The Culture & Technology Podcast
https://culture-technology.podigee.io

Episode 2: Art's Role in Our New Extended Reality
Barnaby Steel x Eva Fischer

INTRODUCTION

In our perceptions of the world, we're all stuck in our own minds – right? What if technology could help us transcend the limits of our own brains and bodies, and connect us to the experiences of other living beings? That's precisely what artist Barnaby Steel and his studio Marshmallow Laser Feast invite you to do through their multisensory installations and virtual reality interfaces. For Episode 2 of the Culture and Technology Podcast, Eva Fischer, curator and initiator of CIVA Vienna's new

media art festival, talks to Barney about how VR can help us to reconnect with the world beyond our filter bubbles.

GUESTS

Eva Fischer is an independent curator, cultural manager and lecturer. She's also the initiator of CIVA, Vienna's new media art festival, and has been curating and teaching immersive art and experimental media for the past 15 years. evafischerav.co

Barnaby Steel is a London-based artist who creates immersive virtual experiences. As a co-founder of Marshmallow Laser Feast, Barney and his team are one of the world's leading art collectives that explore our connection with the natural world through extended reality experiences. instagram.com/barnaby.steel

HOST

Severin Matusek is a writer, producer and editor who has spent the last decade researching how technology transforms culture, communities and society.

IDEAS AND PEOPLE IN CONTEXT

- **Marshmallow Laser Feast** is a London art collective connecting people to the natural world and challenging the notion of individual perception via multi-sensory immersive installations that combine projections, performances, and VR experiences. Notable works include *We Live in an Ocean of Air* (2018) and *Tree Hugger* (2019). marshmallowlaserfeast.com
- **Forward Festival** is a series of events and a platform for creativity, design, and communication. The next iteration, scheduled to be held in Vienna on 7-8 October 2021, brings into focus the digitalisation of the creative scene, questioning the boundaries of the so-called 'new normal'. forward-festival.com
- **Contemporary Immersive Virtual Art** (CIVA)'s inaugural edition debuted virtually (on Discord, Mozilla Hubs and social media) over nine days in late February 2021 under the banner "Social Distancing – Virtual Bonding" in exploration of the possibilities of virtual ties within a context of physical distance. CIVA was co-curated by Eva Fischer and supported by Vienna Business Agency. civa.at
- **Rupert Spira** is an English spiritual teacher, author, and potter known for his Non-Duality philosophy and "direct path" method of self-enquiry. non-duality.rupertspira.com
- **Mozilla Hubs, VRChat, Virbela** are all forms of virtual spaces or worlds that allow people to connect remotely, chat, play games, and hang out. For more on how these platforms are reframing our understanding of spatial experiences, keep an ear out for Episode 6 of this podcast, where two

architects and curators deep dive into the ever-blurring virtual-physical divide. hubs.mozilla.com, virbela.com, hello.vrchat.com

CREDITS

The Vienna Business Agency supports businesses, the economy and the city in developing the Austrian capital's creative industries and shaping its future trajectory. viennabusinessagency.at

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Theme Music by Zanshin.

The topics of the Culture & Technology Podcast will be further discussed at the Creative Days Vienna 2021 - part of Vienna UP'21. https://viennaup.com

TRANSCRIPT

"By stepping out of your human sensory sack and into the perception of other organisms, it does kind of shake that feeling of human self-importance, and you get a kind of ... feeling of how precious and unusual, all of every everything is even a blade of grass is pretty whacked out when you really get into it."

Hello and welcome to the Culture and Technology Podcast. I'm your host, Severin Matusek. The Culture and Technology Podcast is a virtual salon initiated by the Vienna Business Agency in which experts from Vienna and around the globe explore how technology is reshaping the future of culture.

What is reality? Throughout the ages, the question of how we experience the world around us has persisted as one of the most fundamental – and hard-to-answer – philosophical questions. The tricky thing when contemplating answers is, of course, that it's simply impossible to escape our own bodies, our own brain and our senses - and thus we'll never find out what the world looks like for an animal, a tree or anything else that's not a human being.

But what if virtual reality can help us break free from these boundaries? And if so, what if artworks could fundamentally change our perspective?

To find that out I invited Barnaby Steel to join us. Barnaby is a London-based artist who creates immersive virtual experiences. As a co-founder of Marshmallow Laser Feast, Barney and his team are one of the world's leading art collectives that explore our connection with the natural world through extended reality experiences.

Our second guest is Eva Fischer. Joining us from Vienna, Eva is an independent curator, cultural manager and lecturer. She's also the initiator of CIVA, Vienna's new media art festival, and has been curating and teaching immersive art and experimental media for the past 15 years.

Together with Eva and Barney I sat down to explore how technology can enable us to see the world differently.

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EF
As a curator and lecturer, I've been interested in virtual technologies [for] a few years now. And Barney and [I] first met at a conference in Vienna that the Forward Festival did together with The Vienna Business agency back then. I'm actually happy to say that we did several nice projects together since that day. And well, one of my highlights actually was seeing the Ocean of Air that you did at the Saatchi Gallery in London. from the very first second that you would arrive as a visitor at the Saatchi gallery, and you would take or your team would take the audience on this really nice journey.

There was a breathing sensor, and a sensor that would measure your heartbeats and yeah, then actually stepping inside this virtual world and being able to see everybody else in terms of having this visualization of everybody's vascular system and visualizing my own breath. That is really something that stayed in my mind. And I found that was a very fascinating virtual experience that I had. I wanted to ask you how that project evolves.

BS
Thanks. Thanks, Eva. It's great to get that feedback, because I know that the making of the work is often in a dark warehouse room, there's the capturing of the work where we were LIDAR scanning sequoia trees. But there's such a contrast between the process of making essentially a computer game and then having real people interact with it. And it's always rewarding to hear.

It's probably worth me talking about the kind of incentive behind the work because we're big believers in, I guess, the power of science to create a perspective shift and a new sense of wonder and appreciation about the world. And, I think Richard Feynman is one of our big influences here. He's got a great little lecture where he talks about his friend who has a sort of artistic sensibility, looks at a flower and he can maybe be a bit more sensitive to the textures and the colors of that flower. But when Richard the scientist looks at the flower, he understands that the reason it's read as because it's co-evolved in relationship to the eyeball of a pollinator, and it asked questions about, does that pollinator have an aesthetic sense like a human does.

And there's other deeper sort of beauties to a flower, the way it works with photo synthesizes its ability to sort of eat sunlight and process that into the energy that's at the source of the food chain, and all of life, all of these.All of these stories are coming through scientific observation. And so it always adds to a sense of wonder. And so I think this is really the backbone of what we're doing. We're collaborating with scientists to explore the world that exists beyond the limits of our perception.

And, you know, another way of thinking about that is looking up at the stars through Hubble Space Telescope, the images that you see from there are obviously, completely beautiful, almost beyond description, but how does that affect you when you look up at the stars – because your eyeballs just see these small pinpricks, but somewhere in your imagination, those images have registered in it. And it can create a deeper sense of wonder, I think.

So, to tie all of that together, Ocean of Air is one of these projects that's using our scientific understanding and lens on the world to create that sense of wonder for a forest. So in this experience, we're just revealing the connections between plants and animals through breath.

And, breath is a kind of a great way of breaking down any feeling of separation, because the moment you stop breathing, you die. So you rely on breath for life. But breath is part of a process that ties you into the plant kingdom, near the trees create the atmosphere, in order for the trees to create the atmosphere, they're taking energy from the sun. So essentially, these flows, when they're made visible, it paints a picture where all of the humans in the scene, you can see the flow of oxygen through their bodies. So you see the kind of branching and cardiovascular systems. And then kind of like umbilical cords, you see the flow of carbon dioxide and oxygen through the air that connects to the trees. And so yeah, in Ocean of Air, we were basically exploring it making visible those connections.

BS
And I suppose a really important part to it is, is this idea of how you see other people in the virtual world, because when you see, when skin becomes transparent, we found that people interact with strangers, and there's no judgment on age or, or gender or race, you're kind of connected as these branching beings. And, and I think that perspective shift is also true when you start seeing the world, not as separate individuals, but as one interconnected system. So that's kind of what we're hoping to, to get in the work.

EF
That's very interesting. And, actually, we are thinking a lot about avatars and all that, creating a new exhibition environment for the Cyber Festival that's going to happen in February and recreating all those virtual worlds and want to want to make people

come together. And we're also thinking yeah, about the avatars a lot in terms of, you know, non-binary kind of approach.Did you have any learnings from that?

BS
I've been listening to this guy, Rupert Spira. And he's, he does ceramics and non-dualism. And he talks about one sort of perspective on consciousness is that when we think of an actor, in a play, I think he talks about Hamlet or somebody. So we know that Hamlet is a character in a play. And, and that character is not real, but the actor is real. So when the actor puts on the clothes of Hamlet and performs that role, it makes Hamlet feel completely real.

In a similar way, he talks about the reality of time and space that we experience is not real. And it's actually consciousness that puts on the clothes of reality and performs it. So actually, all of us are characters in this play of consciousness, but you take a step back from your character, and the source of your awareness is actually flowing through all things. And whether this is true or not, I guess it's great. It's one of those things that's very hard to ever put a finger in. But something that does translate is our ability to lose ourselves in a story.

I think we can all relate to losing ourselves in a film or in a book. And that that place where we're able to sort of empathize or embody characters as if they're ourselves also happens when you're watching dances – scientists talk about mirror neurons in the brain and how it actually triggers, the way your body would move, if you were that dancer, you sort of put yourself in their shoes.

So when you translate this to avatars, it's a way of embodying something, someone, other than yourself in a way that probably requires less imagination. But it's also something that's really familiar to us. It's not like, you know, we've been imagining that in all sorts of different ways. We did explore this in a piece called in the eyes of the animal, where we put you in the sensory systems of a dragonfly, mosquito, a frog and an owl. You can't simulate a sense that you don't have, but you can give a sort of poetic sense of what that might be like.

It's like trying to explain to a blind person what the richness of color looks like, words and texture, or the combination of all of your other senses are never going to add up to the richness of sight. But you can explore some interesting ideas that can give you that sense of how all of this collage of different organisms occupy a forest environment.

Each one – imagine how space and time sort of stretch and shrink – you know, if you're a dragonfly, your perceived realities, your eyeballs are so close to your brain, everything's happening really quickly. So that means the world you see around you, it moves a lot slower than it does say, than say, you're human – you also see ultraviolet and infrared color spectrums.

And so the more we worked with scientists to understand different organisms' perception, the more wondrous – well, the more exotic and alien it feels. But also, how amazing is that there's all of these different flavors of reality. And, somehow, by stepping out of your human sensory sack and into the perception of other organisms, it does kind of shake that feeling of human self-importance, and you get a kind of humbling – well, I guess a feeling of how precious and unusual everything is even a blade of grass is pretty whacked out when you really get into it.

EF
And in that sense, how do you also think that science and art can help each other in understanding things? Like, how could you, as an artist, have an impact on scientific research processes?

BS
I guess scientists are playing within quite a structured framework – that's a good thing, right? Because, you know, science needs to be accountable and measurable. And otherwise, people would just make stuff up, which they are doing, but they're looking to back it up with evidence, right. So there's a process. Although science is constantly getting updated, there's a process and understanding in place. And as an artist, you're quite free to follow intuitions and explore ideas with more creative license and poetry, and the end outcome doesn't need to be a peer reviewed paper, it can be an experience that's maybe reflecting on something that isn't measurable yet.

And so in that sense, I think you can, you know, a lot of the scientific data or scientific observations need to be reduced to the data sets in order to sort of prove something and sometimes the beauty gets lost in that process. So our lens is absolutely on on the beauty and in, in sort of revealing levels of beauty, that may be apparent to our eyeballs.

A good example would be just looking at a cell through an electron microscope, or we've also been using CT scanners. And so, for example, when you look at the structure of a leaf through a CT scan, you get such a crazy resolution, it feels like a sort of vaulted Cathedral and the inner structures have beautiful symmetries. You know, It's sort of like cathedral roofs, you've got these symmetries that flow through the cells that are really, really quite beautiful. And you just wouldn't know.

We've got this piece – who wants to make photosynthesis, because it's so boring, traditionally, it can be so boring, it's reduced to like diagrams, because there's nothing you can see at that level. But it's also just really the most crazy idea of this, you know, photons of light and smearing into probability waves and hitting the energy centers and leaves.

And there's only so much we know, but if you look at, you know, all of the most advanced knowledge on how that's working, there's still a lot of visual imagery and ideas about how these things connect.

And it's cosmic energy coming in, to feed all of life on the planet. And so we wanted to make an experience that was much more like a spiritual experience of light and, and life connecting through that process. And you could see it – from different viewpoints – the perspective of a photon or a water molecule. Or you could just start the journey as carbon dioxide leaving your own mouth and journey into the leaf, where it becomes part of that process.

But I guess, I guess, my point would be that, yeah, bring back the experiential and or the source of observation backing into it, and revealing that beauty is something that we think is fun. It all starts with that. It's like, Oh, I'd like to, I'd like to experience that. So let's see who we can collaborate with to make that happen.

EF
What I'm always wondering is, on the one hand, I think virtual reality is such a brilliant medium, like when it comes to embodied learning and, you know, like getting inside of all that and being part of it kind of also as a body or an avatar.

But what I thought during the first years was that it's such a niche, and you know, exclusive medium on the other hand, and that only a few people have access to, you know, wearing goggles at the museum, or like you did at the Saatchi gallery. I don't know, the people you reached were many, but it could be more maybe and what really fascinates me now, and since a few months and maybe having been pushed through the first lockdown that we were facing, are all those Web VR tools that are popping up.

For example, Mozilla Hubs, or VRChat or even Virbela or something like that. And even if it's still restricted in terms of performance, and maybe also resolution and stuff, I do have the feeling that those new technologies, yeah, make all those experiences much more accessible to many people.

And we also experienced that a lot in the team. Like I'm having this super good team of VR artists, developers, IT guys and curators, and we've been hanging out in several, you know, VR exhibitions online, did a lot of exhibition tours, also through our own shows that we released during the last weeks, and met a lot of international people.

And we even had, for example, a radio show, a live show being done in one of our spaces. And what I really love about it is the feeling of being in a room together, you know, in the virtual as this third room that might be, but it's spending time together there. And that really makes it special. How do you feel about that? Did you have a

look at, you know, Web VR tools or I guess that you think a lot about how to reach your audience?

BS
I suppose, you know, mobile phones were like these huge bricks and only sort of businessmen had them and it was they had the battery pack. And now you know, they're in the hands of everybody. You can see that there's a trajectory of the realism of computer graphics. If you look at, you know, the modern day-rendered Hollywood blockbusters, you can't tell the difference between something that's been filmed and something that's been rendered. And so you can see that just around the corner, that level of realism is going to be blurring the line between what's real and what's virtual in a way that's going to be hard to distinguish between the two.

And also the accessibility to the devices – eventually it's going to be in the hands of the many. And I think that sort of that evolution of technology is something that's impossible to stop. And it's, it's happening. So it's interesting to think, how do you engage with that in a way that can reconnect us to the world around us?

Because I think you could say that part of the problems we experience, you know, with deforestation, you're reaching for some body butter in the supermarket, because your skin's a bit dry. And some somehow your reach extends around the globe, and it's connected to deforestation in Indonesia, you know, this, when things become global, and you're not aware of the impact of your reach, then it causes problems, but you would never chop down a tree to moisten your – to get smooth skin, you no one in their right mind would do that.

So it's interesting to think, are we trying to disconnect or reconnect and, and so with the projects that with we're working on, it's always about what happens when you take the headset off: has it has experienced in some way, you know, shortened that gap through having a brief an intimate breathing experience with the tree, that's a real tree, it's got GPS position, you can go and visit it. It's been LIDAR scanned, you know, that gives you a connection with a place that you might never visit.

So I guess where I'm going with this is sort of thinking about how immersive technology can maybe give us intimate experiences of ecosystems that we maybe should care about, but don't care about, because there's something that you know, we've never been there, are never likely to go there.

And the same could be said of David Attenborough's nature programs that most – a lot of people's experience of nature outside of their TV is pretty limited. You know, who's who's really seen anything like, you know, been to the Arctic, whales, the whole thing. It's mainly through your TV.

So in the same way, I think, we would hope that when we're old and we look back on our legacy. You know, maybe we've done what Attenborough did for the TV, maybe we've done that for virtual worlds, and in doing so, you know, created a movement towards conservation. That would be that would be the hope.

EF
But I know exactly what you mean. I mean, I saw a Tree Hugger and the Ocean of Air. And, for me, in my memories, I have the feeling that I was there. I was inside of that Sequoia tree, and I was able to fly above and so I'm not sure if you know, in my memories, a movie would have the same I don't know extent, you know, it's really this bodily kind of experience that makes it so special.

BF
VR has a power for that, I think. Yeah, sort of. It's, you're less aware, I guess, with the film, maybe, you know, cinemas are in really dark rooms for a reason. And to put you into that so you're not aware of your surroundings, you're, you're like lost in the film. And, and VR is stepping through the screen, isn't it?

EF
I would, as a last question, go into the direction of, you know, if artistic VR projects can raise awareness for not only science, but also maybe for political topics. Is that a good way to go? In terms of how can we also deal with the whole situation that we're in now, you know, locked down and physical distancing?

BS
I've been thinking about this thing of empathy, and when you kick into gear, it's like, if you're basically when, when you've had an experience that really affects you. So for example, if you're, if a member of your family was murdered, murdered through knife crime, then the chances of you fighting really hard against knife crime and dedicating your life to putting an end to that, then, you know, you can have this because it's there and you've experienced the horror of it, it's going to have an impact.

And on the other side, if you've been swimming with sperm whales, and someone offers you some sperm whale sushi, you're going to be disgusted. So there is this correlation between the things you care about, and the things you experience.

It's also true that, like, love is the best tool we have. And like, if you think about nature, beauty is this kind of, is this tool for survival, in a way, you know, the beauty seen throughout nature, and it connects plants and animals and, and were drawn to, to that beauty as well.

So I kind of feel like that there's something in artwork or experiences that offer deep intimate experience with sort of individuals. And that allows that is our best bet for creating empathy.

I don't think it works so well from, from the helicopter view of a Deforested you know when you get that kind of clear cut deforestation view, it's too much to engage with, but when you look at a single tree and all of the organisms in symbiosis and get to experience a different lens on reality, and then to understand that that's disappearing, you know, that thousands of those go every split second, that's, that probably has a lot more impact than the aerial view.

EF
So finally, what I would really like to talk with you about is whether digital technologies, online tools make it possible for us to stay connected, or to even create new networks or to bond with others.

BS
So this thing intimacy and, and what we care about, and empathy – so I feel like if you look at, like, who's eating their dog, no one's eating their dogs. Right, but you'll eat lamb, but you'd probably really struggle to eat a lamb if you'd grown up with it, and it had a name and you shared life with it. And I think we live in a sort of strange time where our sort of reach can go around the globe. And it's this impact on our actions, we can feel very distant to things because we don't have that intimate experience. And, and I think it's true to say that we care about the things that we fall in love with. And, that changes our behavior. So if you're, if you're looking for a shift from consumers and conservation, I think the route to that is through people having a deep intimacy.

And so virtual reality is actually an amazing way to create that experience, not only because you're simulating the way the body experiences the world. So you're creating a deeper immersive experience, which is more in kin with the way you meet people face to face, I think the power of the collage of all those senses, being engaged, creates a deeper connection. But also you can take people out of their own bodies, which is something that you can only do in your imagination.

So the power to then see the world through the eyes of other people or other organisms is or even just to be shrunk down to or expanded to different levels, you're able to appreciate, I guess, the the richness of other life forms in a way that you probably couldn't even if you're standing in even if you're standing in front of a tree, to really understand it or engage with it as a living breathing being is quite hard until you think about accelerating time.

Then you can see the way it reaches for the sun and, and then when you can see inside you realize that its roots extend out and it's connected to the other trees and that they're sharing nutrients. And there's all of these narratives that evolve that change the way you think about that tree, but you can't really see that with your eyeballs.

And so where I’m getting to with all of this is that through the beauty of science, but also the qualities of virtual reality, being able to embody other people's perspectives, I think all of those kind of tools are a great way to create empathy and, and create the kind of deeper experiences that might change the way you think about yourself in relationship to other people and to the planet.

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SM
That’s it for today. For our next episode we’ll explore what digital objects are and why museums collect them.

If you’re interested in finding out more about Barney’s and Eva’s work, or the general topics they touched on, may I point you to the show notes in your podcast app, where a useful list of resources and links awaits.

The Culture and Technology Podcast is produced by the Vienna Business Agency – The Vienna Business Agency supports businesses, the economy and the city, developing Vienna's creative industries further and therefore changing the city.

Over and out. I hope you’ll join us next time.