

# TECH[NOCULTURE

## Music, technology, and social meaning

### Episode 38

### Full transcript

Guest: Robert Margouleff [Robert]

Host: Federica Bressan [Federica]

[Federica]: Welcome to a new episode of Technoculture. I am Federica Bressan, and today I am here with Robert Margouleff, Grammy-winning producer and recording engineer, electronic music pioneer, film producer and entrepreneur. Welcome to Technoculture, Robert.

[Robert]: Thank you very much. I'm happy to be here. Or you're happy to be here in my studio?

[Federica]: Exactly. I welcome you on the podcast. But the podcast today is in your home studio. Can I call it home studio?

[Robert]: You know, it's a home studio, but it's a studio-studio...

[Federica]: It's a studio-studio! Yeah, well, in Los Angeles.

[Robert]: Yes.

[Federica]: Thank you very much for having me here.

[Robert]: You're very, very welcome.

[Federica]: You, of course, have had a remarkable career. And it would be natural to ask you about all the stories you can tell about it. But something that really struck me about you is that you are still looking forward, pushing the boundaries, and you're very interested in

where we are today and where we'll be tomorrow.

[Robert]: The past already happened, so I don't want to continually relive where I came from. It gets really boring, because I've already been there. But looking at the now and the future, I think is very, very important, because I think in many ways we are at another stepping stone in the media world. And technology does change the art. It affects how we write and how we compose music. And I think music lives on in our memories. You know, it's invisible. You can't see it and you can't touch it, but it lives on in what we think about it, and what it does to us emotionally and empathetically. I mean, music is about empathy. It has no practical use. It's not like a food, substance or an object or anything. It's invisible. And if you unplug it from the wall, it disappears. So I'm interested in that. I'm interested in how technology changes the art. And it has been my quest to look into the future. I guess you might say I'm a futurist in audio. We're at a very interesting place right now in audio, because now audio is being delivered in a new way. And that's on mobile devices, primarily in streaming. There are no more record albums. There's some vinyl out there, but it's a very small part of the billions of downloads that we now have and experience music. It's changed the face of music and how we make it and how we deliver it. And now, with the advent of mobile media and headphones, we are again at a juncture of changing music radically, because we deliver it differently on headphones than we do on loudspeakers. And it changes the way we write music. Billie Eilish would be a very good example of this confessional kind of music that we're now facing, and the music is written on headphones and listened to on headphones, which is a different kind of experience because the music unfolds in our head.

[Federica]: Can you elaborate on that a bit? Because one would say, well, how does that really change my listening experience? Can't I listen to the old classics in a headphone? You know? How does that change?

[Robert:] You can hear old classics in your headphones, and we can look at that as objective music. This is a sonic picture of three guys standing on a stage sawing away on their instruments. Or this is a piece of music that's playing behind the motion picture film. And it is what I call objective music. It is a report of reality, where the microphones are used to report a real time event. But music is moving towards subjectivity. And by that I mean the music exists on our new folk instrument, the laptop. And that unfolds in our head on earphones. There is no more architecture. Music originally was defined as, where is the music going to be listened to? And I am going to write music based on where it's going to be played...

[Federica]: Like chamber music.

[Robert:] Chamber music, for example, or a Symphony Hall concert or, you know, the Los Angeles Philharmonic at Disney. And that's a sonic picture of the Boston Symphony playing Beethoven's Ninth Symphony. People are sitting in the audience, and the microphones and the recording equipment are there to record the event. It is a storage medium for a real time event.

But pop music, it has no real place. There is no more architecture for that kind of music. When you start working with a synthesizer, which is what I did in the early 1970s, we end up with music that are only vibrating electrons, and they only happen in space, basically unfold in the storage medium, in the computer. Basically. There is no real time. There is no objectivity, there is only subjectivity. So, the music is created in space with vibrating electrons and unfolds in our head on earphones. And now, especially with immersive audio coming on board, we're able to finally store what we call HRTF, Hearing Response Transfer Function [Head-Related Transfer Function], where our brain helps us decide where music is coming from, where sound is coming from. And I submit to you that that is as powerful as pitch and duration in music. The ability to be able to create directionality in a musical composition, and not be just bound to left, right, and center, but to be able to have sound come from behind you or above you can impart tremendous emotional results and the listener. I mean, before we invented the microphone, great composers like Wagner or Bach took advantage of specialization in terms of how they wrote for the church. For example, in religious music, where the pipe organ lived in the back of the church and the boys choir was in the front of the church, and there were other sounds coming from different places. That energy created a great deal of mystery and spirituality. And we ditched it all when we invented recording because we couldn't store HRTF electrically. Now, with the new technology, we can store those sounds and the directionality of where the sounds are coming from. So, now, when a young composer sits down at his kitchen table with his iPad, and he's writing in Ableton or in Cubase, he can now control that aspect of his music writing as well, because the music is being delivered on headphones. And when you deliver music on headphones, it unfolds inside your head.

[Federica]: You say this will change how we compose and how we deliver music. You say that technology drives the arts. But sometimes technology is received passively, and it's designed to be used in a specific way, maybe especially today, you receive building blocks or ready-made things, more than probably in the 1960s and in the 1970s. Was it easier to be more creative then? Is there a danger to be passive users?

[Robert:] The interesting thing is... you don't know what you're doing when you're doing it. You only figure out what you've done after you've done it. So to speak, right? For example, when we were working with Stevie Wonder back in the day, in 1972 in Studio B at the Record Plant, that room we built with quad monitors, because at that time the industry thought that quad was going to be a big thing. And we designed the console for that room from API that had quad monitor bus. So, we had two speakers in the front and two speakers behind us. Unfortunately, the technology of being able to try to put quad, just as four channels, on vinyl was a miserable failure. It did not work, as much as we wanted it to work. But what the quad monitoring did, was I was able to take Stevie out of the recording studio on the other side of the glass, and put him in the control room, which became a control room - studio, right, as he performed in the control room. Unless there was an acoustic instrument, like a piano or a set of drums. But if it was electronics, a Fender Rhodes piano or synthesizers, keyboards

and stuff, or I would put like the guitar amps in the studio, but the player would be in the control room. I was able to use the quad monitoring in the control room to affect the way Stevie played, because I could put a guitar part over here opposing his clarinet part over there, and the drums could be in front, in the background, vocals could be behind him. And what we had was immersive music. And it did affect if you listened to those records, Music of my mind, Talking book, and Innervisions or Fulfillingness, those records were composed and performed in that way, in that studio, in quad. We monitored in quad. We had finally to mix it down to stereo. But you'll note that those records sound very dry, because we invented reverb and echo and all these effects to emulate the sense of space and distance. But once I had quad, I didn't need to emulate the sense of space and distance, because I could create this very close, very confessional Billie Eilish now like thing, where Stevie was this close to the microphone, right, he would be able to touch it with his hands, so he knew where it was, because he's unsighted. But we made those records with that very close, intimate feeling. And that's the reason that these records, so many reasons have been the songs are fantastic and have tremendous social ramifications. But they also have a very tight point of view. It's as tight as Bing Crosby in 1946. The Paramount Theatre [was?] riots in the streets, because the way he was using his microphone where it was very close and he could make his voice as loud as the whole band, everyone was going crazy. They wanted to be close to Bing. That's what we did with Stevie. That's what Post Malone and Billie Eilish are doing now. Very close to the mike, very intimate, very confessional, personal music. So the medium is affecting the message.

[Federica]: Yeah, the invention of the microphone...

[Robert]: It changed everything.

[Federica]: Changed everything, yeah. It allowed...

[Robert]: And then, the ability to store it without too many interlocutors. And by that I mean, you know, in the days of making LPs for example, extended play vinyl records, you had to have an infrastructure to manufacture them, to print the covers, to distribute them, to take into account breakage when we were doing laquers, you know, 78s. So the record companies would take the big lion's share of the money back. They would advance all the money for the studio time. And you had to have a lot of technicians running around. You know, with the pencil protectors and the pens, and the guys with white shirts in the control room. And it was a very different and very separate culture than to the artist culture. But as soon as that started to break down and the technology became simpler and simpler, we needed fewer technologists. So all these things have their space. I mean, we have Dolby Atmos in the movie theater and that's what it's for.

[Federica]: Yeah, they co-exist.

[Robert]: They all co-exist. But now, who are the new cowboys and Indians? Who is the 17 year old? Who is Billy Eilish and Post Malone playing music for? It's certainly not people my age. It's for their peers. They're people who are facing life right now. So, technology does drive the art. We write music within the parameters that we're given for the performance. So, when I think of coming out here in the studio and making music with my young partner, Erin, I think that the music is here to be delivered on headphones, [in a] personal way, for my cowboys, for the young cowboys and Indians. Who are they? There are the kids that are working at Space-X and at Blue Origin and doing science and figuring out how to get the satellite in the right position to hit the space station, and designing and building stuff for fuel, and doing medical research and stuff. And they're sitting at their desks, and they're listening to music on headphones and on earbuds. And their music is different than my music, and their music has fewer people between the creation and the listener. When I can come into a room like this, I don't have to pay 1500 to 2500 dollars a day for a recording studio. What does it mean? It means that the music is more available and touchable by the creatives themselves, because they know how to manipulate the technology. That's why I say the laptop is a new musical instrument, because it all lives inside the computer.

[Federica]: While we're sitting in a studio, let me ask you how studios have changed. The type of gear has changed. There has been the "digital revolution" or "transition." Of course, analog is still there. Now they live together...

[Robert]: Yes. And I like that. The studio is a hybrid. First of all, there's no glass in here. There's no acoustic room. This is both an acoustic room and a mixing facility. We have the microphone standing here in the room. We all put on headphones, turn off the monitors, and suddenly we're in the studio. It's the same thing. The space is dead. The acoustics control, you can look up at the ceiling and see the diffusers. You can see that the room is treated acoustically, because we want to emulate what we used to do in the studio on acoustic space. We want to be able to emulate it and listen to it on loudspeakers. That's the transition from acoustic to electric. But now we can do most of it in the same room. I mean, it's luxury to have an acoustic space and a big Steinway piano. But if I need an acoustic space and a big piano and a set of acoustic drums and there are six players, I'll go to the Village recorder, to EastWest or to Capitol where they have the big studios and I'll use them for the time I need them. But then I'd rather be able to roll out of bed at 2:00 in the morning and mix when I say, hey Zeus (Erin's nickname) I don't know about the sound of the kick drum; he says, OK, let's jump in here. And we jump in the room here and we make changes as we go. We're not paying a daily rate. We're not in a taxi cab. We need big studios, they are functional and correct to have - when they're needed. But a young artist who's driving for Uber during the day and coming in, trying to make his dreams come true doesn't have 1500 dollars a day. And there are no gatekeepers to stop him from working anymore. You can't say "come with me, kid, I'll make

you as famous as the Beatles, and I'm going to advance you 200,000 dollars." Right. And then you work for the rest of your life paying back the 200,000 dollars on the art that you made. You might not make as much, but you don't have to sell as many recordings or downloads as you used to to make the same money. So, things are changing in the business world. The record companies are really sort of having to realign themselves in terms of... because they no longer manufacture, stamp, distribute, ship, dropship, all that kind of stuff a record's around, people going to record stores to buy records. Everybody just buys what they want on demand from Spotify or Apple Music or any one of a dozen aggregators that are out there. It's all streaming. It's billions and billions of times we listen to the songs. Are the artists getting paid correctly? No. The upper 10 percent, probably, are making enough money, but really artists now are making money from the real-time appearances, public appearances. The recordings are simply the window dressing in the front of the store to get people to come in and to participate.

[Federica]: Are you worried about all the noise that is out there, because many more people can upload...

[Robert:] No.

[Federica]: Not at all? Why? Because it will fade in time and the... pearls will come to the surface?

[Robert]: The cream rises to the surface.

[Federica]: Yes, yes.

[Robert]: The good music survives. Some of it won't survive. Some of the good music won't survive. But most of it... what is lasting, and means something to the culture, lives on. And I speak primarily of my work with Stevie Wonder. Living Just Enough for The City had social ramifications. Devo, Whip it, for example, or any one of the Devo songs are about the environment. It was 25 or 30 years ago [that] I did that record.

[Federica]: Too early!

[Robert]: Yeah. It's never too early. But there is a kind of an awareness in that kind of music. I think the most successful music that I've ever done in my career of all had social overtones. They are there for a message. It's not just a bunch of fluff of how I love you, baby, and I want to touch you or whatever...

[Federica]: Which is fine? Are you also OK with also... just...

[Robert]: Having a good time? Yeah.

[Federica]: Yeah. Of course not all art should be politically or socially engaged...

[Robert]: For me? That's where I like to live. I do the other music. It's fine. You know, a little toe tapper here and it's wonderful over there. And in some cases, in rock and roll, it's good to see somebody totally illiterate, obliterate themselves on stage and self-destruct and tip over the drum-kit and break their guitar and take drugs and fall apart. And it's a spectacle. And people, it's like watching a car accident.

[Federica]: Haha! Yeah, OK.

[Robert]: Everyone kind of slows down and goes, oh, I feel sorry for him and I'm glad it's not me. And the guys like, you know, Kurt Cobain killing himself in the end. People taking their own lives because of their desperation and fear. People like to watch that. It's like warfare, in a sense. But I think that music exists also to change the world. And I think that that's the responsibility of artists in the social context. And the music now is being delivered in a social context: Facebook, Spotify... But, you know, we can always try to figure out why the wheels are turning. I mean, that's part of what academia is. Why was Bach creative? Or what drove Mozart? Or Jerry Garcia, what made them write music like that? Right? It's still something that an artist takes from his environment, from his place, and reflects his feelings about it. And I think in most cases it's a kind of morality about that that attracts me.

[Federica]: Talking about how you used to work in the studio in the 1970s: first of all, you said that there was a lot of freedom, kind of time and relax to experiment, which is not always what you think of a recording studio which needs to be booked and it's expensive. So, you're prepared when you walk in, do your thing, and get out. I was curious to know...

[Robert]: That's the reason for this room. The booking here is endless. Zeus and I can work as many hours as we want or not. There is no longer a... the technology is not so expensive that we have to make sure that we can pay for it.

[Federica]: It's as if creativity required a non optimized workflow. You need that time to play around a little bit and explore. And this is what happened then?

[Robert]: Yeah, music is written in the... they used to say, oh, you're not kind of come in here and write in the studio, are you. Studio bills can be 500,000 dollars. You know, I don't have to worry about that anymore. When I need to use the high priced spread for an afternoon or 10 hours to cut some basic tracks with four or five players, that's the time to spend the 1500 dollars or 2500 dollars a day. But for overdubbing and for mixing, I want to be able to take the time to explore a variety of approaches to the music. You know, the interesting thing

is, I'm working with a technology called Sonami from Hear360. They've developed a program, it's a specialized existant stereo music. I mean, I can mix from channels too, I mean, I could mix 48 channels of separated stems. But the interesting thing about going and delving into the past... I've just been listening to some stuff I've been doing with Stevie Wonder, I did a spacialized version of Boogie on Reggae Woman, and the thing that I like about the spacialization processes is that encompasses and contains what we originally intended to do. So, if it's a Miles Davis record, I want to have what the engineer was thinking about. I don't want to remix Miles Davis into some other format that the producer and the engineers are not present. Because the function of translating the sonic energy into electricity, the guy called a recording engineer, has a certain level of art and creativity as well. And I want to make sure that those things are preserved as well as the music, because the recording is the performance.

[Federica]: There is something else I heard you say about how it used to be to work in the studio in those years, and it's that it was like an "archive." You use the word archive. How so?

[Robert]: Well, [you] talk about expense, for example. When we worked with Stevie, there was no budget. We just worked until we were finished, which was very... indulgent, I guess you might say. We would come in at 4:00 in the afternoon and leave at 2:00 a.m. or 3:00 a.m. or 4:00 a.m. with the sun coming up. We used to call it "Stevie time." Being unsighted, he really wasn't and still isn't very cognizant of time, day and night. You know, light and dark. Never was really a part of it. He would work when he was feeling really creative.

[Federica]: Which is the night, normally!

[Robert]: People like to perform in the dark, for some reason. I don't know why that is, but it's a different vibe, I guess, when you play at night in an intimate space.

[Federica]: And what did you mean by archive?

[Robert]: Well, we would record a bunch of songs and not finish them, and we would put them in our library, in our archive. And then when time came to do an album, we say, oh, let's pull this one is a good one. We'll take that. Will finish that. Oh, there's another one we did six weeks ago or 10 weeks ago or last year that's gonna fit. We'll take that and finish that. We could put background vocals on it or the rhythm track. We evolve it, but we would constantly work in terms of a library or archive. We were never saying, oh, we gonna have to write six songs for this album or 10 songs for this album. And then we'd get down and try to figure out a name for the album. And then we would, you know, write the songs based around the theme. Which is fine. There's nothing wrong with that. But basically, we were able to write... Malcolm Cecil and I must have written, worked on 150 songs of Stevie over five years. Maybe 50 of them made it to the daylight. Some of them will never be heard. They'll die when Stevie

passes away. Those songs will die with him in his pocket of his suit.

[Federica]: Wait... because they are... in his head? Or he has an archive...

[Robert]: He never got around to them. Or they're not up to snuff. I think that there's certain music, and I think Stevie's music falls into that category, that space, that these are recordings that changed the face of pop music. And I don't take that responsibility lightly. These are recordings that must be preserved for the sake of posterity. [...] Bach left volumes, or any of the great composers left volumes of music behind them, that was written down on paper, so it didn't perish. Our music, a lot of that music was never written down on paper. Or never will be written down on paper. It exists in the medium. So for me... I did talk to some people at Iron Mountain a few weeks ago, producers and engineers wing of the Academy. We're at a party and were talking about Stevie's stuff. A lot of tapes, but not only that they need to be digitized properly, correctly. But we need to get a music historian to work with Stevie while he's still here. For him to talk about the various songs and what he did with them, and the material itself should be preserved properly. And I think it's something that the Library of Congress, of the Smithsonian, somebody like that... And I have recently discussed that with Steve. But I think, you know, we all feel like we're immortal and we'll never gonna leave the planet. Leaving the planet is for somebody else. I'm here forever. You know, it's not the truth. The only thing we do once is die. We do it once when we're born and we do it once when we die. In between is called life. And somehow when you're young, especially when you're young, you think you're immortal and death doesn't mean that much to you. But when you do something that really changes the world, it's and again, it's not only for Stevie, but it's for Malcolm Cecil and myself as well to make sure that our history is preserved, because people learn from the past. You can't have a great future if you don't know where you're coming from. And I think that that's why people study history. I don't really want to live in history that much, but I know I made some. So, I think that for the sake of bringing enlightenment to the next generation or generations, we have to respect our past and understand that otherwise we'd be like a bunch of chimpanzees constantly having to re-learn the basics of existence. The difference between us and chimpanzees is that we have a memory of where we can go and we can be civilized enough to teach somebody something and not have to repeat the same knowledge over and over again, because it's already been dealt with. We tend to use the inventions of our time as building blocks for the future. And I think a lot of what I did with music and with Malcolm and Stevie is that we built a lot of these building blocks. Were we conscious that we were doing it? No. We live it totally in the now. And I always used to say, and I still say it: you know, sometimes it's better to live in the now and not think too much about the future, because the future fucks up your now. Basically, OK. It's important to live a day at a time, but to remain creative and empathetic. I think that that was the two things that I think are most important, what I've learned.

[Federica]: It keeps you grounded, also. Yeah. But when did you start realizing that you were making history?

[Robert]: When people started telling me I was.

[Federica]: Okay! Yeah.

[Robert]: I really don't know. I still don't feel I've done much, really. I'm more interested in what I'm gonna be doing tomorrow. I'm more interested in chasing some other new dream, new songwriter, new music, new sounds, new experiences. And that's really what we have to be doing now. That's the purpose of art, is to change the world.

[Federica]: Thank you so much.

[Robert]: You're very welcome.

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