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THE ETHICS OF LIVE AUDIO TECHNOLOGY

THE ETHICS OF LIVE AUDIO TECHNOLOGY | Jeff Hawley



I had an amazing time presenting last month at the Christian Musician Summit in Tacoma, Washington. During the closing discussion portion of my session on immersive audio, a member of the audience asked a wonderful question. “You shared research that demonstrated how the addition of reverb to a mix increased the occurrence of responses from listeners categorising it as being ‘spiritual.’ The dry mix was a lower tally on this stated response; the wet mix was higher—taken as more ‘spiritual.’ More reverb = more ‘spiritual.’ How should we think about this in terms of the ethics of our mixing activity and the overall quality of the spiritual experience? Is it less ‘real’ or somehow a lesser spiritual experience if it is

being *caused* by our addition of reverb vs. a ‘real’ spiritual experience without reverb?” Wow.

Needless to say, my response in the moment was not very impressive. I understood what the question was getting at, but I didn’t have a ready answer. Sometimes things like this need to simmer a bit. So here is my more considered response in the form of this month’s Audio with Jeff Hawley series article!

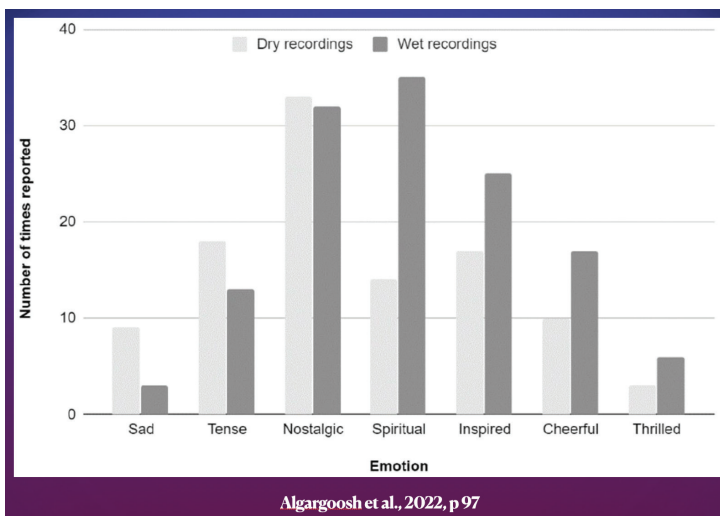
THE PROBLEM OF EVIL FOR ATHEISTS

Well, if that section header doesn’t grab your attention, I don’t know what will. The problem of evil and atheism in a section about worship

technology? Has this Hawley guy gone off his rocker? Well, perhaps. But stay with me. I recently read through Yujin Nagasawa’s book *‘The Problem of Evil for Atheists’* (2024) as part of my research for my PhD in philosophy. Rather than being written for atheists, the book is actually a presentation of a novel argument that Nagasawa puts forward, claiming that the problem of evil not only is a problem for non-theists (like atheists) as well, but he also aims to show how belief in God puts the theist in a better position to defend against what is traditionally used as a possible reason that God cannot exist.

In case you aren’t familiar with the problem of evil, the basic gist is that an all-powerful, all-knowing, all-loving God isn’t consistent with the existence of evil in the world. If God was actually all-powerful, He could stop evil from coming into being. If He was all-loving (or all-good), then he wouldn’t want evil to exist. If He was all-knowing, then he’d know that evil was going to exist and prevent it. So one (or more) of the classic elements within the concept of God must be false, and/or God can’t (logically) exist as defined. Theologians and philosophers have wrestled with these issues since the genesis of our conception of God.

We won’t get into these issues here except to highlight how Nagasawa reframes the issue in his book. The problem, according to Nagasawa, isn’t really as much of a logical problem as it is an ‘axiological expectation mismatch.’ What he means (roughly) is that we have a gap between



what we would expect given the understanding we hold on one hand (the concept of God) and the way the world seems to us on the other hand (evil exists). I'll leave that idea there as it relates to the problem of evil but borrow the 'axiological expectation mismatch' idea to get at the questions that came up in the CMS session.

HOW SHOULD WE THINK ABOUT THE ETHICS OF THE USE OF TECHNOLOGY IN WORSHIP?

Let's start with an example of something that we would likely conclude as being unethical. Say a pastor goes online and asks ChatGPT to write an entire sermon on the topic of evil in the world. ChatGPT spits out its results, and the pastor prints it up and reads it to the congregation word for word. The pastor prefaces the reading by saying, "Here is the sermon I came up with on my own for you all this week." The expectation of the congregation would be that the pastor reflected on his or her experiences, prayed for guidance on what to share, opened up the Bible, and did the work to find just the right scripture for the occasion and let the spirit guide the creation of the notes and references and themes for the week. This is likely close to

what actually happens in most cases. But we have an expectation mismatch since the pastor only typed in 'write a sermon on evil' and merely regurgitated whatever ChatGPT spat out.

It doesn't seem right to claim that it was authored and created by the pastor by any definition in this case. This is a clear unethical use of technology in my view and probably a view most of you would share. If a student did the same thing with their school homework, they'd be in trouble for plagiarism. Not cool. As a side note, recent research suggests that between 50% and 75% of pastors do sometimes use ChatGPT and similar tools in some minor aspect of support of their crafting of a sermon or scheduling their week. I am not claiming that any use of these tools is unethical, merely that extreme and unexpected uses in an extreme manner *could* be.

How about the worship band carefully lip-syncing and playing 'air guitar' on stage while pre-recorded tracks were being played and absolutely no sound from the band was being heard? Yep, probably another case (without clearly stating that the lip-sync was happening)

of an unethical use of technology. A gap between the expectation of the congregation (that vocalists and musicians are actually playing) and the reality of the situation (only tracks are being heard).

EDGE CASES?

What are the expectations of the average churchgoer in relation to technology like pitch correction and immersive audio or even basic common effects like reverb? If 5% of the notes that a vocalist is singing are being subtly 'refined' via a pitch correction tool, is that unethical? Again, I don't think so. It would seem that most people probably understand (and expect) that the sound system in a modern church has some features that will enhance the overall musical quality.

Compressors, reverb units, etc. exist for just this purpose. Short of classical music or traditional jazz performance, most music we hear today has elements of technology of this sort baked into the style itself. Pop music is arguably 'pop' just because of the stylistic elements in place. In fact, if Taylor Swift was performing live and



all of the audio rig effects were disabled mid-song, most people would think something had gone terribly wrong! Of course, the drums will be compressed, the guitars will be carefully EQ'd, and her vocals will feature a bit of subtle technological assistance. In other words, it is *expected* that technology is part of the equation.

In the case of immersive audio that the CMS attendee brought up, we are likely to expect that some amount of room tuning and added reverb would be in play with just about any style of music in a live performance scenario. You could argue that the research I shared (from Alaa Algargoosh, 2022) equally demonstrated that dry (non-effected) audio had a higher response of folks saying it was 'sad' and 'tense' just because it deviated from the expectation that most music is heard with reverb. In this sense I don't think that we really run the risk of an expectation mismatch when we add reverb in an effort to make a better mix, and it happens to track to that mix shows up as being more 'spiritual.' We aren't trying to fool anyone; we are just following the musical norms given the current technological state of things.

So immersive audio techniques, or the addition of reverb or subtle pitch correction, don't seem to be a case of an unethical use of technology per se. Hiding the fact that new content is being created with the aid of tools like AI (in at least the most extreme cases) seems to veer into murkier ethical waters, though.

What about the question of whether an

experience is less 'real' or somehow a lesser spiritual experience if it is being caused by our addition of reverb vs. a 'real' spiritual experience without reverb? Well, here I'd say that just because part of an experience contains some aspect of technology doesn't mean it is less real or of a lesser quality. As noted, the expectation is probably more closely aligned with the inclusion of *some* technology in the first place. We have no reason to think that a distinction exists between a 'real' and a 'fake' spiritual experience. If you feel it, it is real. How you got to that point and whatever neuronal activities happen to be going on at the time likely have no real impact on its veridicality (truth value).

On this point I will return to the concept that I shared at CMS in the same presentation, the *numinous*. Coined by the philosopher Rudolf Otto, this term aims to capture the feeling of the religious experience—the “gentle tide, [the] pervading [of] the mind with a tranquil mood” that contains a seemingly indescribable combination of wonder and awe. I fail to see how the inclusion of digital reverb on channel 17 in the console would be able to take anything away from a congregant who is feeling the spirit and worshipping God. If you are in this state, you are in this state. How you got there and the buttons that the sound engineer might be pushing at the time wouldn't seem to enter the equation.

In short, it would seem that aside from obvious lip-sync fakery or complete fabrications of content via the undisclosed and nefarious use

of AI tools, we aren't likely to enter into cases of obvious unethical uses of church audio technology. Pitch correction may be a tricky one on the edges, but most subtle uses of the tool seem to pose little to no risk of an axiological expectation mismatch. As sound engineers, we are expected to use the technology we have to enhance the mix and create a space for the spirit to move.

We should also be cognizant of the fact that the spirit doesn't need us to work! I'll close with yet another reference from that CMS presentation: “For where two or three are gathered together in my name, there am I in the midst of them.” [Matthew 18:20]. As I said in the session, I don't recall seeing any asterisk or caveat at the end of that scripture that says, “*as long as there is the right amount of reverb” or “*as long as the vocalist is in tune.”

Yes, there are likely cases where we can create a large enough expectation gap with the audience to veer into potentially unethical territory. But as long as we are honest and intentional in our application of technology, it shouldn't be something we worry too much about. I hope that this article answers the set of questions from the CMS session much better than what I attempted to piece together on the spot that day!

Jeff Hawley

A 20+ year music industry veteran—equally at ease behind the console, playing bass guitar, leading marketing teams or designing award-winning audio products. He currently heads up the marketing for Allen & Heath in the US.

