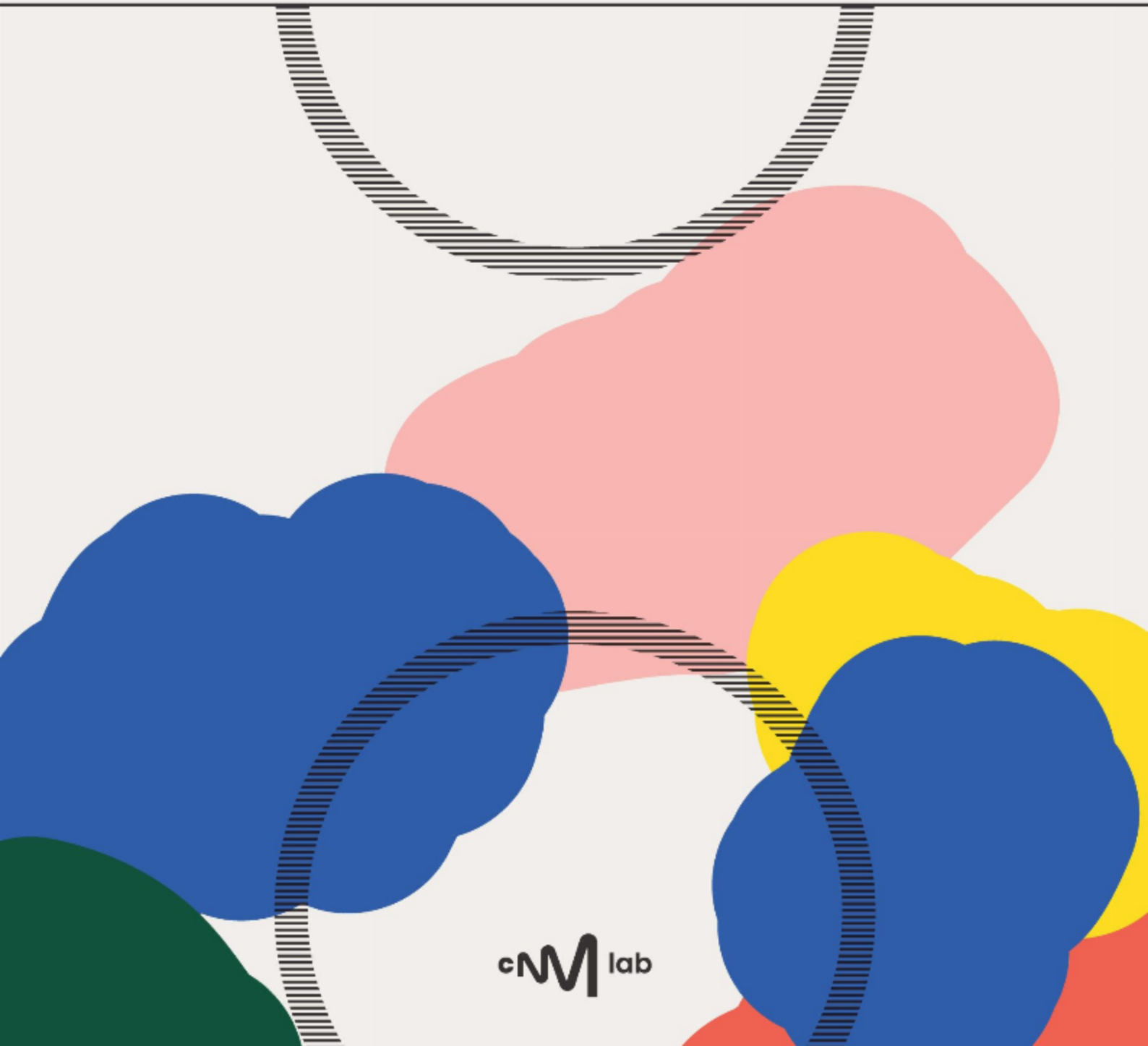
Musical Labor and the Metaverse

The Artist as Code

By Jeremy Wade Morris



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1. Summary

This article explores musical labor in the metaverse: the umbrella metaphor for all kinds of digital experiments pursued by artists, labels, and other industry actors, such as virtual concerts in digital environments or AI-generated artists who exist as avatars on social media platforms. Looking at the industrial investments in infrastructure, technologies, products, and services that aim to place musical artists in digital spaces, I examine two specific examples – Zero Pain and Spottie WiFi – to consider the labor implications for those involved with the projects and how digitization and virtual spaces have opened new opportunities for, and placed new demands on, musicians and their creative output.

2. Introduction

The disruptive potential of new technology is an enduring myth in the music industries. Whether it is a question of new formats (e.g., CDs, downloads, streaming), new means of production (e.g., analog studios, digital audio software), or new models for promoting and circulating music (e.g., retail stores, filesharing networks, subscription services, etc.), the recorded music industry is seemingly always poised on the precipice of massive reorganization fueled by the latest technology. While new technologies have certainly altered how the music business works, and have even ushered in new gatekeepers and institutional actors, the overarching dynamics of its traditional structure have persisted: larger companies (be they established record labels or newer platforms) continue to exert control over production, promotion, and distribution, while artists still struggle to be heard and fairly compensated for their work.[1]The full impacts of the continued convergence of the information technology and music sectors – both for musicians and for our experiences of music – are still unclear.[2]

We should not be surprised, then, that recent trends – like NFTs and the blockchain, the metaverse, and artificial intelligence – have reinvigorated narratives about technology's power to level the playing field for artists and provide novel business opportunities for the music industries.[3]There is a concerted optimism that these new technologies will bring more authentic connections between musicians and listeners, new forms of music production and community, novel ways to distribute and sell music, and the chance to disrupt power relations by giving artists greater agency and ownership over their own creative labor and output. There are also, of course, fears about how these new technologies may erode or replace the labor of practicing musicians and the many other workers that make up the music industries.

Accordingly, this article unpacks one of these new technological promised lands: the metaverse. Using case studies, it explores the financial and cultural investments in industrial infrastructure by various services and companies that aim to place musical artists in the metaverse and the different kinds of labor arrangements that emerge as a result. I explore how each case raises issues around who might be considered a musician, who has ownership over an artist's image and music, and what kind of additional labor artists and fans take on as they adopt new technologies. Ultimately, we can see how the metaverse has prompted investment and engagement in new platforms, services, and relationships. Artists and fans are required to further integrate their creative practices with multiple digital media channels, speculative commodity markets, and costly virtual spaces. These continue to support existing gatekeepers and increase expectations around how to create and consume music.

3. Music in the Metaverse

What the Metaverse Means for Music

The lockdowns during the COVID pandemic upended "live" events like concerts across the music industries.[4]Artists, concert promoters, and fans who had only tentatively experimented with social media watch parties, livestreaming, video game concerts, or other similar virtual performances were more willing to experiment as lockdown orders were extended[5]. As the return to live, in-person events remained unclear, many concert promoters, venues, social media platforms, and artists turned to virtual solutions, from livestream shows on social media to in-venue performances streamed on YouTube Live or Instagram.[6] There were also more involved efforts, like exclusively avatar-based virtual concerts or entire online music festivals. While virtual concerts, holograms, avatar musicians, and digital worlds for musicking existed well before the pandemic, especially in China and Japan,[7] these relatively marginal practices in North American and European markets became more commonplace as COVID-related shutdowns of large public events created an urgent need for alternate forms of live music presentation. In response, the music industries suddenly seemed to band around an emerging buzz phrase: music in the metaverse.

The metaverse is a complicated umbrella metaphor for all kinds of digital experiments using virtual worlds, augmented reality, and other similar technologies. The term has its origins in a 1990s science fiction novel,[8] but its recent revival comes most directly from Facebook's attempts to rebrand itself as Meta in 2021. Facebook, however, is not the only company to have invested in products, software, and other technologies to build a virtual platform on which all kinds of social activities, including musicking, can take place. What we see in the tech and media industries, then, is an incongruous collection of conceptualizations of the metaverse and what it means driving priorities, hopes, innovations, and services. This picture – that there is no single "metaverse" - is paralleled in the music industries. The existence of, and investments in, a slew of companies such as

promoters of virtual concerts (e.g., Wave, AmazeVR), open world video games (e.g., Fortnite, Roblox), 3D multi-camera video capture companies (e.g., Condense), online multi-user environments (e.g., Decentraland, Sandbox), and digital avatar creation companies (e.g., Genies) show just some of the ways companies are hoping to capitalize on the idea of the metaverse.

Much like the aspirations for music in cyberspace in the early 1990s, the discourse around the metaverse promises similar benefits. Musicians will be able to connect more easily and more directly with fans and listeners located all over the world.[9] The metaverse will enable musicians to collaborate and cocreate in new ways, generating new musical communities and practices.[10] Through NFTs, the blockchain, and other adjacent technologies, the metaverse also promises musicians greater agency and ownership over their own creative labor and creations.[11] Benefits extend to fans, who can take in a concert wherever they are, often for a fraction of the price of a traditional concert, and even participate in "backstage" and VIP meet-and-greets with their favorite artists.[12] For music labels and the businesses involved in the metaverse, new digital worlds promise additional opportunities for advertising, data gathering, and a near infinite amount of merchandise and related digital commodities to sell.[13] The metaverse, in these visions, is a win-win proposition for fans, artists, and music and tech companies alike.

While it is easy to critique the metaverse as a contemporary collective illusion – the latest iteration of cyberspace that promises more than it can possibly deliver – to do so would be to miss an important detail: the push toward music in the "metaverse" is driving significant financial investments in industrial infrastructure and technologies around services, companies, and initiatives that aim to place musical performances in digital, virtual, and augmented worlds and spaces. It also involves cultural investments in the very idea that virtual spaces, characters, or other metaverse services provide a valuable and authentic opportunity to interact with musicians and their music. These financial and cultural investments in turn create new and different kinds of musical labor for artists and fans; labor that includes new work practices around music making, production, promotion, distribution, and even new forms of affective or relational labor made possible by metaverse-generated interactions between artists and fans. Rather than be distracted by the question of whether musical experiences in avatar-based virtual environments measure up to "offline" ones, as so much of the industrial discussion around this topic does, the next section explores examples of music in the metaverse and what these suggest about future music industry developments. Music in the metaverse might be a mirage that never materializes, but the ways the idea of the metaverse helps direct financial investment, cultural ideas about technology, as well as hope and attention, point us to consider what live music might look like in a world where live performance at in-person events is just one among many modalities for musical experience.

Observing Musical Labor in the Metaverse

If the pandemic pushed the music industries to recognize the value of virtual concerts, then the metaverse provided a concept under which to organize the disparate pre- and post-

pandemic efforts that were taking place. To explore some of the possibilities and problems for musical production and performance that the metaverse presents, I turn now to two case studies: Zero Pain, a "virtual" musician, and Mig Mora, a hip hop artist who purchased and created a digital avatar named Spottie WiFi.

Given the range of activities, technologies, and environments that have been associated with the concept of the metaverse, there are countless cases that could be chosen, from video game concerts to musically focused virtual environments like Decentraland. Rather than concentrate on specific technologies or environments though, I have selected two cases that highlight the role of the "artist," and where the labor of building, marketing, and maintaining a digital avatar is on display. I have also chosen cases where the artists exist (or are primarily known) through their digital avatars, rather than artists who are already known musical commodities.

Unsurprisingly perhaps, the most popular metaverse musicians to date have been the avatars of global pop stars like Justin Bieber, Ariana Grande, Megan Thee Stallion, Travis Scott, and other big-name artists, who have put on shows that boast anywhere from five million to fifty million viewers, depending on the artist.[14] Given these artists' established fame and popularity, however, they offer less instructive cases for looking at the shifts the metaverse presents; for them, the metaverse is principally another distribution outlet in a larger strategic promotional plan. Instead, I consider two artists who rely primarily on their digitality and virtuality. The originality of their projects helps us understand the variety of metaverse experiences artists are pursuing and the challenges they are encountering in doing so.

4. Zero Pain and the People Behind the Avatar

Birth of an Avatar

Concerts featuring the popular artists noted above typically place avatars of the artist in virtual spaces and invite viewers to attend, and sometimes interact, as avatars either through virtual reality goggles or simple web-based platforms. While these shows bring popular musicians into the metaverse, major labels and independent producers are launching other initiatives to create metaverse-born artists. These are artists who exist solely as avatars, and who launch music on the internet via social media channels, streaming services, or within virtual spaces. In 2023, almost all the major music labels and entertainment companies, like Tencent, had some kind of virtual artist project on the go or had "signed" a virtual artist to their roster.[15] Rather than turning an existing musical celebrity into a virtual star, these efforts aim to build a virtual star from the ground up. Given the contentious place of artificial intelligence these days, in the music production process specifically and in the music industries more broadly, the labels involved in these

projects are quick to note in press releases that there are "real" musicians behind the avatars.16 The beats and songs are usually composed and arranged by human producers, but the imagery and the face of the project is typically the avatar. In fact, as we will see with Zero Pain, the metaverse still very much relies on many of the same activities, outlets, and infrastructures as traditional artists. In other words, it is a conceptual layer wrapped around more standard industrial practices.

A project of Universal Music's Italy division, the digital avatar Zero Pain launched in the fall of 2022. Zero Pain is associated with a musical genre known as phonk, which features a fusion of heavy electronic and synthetic sounds with Hip Hop beats. Although phonk had been gaining traction on TikTok, its status as music that seemed like the score for aggressive video games meant that many of the genre's creators were relatively unknown. Hoping to change this, the team behind Zero Pain created an anime-inspired avatar with jagged silver hair, exaggerated pointed facial features, and wearing a black facemask featuring menacingly sharp silver teeth. The angular imagery is echoed in the music, which fuses dark and clashing computer synth noises with relentless EDM and Hip Hop beats. Lorenzo Gessner of Universal Music Italy, along with Gabriele Di Giacomo, are credited as the "creators" of Zero Pain.17 Their work exists behind the image of the "artist," who is the visual face of the campaign on streaming services and social media.

Zero Pain, then, can be found in many of the same places as more traditional artists. The avatar's first single on Spotify appears to be from September 2022 (*Millennium Trauma*) and the second and third singles were released the following months (*Peccato* and *Aggro*). The most popular track, *Pizza Phonk*, has nearly four million streams while *Peccato* has just over three million at the time of writing. Fans can also stream the songs on YouTube or SoundCloud, and Zero Pain is moderately active on Instagram (@ihavezeropain), posting song videos and dystopian, futuristic computer art images. These outlets mirror the traditional ones used by many artists in the digital age to share their music with fans. Here, then, it would seem that the metaverse is less about the use of specific online spaces, and more about the presence of an avatar across a network of services used by its creators, in conjunction with their approach to coordinating how the artist appears in them.

A Collective Experiment

In terms of this approach, Zero Pain's creators are quick to note that the project is actually a larger virtual collaboration between them and the community members of a forum/server on the chat service Discord.18 The idea for Zero Pain emerged from discussions taking place on a general Discord server about Italian rap, which have since been moved to an invite-only forum specifically devoted to Zero Pain. Community members vote on various elements of the artist's career, including Zero Pain's visual representation and releases. Everything from artwork, song titles, artist biography, and social media presence is up for input from fans, creating an artist who, in theory, "represents the collective will of his Discord server."19 As Gessner notes in an interview with Billboard Italy, "This is a collective experiment, where people must feel an active part and fully identify."20 For Gessner, it seems to be as much about the process as it is about the project; a process that

involves coordinating a community in addition to creating content.

This kind of collaborative engagement and interaction with an artist is not entirely novel, even if the mechanics for crafting the image and sound of a virtual avatar may have the sheen of the new. Nancy Baym's research into digital technologies, for example, shows how social media and similar technologies facilitate intensely intimate artist-fan relationships, making fans feel invested in artists' careers and the decisions they make.[21] Similarly, in my previous research, I examined the release of Imogen Heap's album *Ellipse*, where she used daily video updates via YouTube to invite fans to take part in the song/album creation process. Using social media, she crowdsourced many of the marketing aspects related to the album, like her biography, album photography, and album design work.[22] She also maintained near constant contact with her followers via her social media feeds, building a community that would support the eventual release and sale of the album. Heap's "do-it-ourselves" collaborative approach even worked through compensation – such as expenses paid for the photographer's travel, access to concert tickets, and early copies of the CDs for certain fans – though many of the fans who contributed did so simply to be part of the project. Just as Baym details in her book,[23] Heap's approach shows the new forms of labor musicians are expected to perform to build and spearhead the communities that support them. While the initiatives Heap took helped finish the album and find an audience, they also show the physical and mental efforts involved in maintaining such constant communication. Fans, of course, also took on extra duties – not just as listeners and paying audience members, but as producers and collaborators.

The case of Zero Pain follows in this lineage. Audiences are similarly enlisted through a key social media platform (in this case, Discord) and work collaboratively and virtually to create the avatar that is the face of the music. Since Zero Pain's musical output is more reliant on computer programming than Heap's, fans are even more integrated into the musical production and decision-making process, choosing from a number of different musical options for each single.[24] Like a traditional artist, Zero Pain's image still requires tending and management; the social media feed still requires updates. This work falls largely to Gessner, in addition to his work creating and coordinating the responses and comments in the Discord server. There is also the more typical work of producing the songs and getting them ready for distribution. Given Gessner's role as data and innovation manager at Universal Music Italy, it is perhaps not surprising that a project like Zero Pain drew his attention. Much of Gessner's everyday work seems to take place at the intersection of gaming and music. Along with design and animation assistance from Gabriele Wiedenmann and Davide Armani, the team served roles similar to songwriters and graphic designers who create music and images for other, more traditional, artists to embody. Gessner and Di Giacomo also take on the also take on the added task of facilitating the management of digital assets and building the virtual story world for the avatar.

Gessner seems deeply committed to the collective process behind the project: "Even if virtual, it is this meeting of creativity that brings the best results."[25] Despite being a community effort, Spotify's metadata makes it clear that the songs and the project are

copyright of Universal Music Italy. It less clear, then, how the community that participates in Zero Pain's rising success benefits from any of the revenues the artist generates through the many plays on Spotify, YouTube, and Soundcloud. If the community's collective labor is primarily that of producing ideas for Gessner and Di Giacomo through votes and suggestions in the Discord server, it is easy enough to pass off as typical fan activity, and Zero Pain's success is simply evidence that a vibrant fandom exists around the artist. In contrast to Heap's case, however, there is no physical merchandise or experiences to swap with fans for the contributions they are making. A fan's relationship with Zero Pain is as virtual as the character itself. For Zero Pain's creators, the time spent making music is one small part of a much larger effort to curate an online community, and to facilitate and guide the decisions of that community in terms of the future direction of the avatar.

5. Spottie WiFi and New Economies of Music

Avatars managed across a network of social media sites and virtual concerts put on by established artists and traditional labels show one facet of metaverse activities. However, Zero Pain still follows an economic model that has supported other "virtual" musicians over the years, from Alvin and the Chipmunks to the Gorillaz (namely, profiting from the sale of recorded music). By turning to explore another virtual artist, Spottie WiFi, we see a different approach for generating value from musical labor in the metaverse.

The Best CryptoPunk Rapper

Spottie WiFi is often described as the "best (and only) CryptoPunk rapper."[26] Unlike the polished anime style of Zero Pain, Spottie WiFi is decidedly lo-fi; the avatar wears a baseball cap, a black T-shirt, and a gold chain, and has a design aesthetic reminiscent of 8-bit computer graphics. He has also got spots on his face and arms that give him his name and provide material for many of the rhymes in his hip hop tracks. Spottie is a different kind of collaborative creation from Zero Pain, and a different iteration of a musician's interaction with the metaverse. The Spottie WiFi avatar itself was algorithmically and randomly generated by code created by Matt Hall and John Watkinson, a duo of Canadian software developers and digital artists working under the name of Larva Labs.[27] In 2017, Larva Labs created over 10,000 digital characters, a collection known as CryptoPunks, and sold them as non-fungible tokens (or NFTs) via the blockchain: a decentralized ledger system that enables the exchange of virtual currencies and goods, allowing users to "own" unique digital copies. This sale of virtual CryptoPunks is often cited as a defining moment in the NFT art market, and responsible for hugely inflated values around digital collectibles at the tail end of the 2010s.[28]

Mig Mora, who grew up with aspirations of being a hip hop artist, ended up purchasing one of Larva Labs' 10,000 digital characters. Finding himself out of work as a result of the

COVID pandemic, Mora was looking for his next project.[29] Although he had been making cryptocurrency purchases since 2017, they had not yet realized their full value. After following the CryptoPunks work of Larva Labs, he took a risk and purchased CryptoPunk 5528 for about $40,000 USD, or 27 ETH (the digital currency associated with the Ethereum blockchain) early in 2021.[30] Although each CryptoPunk is unique, CryptoPunk 5528 is only one of just over one hundred CryptoPunks with spots, making it even more rare and distinctive.[31] Mora believed it was undervalued since it had "spots on it, but the spots add to the rarity."[32] While NFTs, cryptocurrencies and the blockchain are elements of a number of emerging metaverse environments (e.g., Sandbox, Decentraland), CryptoPunk 5528 would need more refining before being ready for the metaverse.

Inspired by his NFT purchase, Mora reunited with a producer he had worked with previously and began recording songs under the moniker Spottie WiFi. While Mora initially simply used the Spottie WiFi avatar in his own personal social media accounts on Twitter and YouTube, he consciously decided, as the project began taking off, to create a separate persona and accounts for Spottie. As Mora notes in an interview, "I made him my profile picture for my personal Twitter for a while. … But it was only a few weeks after I bought it that I wanted [...to] make him his own entity."[33] Later that same year, Mora and his producer released a seven-song album called *I'm Spottie* that he limited to 2,000 copies. Each copy came with an NFT, a vinyl copy of the album, and gave buyers the right to use the songs on the album in other media and keep any revenue that was generated.[34] The project brought in close to $200,000.[35] While this kind of limited sale event certainly does not create a stable or sustainable revenue source for Mora, these event-based releases with artificial scarcity create a demand among fans and leave them waiting for the next announcement.

The Promises of Decentralized Worlds

As a way to bring attention to the project, shortly after the album launch, Spottie performed at a concert in a virtual environment called Decentraland. Sites like Decentraland or Sandbox label their offerings as metaverses and allow users to take part in a variety of activities, such as social interaction, attending events, buying and owning land, and building experiences for other avatars in the game. These are user-generated worlds where most of the site is owned and operated by users rather than a development team. Recognized as DAOs, decentralized autonomous organizations – services managed largely by decentralized computer networks and making use of blockchain technology for financial transactions and other decision-making processes – Sandbox and Decentraland are more open versions of proprietary metaverse experiences like Meta's Horizons. Using cryptocurrency and blockchain technologies, users can buy pieces of land and start designing experiences on that land, like a concert or a music festival. These sites raise a number of issues regarding the speculative nature of digital space and what it means to own a plot of digital land. Decentraland and Sandbox are not only spaces for music and musicians, though musicians do perform there, and some experiment with selling music or music-related goods as part of their participation in the sites. The decentralized governance structure creates a kind of open-source ethos, but this also complicates the ability to

negotiate licensing agreements with composers, artists, and authors who may have the rights to particular musical works or goods. The promise of blockchain technologies for musicians – to automate the remuneration of all parties involved in the creation of a musical work – thus collides with the realities of complex and complicated metaverse environments that each seem to operate according to their own logic.

Decentraland has also been courting the involvement of musicians through its Metaverse Music Festival. The site has hosted several festivals over the last few years, featuring big-name artists including Bjork, Ozzy Osborne, and Soulja Boy. The free, four-day events even included gamified portable toilets.[36] Spottie performed a twenty-minute "set" at the 2021 edition, and returned to perform in ensuing years. The CryptoPunk has also taken part in other festivals, such as the Metaverse Fashion Week in 2023, and Mora now owns over one hundred parcels of land in Decentraland, on which he is proposing to build a gamified theme park, festival grounds, and a mall.[37] While Mora continues to make music under the moniker, his key activities are more akin to a stock trader or speculative investor; he is constantly scouting for, and acquiring, land and assets as he seeks to raise awareness of Spottie, and finances the project through the sale of digital collectibles.

Sandbox offers similar promises for musicians, and artists such as Hip Hop star Snoop Dogg have made investments like Mora's. Snoop Dogg owns land in Sandbox, which raises the value of the plots of land near his. He also offers users access to special edition Snoop-themed avatars and "skins" that can be purchased for their character.[38] Activities such as this have piqued the interest of major record labels. Warner Music Group struck a strategic partnership with Sandbox in 2022, promising to create a "combination of musical theme park and concert venue" to support in-world concerts and other musical experiences.[39] Oana Ruxandra, Warner's chief digital officer noted that: "As a first-mover, Warner Music has secured the equivalent of beachfront property in the metaverse. On the LAND, we'll develop persistent, immersive social music experiences that defy real-world limitations and allow our artists and their fans to engage like never before."[40] While they will likely aim to develop musical experiences that can be commodified, as Mora has, they also see the same value Mora sees in the land itself. With some reports suggesting that one user paid close to $450,000 to own a plot beside Snoop Dogg's estate,[41] it is perhaps unsurprising that after its partnership with Sandbox was announced, Warner Music Group's first initiative was not a concert, but rather the sale of digital lands adjacent to where the Warner Music Group's musical theme park and concert venue would eventually be located.

Spottie WiFi's efforts in Decentraland show how a digital avatar can move from social media-based metaverse activities on Twitter and YouTube (similar to those of Zero Pain) to metaverse performances in virtual environments (like Decentraland). These virtual spaces allow not only for the presentation and performance of recordings, but for a vibrant economy of NFTs and other digital goods such as outfits, digital songs, concert tickets, or clothing and other accessories for avatars. They also allow musicians and labels to invest more speculatively in land, or digital plots, within these environments, even if prices and the value of these digital holdings fluctuate drastically from month to month. As the case of

Spottie WiFi shows, the work of the musician in the metaverse involves a network of speculative and risky investments, like NFTs, digital land, and other digital assets that are ultimately tied to volatile cryptocurrency markets. The metaverse offers musicians and their labels the chance to be investors and speculators, with the music in these spaces becoming the value-added or distinguishing feature of their particular corner of the metaverse.

6. Music as a Metaverse Commodity

The two cases above showcase different iterations and interactions with the metaverse. Both artists, as digital avatars, exist in primarily virtual spaces, be it through traditional social media channels or through a virtual environment explicitly crafted as a metaverse. Whether it be Zero Pain's approach to virtual collective collaboration or Spottie WiFi's engagement with digital land and assets, each artist shows the ancillary activities beyond music that are required to participate in the musical metaverse. The following sections consider the implications of this work in the metaverse on music and the music industries.

As is perhaps obvious from the discussions of musicians as avatars, music in the metaverse suggests the increased intertwining with video games as a mode of distribution. Games have long been an outlet for popular music via soundtracks or games based on licensed music. Previously understood as "sandbox games" or "online gaming platforms," Fortnite, Roblox and Minecraft have all recently recognized the benefits of using the term "metaverse" to describe the service they provide.[42] These sites join spaces like Sandbox and Decentraland as virtual environments that support a variety of musical experiences. So far, the concerts in these game spaces are generally short and lack interactivity between artist and fans. But the power of these platforms to draw existing audiences, and the fact that these audiences do not need to adjust to or adopt a new platform, and are used to purchasing digital goods already, means that they scale much more easily – and profitably.

The cost of developing digital avatars or creating events in the metaverse is significant. While record labels and concert promoters are excited by saving on touring costs and being able to scale concert-goers to numbers far greater than any physical venue could hold, the production of concerts still requires teams of software designers and programmers to create and then maintain the virtual environment. The creation of avatars still needs designers and partnerships with graphic artists willing to produce new material, or at least curate any artificially generated images that are created. It is unlikely an independent artist or relatively unknown singer would be offered a partnership in these leading game spaces.

The reliance on game or game-like environments, whether well-populated ones like Fortnite or more niche spaces like Decentraland, means that artists are having to think of themselves as game developers or programmers, as coders responsible for building

platforms and environments where experiences can unfold and communities can emerge. Spottie WiFi and Zero Pain have different origin stories, but both require the creation and maintenance of an avatar and the community that emerges to support them. Just as Negus notes that the role of the artist is shifting from creator of content to curator of an experience, and music is becoming increasingly datafied,[43] Spottie and Zero Pain hide the creator behind the avatar and move the focus of the creator's labor to the production of the avatar, and the mining of value from digital data. Since many musicians may not necessarily have the tech skills of Mora or Gessner, there are new or additional intermediaries that artists need to work with to maintain their visibility in these spaces (i.e., companies that can help build this kind of immersive digital presence).

As Baym points out, while social media has brought artists new ways to get in touch with their fans, it has also brought added responsibilities for artists to curate a closer, more intimate, more authentic community with their audience.[44]By the same token, avatar-based musicians, like Spottie WiFi and Zero Pain, and the spaces they frequent, create expectations around the types of relationships that artists must maintain with their fans. Leading and maintaining a community in Discord, for example, or curating and keeping current a festival and mall space in Decentraland, are likely highly time-consuming activities for Gessner and Mora.

In addition to the new expectations surrounding virtual artists in these virtual spaces, there are similarly disconcerting shifts with music commodity, which in this context becomes a collection of digital goods around the experience of an artist. The decoupling of music with a physical format began decades ago as computers became primary devices for making, listening, and distributing music.[45] But the metaverse further extends the exploitability of the digital music commodity. It creates spaces where digital goods are sold seamlessly as part of the experience, whether it is a Eminem skin in Fortnite or souvenirs from a digital concert in Minecraft. Virtual music commodities are often exclusive to the gaming platform in which they exist (i.e., Eminem's partnership with Fortnite creates specific digital goods that are only available there). And, unlike a CD or T-shirt that you only buy once, these digital goods can be continuously updated, endlessly iterated, and repeatedly recommodified. Virtual concerts and worlds built on game logics and economics open up new modes of selling and profiting from music where the recorded music commodity is just one, and often not even the primary, way of interacting with an artist. The concert, the merchandise, and the digital souvenirs become part of the game or, increasingly, start to resemble one. Zero Pain's or Spottie WiFi's albums and singles, like those of so many musicians in the contemporary music industries, are available widely on streaming services, which users can access for free or for a relatively small subscription fee. With less prominence given to, and value generated from, the music, these digital assets offer a promise, however optimistic, of a return to more stable and sustainable revenue streams based on the exchange of goods rather than services.

Along with the sale of virtual goods like skins, emotes, and avatars, there is equal if not more excitement about the speculative transactions that allow artists or companies ownership of (supposedly) limited digital spaces within metaverse environments. Spottie

WiFi's project is as much a musical one as it is an experiment in speculative investing and the viability of cryptocurrency. Spottie is a musical avatar, but also a financial bet made by Mora and on which he saw substantial returns. The NFTs and licensable music that fans were able to purchase, along with Spottie's exclusive album, share those speculative possibilities with fans. Artists and companies buying up land in Decentraland or Sandbox are similarly making bets, less on the success of a particular artist and more on the ability to monetize a space, or an image, or another digital asset that will one day return dividends.

These experiments in the metaverse are possible because both music and tech companies have made significant financial and cultural investments in the concept. As music tech has emerged as a distinct sector of interest for venture capitalists,[46] there has been a push not only for technologies to support various iterations of the metaverse, but also for new economic models around profiting from popular music. Over the last few years, for example, a huge amount of financialization and assetization has taken place in the music industries more generally. Private equity firms and other Wall Street players like Blackrock, JP Morgan, Merck Mercuriadis's Hipgnosis Songs Fund, and Kohlberg Kravis Roberts (KKR) have poured hundreds of millions of dollars into acquiring the publishing catalogs of famous artists like Shakira, Bob Dylan, One Republic, Neil Young, and others.[47] Sensing these catalogs were undervalued and looking for further opportunities to introduce music into all kinds of new spaces, these companies are willing to bear the eye-popping price tags for the potential upside this intellectual property represents. Is it any wonder then that music in virtual spaces is becoming just as speculative as music beyond the metaverse?

7. Conclusion

As live, in-person, events resumed after the pandemic, many of the services, companies, and initiatives that were focusing on virtual events, avatars, and musical experiences either shuttered or had to pivot, leading journalists and industry executives to wonder whether virtual concerts would end as quickly as they had (seemingly) begun. Meta's own public backing away from the metaverse, with decreased investment in its metaverse division and less publicity around the concept,[48] also signaled that the metaverse was perhaps a passing fad. However, given the cultural and financial investments by companies in the music and tech industries, and by artists themselves, some iteration of the idea of the metaverse will continue to be part of music's future production, distribution, and commodification, as Eminem's recent experiment on Fortnite suggests.

The cases I have examined here provide an introduction to potential pathways into the musical metaverse. Whether it is the collaborative community curation required to support a virtual avatar like Zero Pain, or the speculative investing and commodification of rare musical experiences pursued by Spottie WiFi, both show the kind of work beyond that of making music required by the metaverse. While the experiments currently grabbing headlines (and audiences) seem to be larger virtual concerts with existing celebrities, it may be just as useful to turn our attention to some of the more substantial and complicated

examples of metaverse engagement that we see with the likes of Spottie WiFi and Zero Pain. The hype around the metaverse may certainly turn out to be greater than the realities that will play out, but ignoring the practices that are fueling the cultural and financial investments in these spaces means missing out on the novel forms of work in which musicians are engaging.

These experiments to create avatar musicians, stream virtual concerts, introduce digital goods and assets, and partner with metaverse platforms to deliver other musical metaverse experiences signal, at the very least, a recognition that some form of virtual interaction will increasingly be a part of broader musical experiences. The phenomenon may fizzle quickly, as speculative markets often do, or it may bump up against the ecological limits of technology; the vast amount of computing resources required to support not only the metaverse, but the blockchain, cryptocurrencies, and other related technologies, are very real concerns. Furthermore, the recent reinvigorated interest in generative AI is already creating new kinds of avatar-based entities in metaverse-related spaces, be it Decentraland or traditional social media platforms. These activities potentially eliminate the need for some of the very forms of work described in this article. As such the efforts and initiatives to get music into the metaverse – whether by big labels or independent artists – are, at the moment, highly speculative experiments. But speculation has always been at the core of music as a commodity. Predicting the success (and profitably) of any artist is the fundamental guessing game on which the music industries are built. That game has always favored bigger players with deeper pockets, rather than the smaller players experimenting at the margins. The metaverse may provide more space for artists like Mora to experiment with alternative ways of being a musician, but we should also not be surprised if labels and other larger industry players are moving to ensure they own a piece of the lab in which these experiments are taking place.