

# **Analysis of Electronic Music in the Space of Both Natural and Public Perception**

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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## **Introduction:**

Electronic music has become the new medium of which humanity has intertwined emerging technology and their longstanding love of music. Music is ingrained as a product of thousands of different frequency signals all colliding in frequency space. Music is one of humanity's greatest cultural exports, being able to express our deepest thoughts and feelings often better than any basic language can. Music software has not only broadened this aspect to so many people, but has forever changed the way that music is made and consumed as a whole. Music has continually evolved, but still serves the same purpose as it did when humans initially started performing rudimentary songs with each other. My research question is how exactly these newer musical systems have not only changed how we make music, but our understanding of it as well. We can perceive partly how both our perception of music as well as social and cultural aspects of our society have changed by analyzing the music industry. We can understand exactly how this still developing industry is understood in the general public, and how we associate music with those that listen to it, by looking into the evolution of music and seeing similar patterns emerge during its history. First, music will be discussed in its place in society, then how technology has emerged which has pushed the music industry to evolve, then electronic music will be discussed in how it emerged and its similarities to the past can be seen.

## **Methods:**

I researched this topic using Actor-Network Theory to establish and analyze the relationships between the greater public and the music industry, focusing on professional musicians, music students, music teachers, the music these groups produce, and the technology these groups use to make it. I studied the relationship between the music consumer and music producer, with both parties impacting the process the other uses. Humans, music, and music technology are important actors in this network, with them constantly developing different relationships through the continued advancement of all parties due to the others. This relationship continues to change, with both new artists entering the field and the public's

perception of music changing. With technology for music becoming more powerful and impactful day by day, these two groups become even more intertwined as music becomes easier to produce and easier to consume.

### **Music as a Part of Society:**

Music is often the backbone of cultural expression, regardless of the other central components of that culture itself. Music forms a basic foundation of emotion that members of a culture can share together without a spoken word (Knight, 2012). While positive emotions can be expressed through upbeat pieces, the same form of emotional communication can be made with sadness or relaxation with a slow or somber piece. This emotion can often come from the instruments themselves, made of materials often plentiful to the area or of great cultural significance. This connection to an artist's culture helps tie the themes of a piece together and create an even deeper understanding of the artist's emotions.

This cultural significance goes beyond indirect association with the pieces themselves, as many songs form part of the background of the time period that a culture might be in. Songs singing about fun times and happiness with friends, along with songs consisting of deep sadness, remain forever in history as directly representative of the time they were in. Music can easily unite and create bonds between individuals that would otherwise be very different, as a shared connection through the emotions expressed in their favorite forms of music can connect any individual. These are all reasons why it is so important to analyze the advent of technological music and the software that produced it.

### **Results & Analysis:**

Electricity used in conjunction with music production has a long history dating back to the 19th century. The phonograph first started being used for both music production and consumption in 1878 (History of the Cylinder Phonograph). From there, more advanced forms of music production emerged. Recording devices such as microphones and amplifiers and listen-back devices like headphones and tape recorders were developed over the years to

further allow music production to reach greater heights. As these technologies improved, music moved away from live productions and towards recorded productions, especially as better recording practices and technology allowed for longer albums and productions (How the Ability to Record Music Changed the Music Industry, 2019).

The genesis of this new form of music production was a slow one, but for many individuals, the convenience of being able to listen to music at home easily was too easy to pass up on (Taylor, 2001). Styles of music changed as well, with the additional introduction of the radio changing the length and tone of the individual songs themselves (McKinney, 2014). Professional musicians that were focused on making a career as well as expressing themselves through music were challenged with producing songs that both worked well for the radio and worked as a piece within the set of songs it was meant to be a part of.

Some of the music technology that emerged during this massive evolution of technology not only changed how music was recorded or listened to, but changed what music could even sound like. Early synthesizers were able to consistently create industrial, machine-like sounds that were easily reproducible, but did not create new genres in their limited form (McNamee, 2010). For that, “electric” instruments, in their colloquial sense, created a variety of genres. As the sound of these new instruments was stranger than audiences were used to, they were often used to create an ephemeral sound that was meant to be “weird”(Holmes, 2020). It required a significant period of growth and acceptance overtime for these instruments to be used as a primary sound source in more popular genres including rock and metal. These new genres were especially held together by the electric guitar, with its new sound being popular with radio-heavy cultures. Other electronic devices that emerged afterward included the keyboard a few decades later and a variety of other acoustic or percussive instruments that wanted the change of sound electricity had already given to string instruments. These new technologies were not just limited to mimicking already made instruments. Devices such as digital samplers allowed any sound to be turned into music, and through experimentation allowed them to be turned into true

instruments. Vocoder allowed for the most human sound, our own speech, to be both turned into an electronic sound as well as crudely mimicking our voices. By far the greatest change in this audio landscape is the modern synthesizer, a much more versatile device than its earlier predecessor that could stand on its own as an instrument. The control that this device gave to music producers over every aspect of a song was nothing short of revolutionary. It would not make sense to list off the genres that use it as before, as it quickly was adopted into almost every genre you could fit it in. It only makes sense that the tools to make music in the same, easily playable manner would flow in the same vein.

After the radio, more technology was created to make listening to music even easier. Music became a greater part of society's everyday life as music listening became more common, with advancements ranging from the cassette player to mobile phones. It has already been discussed how culture was already tied with music, but music had become something that was an ordinary part of your day, instead of a rare chance to deeply appreciate an art form. Just as radios before did, current forms of music listening and streaming have changed the soundscape of what to make and what music is profitable. Online platforms have only decreased the length of songs and increased the need to be "catchy", even more so than the radios before them (Zandt, 2022). The internet wove audio and visual productions together, and the rise of YouTube being a primary reason for a reemergence of the music video after years of dormancy (Shaffer, 2020).

### **Perception of Electronic Music:**

As previously mentioned, music almost always either gains part of its character from the instruments the music is played on, or the public's perception of the instruments themselves (Barton, 2018). For music heavily produced from these electronic instruments, it is an extreme case of both (Toiviainen, 2007). Genres range from light tech influence, such as early hip hop, to genres with a much heavier influence and use of tech, such as metal, with some genres such as the aptly named electronic music being produced in a purely digital form. Entire songs can be

produced in an entirely electronic sense, and it gives a whole different meaning and feeling to the song itself. There is no longer a “natural” reverberation of air or percussive material to create a sound, it is purely an electronic signal. There is no longer a human “producing” the sound by performing some physical action, only by pressing the keys for the computer to create it. It is totally alien to all other forms of music that have been developed by a multitude of different cultures of millenia. It is then curious why some individuals, especially as it has become even more popular over time, prefer it so much more greatly over all other classic forms of music production.

One reason electronic music has become so popular is because electronic music has elements of self-expression that cannot necessarily be easily replicated by traditional forms of music. As much as humans can physically practice an instrument and a piece ad nauseam, the most “perfect” version that is kept in recording or performed is still rife with what the performed would consider errors on their part. For some, this greatly improves the experience of listening, especially to an artist they feel close to. Extended studio albums with various forms of the songs in development are consistently sold to super fans of an artist, partly because enjoying the making and “mistaking” of their favorite pieces lets listeners enjoy newer versions of the song, along with letting them approach songs from a different perspective. Even the physical technology itself can lead to mistakes and imperfections that become synonymous with the medium. Just as the exposed film reel is elicited in movies for emotion, the crackling of a record player or reel of a tape recorder is still a part of modern music culture, with artists purposefully using the sound to establish a mood in their songs.

Electronic music can be literally perfected to what the producer wants, given enough time and meticulous effort. For many performers, this is strangely negative. Music is a part of culture because of the human element, including the way that a human performs, which includes a lot of small things such as the minute errors that give a performance character and life. Perception of what these “small mistakes” sound like in an electronic music soundscape

lead to strange misconceptions into what music is “supposed” to sound like. If mistakes are included in an electronic piece for anything other than a purposeful act by the producer, which could be argued as not even a mistake in the first place, then it is perceived very harshly by the listener, and for good reason. In the age of total control over the production of your personal soundscape, mistakes look like the artist simply simply didn’t care enough about their own music output.

Electronic music is the product of signals and systems they were constructed from. Electronic music, when compared to a traditional set of instruments, is often a louder, more busy, environment, with the analog signals of traditional music being combined into a digital landscape (Emmerson, 2017). The public’s perception of electronic music pushes it even further, with most people looking at the complicated apparatuses being used to make such pieces with a strange eye, perceiving electronic music as a unique subgenre not suitable for most individuals (Cannon & Greasley, 2021). This is only exacerbated as a problem by the general public when the listeners of this music are mostly younger, a similar trend to all relatively younger musical genres, that heavily contrast with the more mature audiences of most common musical genres, including classical, classic rock, jazz, country, pop, and other long-standing pillars of musical genre history. These attitudes are certainly reminiscent of metal’s surge in popularity during the last part of the 20th century, and even jazz’s emergence from New Orleans during the beginning of the same century.

With these comparisons in mind, it is very easy to see some part of the puzzle when it comes to public non-understanding of this genre. At the time, jazz was a revolutionary genre that changed music forever, and is certainly a stepping stone in the development of the musical industry as a whole. Jazz was mostly not in your face, but it allowed pieces with high energy to be shared with the audience. While classical music has pieces bursting with energy, they are often an expression of the composer and the conductor. With jazz, that energy is spread throughout the band and the halls in which they are played. As rock developed in time with

technology, these same attitudes were felt again. While rock and its more niche, similar genre metal were much more audience driven in a different way than jazz, it's hard to deny that it has similar parallels with the advent of jazz. With both of these movements being filled by youth culture, it is even easier for the general public to not so easily accept them as an established part of society. These attitudes faded over time, with jazz now joining genres such as classical that are seen by the general public to be "antiquated", even as the two had initially been compared as opposing musical genres.

Electronic music has had a similar form of creation life cycle, with it emerging in a slightly, more modern way. As the rise of the internet promoted song sharing, electronic music was a perfect fit for it, given the types of music being shared and its intended audiences being very similar. As this was still emerging tech in American homes, it was primarily used by youth, the same demographic that was trying to find a cultural identity that matched this upcoming, uncertain future (Taylor, 2001). This early form of online media was seen by many as a harbinger of what was to come for the future of the internet, due to the rapid nature of its acceptance and ease of acquiring new music compared to older methods, and electronic music played a hand in that, as a "different" form of music that not many were used to. Combined with the technological limitations of the time promoting music with features commonly found in electronic music such as compression issues and download speeds, electronic music and other late 90's-early 2000's similar genres thrived.

Electronic music continues to thrive in a variety of spaces currently, with it being especially adopted in bar and nightclub settings, where its immensely high energy is great for setting a very specific mood. Culture began to be created around electronic music itself instead of the opposite, with rave culture becoming synonymous with the 90's. Shows became popular with frantic and fantastical light displays being used to accompany the equally stark music. DJ's became recognized as artists as both their producing skill and talent during live performance when adding their own flavor or working with the audience was seen to be a very important



artistic skill. A variety of subgenres continue to form, perhaps the most of any singular form of music, as for the most part electronic music is simply just a form of medium in which the artist can imprint their own sound.

This same culture definitely does not help its perception with the general populace however. Even as some electronic music takes plenty of top spots on the charts, even if many of those being mostly pop songs with light electronic elements, some are still adverse to making the genre more mainstream. Just as the “look” of metalheads may dissuade individuals from initially being interested in becoming a part of its culture, a large number of people would be equally able to dismiss most heavy electronic music listeners as “different” enough to not want to associate themselves. The aggressiveness of the clubbing scene, with stark lights and a close-up collection of people, is equally reminiscent of the stylization of rock. Drug culture is also immense in the scene, with “uppers” being used heavily to maintain the party atmosphere and mood (Jenkins, 2013). This is not to disparage the use of such drugs, moreso to state that these drugs are more connected with this scene than any other, including mellower drugs in jazz and harder substances in rock and metal (Olsen, 2019. Erickson et al, 1996). The type of culture can also influence how electronic music is accepted as a whole. Just as northern Europe adopted heavy metal and is now the largest producer and listener of it in the world (Dempsey, 2021), central and western Europe adopted electronic music heavily, with France often being called a hub for it around the world (Petridis, 2019).

### **Importance of Digital Tools:**

The sound of the music itself is not the only important aspect of technology's impact on a soundscape. The tools that digital music production provides are applicable to all genres of music, from beginners to expert musicians. As the tools that are required are already part of your daily life, such as a computer or even a phone, it allows those of a lower socioeconomic background to approach music in a much easier way. Tools for being able to make music have only gotten cheaper over time, with common programs like Audacity and GarageBand being

widely available and easy to use, with vast amounts of information online on how to use them. This is not to say that these “common” items are neither essential to music making nor are they obtainable by those of a lower socioeconomic status, moreso that they are still much more commonplace in one’s life then the extravagant equipment that was needed to perform these functions before.

As music making tools become ingrained in our other devices, it makes it so less indirect technology needs to be bought, such as an instrument. While a computer or phone may not be within the price range for someone of a lower socioeconomic status, it is still a much more sound purchase than an equivalently priced instrument. As this becomes less of an inhibitor to making music, it promotes a wider range of genres to be able to shine in the light at the forefront of music evolution. With pop, rock, and country defining American musical culture, it is no coincidence that these were primarily genres of music that were made, performed, and listened to by those able to partake in this art form. At the same time, this is used as a vast critique of these forms of music, with them often being attributed to a “corporate” sound, lacking character and spirit, but still being able to make money because of how large the genre of even the artist themselves are. This is a much less used critique in genres with a much smaller listening base, including older genres such as classical or jazz, ones that are supported by both creators and listeners that are, as a whole, much more invested in the nurturing and growth of their genres.

With the introduction of music, individuals that are a part of these smaller genres can grow even more easily than before. While electronic music is not the most underground genre, it still helps immensely for it to become more well known and appreciated by a larger number of people. Technology allows for individuals to become even better at self-expression, and to share the music that they have made online, only further strengthening and growing these communities.

Digital production tools also greatly simplify the learning process, as while older music making software was an archaic process of endless command line scripts, newer music

production software is often a great combination of more understandable user interfaces. These tools also offer lengthy tutorials explaining the software's often limitless features, and an explanation of the music terms and symbols used (Liu, 2021). Tools such as digital audio workstations have become more streamlined to use over time, with protocols such as MIDI allowing for a variety of different tools being able to talk with each other. Modern digital audio workstations are expected to have the ability to produce a variety of virtual instrument sounds, loop and trigger samples at a specified time, time stretching, and live manipulation of sequences to remain competitive in the market (Early Daws: The Software That Changed Music Production Forever, 2020).

### **Discussion:**

Electronic music, and the technology that fuels it, can be and has been seen to be a positive influence on both the music and art environment as a whole. From online groups encouraging a variety of self-expression reminiscent of jazz houses and house clubs, to its rhythmic nature being fit to work extremely well with new forms of technology, it makes a lot of sense why it has become so much more popular, if not mainstream, in the past two decades. Similar to jazz, electronic music is not necessarily a genre within its own, more so a framework to use to apply one's musical ideas to form their own pieces of music with their own self-expression. The technology that we have invented over time has helped this immensely, with it doing a variety of things to help ensure that all can create and listen to music. From bringing it to one's home, to creating new instruments of self-expression, to making it a bigger part of your life through car radios and online music sharing, to reinvigorating existing genres through breakthrough enabled by technology and newcomers in the genre, technology has impacted music in possibly the greatest way in the history of music making, an art that goes back through almost our entire history.

Electronic music still has a long way to go to be better adapted to the general public. Its high energy levels, only rivaling those of genres such as power metal, are off-putting to a large

number of people, and also make it so that it is not the most applicable music in a variety of circumstances, in the same way that is a large reason pop music is so big. In spite of this, it still manages to preserve due to the identity of the music not being found in any other genre, with anything from hard bass rhythms to powerful synths being characteristic of what makes electronic music unique and special.

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