Unveiling AI's Impact on Music Production: Enhancing Creativity or Diminishing Artistry?

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Probably the most memorable and the biggest scandal involving artificial intelligence (AI) and the music industry happened in April 2023. Many people are familiar with the outrageous song “Heart of My Sleeve”. The anonymous creator known as Ghostwriter released a song with AI-generated voices of Drake and The Weekend. The song was so good at mimicking the vocals of the artists that it immediately went viral. Typical musical artists´ aesthetics were copied too. That is why it was so hard to tell whether it was the original song or not. Many internet users were deceived into believing that it was originally created song. It was in a short period of time removed from all streaming platforms by Universal Music Group.

This incident revealed the flows of the legal system regarding the AI and music industry, which created a wide field for debate. It showed the potential danger for musicians and created an ongoing discussion about AI becoming a substitute for real songwriters.

I tend to believe that the balance between AI and human artistry is key in this area. But it seems that this balance has already been jeopardized. AI only continues to advance human creativity, which brings a question of saving the soul of music production.

Music creating industry consists of four essential steps and none of them can be skipped. *(Bruns & Long Lingo, 2024)* It is a pretty conventional process of creating, producing, distributing and finally supporting music. Nowadays AI is present throughout all the steps of music creating industry. It would be a mistake to concentrate solely on one or two of these steps. While I was deeper going into music creation, it appeared to be obvious that all these primary activities combined with AI create a new completely unknown and unregulated ecosystem which might seem not immediately evident. In this paper, I aim to show how exactly AI is changing this industry through the newly born ecosystem.

It is hard to determine whether AI is changing the existing music industry ecosystem into a more interconnected and efficient one or it is creating a new one based on existing. I will stick to the point, that AI is only being integrated into the

already existing system and altering the functioning of every step within it. Let´s look at this closely.

Every ecosystem creates value. In our case, the result of this might be the music itself, live performances or even the emergence of new artists. With AI integration into a traditional music industry ecosystem, as a main result, we have interactive performance, music discovery, innovation in music style etc. Essentially, AI has the potential of reshaping the whole industry and transforming human impact on creativity. That represents the main novelty of AI in music. The computer utilizes personalization to create fitting content for a specific person. At the same time, it always tries to use human resemblance to make human-like output.

Another crucial criterion of every ecosystem is efficiency. Inefficient systems are not able to survive for a long period. In our ecosystem efficiency is being reached by optimisation of different steps. The main manifestation of AI efficiency is at the production stage. Creating music is very much simplified with AI-driven tools like Amper Music and LANDR. These platforms are capable of generating beats, melodies and other components of music, removing unnecessary sounds and noises, which removes unnecessary burdens from musicians. Although it can dehumanise music if overused. This negative aspect will be discussed later.

At the distribution and marketing stage, AI performs actions that facilitate the delivery of music to the audience. Platforms such as Spotify and Apple Music embed AI tools to create personalised playlists, where AI renders social media and selects the right content for each listener. AI is also collecting statistics and calculating future trends in the music industry, which reduces costs and saves time for music corporations when creating their strategy. All of these and many more aspects of using AI in the marketing process create the opportunity for labels and musicians to reach a wider sampling of audiences and provide an opportunity to reduce costs financially and time-wise.

What might be one of the most important elements in this ecosystem is the data and knowledge that are being fed into an AI to be processed into new results. Such activities as the identification of trends, production of the next hits or creation of the next big star all rely on previous data through machine learning. However, it is the most questionable part of AI use in the music industry. Is it ethical to base machine learning on existing music compositions? Does it require a formal confirmation from the composer or not? This creates a new discussion in the field of intellectual property rights. Intellectual property itself should be

separated from copyright in the compositions from copyright in the sound recording.

For instance, let´s look at the British copyright law. According to the law, to be protected by it, sound recording can be created or generated by AI. It would make no difference. Although it is different for song or lyrics. It must be original to have a law protection. *(Clifford Chance, 2023)* This distinction shows us the complication of the ethical part in this area. The ambiguity must be taken under control by legislators. Plus, the use of existing music for machine learning must be taken into account, since at the time there are no boundaries present in this area.

Overall, the use of AI in the music industry has tangibly increased its effectiveness, especially in the marketing phase. However, things are not entirely clear-cut, as in the realm of production, the use of AI undermines intellectual property rights and creates the basis for creating a balance between the presence of AI and human input in music.

AI can be used not only for music production, distribution or marketing but also for live performance. This way of using AI might not be that broadly adopted yet. However, denying it would be a mistake. Live-performed music since the creation of musical art is beloved by people. The main goal of all concerts is to experience the masterpieces of your favourite performer in person. And the use of AI here can be brought into question. Nonetheless, this use of computers must also be tackled. The music itself is an art that can and should be notated. When we see a performer on stage, all of their actions with musical instruments are guided by notes. While some improvisation is possible, musicians will usually stick to the main key and main tones of the composition.

If we want to implement AI in a live performance then the computer needs real human guidance, that will lead the machine in the right direction. As it was proven in an experiment by Roger Dannenberg, the computer by definition is not associating itself with a performer on stage. It means that duet scenario with AI, the machine would create music by itself just taking into account human input. It is still possible to teach the machine to associate itself with an ensemble or a performer. But even if so would be done, the machine still would need to know who of the performers, if such are multiple, to follow. And situations, when on stage is being present only one individual is quite rare, which makes the use of AI on stage controversial.*(Wang & Siau, 2019, p. 3)*

It remains that the use of AI in live performance is possible and will be used inevitably. However, it can take a long period of time just to master machine learning and get from the computer melody that would complement performance. Therefore a question of expedience of this might be stated. Furthermore, live performances will always remain the unique and only possibility for the audience to witness the live version of their beloved musical compositions. That is why performance with AI´s help might be not that popular. What is the uniqueness of such concerts then?

Coming to an end, let´s mention the main negative sides of AI use in the music industry. There are certain things that AI will probably never be able to achieve or at least for now it is far from perfect. Usually, it is some subtle details, which the human brain pays a lot of attention to. I underlined the two most prevalent ones.

Firstly, the emotional side of music should be mentioned. It seems to be the most controversial one because even humans perceive emotions differently and uniquely. What for one person might stir feelings, in another won't evoke any emotion.

Musicians infuse their creations with lots of nuanced details, which are often perceptible only by the real admirer of the artist. For AI emotions reduced to change in tempo and key. When a song full of sorrow and sadness is being created by AI, it is based on a slow tempo or/and minor key. On the contrary human brain is not choosing predefined parameters to fit into a cliché of sad music. The creativity of the human brain can bring to life everything, even a sad song, which might not be slow and melancholic. This aspect of AI will probably never be overcome.

The emotional aspect of music is usually not that obvious. Music evokes emotions not only by the context of lyrics and the sound of a melody. Music cannot be separated from its creator. The public will always sense the difference between AI-generated voice and the voice of their beloved artist. A good example of this is the outrage of Beatles´ fans, when Paul McCartney on the radio broadcast created confusion by saying that “he would use artificial intelligence to create the final Beatles song, including vocals from the late John Lennon”. The idea of bringing live the AI-generated voice of John Lennon brought a wave of resentment to the audience. Later, the singer had to clarify, that “nothing has been

artificially or synthetically created". AI was only used to clarify the recording of stems of Lenon. This example brings the question of the authenticity of AI and once again highlights the limitations of AI´s genuine creativity compared to human´s. *(Billboard, 2023)*

What is often overlooked is the connection between quality and quantity. Often AI does not achieve the purity of sound and perfection that is inherent in human-made music. Superfluous notes, unnecessary noise or transitions are not uncommon in computer-generated music. This is also compounded by the casual simplicity of the sound and the lack of musical sophistication. The obvious positive side of this is the amount of content that can be produced. No human brain, even the most brilliant, is capable of generating the amount of information that AI is producing. This gives a big head start to the computer and will allow it to get a small period ahead of human intelligence.

However, this advantage can't last long as the public sooner or later will get tired of the monotony and simplicity of musical works, they will demand something new and unique. Man is capable of hearing and feeling the absence of the human. Modern music, although it is saturated with monotonous beats and chords, always has a particle of the composer himself in it. Often fans know the details of composing and can recognise the signature style of their favourite artist with accuracy. It is not for nothing that videos, where the musicians themselves take apart the written music in detail, are gaining popularity on the Internet. The audience is pleased to understand that the content they consume daily was painstakingly created in small pieces. AI, on the other hand, is not yet capable of giving this to the audience. Human-made music gets the response of the audience from very deep levels, whereas AI excels in quantity.

AI is changing the process of music creation and bringing innovations that have the potential to revolutionise the understanding of the music ecosystem in general. AI has managed to have a positive impact on music, for example, in terms of production and marketing. But it, in any case, leads to ethical and copyright issues, and the emotional side of music will suffer.

AI creates opportunities and threats in equal measure. The balance between human creativity and computer intelligence should always be a consideration. However, sometimes the use of AI is questionable. Mainly we are talking about live performance and the use of AI as a participant on stage.

AI calls into question the very notion of creativity. It is undeniable that AI will only continue to evolve and increasingly influence the music industry while posing many threats to both intellectual property rights and musicians. The music industry needs to be careful about the integration of AI and always prevent the potential loss of human creativity in music.

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