

If technology is the future of music where are the aesthetics?

Before one can begin to discuss the above statement one must arrive at two understandings in regard to the key terms 'technology', 'music' and 'aesthetic'. Firstly in what contexts are these terms being referred and secondly how we can relate them within these contexts. A context can be established immediately by the concatenation of the terms 'music' and 'technology' to create the term 'music technology'. During the last century the term 'Music Technology' was often used when one wished to focus on those forms of technology involved or associated in any way with the musical arts. In more recent years however, the subject of 'Music Technology' has more commonly been identified with the use of electronic devices to facilitate playback, recording, composition, storage, and distribution of musical works. In the late twentieth century it was the increasing availability of such devices that gave rise to new forms of music creation and new types of artist. However, despite an ever increasing technological power, as we have moved into the 21st century, there have been no major changes in the genres of music we compose. Today with so much emphasis devoted to increasing our technological power should we now start to ask ourselves, where was the aesthetic in our actions and why have we come to expect so much from technology in music?

In layman's terms the science of aesthetics refers to the method of examining what makes something beautiful. If something is said to have beautiful characteristics it will provide a perceptual experience of pleasure and satisfaction in oneself. Our Judgement of an aesthetic therefore relies on our ability discriminate at a sensory level. It is important to mention at this stage that the study of aesthetics is often used as a synonym for the philosophy of art. One may argue at this point that this is a subject area that is far too complex for the purpose of this discussion. However, music is after all a form of art and the author feels it is critical to this article that a basic understanding of the aesthetics of music in regard to the arts must be established. In a musical context, aesthetic characteristics of music often include volume, dynamics, resonance, timbre and harmony. This therefore leads to suggest that over time as musicians have received more technological power there has been an increase in the aesthetic potential of music.

The pursuit of investigating the directionality that new technology can bring to the musical arts can be rooted in the works of French composers in the post war period. Most notably the work of Pierre Schaeffer, pioneer of 'Musique Concrète', a

musical practice of creating music from real world sounds as opposed to traditional instruments. It was during the 1930's working as an engineer at Office de Radiodiffusion Télévision Française (ORTF) in Paris that he first began experimenting with the manipulation of recorded sounds using turntable technology. In 1949 Schaeffer founded Groupe de Recherche de Musique Concrète (GRMC) with fellow composer Pierre Henry and after gaining official recognition from ORTF they were awarded a new recording studio. This was of great significance because the new studio included a tape recorder, a piece of technology that was now becoming commercially available. The functionality of the magnetic tape recorder allowed for a much greater manipulation of recorded sound compared with that of turntable technology. Magnetic tape could be cut and spliced from one end to the other, creating circular loops that could be played continuously on reel-to-reel playback machines.

The fact that Schaeffer was an engineer by trade who later became a composer suggests that manipulating sound through the use of technology had aesthetic qualities in common with that of the arts. Pierre Schaeffer famously highlighted a cross roads that art had reached in an era of high technology: *"Either technology could come to the rescue of art, or the ideas of science and technology could be adopted for use in making art"* (Timothy Dean Taylor, 2001). A possible explanation for Schaeffer's actions can be related to the explosion of modernism during this period. Modernism emerged at the end of the nineteenth and beginning of the twentieth century and is used to refer to the political, cultural and artistic movements that were strongly influencing western society. In modernism the re-examination of all aspects of society was encouraged with a particular emphasis on rejecting tradition and history. The thought of modernism acknowledged the power of human beings to improve and reshape their environment with the aid of science, technology and practical experimentation. This therefore leads us to believe that Pierre Schaeffer's transformation from engineer to composer was heavily influenced by the philosophies proposed by modernism. His experimentation with new technology was used to create a new form of musical composition that rejected musical tradition and that had no apparent historical references in the musical arts. An important feature of Schaeffer's music was that it was not confined to having a sense of tonality. The term 'Atonality', which describes music with lack of a tonal centre however was not unique to Schaeffer's music. It is an aspect of music which modernism had explored previously, most famously by the works of Schönberg.

Schönberg was a composer originally from Austria who's compositional style heavily involved the use of tone rows, in what he called 'dodecaphony' or 'Twelve-tone technique'. Similar to Schaeffer, Schönberg also followed the modernism approach of rejection. In creating 'Twelve-tone technique' Schönberg rejected tonal harmony, a hierarchical system of arranging musical works that had directed musical composition techniques over past centuries. Schönberg believed that in doing this he had invented a new approach to organizing sound by using twelve-note rows. In 'Twelve-tone technique' all twelve notes in the traditional western chromatic scale are given equal importance, and pieces avoid being in any key.

Despite Schaeffer's apparent technological advantage, what separates the arrival of 'Musique Concrète' from Schönberg's 'Twelve-tone technique' is where the start of the compositional method is rooted. In traditional forms of western music, the compositional process commonly start with an abstraction then musical notes are committed to a score, which can be converted into audible music later via an instrumentalist. What was unique about the 'Musique Concrète' form of composition was that it focused on placing the root of the composition in the 'concrete' sounds. After experimentation of these sounds through technological manipulation they can be abstracted into musical composition. If we take technology out of the equation then this is the only aesthetic difference 'Musique Concrète' had in comparison to Schönberg's Twelve-tone technique. The obvious common aesthetic being that they both strive towards being groundbreaking and avoid compliance with traditional musical aesthetics. We therefore have to look under the surface though to see the major shift in aesthetics taking place.

It is only here one can realise the importance of technology in the creation of potentially new musical aesthetics. An important clue is given in the way Schaeffer described his process of manipulating recorded sound before he could abstract them into a composition. His use of the word 'jeu' which is from the French verb 'jouer' describes the process of one gaining pleasure from interacting with their surroundings. This proposes that the way in which Schaeffer was experimenting with technology had very personal aesthetic qualities. Another clue is given in the fact that similar to its English equivalent 'play', the term 'jeu' can also mean to operate an instrument. Schaeffer's experimentation with technology to play sound can therefore be said to have similar aesthetic characteristics to that of a traditional musician practising their instrument.

Both Schönberg's and Schaeffer's work can be placed under the category of serious music or art music as it is more commonly referred to. Music of this nature is distinct from traditional music or popular music because they imply advanced structural and theoretical consideration. During the 1950's the gap between popular music and serious music widened significantly. The introduction of new electronic instrument technology proved a somewhat traumatic experience to the large majority of composers who were very familiar with existing analogue instrument technology. While popular music continued to be the music favoured by the masses, serious music became confined to academic institutions. Etzkorn (1982) explains: *"Distinctions between serious and popular music typically elaborate assumptions about aesthetic norms. Serious music is assumed to be aesthetically more complex or satisfying than popular music. The sheer numerical preponderance of a style, called 'popular' because of its quantity, is not expected to be able to attain the musical quality of the less frequent, or less popular, serious forms. (p. 564)"*

Despite this distinct gap between the two genres new electronic recording technology had no problem finding its way into popular music practice. Widespread use of electronic technology in popular music recording studios therefore became very common. Previously mentioned in this discussion is the way in that once recorded sounds were in an electrical analogue form, they could be processed subject purely to individual aesthetics. This however, was in regard to serious music. In popular music on the other hand, as audio manipulation technology improved an ongoing debate was established between 'real' vs. 'recorded' music. Until this point the goal of recording had primarily been to re-create real life acoustic experiences to be played back in the home. This was due to the fact that recording technology was just another example of a technology caught up in the high fidelity engineering movement of the earlier twentieth century. Hence, even at an abstract level, recording engineers felt that a recorded sound must imply a truthful connection to the original sound source.

The power to manipulate recorded sound gave many recording engineers, composers and performers the inspiration to improve the 'impact' their recorded music had on the listener. Struthers (1987) comments: *"Recording personnel have chosen to use the facilities to ensure that the finished product includes only what they consider to be the best possible recorded performances". (p. 245-246)*. These new ideas of working strayed from the historical goal of recording, which was simply to achieve high fidelity. Recordings could now be tailored towards an ideal sound that

no person could ever actually be in a position to hear in a true acoustic sense. Morton (2000) explains: *"Tape destroyed the already tenuous concept of an 'original' performance and made the performance a source of content to be refined rather than something to be preserved."* (page 46). The recording studio therefore became a very contested terrain but it was in this terrain though that a new aesthetic was developed in the ability to adjust the sonic fidelity of music throughout the recording process. Steve Jones (1990) writes, *"it has become sound – and not music – that is of prime importance in popular music production and composition and consumption"*. This actually helps to explain how an aesthetic quality that had previously only been evident in the works of serious music and highbrow culture had now crossed over into popular culture via the widespread use and commercial availability of technology.

It is at this stage we can start to see how popular music came to be entangled with technology, and understand its possible aesthetics. Over the latter half of the twentieth century technological development would give popular music the clear sense of progression that it was lacking previously. As well as being realised through the use of technology, popular music was soon becoming perceived through use of technology. The latter refers to modern broadcasting techniques, something that had only come into existence as a result of mass production and modern technology. As Warner (2003) explains *"the image of the machine as an object of beauty and power recurs again in twentieth century popular art generally, and pop music in particular. Thus not only are the production and reception processes of pop dominated by technology, but also the semantic content: pop music exists through technology and is often about it too."* (page 12). The distinction that popular music was having towards serious music made it increasingly hard to uncover the aesthetic value. Whereas serious music is said to transcend social forces, social forces determine popular music. It was therefore common for popular music to be regarded by many academic musicologists as aesthetically worthless. One method of searching for an aesthetic in popular music is to identify and analyse its degree of authenticity. The term authenticity in terms of popular music may describe the power or force that enables a popular artist to appear unique and individual. However, simply assessing the level of authenticity in a piece of popular music gives no indication that there is a method of determining its hierarchical aesthetics in regard to technology. It is at this point in our discussion that one can start to anticipate the problems that the widespread availability of recording technology and awareness of recording techniques is imposing on music today.

Today modern composers have a far superior technological processing power compared to the electronic composers of yesteryear. Computers are ubiquitous in all areas of the recording industry and the decreasing cost of technology has placed the functionality of a multi-track recording studio in nearly every home that was equipped with a personal computer. Therefore a somewhat disturbing fact is how the widespread use of computers in music has not spawned any apparent new potential musical aesthetics. Bob Ostertag (1996) explained how: *“Computer Music per se is, at least for the moment, at something of a dead end. This is the result of a bizarre sort of inverse push over the last few decades.”* The rationale behind Ostertag’s statement suddenly becomes clear when looking back through time. In the early twentieth century despite technological power of the composer being limited compared with what is available today innovation and exploration was rife among the musical arts. With this in mind, the question is why has the technical discourse created by the arrival of the modern computer not created a discourse in new musical aesthetics? An explanation may be found in the introverted manner in which serious music so to speak and the high arts have developed over the years after splitting from popular music culture. Hodgkinson (1996) discusses: *“High art lacks the inbuilt legitimation of mass appeal and commercial success; it therefore needs an appropriate form of cultural legitimation. It seeks to present aesthetic activity as technical and scientific activity.”* He also proposes though that there is another point of view opposed to this, which regards the impact of new technology in music as very anti-hierarchical with an emphasis on state of mind as oppose to operational technique. *“New technology is not sensed as technical but as the new state of mind sweeping away the old one. Music is not something to be performed but something to be put in place or set in motion.”* (Hodgkinson) Acknowledging the issue from this perspective suggests that we must try to find new musical aesthetics not in technology but in the aesthetic characteristics of the new medium. It would appear his suggestion has been well conceived as we entered the new millennium and a home for this new medium was established through widespread use of the Internet.

The power that the Internet can place in the hands of those involved with the musical arts today has revolutionised the way in which music is created, distributed and purchased. Mass adoption of the Internet in popular culture is also helping to change the aesthetics associated with popular music. No longer is popular music being influenced by social forces, it now has the power to transcend social forces similar to the way that serious music could in the middle of the twentieth century. In the last century our love for modernism and an increasing emphasis in the search for

new technology aesthetics resulted in a smothering of progress. This shift in social practices though helped us to acknowledge our arrival in the era of mass collaboration. As modernism relied on the ideas of creating progress through the aid of science and technology, the era of mass collaboration proposes methods of progression through shared understanding and trust. Finally, the adoption of mass collaboration in popular culture will remove the hierarchical order of authenticity as all collaborators will have equal opportunities.

To finalise, one can now start to arrive at a series of conclusions in regard to the role of technology and the development of aesthetics in new music. As we enter a new millennium and anticipate the arrival of new social practices and aesthetics we must not fear our continuous technological empowering through time. We can hold our quest for modernism accountable for the commercial death of creativity in popular culture but in doing this we would be failing to acknowledge the aesthetic values we have learned from popular culture itself. Popular music culture helped make music technology available to every human being and in doing so will carry us through to a new musical and cultural era, which will undoubtedly give rise to new musical aesthetics giving influence to a new generation of musical experimentation.

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