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EXPLORING THE CAPACITY OF MAX AS A DIGITAL PLATFORM FOR THE PRODUCTION OF NOISE MUSIC

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05-4506832 😨 pustaka.upsi.edu.my f Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah 💟 PustakaTBainun 🚺 ptbupsi DISSERTATION PRESENTED TO QUALIFY FOR A MASTER'S DEGREE IN MUSIC (RESEARCH MODE)

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ABSTRACT

Noise music is a genre of music that uses unconventional sounds in performances. In Malaysia, many performers use the analogue approach including instruments such as guitar pedals, contact microphones and metal objects to perform noise music. The analogue approach limits the possibilities of composing more noise music compared to the digital approach of sound manipulation and audio signal processing today, available through programmes such as Max. The objective of this research is to explore and critique Max as a digital platform for noise music production. This research aims (1) to identify techniques of producing noise music through Max (2) create noise music using Max (3) perform noise music produced by Max. This research utilised the selfethnography and practice-led approach including composing, performing, reflecting and revising. Research outcomes show that Max can replicate most of the analogue approaches used in producing noise music. In addition, it has the capacity for creating more sound expression to produce noise music using techniques such as randomisation, audio panning, time-based event and real-time audio processing. In conclusion, Max has the capacity of producing noise music but it is not user friendly or effective as a self-taught programme. This research recommends users to learn this programme under an instructional approach prior to producing noise music.







MENEROKA KEMAMPUAN MAX SEBAGAI SEBUAH PLATFORM DIGITAL BAGI PENGHASILAN MUZIK NOISE

ABSTRAK

Muzik Noise adalah merupakan genre muzik yang menggunakan bunyi yang bukan konvensional dalam persembahannya. Di Malaysia, kebanyakan pemuzik Noise menggunakan pendekatan analog menggunakan pedal gitar, mikrofon contact, dan objek logam untuk membuat persembahan. Pendekatan analog ini mengehadkan kemungkinan untuk membuat gubahan muzik noise berbanding dengan pendekatan manipulasi digital dan pemprosesan isyarat bunyi digital yang wujud pada masa kini melalui program seperti Max. Objektif kajian ini adalah (1) mengenal pasti teknik untuk menghasilkan muzik noise melalui Max (2) menghasilkan muzik noise menggunakan Max dan (30 membuat persembahan muzik noise yang dihasilkan oleh Max. Kajian ini menggunakan pendekatan self-etnography dan kajian berpandukan praktis seperti membuat komposisi, membuat persembahan, membuat refleksi, dan membuat semakan. Dapatan kajian menunjukkan bahawa Max boleh menghasilkan semula kebanyakan pendekatan analog yang digunakan dalam menghasilkan muzik noise. Tambahan pula, ia mempunyai kapasiti untuk menghasilkan lebih banyak ekspresi bunyi seperti perawakan, pergerakan audio, peristiwa berdasarkan waktu dan pemprosesan audio waktu sebenar. Kesimpulannya, Max mempunyai kapasiti untuk menghasilkan muzik noise, namun, ia tidak mesra pengguna atau berkesan sebagai sebuah program yang boleh dikuasai secara sendiri. Kajian ini mencadangkan supaya pengguna mempelajari program ini dalam sebuah pendekatan instruksional sebelum menggunakannya untuk menghasilkan muzik noise.











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CHAPTER 1

RESEARCH BACKGROUND



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This research focuses on exploring Max, a visual computer programming language specifically used for the medium of audio, video, graphic and other manipulation data. This research is focused on the digital audio signal processing provided by Max's MSP to provide a digital platform for performing Noise music.

Max is a software that allows Max objects to connect through virtual patch cords to produce interactive audio, visuals and custom effects. It consists of several elements such as Max, MSP, Jitter, Gen, BEAP and Vizzie. Each of these elements carries out their own functions (Cycling '74, 2018). MSP is a feature in Max that comes with 200 Max objects used to perform audio signal processing. Users may build their own synthesisers, samplers and effects processors with these Max objects. By using the









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MSP, users could create their own personalised designs for digital audio devices (Cycling '74, 2018).

Max is utilised to provide a digital platform to perform noise music, particularly through MSP in this research. An explanation on several contextual meanings of noise will clarify the context of this research.

Noise represents a sound formed by multiple opposing frequencies. The result of these clashes resulted in a sound that consists of scattered pitches (Berg & Stork, 2005). Noise is also defined as the undesirable signal that obstructs with the message or dimension of another signal, while, at the same time, convey the information about the source of the noise (Vaseghi, 2000). Noise had also been seen as disturbing. This has been proven by the creation of rules regarding noise such as United Kingdom's subpsi-Noise Act 1996 (c. 37) that deals with the provision of noise production from residences in the night. The failure to abide by this law would result in the penalisation and impounding of equipment that is used to cause the unlawful and illegal noise (Noise Act 1996 (c. 37)).

Various definitions of noise music have existed. Couprie (2007) explained that the term noise music refers to contemporary music of the Futurist and Dadaist movement, music of John Cage, musique concrète, experimental rock music, punk, live electronics and electronica music (Couprie, 2007). Besides that, the definition by Couprie (2007) on noise music was perceived in several significant definitions.









Wolf (2011) also noted that the term noise music did not have a proper definition, hence, he proposed two definitions that fit the term of noise music. One of the definitions is the noise music of Merzbow and the like of him accompany the listeners to physically experience the sound. This type of noise music also defies the limits of listening. On the other hand, there is another type of approach, which is also accepted as the definition of noise music. This approach utilises noise or comparable sounds such as hissing, crackling and feedback without relying on the high-volume performances. This latter approach has frequently been considered as the key parameter of noise music (Wolf, 2011, p. 67).

From the aesthetic and artistic perspective, sound has been perceived as a combination of two elements. One is noise, while the other represents music. Noise appears as disordered, unusual and aggressive, while music is considered as pleasant, rich and heavenly. Both these elements existed in the occurrence of noise music. Noise music is characterised as music synonymous with the harsh frequencies and loud volume and perceived as harsh, dissonant and to a certain extent, unbearable to the listeners. Noise music is typically referred to as merely noise (Klett & Gerber, 2014, p. 276).

To understand noise music, we must understand the musical perspective on noise. In terms of music, noise is something considered as an outsider of music but not the opposite of music. Noise is the disturbance that occurred between the music and sound. By adopting this perspective, we could understand that noise music existed as something that stands between the music and sound. In Japan, noise music, or simply







referred to as Japanoise is characterised by an inter-genre, inter-category, highly amplified and highly processed music (Hegarty, 2001, p. 194).

One of the philosophical views of noise music is that noise music existed as a marker of limitations. These limitations represent the perception that noise existed to intimidate the margins of music, and considered as far-reaching or thought provoking. Noise music should stay at a certain distance away from music. It must maintain its musical qualities to remain between the musical region and noise, failing which would make it stay as noise. It must also maintain its noise elements so that it would not become fully musical and lose its noise elements (Thompson, 2010, p. 10). Figure 1.1 below displays the affiliation of noise music to noise and music.



Figure 1.1. Affiliation of noise music with noise and music







In the context of this research, noise music is perceived as a live electronics music that embraced the potential of accommodating the listeners to physically experience the sound (Couprie, 2007; Wolf, 2011, p. 67). Noise music is harsh, dissonant and to a certain extent, unbearable to be listened to (Klett & Gerber, 2014, p. 276). By embracing these characteristics, the researcher tries to explore Max to perform music that utilises noise that existed between the music and sound region by employing the digital signal processing elements through MSP elements to produce results as stated by Hegarty (2001), that this is an inter-genre, inter-category, highly amplified and highly processed music (Hegarty, 2001, p. 194). All of these were performed while maintaining the philosophical objective of preserving the noise music between noise and music as suggested by Thompson (2010).

1.2 Problem Statement

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Merzbow is a prominent artist in the noise music scene. Merzbow had used Max for the production of several audio releases. Subsequently, he had abandoned Max and returned to making audio releases using analogue methods (Bailey, 2012). An example of this setup is seen in a video of his performance at the Boiler Room, Tokyo which was uploaded on Youtube.Com. In this video, Merzbow was seen using a number of effects pedals and metal such as garbage can lids and lamp holder.

In the context of Malaysia, there is a scene of avant-garde and experimental music fringe. It is small but gradually growing with the visitation of touring artists coming to Malaysia to perform in this scene. Local performers were influenced by







diverse artists such as the Japanese noise performers, local bands performing obscure underground metal and punk music, or influenced by world surroundings. They were self-taught and practised the trial and error approach in making noise music (Mokhtar, 2015, p. 34).

Mokhtar (2015) attempted to seek an answer to the approach performers used in their performances. One of the performers, Jerk Kerouac, said he is inclined to use the analogue equipment to produce noise music; such as shaker box with contact microphones, multiple pedals effects and synthesisers. Another noise music performer, Mack, had used multiple guitar effects pedals and homemade electronics for his performance with his partner, Maddy. The duo called themselves 'Krosot'. Their technique is practically identical to the technique employed by Jerk Kerouac. However, in their earlier years, they had used computers and software (Mokhtar, 2015, p. 35-37). Neither Mack nor Mokhtar (2015) had provided any explanation on the reasons why they had stopped using computers for their performances.

The researcher had encountered several performers performing live in small shows or gig using a number of pedals, metal pieces and mixers during his performances. The researcher had discovered that some of these performers were less keen to use the digital platform or digital equipment to perform noise music. They prefer to use analogue equipment or relatively limit the usage of digital equipment in their setup for performing. At the current moment, the only artist that the researcher had identified who performed noise music in Malaysia using laptop is File 106.







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Several problems arising from this research is indirectly related to the previous discussion about Merzbow, Malaysian noise scene, local noise performers' methods and the fact that only File 106 had used laptop to perform noise music. These problems are due to the lack of diversity, the place of a digital platform in noise music and the allure of modern technology. A detailed explanation is provided below.

1.2.1 Lack of Diversity

Based on the researcher's observation, a number of local performers had used a similar approach when using multiple guitar effects pedals and metal object. Some artists, such as Jerk Kerouac, had used the synthesiser combined with the usage of guitar pedal effects (Mokhtar, 2015). Based on the researcher's observation, this had led to a scene perfected in terms of diversity. In the context of this research, diversity refers to the techniques of performances and the characteristic of the noise music itself. In the researcher's observation, a typical setup used by the noise performers in Malaysia had also resulted to uniformity in terms of performers. The researcher is interested to explore and investigate whether a digital platform can overcome the lack of diversity in the setup, performing practises and sound characteristics of local noise performers' sound through this research.

1.2.2 The Place for Digital Platform in Noise Music Performing Practise







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There were no explanations offered on the reason why Merzbow and Krosot abandoned the digital platform they had used and reverted to the standard approach of using multiple guitar effect pedals, metal objects and contact microphone (Bailey, 2012 and Mokhtar 2015). From this observation, a question arises on the intention of Merzbow and Krosot abandoning the digital platform. Besides that, there is an issue why only File 106 was seen performing noise music using a laptop with auxiliary equipment such as multiple guitar effect pedals and guitar in the Malaysian noise scene? These questions require answers for the context of local noise music scene from the researcher's perspective. Through this research, the researcher would like to explore and investigate whether there is a way for digital platform usage in the context of the local noise music scene performing practice.

1.2.3 The Allure of modern technology

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A question rise on why the Malaysian noise music performers did not opt to handle the digital platform to perform noise music in a world where smart phones, compact computers and mobility had dominated. This had caused a gap that needs to be filled with appropriate answers. Is there a restriction in operating a digital platform? Is there a gap between the knowledge of the digital platform as a tool for performing music? Through this research, the researcher attempts to explore and investigate whether some specific reasons had made the local noise music performers' distancing their performance practices from the digital platform. This is explored through this research as the researcher tries to explore Max as a digital platform to perform noise music.





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1.3 Research Objectives

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- 1. Identifying techniques to develop Max patches for noise music performance.
- Developing Max patches based on the techniques identified for noise music performance.
- 3. Criticising Max usability for noise music performance.

1.4 Research Questions

- 1. What are the techniques to develop Max patches for noise music performance?
- 2. How to create Max patches for noise music performance? Perpustakaan Tuanku Bainun Kampus Sultan Abdul Jalil Shah

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3. How is Max usable for noise music performance?

1.5 Significance of Study

The most significant outcome of this research is the updated knowledge that may emerge during the exploration of Max as a digital platform for noise music performance. In a way, this would equally contribute to the local Malaysian experimental music scene that noise music performers take part.

In terms of creating diversity, this research allows new or old performers to perform with other technique than the conventional technique used in the local noise







scene. This would allow the emergence of diverse performing techniques and the variety of sounds produced in the Malaysian local noise scene. This diversity would make the Malaysian local noise scene more vibrant and interesting.

This research is important to understand that there is a need for digital platform to be in the local noise music scene based on the researcher's exploration with Max as part of his practice. This will highlight the relevancy on the usage of a digital platform and its suitability for the Malaysian local noise scene by developing patches that create familiar sounds of noise music recognised by the local and international noise music scene.

This research is significant because it could offer an alternative to the bulky setups used in the local Malaysian noise scene. An alternative setup of a digital platform would allow the performers to bring only the laptop and audio interface for performances as a minimal setup rather than the common bulky setup. This would create more mobility to the performers of noise music in the local noise scene.

Scope and Limitation of Research 1.6

The scope of this research is to explore noise performance on a digital platform through Max. By considering this as the research scope, this research intended to use the exploration process of creating the Max's patches to explore and understand the process and outcome of the noise performance on a digital platform through the usage of Max, achieved through several aspects of the research.









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Through this research, the researcher would limit the exploration of the noise performance on a digital platform through the Max patch only. The digital platform in this research refers to the usage of computers.

The researcher would limit the research to explore only the process of performing noise music through the digital platform to create an extreme performance in nature, in terms of imagery, performances, or sound level. This is because the researcher and peers would typically relate a conventional noise music performance with the Japanese noise culture. According to Hegarty (2007), the usage of amplification and other electronics are extreme in the Japanese noise culture (Hegarty, 2007). Through this research, the exploration of the digital platform is dedicated to

These created limitations or scopes of research ensure that the exploration of noise performance on a digital platform is recognisable as noise music, explicitly in this research, through the usage of Max. This to ensure the outcome fits into the definition of noise music as discussed by Couprie (2007), Wolf (2011), Klett and Gerber (2014), Hegarty (2001), and Thompson (2010).

Research Design 1.7

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This research was conducted through a combination of several approaches. These approaches are discussed in depth in Chapter 3: Research Methodology. They are





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practice-lead research, auto-ethnography and content analysis. The progression of research according to the planned process is shown in Figure 1.2 below.



Figure 1.2. Flowchart of Research Progress



1.8 Glossary

Audio Samples

An audio sample is the number of units stored in the digital signal, theoretically. Audio samples are also recognised as a term which refers to a whole set of digital information ready to be employed (Collins & Collins, 2010, p. 64 - 65). This research uses the latter definition.

Audio Sampling

The process of transferring analogue signal into a digital signal is referred to as Audio 05-4506832 pustaka.upsi.edu.my Sampling (Collins & Collins, 2010, p. 64).

Digital Audio

Digital audio is the product of the process of sampling with the usage of mathematical formula such as a sampling theorem. Loy (2007), Watkinson (2001) and Pohlman (2005) agreed with this (as cited in Collins & Collins, 2010, p. 18).

Digital Approach

The digital approach in this research refers to the process of manipulating digital audio to create noise composition.







Electronic Music

Electronic music is divided into analogue and digital. Electronic music refers to the process of making musical composition through the usage and manipulation of electronic apparatus (Cope, 1994, p. 217).

Experimental Music

The term, Experimental Music, is commonly used to refer to the type of music that is headed towards the outer reception for the categorisation of music. It represents music that sounds unusual. A lot of experimental music are improvised, had different structure compared to the classic song structure and uses sounds that are considered as odd by listeners (What is Experimental Music, n.d.) in Tuanku Bainun Kampus Sultan Abdul Jalil Shah

Max

Max is a visual computer-programming language specifically for the medium such as audio, video, graphic and other manipulation data (Cycling '74 Max, n.d). The users would use objects in Max to communicate with Max. According to Bugge (2014), Max is a graphical/visual object-oriented computer-programming environment, which is used mainly for making custom DSP applications for studio, installations, and live performances. It is object-oriented because the programming process in Max revolves around by combining available different objects that interact with each other. By using Max, one could create a user interface with computer programming (Bugge, 2014). Max Patches

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Max patches refer to a set of unified items that consist of pre-set function or algorithm (Cipriani & Giri, 2010, p. 127). In simpler terms, Max patches are a combination of Max objects that had its own functionality and arguments that are used to process data in Max.

1.9 Summary

Chapter 1 comprised the background, statement of problem, research, research objectives, research questions, and research design. Also, this chapter had explained the researcher position in the context of this research. In this chapter, the researcher discussed about his objectives, motivation and scope of the research. Chapter 1 is significant in this research because it highlighted several issues that are related to noise music, digital platform and significance of this research.





