

Synthesiser Sounds and Phenomena in China

Han Li

Heze University, Shandong, Heze, 274015, China

Abstract: *Under the STS perspective, the thesis explores the cultural, regional and personal attributes of Chinese-made synthesizers ascribed by their designers and makers in various phases, the natural, social and transformative properties of the synthesizer's output sounds, and the changing conception of "synthesizer" as a cultural symbol in the Chinese ideology.*

Keywords: *synthesiser; sound studies; sound culture; social studies of technology*

1. Introduction

In China, it is widely believed that synthesizers are only used in the field of pop music, but the reality is that synthesizers are used in thousands of places, such as rituals, weddings, square dances, campus stages, rural opera classes and so on. The venues encompass not only the live scene, but also the internet, so it can be said that they are all over the place. In the 1970s, the synthesiser was introduced to China along with Nixon's visit to China, and once the concept of "synthesizers without borders" was put forward, the synthesiser manufacturing industry quietly flourished, such as acoustic toys, electronic gongs and drums, and double-row keys. Is the output of a synthesiser still just sound? Or what are the cultural, and geographical symbols that have been attached to synthesisers since they were made? What are those symbols? What does it mean? How has the Chinese understanding of the synthesiser changed over the course of history? How has the meaning of "synthesiser" changed? What will the future hold?

2. Synthesizers Made in China

Most of the synthesisers used in contemporary Chinese electronic music are made abroad. On a popular level, people will undoubtedly ask, "Did China ever make synthesisers?" In his independent documentary, Chinese-American musician Yukes Yukes says, "People have forgotten that synthesisers were made in China." There were two pioneering synthesiser designs in China in the 1970s: the first was the electronic piano, which used discrete components or integrated circuit chips, such as the Mustang, the Jiale, the Angel, and the Jiaying. Due to the lack of filters and other components, it does not have some of the traditional functions of a synthesiser; the second is the string-controlled electronic organ developed by Tian Jinqin, a researcher at the Taiyuan Institute of Electronic Musical Instruments in Shanxi Province. This kind of electronic piano can be manipulated by hand to press the neck strings, using the "sliding, vibrating, pressing and trembling" playing techniques to achieve the output of Chinese tone. As can be seen from these two types of synthesisers, the original intention of the designers is related to music on the one hand, and to education and entertainment on the other. It is strange to wonder why an educational design concept would have appeared in the 1970s, when synthesisers were just being introduced[1].

2.1. Impact of education policies

In the 1990s, the view of education in China changed from "education is an important tool of class struggle" to "recognition of the important role of education in the development of science and technology and modernisation"; in August 1966, the Decision of the Central Committee of the Communist Party of China on the Proletarian Cultural Revolution emphasised that "education must serve proletarian politics". The Decision of the Central Committee of the Communist Party of China on the Great Proletarian Cultural Revolution of August 1966 emphasised that "education must serve proletarian, and that education must be combined with productive labour". On 22 April 1978, this concept was changed. Comrade Deng Xiaoping, in his speech at the National Education Work Conference, made it clear that "the quality of education should be improved, and the level of scientific and cultural teaching raised, so as to better serve the socialist construction", and that "the cause of education must be compatible with

the requirements of the development of the national economy". The change in the concept of education has contributed to the importance and development of education in China, and the marriage of education with science and technology, and economic development has been realised. Another reason is the traditional Chinese view of education. The Chinese concept of "three years old is old, education should be done while the child is young" has led most Chinese parents to start educating their children when they are infants. The Confucian concept of learning, which states that "those who know are better than those who do well, and those who do well are better than those who do well", believes that the desire to learn, and to learn consciously, is the driving force behind the ability to continue to learn. Toys are objects that can become a source of motivation for learning.

2.2. *DIY enthusiast*

Unlike the current generation of DIY enthusiasts, the reason at this point should be a matter of financial conditions, not hobbies. Family conditions limit the items that can be purchased, and it becomes inevitable to make the needed items with one's own hands. This idea is deeply rooted in the agrarian culture infused countrymen, for example, in most families, the fathers make furniture. As a result, books on how to make ekiben were widely popular during this period. The goal of making things is traditional and primitive materialism. In the subsequent development, the behaviour of DIY has undergone some qualitative changes[2].

3. Imitating the voice of China

It must be one-sided and unrealistic to think that the synthesiser is the source output of music and that the music output from the synthesiser is pure. When interviewed, Tian Jinqin talked about how he designed and manufactured the string-controlled electronic piano initially to imitate the sound of Chinese musical tones such as guzheng and flute. However, in practice, he found that he could not solve the "rhyme" of Chinese music in the form of keyboard. Therefore, he designed the instrument as a combination of strings and keyboard, as well as a more convenient Ryukyu-style string-control form. The other substance that man obtains by making synthesiser matter is sound. Sound matter has conceptual properties, and it is attached to the maker's regional cultural concepts, political ideas, and personal beliefs.

Synthesizer-generated sounds that mimic acoustic instruments as a substance also manifested themselves in the field of theatre at the time. "Musical compositions that used to be performed only by electroacoustic bands, small orchestras, and even large symphony orchestras, can now be performed by one person using electronic instruments". One can use a substance to facilitate the acquisition of another substance. During the Cultural Revolution, the model theatre borrowed from Western art forms and compiled a symphonic accompaniment. If the full complement of personnel to take on the task of going to school, going to the countryside condolences and so on there is the problem of "too many people". "After the 80's generally only retain the string section of the orchestra, while the rest of the use of synthesizers to replace after a number of repertoire verificationit is feasible for it to serve as a multi-instrumental imitation."

There is also some deviant behaviour in tone imitation, but it is impossible to say whether this is intentional or a technical problem. The "toy" electric piano, with its rudimentary integrated circuits, deviates far from the original design intent of a certain acoustic imitation, and the resulting distortion brings an interesting direction in which the synthesiser can also be "self".

4. The Chinese Voice of Synthesizers

After the turn of the millennium, synths in China became popular with both the musician community and the commercial community.

4.1. *Musicians Emerging*

China's first real pop-electronic band Super Market was formed in 1998. Synthesizers are warm and calming in Super Market's music. "It turns out that synthesizers are not cold, but a slow but direct warm current that flows into the sea of everyone's disappointment and converges into a little bit of hope.

The field of professional music has been on the road to applying electronic music since the 1980s, and there are two noteworthy phenomena in the early days: one is the study abroad programme, and the

other is the commercialisation of electronic music. The purpose of the study abroad programme is to allow us to better understand foreign products and cultures, as well as to export Chinese culture and aesthetics in the most natural way.

4.2. Business Integration

Business is not an isolated behaviour; it can be thought of as a reaction to norms of people's behaviour. The disruption of norms by synths inevitably triggers a butterfly effect. It literally produces the commercial landscape and influences popular culture.

At the beginning of the 21st century, the colour ringtone business was officially put into operation. Mouth-watering songs became colour ringtones, such as "The Mouse Loves Rice" and "Two Butterflies". "The 'who is downloading question' also evolved into the question of what kind of public the mainland's colour ringtones catered to, and how the colour ringtone era answered this. In her doctoral thesis, Zhou Xiaoyan argues that the mainstreaming of the "popular pandering theory" is a manifestation of "an extremely mechanical, low-grade, erroneous, and irresponsible outlook on creativity, values, and criticism. From the side, it reflects that Chinese people's low cultural and aesthetic level at the beginning of the 21st century, the reason for which stems both from the imbalance of national income and, more importantly, from the influence of politics, history, and culture.

Compared with the colour ringtone, the advertisement is more catering to the consumer psychology. The classic case of domestic advertisement, "Brain Platinum", has been selling well for twenty-five years, during which time it has been changing its style. Every year in front of the TV set, we hear the newly configured advertisements not only have the entertainment function of laughing, but also have the metaphor and implication of the medium, implying that the sound output through science and technology is transformed into material and becomes a necessary part of our lives.

After the turn of the millennium, the synthesiser began to merge with the creativity of the musician community as an independent and normalised object. At this stage, the synthesiser's sound no longer merely imitates the sound of acoustic instruments and its instrumental role, but begins to have a "self-thought". Thoughts are the expression of the values of the musician community in the synthesiser, which is inevitably influenced by regionality and produces sounds with Chinese labels. These labelled sounds are transformed into material goods for commercial consumption[3].

5. A time of mixed reviews

The public's attitude towards synthesisers has been embraced and denigrated by different social groups and in different times. The synthesiser itself is simply a substance; without sound, it is just a patchwork, some iron and a lump of wire. It is not the attitude towards the synthesiser that varies, it is the act of applying the sound output of the synthesiser, and the community that uses it that reflects this mixed attitude. It exists in different temporal and spatial scenarios.

5.1. 8-bit sound

The use of synthesisers in the music of New Pants' "Dragon Tiger Man Dan" brings back memories of the 80s and 90s. The generation that grew up in this era is most familiar with or excited by 8-bit sound effects. But this memory is often accompanied by what their parents taught them. 8-bit sound effects are the product of experimental music created by British musicians using the Commodore 64 music synthesis chip, and from 1985 to 1987 this kind of music was ever-changing, both in terms of quantity and quality. Transposing the same sound to China, home education, and the keyword "game console", two phenomena emerge: on the one hand, there is the admiration of the synthesiser as a part of life; on the other hand, the use of synthesised music in the form of "game consoles" appears as the antithesis of education, and is considered to be a bad example of the impediments to the development of young people.

The first voice of disparagement comes from the educational community. Educational groups look at new things from the perspective of education, focusing more on such topics as whether the new things are suitable for the educated, whether the mentality of the educated can withstand the new things, and how the new things affect the educated. Game consoles appeared in many families in the 1990s, and the issues of whether entertainment can be involved in education and how much entertainment is appropriate in education are widely debated. It was generally agreed that learning could not be synchronised with playing, that playing would create inertia, and that abstinence should be used when learning. Such a

philosophy of family, school and social education abounds. This philosophy has also spread to entertainment-related synthesiser sound products.

Secondly, another pejorative sound stems from the synthesiser's imitation of acoustic instruments. The professional music community believes that synthesizers mechanically mimic the timbre of acoustic instruments, that their sound is inferior, that they are not conducive to the aesthetic abilities of the general public, and that all synthesizer imitation sounds should be discarded[4] .

And the praise part only gradually appeared in China in the late 90s, greatly due to the limitation of equipment (computer). With the popularity of computers and the Internet in the late 1990s and after the millennium, three phenomena were created: first, Flash music animation production, which successively produced music animations with a high click rate, featuring novelty and responding to the life and times. Secondly, the computer music production software Cakewalk and so on are concerned by musicians. The third is the popularity of computer music production courses in higher music education.

These attitudes are not inherent to a particular era or period of time, but have been discussed since the introduction of the synthesiser in China, and it is an unanswered question that will continue to resonate into the future.

5.2. Square dance sounds (disco like style)

Another spatial scenario that generates mixed wordplay is the one in which it occurs. In any open space in any city, early in the morning or at night, older people gather in self-conscious rows and dance to lyrical or powerful music with an intensified 4-beat accent. On the other side of the square, older people sing along to classic songs from the 70s and 80s on portable stereos.

The non-elderly age group of the country is envious of the richness of life of the elderly, but at the same time, they are also plagued by the pollution of these environmental noises. In 1997, China enacted the new Law of the People's Republic of China on Prevention and Control of Environmental Noise Pollution, which stipulates industrial noise standards, incidental environmental noise standards, traffic noise standards, and living noise standards. The 2021 amendment bill specifically addresses domestic noise with corresponding policy changes. "When organising or carrying out entertainment, fitness and other activities in public places such as streets, squares, parks, etc., the manager of the public place shall comply with the regulations of the public place regarding the area, time period and volume of the activities, and take effective measures to prevent noise pollution." Amendments to the regulations also added recommendations for the formation of good habits, from the legal system to the rule of law, such as "families and their members should cultivate the formation of good habits to reduce the generation of noise try to avoid the generation of noise on the surrounding people caused by the interference, mutual understanding and mutual accommodation to resolve noise disputes, and jointly maintain the quality of the acoustic environment ".

6. Revival in the vintage trend

Every era has iconic objects or ideas. The red star army cap in the 1960s and 1970s, the kettle, tea pot and radio in the 1970s, and the bell-bottom trousers and television set in the 1980s, etc. When this behaviour becomes a group behaviour, we call it "revival". Contemporary artists may incorporate these objects of the "past" into the expression of their ideas, and when this becomes a group behaviour, we call it a "revival". Synthesizers, after a period of mixed feelings, are beginning to converge in the values of some groups of people, and the reason for this is the vintage trend. We can't help but wonder what kind of values have triggered the vintage trend[5] .

The generation born in the 1980s and 1990s is known as "the successors of the new era". In the formulation and implementation of education policies, this generation grew up under the concept of "moral, intellectual, physical, aesthetic and labour", and not only had the ability to acquire theoretical knowledge of culture, but also had a desire for art and the ability to practice it. In the concept of family consumption, the positive economic development has enabled most families to have the ability to have enough food and money to fulfil their spiritual pursuits. However, the inconsistency in thinking between the young generation and the middle-aged and older generation often results in a physical and mental deficit among the youth. Young people's attempts to make up for their spiritual deficiencies in adulthood are part of the formation of the values of the vintage trend.

More importantly, the values of the retro trend have prompted individuals to express their self-

emotions or aspirations in familiar and loved ways. Two phenomena have emerged in China: one is the pop music electronic music trend that has swept through since 2016; the other is the synthesizer DIY trend that has taken the musician community by storm. "At the IMS (International Music Summit) Asia-Pacific Summit held in 2017, NetEase Cloud Music released data saying that the total number of electro songs played on NetEase Cloud Music's entire website increased by 434% in the whole year of 2016, making it the fastest-growing music genre within the platform. With that, the domestic electro-voice industry expanded on video-based social platforms and variety platforms such as TV and online, such as Jinyin, China Rap Peak Showdown, Gai Shi Yin Xiong, Instant Electro Music, etc. DIY positions are showing up on other online platforms in China - Beili Beili, Zhihu. The platforms use both text and video to share how to make synthesizer modules, the history of synthesizers, and the sound design of synthesizers, covering the full range of content from theory to practical combination.

7. Conclusions

The arrival of the synthesiser, a substance that shook the established rules of domestic culture and society, was not like a fog that blows away in the wind, but like a seed that takes root in a foreign land, takes root and blossoms. Different social groups reacted differently to this new material behaviour. As a substance, the synthesiser enters China, not only has a "Chinese" body, but also speaks "Chinese". Is the synthesiser still just a sound? It is not only a sound, but also a voice for different social groups with the ideological values they assign to it. As a result, the sound of the synthesiser has developed a cultural and commercial value, and has been transformed into a material object that can be used and applied by other social groups.

In this way, we can see that the sound matter output from the synthesiser, unlike the Darwinian theory of "natural selection", forms a closed-loop ecosystem that is self-contained and sustainable. It is exported and circulates between groups. Its output leads to the aggregation, coalescence and impact of new social groups.

In the light of Marxist ideological theories with Chinese characteristics, the nature of synthesisers is worthy of further reflection. On the other hand, with the recent policy changes, what about the "outdoor music festivals", which are the main towns of synth electronic music? Will synth electronics once again be made in China? These questions are worth exploring further.

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