

— International —
Master in Composition
— for Screen
—

Research paper

2nd cycle (Master)

Academic Year 2021-2022

**Synthesizers: The assimilation of the monsters of film
music**

Simon LESCURE

InMICS – International Master in Composition for Screen

1st year: *Université de Montréal – Canada*

2nd year: *KASK & Conservatorium / School of Arts Ghent - Belgium*

Name of the supervisor: François-Xavier Dupas

Institution: *Université de Montréal – Canada*

Date of the defence: 14 September 2022

Université de Montréal

Synthesizers: The assimilation of the monsters
of film music

Synthétiseurs: L'assimilation des monstres de la musique de film

Par
Simon Lescure

Université de Montréal, Faculté de musique
Conservatoire de Musique KASK de Gent

Mémoire présenté en vue de l'obtention du grade de maîtrise
en Musique, option composition pour l'écran (M. Mus.)

Mai 2022

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Université de Montréal

Unité académique : Université de Montréal, Faculté de
musique

Ce mémoire intitulé

(EN) Synthesizers: The
assimilation of the monsters of
film music

(FR) Synthétiseurs : L'assimilation des monstres de la
musique de film

Présenté par
Simon Lescure

*A été évalué(e) par un jury composé des personnes
suivantes*

Pierre Michaud
Président

François-Xavier Dupas
Directeur de recherche

Francis Perron
Membre

[Français]

Résumé

Le regard de la société sur les avancées technologiques a été la cible de multiples remises en question. Des premiers synthétiseurs aux allures monstrueuses et presque grotesques aux instruments virtuels, les compositeurs de musique de film ont souvent porté un regard curieux sur cet instrument énigmatique, aussi singulier que versatile. Un synthétiseur est un appareil musical électronique ou un logiciel utilisé pour générer et combiner des signaux audio par des processus analogiques ou numériques . (traduit de Devine, 2013). Par un processus d'expérimentation, certains compositeurs ont relevé le défi musical d'utiliser le synthétiseur dans la musique de film. Avec le temps, ils ont trouvé en lui un outil irremplaçable.

Mots-clés: Musique, Synthétiseur, Composition, Musique de Film, Technologie Musicale

[English]

Abstract

Society's view of technological advances has been the target of many questionings. From the first monstrous and almost grotesque looking synthesizers to virtual instruments, composers of film music have often taken a curious look at this enigmatic instrument, as singular as it is versatile. A synthesizer is an "electronic musical device or software used to generate and combine audio signals through analog or digital processes" (translated from Devine, 2013). Through a process of experimentation, some composers have taken on the musical challenge of using the synthesizer in film music. Over time, they have found in it an irreplaceable tool.

Keywords: Music, Synthesizer, Composition, Film Music, Music Technology

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Acknowledgements

I would like to thank François-Xavier Dupas for his steady help, patience, understanding, and support, in deeply frustrating and mentally challenging pandemic times. I would also like to thank him for giving me the chance to discover new creative ways and improve new skills through the InMICS program, and ultimately getting to know myself and where I'm heading better.

Thanks to Régis Dragonetti for his guidance, interest, serious and availability, and for providing brilliant insights that made this research process as rich and inspiring as it was pleasurable.

I would like to thank the InMICS program for the fantastic opportunities it offered to students to meet other creatives and to record our compositions. Thanks to Ruben De Gheselle for getting us a better understanding of the whole process of writing, recording, producing and mixing.

Thanks to Dirk Brossé for his curiosity, concern, refreshing creative advice and compliments on my musical vision.

Thanks to Vincent Laurin-Pratte for his steady support and attention, Tristan Capaccione for his dedication, Véronique Lefèbvre for her benevolent assistance and diplomacy, and Tristan Alantar for his help and inspiring works.

Thanks to Samya Papasoff for her help and interest even from an imposed distance, Thomas De Keere and Michael Łyczek for all they did for us students at the Ghent Film Festival and the Krakow Film Festival.

Thanks to my parents, and my sister, for believing in what I do.

Introduction

Society's view of technological advances has been the target of many questionings. From the first monstrous and almost grotesque looking synthesizers to virtual instruments, composers of film music have often taken a curious look at this enigmatic instrument, as singular as it is versatile. A synthesizer is an "electronic musical device or software used to generate and combine audio signals through analog or digital processes" (translated from Devine, 2013). Through a process of experimentation, some composers have taken on the musical challenge of using the synthesizer in film music. Over time, they have found in it an irreplaceable ally.

Advances in music technology have taken a long time to become mainstream. Before blending in and being diluted in a large number of genres, the synthesizer was an invention that knocked on the door of film music like a discomfiting guest. By turns remarkable or barely perceptible, it can be found nowadays in almost any audiovisual production. This progressive assimilation has gone through several phases, themselves linked to our societal history and our notion of progress. I will try to give a brief overview, following the mutations of this instrument-tool.

I launched myself into this research by the simple fact that I myself have long been reluctant to use the synthesizer, to which I associated certain stereotypes that I expose here. Indeed, I thought it was too connoted to make any personal musical use of it. In 2015, I decided to buy my first machine, a polyphonic synthesizer from Clavia. There followed years of researching a sound identity, textures, of frustrations and surprises, of passion and perseverance. The synthesizer, which I regarded as stereotypical and without musical relevance in my universe, had become a daily obsession.

The purpose of this research paper is to show how the identity of the synthesizer in film music has been affected by the consecutive changes in the way technological advances have been perceived by our Western culture from the 1960s to the present. It is not my goal here to offer a summary of the synthesizer and an inventory of each member of this large family, but to illustrate the evolution of its role in film music with some revealing examples.

This thesis will be divided into three major axes. The first part will expose the context on which the synthesizer was dependent when it broke into film music. The second part will show how the synthesizer has been accepted and recognized musically, and how its legitimacy in soundtracks has been acquired. Finally, we will take a look at an ancillary phenomenon to the hegemony of the synthesizer in soundtracks at the end of the 20th century and attempt to understand its place in film music today.

I. From phenomenon of science to tool for art

A. *First shout*

1. *Solaris* and the ANS synthesizer

Designed in 1938 by sound engineer Yevgeny Murzin and named after composer Alexander Nikolayevich Scriabin (ANS), the ANS synthesizer was one of the first analog monsters. (Nolens, 2016).

Why the term "monster"? They are monsters in the context of the years of Hollywood symphonics in the 1930s, in which musicians followed the codes of a pre-existing musical language created to serve moving images, and hinged on synchrony and the enhancement of feelings depicted on screen. The properties of the language of Eastern European and German post-romantic opera music were considered appropriate and useful to the narrative form of a film by composers of the time, and ideally accompanied the various emotions of the characters in music. (Carayol, 2012) By default, music was thought of and written for symphony orchestras, making film music in the 1930s an exclusive compositional club.

In such a context, it is hard not to be surprised by the use for film music of a remarkably large, obscurely functioning machine with extensive connectivity and an often aggressive monophonic sound. These characteristics made the synthesizers singular creations, foreign to the public eye of their time, and their aesthetics and ergonomics seemed unsuited to musical use.

The ANS was central to the music of Russian electronic composer Eduard Nicolai Artemiev for Andrei Tarkovski's *Solaris* in 1972, the latter being a figure of the Soviet cinema revival. The film follows the adventures of an astronaut sent on a space station, orbiting the strange planet *Solaris*. The film presents a duality between two worlds: a known world, that of the planet Earth and its humans, and an unknown extraterrestrial world, that of *Solaris*. This duality is represented by the music of the film; to the planet Earth that of Bach (the Choral Prelude in F minor, in particular), while to the enigmatic *Solaris*, the sounds and effects of the ANS.

Like Solaris, the ANS is so enigmatic that it is a work of experimentation and technological innovation. It is a "photoelectronic" synthesizer whose remarkable feature is that it is played with optical scores.

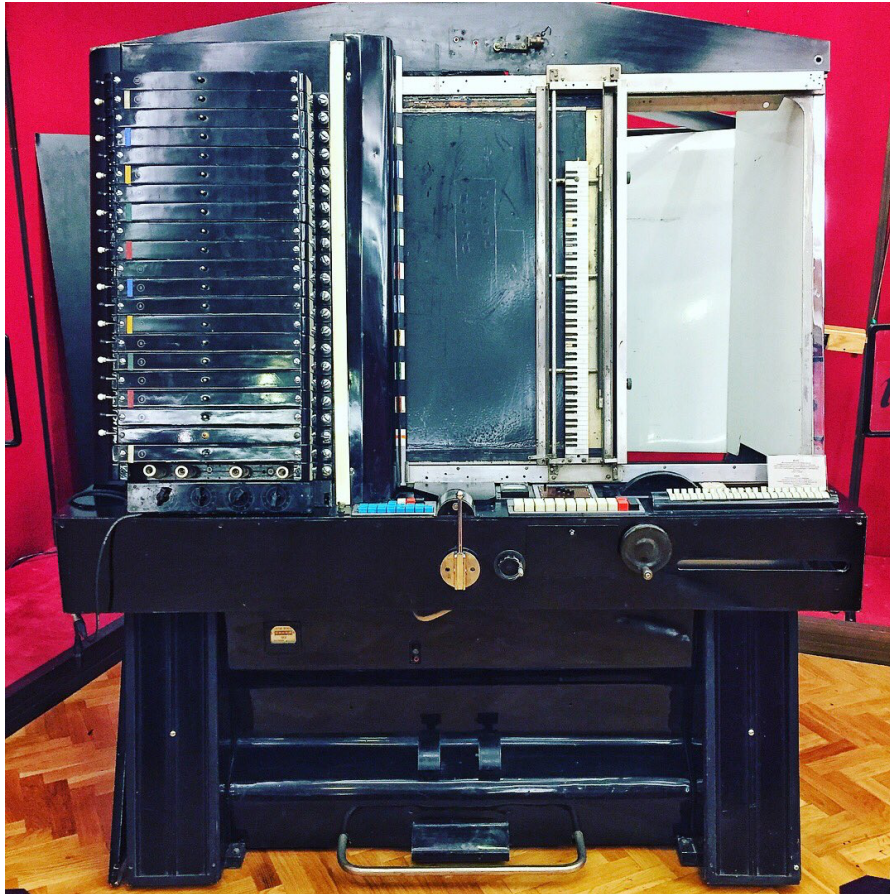


Figure 1 : The ANS synthesizer

©Richard Devine, August 25, 2017

The ANS displays a glass surface covered with an opaque black resin, which is metaphorically reminiscent of Kubrick's mysterious monolith. It is a black pane hiding a complex machinery, itself having an obscure functioning, hidden from the eye of the public.

The process for playing the ANS was as follows: when the user draws on the glass surface, the machine decodes these drawings as a series of musical directives and superimposes sound frequencies as they are read. These haunting, singular sounds, foreign to the audience's knowledge, proved perfect for setting to music and representing

the enigma that was the planet-ocean. The monstrous appearance of the instrument and the singularity of its sound make it a machine with an almost grotesque connotation.

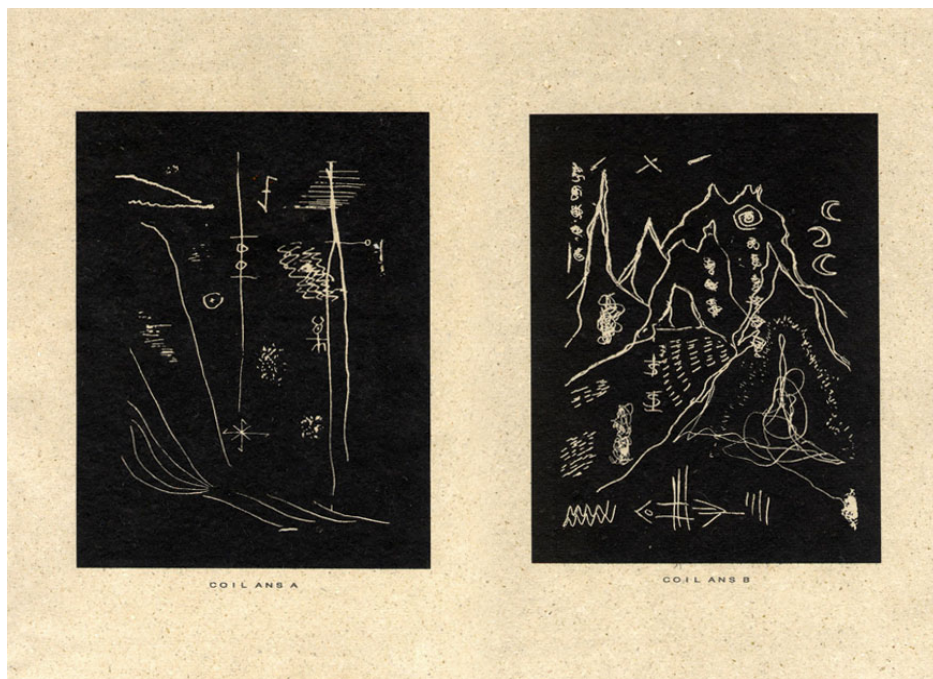


Figure 2 : Drawings on th black resin of the ANS synthesizer

©Richard Devine, August 25, 2017

2. Wendy Carlos' Moog system and Vocoder

Carlos was known as a pioneer of the synthesizer, and made a strong impression especially with her explanatory video where, wearing fake sideburns, she demonstrated her imposing and overwhelming Moog system. Her first successful studio album was released in 1968 and was called *Switched-On Bach*, an album of synthesizer covers of Bach's works.



Figure 3 : Wendy Carlos and her Moog

© T, January 13, 1966

In the dystopian science fiction film, *A Clockwork Orange*, released in 1971, she not only produced new versions of Rossini, Purcell and Beethoven, but also innovated by using the vocoder in a reprise of the 4th movement of Beethoven's 9th symphony, which she then entitled "March From Clockwork Orange". The vocoder has been invented in 1928 by Homer Dudley at Bell Laboratories in order to synthesize human speech. It has been used as voice codec in the telecommunications industry to encrypt speech in order to prevent it from being intercepted during radio transmissions. A vocoder allows to set the dynamic range and alter the spectral content of a sound (the modulator) through a carrier. The modulator is generally the human voice, spoken or sung, while the carrier is

generally a synthesizer. The decoding part of the vocoder, called voder, can be used independently for speech synthesis.

This was the first time the audience heard the connotative and disorienting sound of the vocoder: for it was not only a machine suggesting an inhuman side, but a recognizable imitation of the human voice. Perhaps this phenomenon can be explained by the 1970 concept of ‘uncanny valley’, a term coined by Japanese roboticist Masahiro Mori (Eveleth, 2013) to describe the relationship between the human appearance of a robotic object and the emotional response it evokes. This theory exposes the idea that we would tend to feel a sense of unease or even repulsion when faced with very realistic humanoid robots, and that when a robotic or animated representation is within a certain degree of resemblance to human features, it would provoke in us a feeling of unease, strangeness, or even disgust (Milinski, 2020)

We find on Carlos' website a relevant comment on her own creative process:

I'm often amazed how much music we were able to squeeze out of such meager, recalcitrant tools back then. I'd never wish to go back to those frustrating limitations. Often decent art can arise despite gross constraints. (...) Nevertheless, we truly have "come a long way, baby!" You can't help but notice it by now. Here's to the next generation of electronic and computer media art which can be built on a much firmer foundation than existed back in 1971. Here's to the future of our still young medium! (Carlos, 1998).

Indeed, the use of extreme vocal treatments had never been heard before and was a radical creative departure. *March From Clockwork Orange* was not only a heavy musical statement; the piece reflected the image of a monumental technological leap forward - with inhuman robotic overtones - at the time of the film's release.

B. Towards assimilation

1. Cohabitation

Most 70s soundtracks have in common the way synthesizers were used. As shown by numerous examples, including *A Clockwork Orange* and *Solaris*, composers have thus found a use for them in science fiction (sci-fi). They were often used to contrast more familiar symphonic acoustic sounds. Indeed, Carlos in *A Clockwork Orange* also succeeds in bringing together classical music and electronic music.

In those years, other composers helped the development of the synthesizer, such as Jerry Goldsmith with the soundtrack for the film *Logan's Run*. The 1976 film is a dystopia depicting a hedonistic society where citizens are put to death when they reach their thirties. Goldsmith is at the time a prolific composer of film music, as comfortable with synthesizers as he is with orchestras, and chooses a synthesizer still new on the market, the ARP 2500, to compose the music of the movie. The look of the machine remains intimidating; but one can see that its creator somehow wanted to make it look like a more traditional instrument.



Figure 4: ARP 2500 with its wings, from the collection: Electronic Music Education and Preservation Project ©

The sequences of the film representing the city are then attributed to the extraordinary sounds of the ARP 2500. Goldsmith then creates a score combining

synthesizer and orchestral music, which compositional strategy aims to highlight the contrast between the oppression weighing on the inhabitants of the “artificial” city, and the “free” outside world.

2. The synthesizer without Science Fiction

From the very first beginnings of the synthesizer, some composers will give it a chance and find it useful in their compositional work methods, and in more traditional contexts. It seems to be for some composers something other than an obvious connotation to science fiction and will be used as a real tool for musical production.

This is the case of composer Maurice Jarre, who uses the Moog in the soundtrack of *Dr Zhivago*, and makes it - as early as the recording sessions in 1965 - the first album where this synthesizer can be heard (although very subtly). The synthesizer takes on a new role here; Jarre uses it as a support for the orchestra, and even though it is barely audible in the mix, he claims its use. He provided one of the first Moog models and called upon a new type of musician, the synthesist Paul Beaver.

Jarre used the electronic music in *Dr Zhivago* as a layer mixed far into the soundtrack, not to place the synthesizer in the foreground but to add another dimension to the orchestral music. This act is significant, as it illustrates by the acts previously mentioned also the fact that the eyes begin to turn towards the synthesizer on the side of the composers of film music, and appears to them as a mysterious beast with a certain potential, which only asks to be tamed.



Figure 5 : The album front cover of Doctor Zhivago

©LP, MGM Records SIE-6ST, January 13, 1966

II. A quest for identity and recognition

A. *Imitating the models*

If these new monsters are making a place for themselves in film music, they are still in search of an identity. The synthesizers then try little by little to imitate the behavior of the acoustic instruments, to resemble them. Claiming their usefulness, one wants to make them fulfill the same functions as the acoustic instruments, and certain composers even want to monopolize the ambitions of the latter.

We observe the phenomenon of "imitative synthesis" in the early 80's, whose goal is to reproduce as faithfully as possible the sounds of acoustic instruments or sounds not produced electronically. Some performers even take it as a challenge to produce synthesized sounds that can be mistaken for conventional instruments. A good example of it is the Mellotron of the 1960s, a synthesizer whose key triggered the playback of a tape and which was in itself a poor substitute for orchestral instruments, has been used in different contexts and in a non-imitative way. It thus became an instrument in its own right.

Francis Ford Coppola's *Apocalypse Now*, released in 1979, would be a good illustration of this phenomenon of imitating the characteristics of acoustic instruments. The track "The Delta" from the movie's original soundtrack features achingly high-pitched synthesizer lines that are particularly striking in their attempt to recall the melodramatic emotional weight of the violin in its high register. The synthesizer then takes back the codes of the acoustic instrument and one of its musical functions. It imitates it in its envelope, its register and even tries to seize its timbre. It seems to claim the same ambition as the violin in its role on the screen. The mimicry of the synthesizer is not perfect, and the composers Carmine and Francis Ford Coppola play on the feeling of artificiality provided by its sound envelope to add an inhuman connotation to this stereotype of the violin. They play with the codes and bring then another real emotional dimension. Francis Ford Coppola's movie will be remembered partly because its soundtrack is considerably weighed down by the Moog synthesizer, borrowing its usage

from the style of Japanese experimental musician Isao Tomita, one of the pioneers of both electronica and space music. (Aldredge, 2016).

The *DX-7*, released by Yamaha in 1983, is a new type of digital synthesizer that allows for a wider range of sounds, some of which can resemble acoustic instruments. This event is another major upheaval that erupts, and makes this imitative synthesis a force in the synthesizer market, far surpassing in performance, options, and synthesis capabilities any synthesizer ever made before that time. (MN2S, 2017) The *DX-7* initiated the production of the equally controversial digital arranger workstations; because when the sounds of an orchestra were made available in an inexpensive synthesizer, it changed the direction of the entire synthesizer market, to the detriment of musicians and performers whose roles seemed to be made obsolete.

Although imitative instruments drove many other types of synthesizers out of the market, analog synthesizers using mostly subtractive synthesis techniques did not vanish from the cultural landscape, as these distinctive sounds had already made their way into the collective imaginary.

B. *The synthesizer slave of its stereotypes*

Even if they were used in various contexts and for various purposes, synthesizers remained famous for their Sci-Fi associations, and it was thus still very common for them to be targeted for stereotypical use. Their newness put them in the spotlight and therefore under the gaze, judgments, fantasies and apprehensions of the audience (see section I.A.). This provides a certain opportunity for them to join the exclusive club of "instruments for film music" laid down by the Hollywood symphonic movement of the 1930s. Television producers have come to expect synthesizers to provide the sound effects of fictitious spatial technologies, like the spaceship machineries in *Star Trek* (*Computer Music Specials*, 2009).

Perhaps one of the most famous illustrations of this phenomenon is found in Steven Spielberg's 1977 *Encounters of the Third Kind*. The synthesizer central to the alien communications process in the movie was an ARP 2500 (see Fig. 4). Phil Dodds, ARP's Vice-President of Engineering, was in charge of the installation and configuration of the machine on the movie set. Dodds played five notes in order to interact with the alien vessels and later watched in amazement as the aliens remotely took control of the synthesizer, in the infamous conversation scene called "Wild Signals" in the film's soundtrack (Thatcher, 2017).

Of these uses of the synthesizer, more for sound effects purposes than as actual musical composition, one finds it doing the electronic chirping of the droid R2-D2 in *Star Wars*. The expressivity of the ARP 2600 combined with Ben Burtt's speech created a covert communication to be understood by the audience before his companion C-3PO translated it for them. This ARP was even recreated virtually through Symbolic Sound's 'Kyma' system for the newer *Star Wars* movies. (*Computer Music Specials*, 2009)

In France, the 1968 animated series *The Shadoks* is another example of "new technology" profiling, displaying Robert Cohen-Solal's deliberate choice of an electronic soundtrack as the backdrop to an animated series set in outer space.

The synthesizer's popularity seems to tie it to its science-fictional identity. However, some composers continue to give it a wider range of uses and predestine it to be enjoyed by a broader public, and not only by science fiction fans.

C. *Recognition: the synthesizer as an
acclaimed choice for Film Music
composition*

Synthesizers have provided a new way of composing music, but it required both experimentation and time to gain public acceptance of electro-acoustic music as a legitimate means of composing for film, and for its aesthetic to gain recognition among the establishment. The 1982 composition of the *Chariots of Fire* soundtrack by Vangelis using the *Yamaha CS-80* analog synthesizer was a major breakthrough for the synthesizer and acceptance of electronic music as a legitimate way of composing for film. The main theme of the movie proved so successful it became the Olympics Anthem in the summer of 1984. In 1982, Vangelis also won an Oscar for best film music with this score. It received public and critical acclaim, in particular for its use of elements of electronic music (Alantar, 2021).

Thus, the synthesizer is no longer just a machine that, by imposing its own image and sounds, conjures up the strange and unusual; this recognition shows that from then on, for critics and audiences alike, it was considered a suitable instrument for the composition of film music. The composer's approach with the synthesizer was recognized and rewarded, as *Chariots of Fire* featured a soundtrack made up of electronic music from beginning to end. In a science fiction context like *Blade Runner*, Vangelis succeeded in using the futuristic tones of the synthesizer as it is well known in this context, and in playing with its codes. The well-known lead of the *CS-80* which one would instinctively associate with the world of science fiction also assumes the timbre of an acoustic solo instrument. It becomes melodic and musical, and firmly appreciated for its aesthetic (Darthout, 2017).

Many applications seem to follow from this important step in film music. This is the case of a movie such as *Manhunter* of 1986, which soundtrack celebrated the synthesizer unreservedly. Mention should also be made of director-composer John Carpenter, who made a point of showing the synthesizer as an integral and inescapable element of his movies (Francis, 2020). Digital drums proudly and uncompromisingly imposed themselves in the blend. Digital reverberation is incorporated, not to ease the

mix but to really enhance the style. Composers of the 1980's assumed the identity of the synthesizer and asserted its sonorities with a purely aesthetic aim. Their presence in the sonic landscape of movie music of that time is very strong.

Thus, new codes appeared in film music since the synthesizer was being used to its utmost potential. The 1990 series created by David Lynch *Twin Peaks* presented not only digitally synthesized polyphonic tones that had never been heard from most monophonic analog synthesizers, but it also introduced a new way of playing them that was unique to the instrument. It was the pads, programs of synthesized layers of sound, which set the tone for the celebrated series. Pianist and composer Angelo Badalamenti has used the synthesizer as a source of intrinsic inspiration in order to enhance the narrative of the series through music. (BBC Four, 2013) The synthesizer is an intrinsic part of the aesthetic of the series itself; the synth theme dictates the mood several times per episode and establishes the tone of the show. The direction is a digital counterpoint that intentionally contrasted with the more familiar setting of an American small town rustic country setting in the middle of the woods, to which warm, folk-like acoustic sounds would have been appropriately associated. The synthesizer here acts as a mental narrative guide to the psyche of the plot.

III. The synthesizer around us

A. *The aftermath of the digital revolution*

In the 1980s, technology no longer seemed to frighten anyone; it was becoming exciting and exhilarating. After the Cold War and its anxiety-provoking vision of the technological world, the digital revolution took on an attractive and exciting form in the eyes of the public. Now, everything that technology brought to the table was presented as desirable, with design studios working hard to make this flood of new products appealing. (Gannett 2022).

In the sound synthesis world, there has been a transition from big, bulky, intimidating machines with heavy woods and large metal knobs to a flurry of smaller instruments with tantalizing sonic potency. There is a transition from simple, monophonic, variable and analog sound to rich, polyphonic, stable and digital. By turns velvety layers, bizarre effects, complex sequences, reverberating electronic drums, crystal-clear, startling, wispy sounds, and searing leads that would haunt audiences for generations in synthesizer-heavy, sometimes overloaded, movie soundtracks. The FM modulated synthesizers of the 1980's (synthesis mode where the frequency of an oscillator is altered in accordance with the amplitude of a modulating signal) felt like walking into a candy store to the musician as well as the listener; there were all colors, all shapes, and for all budgets and tastes. In democratizing itself, the synthesizer modified the musical practices. By facilitating the performance, it allows the amateur musician to obtain satisfaction without having to take lessons in music theory or in piano technique, since the capabilities of sound synthesis can capture the attention or generate musical interest on their own.

One feels this technological consumerism phenomenon also in the soundtracks. On the television, programs such as *Knight Rider* in 1982 or *Miami Vice* in 1984 used the sounds of the latest synthesizers in their opening themes and all along their episodes.

B. Synthwave: Tribute to a future that did not exist

The underlying question: Is pervasive nostalgia for the recent past... normal? Or is there something wrong with today's fixation with the past? (Harvey, 2011).

Once the synthesizer was widely accepted as a composing tool for film score soundtracks, it eventually created exhilarating futuristic imagery that eventually dissipated like a mirage, when the anticipation of that future s turned out to be different. This false prophetic anticipation gave birth to a collective nostalgia for this fantasized future that will never have existed, through a cult devoted to the popularity of the synthesizer in the soundtracks of the 1980s. Since the early 2000s we witness a revival of the aesthetics of that time. "Synthwave" is primarily inspired by 1980s movies, TV shows, soundtracks, and video games. While 80s sci-fi films look to the future, synthwave does the opposite many ways. It looks to the past to create music that sounds "futuristic" for the 1980s, but "retro" for today's standards. (Lobier, 2020) The reasons why Synthwave is successful are then open to interpretation. While synthesizers tend to dematerialize with digital emulations, we want to keep certain machines that are no longer even manufactured, which are difficult to maintain, take up precious space and are inefficient compared to today's industry standards. The attachment to the culture of the 80s is present today in the most serious recording and production studios in particular, with still a large part of hardware from this era, while digital includes emulations of these machines, themselves yet capable today of circumventing their limitations. We speak of "character", of "charm"; but why do we never talk about the "charm" of digital?

The hypothesis of a collective disillusionment after the promises of the consumerist Reagan era would seem possible, as technology today poses many questions for society. One could see in the retro-future a nostalgic toy of an alternative world where one did not have to worry, for example, about the climatic catastrophe caused by a technological explosion however so promising at the time.

In terms of music, the synthwave genre has heavy drum sounds, thick layers of synthesizer and large digital reverberations. The emphasis in synthwave is put on the catchy melodies, with the intention of engaging the audience and getting them to step into

the time machine. It is a genre that is unapologetic about its obvious influences - on the contrary, it claims them. The recently popular Netflix sci-fi series *Stranger Things* clearly takes its inspiration from the music and films of the eighties, for example (Lobier, 2020). One could also mention Nicolas Winding Refn's movie *Drive*, of which the aesthetic effect loosened many tongues within the composer community and the public at large (Moayeri, 2021).

While Synthwave certainly has a retro quality to it, what is being created today that is inspired by the past has the benefit of a contemporary perspective; and with it, the freedom to break away from a "déjà-vu" approach to the synthesizer. This is particularly true for music technology. Synthwave thus finds its inspiration in the fantasized future, but also now, in the past. Perhaps it is when one is stuck in the present, between past and future, that alternative paths are explored.

C. The synthesizer in the present; Far from its stereotypes, a multiform and sensorial aesthetic

Since the 1980s, the synthesizer has been part of the modern collective soundscape (see section II. C.). It is a common artistic choice now made commonplace for the composition of film music, along with orchestral music. The synthesizer models built today do not necessarily link them to their past.



Figure 6 : Homemade synthesizer by Ewa Justka

©Etsy

They have become part of the daily lives of amateur and professional composers of all backgrounds due to their wide range of prices, and are regarded as musical tools which are used for their functionality and their ability to handle complex musical tasks. While some composers such as Maurice Jarre used the synthesizer as a support in orchestral mixing, the use of the synthesizer was still connoted, and in some cases, controversial (see section I.A.2). Indeed, it is hard to think of a composer in the 1970s turning to the synthesizer without associating it with some degree of a mechanical and musical challenge, given that its limitations, such as monophony, were so restrictive (see quote from Wendy Carlos in section I.A.2). Nowadays, because of the various manifestations and features of the synthesizer, these connotations seem to be only relevant to earlier mores.

In recent films, such as *Deadpool*, the electronic artist turned film composer Tom Holkenborg has used a multitude of vintage analog and digital synthesizers but does not necessarily attempt to recapture their codes. Instead, he uses them for their assets and the almost immediate effect they provide, rather than to suggest their era (*Making of Deadpool Soundtrack (Tom Holkenborg aka Junkie XL)* [Video]. YouTube. https://www.youtube.com/watch?v=sMx7qUH_DMs&t=179s).

Farther still, some composers nowadays seek to merge the synthesizer with the sound design to give an immersive experience, one that anchors the audience in the present moment of the movie viewing experience. In such films as *Under the Skin* or *Irreversible* the purpose of the soundtrack is to reach new spontaneous sensations, more internal and more sensory. As a result, it can explore new horizons through its enhanced sound capabilities. The highs and lows play with the extremities of our sensory spectrum, feeding adrenaline, instant perceptual pleasure or conversely, physical discomfort (*Tom Wolfe (Omnisphere 2: Ares Patch Demo)* [Video]. YouTube. <https://www.youtube.com/watch?v=8n-Ralz1R3M>).

Today's synthesizers are tools that can pick up the audience instantly in a soundtrack, sensorially and physically, without even allowing them any mental or physical distance to it. The viewer can be reminded of his own body at any moment,

thanks to modern synthesizer engines able to produce complex and powerful sounds providing an immediate sensorial sound stimulus. The body is the first to digest the sound, and leaves sometimes no space for connotations and dwelling on possible cultural references. This can as well be achieved with vintage synthesizers enhanced by today's production techniques. This term of performance is significant since the idea of performance in technology has become an idea of progress; and with progress, the creative process evolves as well (*Dash Glitch (Immersive Atmospheres in Seconds with Dawesome ABYSS Atmos Synthesizer)* [Video].YouTube. <https://www.youtube.com/watch?v=aAgVAJ-0zJ4>).

If this notion of progress has not necessarily a Sci-Fi connotation anymore, operating in an alien future, it has given way to a concern of constant optimization of the present. Synthesizer developers such as UDO are in constant and uninterrupted search for increased performance, high definition, lifelike, "3D" in sound. So, these images have changed, and unlike the last century, today it is difficult to hear a synthesizer that would evoke a future that is alien to what we might already have in mind. This is perhaps due to the fact that being surrounded by electronic sounds in our daily media, stereotypes have dissolved. Or perhaps the design of synthesizers today is more compliant, and designed for apartment living, as evidenced by the growing market for pocket-sized synthesizers and desktop synthesizer modules.

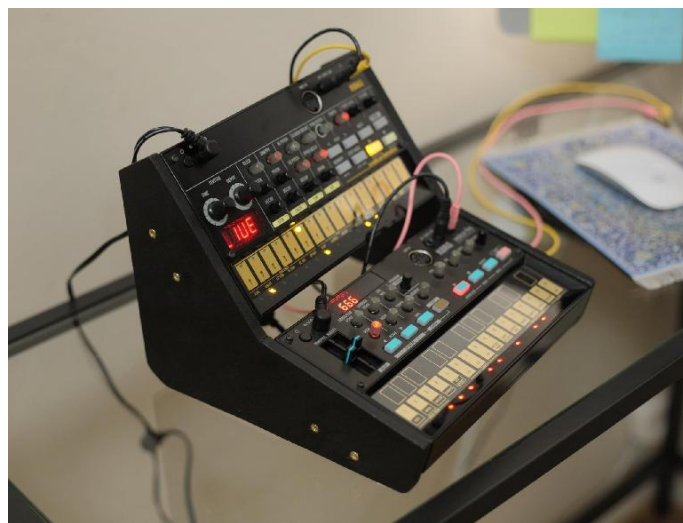


Figure 7 : Korg Volca

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From this performance-oriented use, the synthesiser today has a plasticity, a transparency and a permeability that detaches and distinguishes it completely from its past counterparts. It is pushing the limits of all that is possible in acoustics, and is used to assimilate and process acoustic sources in order to improve them, like Xfer's digital synthesizer Serum. Synthesizers have become valuable for the film industry, and is often an essential part of the chain of production to achieve a result that meets the expectations of an audience that is now accustomed to immersive soundtracks.

Conclusion

When it first appeared in film music, the look and sound of the synthesizer was extremely unusual and unsettling. It mirrored an image of a huge technological step; and the way it seemed to break away from traditional acoustic instruments was disorienting to the audience. Several composers decided to tackle these complex creatures by experimenting, then by challenging themselves musically. The synthesizer is eventually approached differently, in an attempt to blend more easily into the mainstream.

Composers then play with the codes of the synthesizer, and it brings then another dimension to film music. However, it is an instrument which remains slave of its sci-fi affiliation until the 80's, but progressively will manage to detach itself from it, to eventually become well accepted by the general public and the elites. It is then appreciated for its beauty, affirms itself, and will even assume at times the role of emotional narrative guide on the screen. As its popularity grew, it became a soundtrack to the hopes and utopias of the 80's, and as technology and its consequences became disillusioned, it became an icon of nostalgia that could still be preferred to the modern, constantly updated, digital equivalents.

Regardless of preferences, a synthesizer is now an asset for any composer, when it was once a musical challenge. With gentler and portable designs, it is now thought for the home, and becomes an indispensable companion for almost any music production that wants to be competitive on the market. Today, even dematerialized, it assimilates all styles, playing with our senses with delicacy and exactness.

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