

Book Title – Electronic Visual Music. The Elements of Audiovisual Creativity

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Chapter Title – Introduction: Electronic Visual Music

Introducing Electronic Visual Music

Welcome to my book about visual music. It has been a desire of mine for some time to commit into print my thoughts about this subject and consolidate some of my experiences, both in teaching at university, and in my personal creative practice, which extends back to 90s. The motivation to write has also been inspired by reading the many excellent books and articles about visual music, some of which are referenced in this book. Visual music and audio-visual media continue to grow as disciplines and there is a wealth of high-quality writing and artworks available; hopefully I can contribute something useful and meaningful from my own perspective. Writing has been both an enjoyable and challenging process. My own thoughts and preconceptions have been challenged every step of the way. Only when committing the words to paper did it become apparent that something lacked the clarity I thought it contained. This has encouraged me to try and reinforce every discussion by undertaking more reading and reflection. I hope this has been mostly achieved, but welcome feedback and further discussion so updates can be made when this book is revised at some point in the future. The topic is visual music, a creative artform, but writing itself is also a creative process, one that I am still learning. It is necessary to work on the fine detail, the intricacies of each word, sentence and paragraph and their emerging meanings before returning to an overview of each chapter and the whole book to objectively evaluate its progress. The process is not unlike composing a piece of music or visual music, only the medium is different, and the artist will understand that composition rarely goes as originally intended. The enjoyable aspects are seeing things come together after days and weeks of working. Refreshing one's knowledge in a subject that has been studied for so long still reveals new ideas, artists and authors that feed into the discussion and inspire one to create new pieces and articles. Writing is an excellent way to understand a subject.

This book is very much my own perspective on visual music, albeit being informed by the interviews in Chapter 2. It is a subject that has a relatively recent history but one which has become more established and diverse. It is not necessarily helpful to try and pigeonhole a range of works into one category but sometimes there is no way around this without identifying sub-genres and increasingly detailed classification systems. For now, I will refer to artworks relevant to this book as 'visual music' and discuss the rationale for this soon. The golden period of this artform resides in the mid to late 20th century and is associated with artists including Viking Eggeling, Mary Ellen Bute, Oskar Fischinger, John Whitney... These artists are the influential pioneers of the art and created defining compositions of the genre. Many contemporary artists have been inspired by these pivotal moments and refined and updated the techniques to create new works of outstanding beauty. My own step into visual music stems from experiences I had in popular music, the use of computers and augmenting live music shows with screened visuals in the 1990s. At that point in time, I did not consider defining the media I was producing as 'visual music', and I still do not consider that work to be classed as such, but those experiences have informed my later practice by providing a good foundational insight how visuals work as an independent medium and cohesively in conjunction with music. These are important considerations when creating visual music.

These formative experiences were gained in my home city of Sheffield, UK. During the 1980s and early 1990s there was a culture of live experimental electronic music which, by some artists, was accompanied by video projections. These events took place in local clubs such as the City Hall Ballroom, the Arches and a range of smaller venues dotted around the city. The gritty visuals and audio often had an industrial and experimental leaning, at least in part inspired by the industrial heritage of the city. At the time Sheffield really was a creative place with its own distinct aesthete and just living in the area meant osmotically absorbing these influences by trading ideas with friends and artists. Some acts typified this approach such as Cabaret Voltaire and Clock DVA, the latter who were a strong inspiration for me to begin working with digital video animation using Electronic Arts' Deluxe Paint on the Amiga computer. This seemed to be a natural progression to the MIDI sequencing work I was doing with Microillusions' Music X sequencer. It was the dawn of the home personal computer and multimedia software, and it unlocked many creative possibilities. These formative explorations found their way into the live arena when electronic video was produced to

accompany the band I was performing with. The digitally generated visuals were recorded to analogue VHS tape and screened on old and heavy cathode ray tube television sets mounted on top of speaker stacks. Being the car driver meant I was the person mostly responsible for storing and lugging around the equipment, always strenuous work! The videos in these early productions were not intended to be of interest in their own right; they were more a way of enhancing the musical performance in a visual way. Something else for the audience to engage with. The videos were abstract and colourful and often behaved more in the manner of a light show, rather than containing any kind of narrative or representation of the musical content. The audience seemed to accept and enjoy the visuals and responded with positive comments about their inclusion in the performance. Preparing and creating all this additional media was time consuming, but it provided an additional layer of interest for the band and the audience, which set us apart from many of our peers who, apart from the acts noted above and a few others, were still largely performing music only stage shows. Some of the ideas concerning the use of abstract colour and light experienced in these early videos have since been carried forward into my later practice and theories related to composition and performance. Thomas Wilfred's *Lumia* (1947, 247), for example, seems particularly relevant in this respect and was used as inspiration for *Space Movement Sound* (Payling 2010) and *Diffraction* (Payling 2012), the final two compositions of my PhD portfolio, as well as being a more generalised influence in later works.

A further advancement to later work was the intention for the visuals to become more cohesive with the music. In an effort to achieve this, my artistic output since 2008 has explored the workflow and techniques used in creating what I identify to be closely aligned with the artform of visual music. This genre is focussed and refined to enhance the synergy between music and image, to achieve a more unified balance between the two. The technique of '*compositional thinking*' (Hyde 2012, 171) was used in part to achieve this. In compositional thinking the compositional form of music influences that of the visual. This is where one connection between sound and image can begin. The primary technique to further enhance these relationships however, was '*material transference*' (Hyde 2012, 170). With this technique the attributes of one medium are transferred by some means to the other. So, for example, visual colours could inform the choice of musical timbres. In my earlier portfolio pieces material transference was achieved through automated techniques and parametric

mapping, the mapping of parameters from one medium to another. Sound amplitude modifies shape size, for example. Aside from these rigid mapping processes a more subtle transference was applied, through the composer's influence and intuitive interpretation between the media. This occurred more frequently in later work as confidence in composition increased, but in all approaches the artist's guiding hand made the final judgement. These are only a few examples of approaches that can be used during composition and performance, many others will be discussed throughout this book.

Intended Audience

Although compiled with newcomers and existing visual music practitioners, audiovisual composers and academics in mind, this book may be of specific interest to those who come from a music background and who are considering adding a visual component to their work. Although I think of myself as an interdisciplinary artist, my experiences originate in popular music composition and performance and later in more experimental musical forms. The visual skills came later and have been developed alongside the core practice of music making. The discussions about visuals in this book are therefore written from this perspective; a musician seeking meaningful use of visuals. This may also be true of others in a similar position. The necessity to diversify roles, the prevalence of video sharing sites and a desire to have as much artistic control as possible means many musicians have an interest in working with visual materials. It is hoped therefore that this discussion is of use to those readers with similar ideals. This may of course work the other way. Visual artists, who are interested in adding a musical dimension to their creations, should hopefully be able to derive pertinent information and techniques from this work. Music is the prevalent undercurrent which drives much of the discussion, and some practical techniques in sound will be introduced in Chapter 5.

Sound and Image Genres

Visual music has, in recent times, diversified and become a more nuanced practice. Originally identified with the types of film produced by the originators of the artform introduced above, it can now be used to describe a range of different sound and image based productions. Some related terms that may be used in a similar context are audio-visual, videomusic, multimedia and intermedia. Intermedia is a term used by Kapuscinski, where he describes works '*in which sounds and images are given equal importance and are developed either simultaneously or in constant awareness of each other*' (Kapuscinski 1998, 43). This is a good contender for

describing the process of creating visual music, but the label doesn't specifically refer to sound and image. Videomusic is the name adopted by Jean Piché and is very apt for the compositions produced by him and the artists he works with. It is quite closely connected to the Montreal scene so is not considered as fitting for a more generalised discussion. Louise Harris (Harris 2021) makes a strong case for using the name 'audiovisual' (omitting the usual dash in audio-visual), arguing that both media are composed together to create cohesion, whereas in visual music the visual conforms to the musicality of the work. I do also occasionally use audiovisual when referring to media in this genre, but this has some distracting associations. Firstly, the term 'audio-visual' has a usage unrelated to the artistic practice itself. Audio-visual can refer to the apparatus, equipment, projectors and loudspeakers, involved in sound and vision reproduction. It is a means of screening selected works, not the creative process itself. In isolation the word 'audio' refers to transmitted and recorded sound. Although there are techniques where all sound can be structured as music, there are many uses of the term audio that do not refer directly to music. The use of the word 'music' therefore promotes sound from its functional capabilities to something more associated with art. Although the word 'visual' has several meanings, when coupled with music to form the phrase 'visual music' it forms a harmonious combination reflective of the artworks in this genre and appropriate to the many artists and compositions discussed in this text.

Defining Visual Music

For the purposes of this book, visual music involves the portrayal of musical qualities in sound and image media. One of the first definitions and implementations of this artform related only to the visual medium, originally paintings; this type of visual music did not require sound. In this discussion however, music is a key component of the whole, hence the references to sound and image. From a visual perspective visual music would normally predominantly include time based visual imagery with underlying musical form or qualities. Even if this is not the intention at the outset there are several techniques that, once applied, will naturally impart what could be considered as musical qualities. The use of metric montage (Eisenstein 1949, 72–73), for example, will impart a musical time base to moving images. Visual abstraction is another trait of many visual music creations and from a musician's perspective abstract visuals may have certain traits and behaviours which could be interpreted as

reflecting musical qualities. Although abstraction is not essential in visual music, many of the pieces being discussed in this book are non-narrative and non-representational in nature. They are also accompanied by sound; therefore complying with Evans' (2005) definition of visual music.

Electronic Visual Music

Visual music is one part of the book title; prefixing it with the word 'electronic' could be a contentious move. The inclusion of 'electronic' stems from my personal interests in electronic music and by extension, electronic visuals. Visual music historically originates from painting and direct abstract animation using canvas and film stock, whereas many recent works, at least those introduced in these pages, are created with the aid of computer technologies. I personally have a very heavy reliance on computer-based techniques to realise my projects and feel the term electronic fits more closely with this approach. This does raise the question, why not 'digital visual music'? To which my reply is that electronic music comprises a recognised range of related music genres, whereas digital music is more frequently associated with production techniques and delivery formats. I therefore propose **Electronic Visual Music** as a name that can be applied specifically to my own work but also to similar productions that use electronic means for the production of sound and/or image. Although some artists will prefer their own specific terminology, for the sake of brevity I will mostly refer to their works as 'visual music' or more specifically 'electronic visual music'.

Even though this book identifies with visual music and electronic visual music, I have no qualms with alternative names being used. There are many parallels and similarities between the previously discussed genres and techniques which will become apparent throughout the discussion ahead. Ultimately, I feel anyone with an artistic slant towards sound-image composition and performance is within the same family of practitioners and hopefully they might find some useful discussion in this book. The label being used is not of primary importance; it is the artwork itself that should be prompting engagement and discourse.

Book Structure

The content and order of the book is conceived around the five elements used in various Indian schools of philosophy. This is perhaps an unusual way to organise the contents of a visual music book, but it aligns with the interests of some of the past luminaries of the artform

and has provided a higher-level structure which has helped me produce and organise the written materials. The elements of spirit, air, fire, water and earth are all different states of energy which can be transformed from one to another. The purest form of energy spirit exists all around, it is the element from which all others are derived. Through motion, heat and condensation it gradually solidifies into solid earth 'energy' which, in the case of this book, signifies the transition from inspiration to realization through chapters 1 to 5. Considering the transition between states and beginning with spirit, this fine energy can begin to flow as moving air. As the air begins to move more rapidly heat is generated creating fire. This heat creates condensation from the air which can distil into water and finally solidify into matter and earth. These elements therefore possess different qualities but all influence and stem from each other, much in the way performance can influence composition for example. Applying these elements to the structure of this book presents a novel and hopefully intuitive approach to ordering the chapters. Firstly, spirit relates to the wider aspects, historical context and influences of visual music. It is the spirit of the artform which can be channelled in future works. Air is used in the communication of ideas by various composers, which are presented as interviews in chapter 2. These discussions took the form of verbal communications using vocal movement of air, hence their designation as the air element. Fire represents the energy of performance, the stirring of nervous energy and the physical gestures used to create the art. Water represents the creative state of composition, converting ideas into arrangements and tapping into the composer's emotions and intuition. Lastly, earth presents practical techniques used in creating the artworks, taking the preceding insights and processes and applying practical methods to create the finished piece.

Even though this idea has helped me to conceive and structure the book, so it reads from start to end as a continual developing discussion, it can be explored freely in any order the reader chooses. Apart from reference to specific methods, theories and artists that follow through this discussion, each chapter has sufficient context to be explored as a standalone article. This is especially true of the interviews section, and if looking to get started with some practical techniques one could go straight to the final chapter.

Chapters Overview

A brief overview of the content of each chapter is provided below.

Chapter 1. Discovering Visual Music (Spirit) – A wide-ranging historical context that examines links between images and music in science and art and how they have been applied. This chapter introduces the luminaries and pioneers of visual music dating from the early to mid-20th century. It documents early attempts to convey musical concepts in visual form to present-day developments and the use of computer-based animation and sound creation to create similar results. It also examines related subjects such as synaesthesia and sonification and how they have influenced interdisciplinary composition.

Chapter 2. Communicating Visual Music (Air). This chapter presents interviews with current visual music artists giving perspectives on their work and techniques of composition and performance. These have been selected from a broad range of backgrounds and techniques, in an attempt to provide a diverse range of perspectives on the subject.

Chapter 3. Performing Visual Music (Fire). The theory and practise of performing with audio-visual media. The theories of liveness, performance and flow state will be discussed in relation to audio-visual performance. The types and roles of visuals in live performance are considered followed by techniques of parametric mapping and controller conditioning. A case study of a networked and in-person performance will be discussed.

Chapter 4. Composing Visual Music (Water). This chapter opens with the various approaches that can be used when composing with sound and image. It discusses techniques of montage, material transference and compositional thinking and how they can be used to create cohesion between sound and image. Spatiality of visual music is addressed by considering audio-visual landscapes and the role of gesture and texture visual music. A comparison is made between algorithmic generative techniques and composer rendition with the inclusion of an algorithmic case study. Thomas Wilfred's Lumia artform is presented as a technique for informing visual music composition.

Chapter 5. Creating Visual Music (Earth). This chapter discusses the various technologies which can be used to create visual music compositions and performances. The benefits of each technology will be introduced along with a discussion of their strengths. Various practical video and sound production techniques are then examined and related back to some of the theoretical discussion in earlier chapters. The audio-visual production workflow is discussed with reference to specific mastering and rendering techniques. A composition case

study is included detailing how each stage of a project is undertaken, and the final artefact realised.

Thanks again for taking time to read my book. Now on with the discussion...

Online Video Viewing

Throughout the book I have referenced visual music compositions which are hosted mostly on YouTube and Vimeo. One reason for doing this is to attempt to contribute to the number of references creative works such as these accumulate. When compared to written articles, published in journals and books, compositions receive far fewer citations. These practice-based outputs are however equally as important to the artistic research community and should gain the credibility they deserve. Apart from this the links are intended to be followed up and viewed by the reader to gain a full appreciation and contextualisation of the discussions. Please take the time to visit the links, view the media and where appropriate comment on, like and share the videos. It will give the artistic community the recognition it deserves and provide motivation to continue.

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