

Developing Hybridised Influences
Inspired by Japanese Pop Culture and the
Art of Wassily Kandinsky through
Collaborative Practice

Hangrui Zhang

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Abstract

This research explores the hybridisation of influences from Japanese pop culture and Wassily Kandinsky's art and philosophy, alongside the development of collaborative methodologies for music composition. By studying these two distinct sources and merging their influences, this work seeks to uncover unconventional perspectives for compositional practice, fostering creative thinking in cross-genre and cross-disciplinary contexts. Through a portfolio of compositions, I examine pop music elements, Kandinsky-inspired compositional techniques, graphic notation, and interdisciplinary practices. Simultaneously, I collaborate with artists from various disciplines and musicians of diverse backgrounds to refine a collaborative approach that elevates hybridised influences, forging connections between music and art from a deeply personal perspective. This practice reflects my artistic vision, challenges the boundaries of contemporary classical music, and promotes a unique compositional style, emphasizing collaboration-based projects and diverse artistic engagement. Furthermore, the commentary documents the research underpinning my practice, identifying techniques, examining hybridised influences, and evaluating collaborative processes.

A practice-based, autoethnographic approach is central to realizing the potential of this research. This methodology facilitates the exploration of hybridised influences, the curation of cross-genre and cross-disciplinary projects, and the development of collaborative methodologies. Through this creative process, I have established connections between Japanese pop culture and Kandinsky's works, both musically and philosophically, uncovering their artistic significance. These discoveries have enabled me to shape a distinct compositional style and integrate a collaborative approach that bridges interdisciplinary subjects through communication and cooperation. Collaboration has become a vital aspect of my compositional practice.

This research marks a pivotal transition from a traditional concert music composer to one who actively engages in collaboration and interdisciplinary art forms. It lays the groundwork for lifelong exploration of unconventional influences in music composition, broadening the scope of cross-genre and cross-disciplinary works, and solidifying a commitment to collaborative practice. Compared to traditional concert music, cross-disciplinary collaboration in contemporary music is relatively new. Moreover, the gap between contemporary music and other artistic disciplines presents a challenge. This research represents an initial step in bridging these gaps, challenging conventional boundaries, and introducing innovative approaches to music composition.

Keyword: autoethnography; collaboration; Japanese pop culture; Wassily Kandinsky; hybridisation; cross-genre; cross-discipline

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Introduction

My path to becoming a composer is different from that of many of my peers. Growing up in China, I took some piano lessons when I was a kid, but soon after abandoned my music study for various reasons. Music was still a hobby and I enjoyed listening to pop songs and classical music. In my early 20s, I decided to take music more seriously and was motivated to write pop songs. As my study dived deeper, my interest gradually transited to contemporary classical composition. At the age of 23, I embarked on formal musical training in the United States. Following seven years of study, I pursued postgraduate studies in composition at the Royal College of Music in London, which ultimately led to my current doctoral research. My background, blending East Asian and Western influences, has profoundly shaped my artistic identity and compositional practice.

During my initial studies, I explored a wide range of compositional styles, relying heavily on intuition to find my own voice. This period of exploration gradually revealed my musical interests and the influences that resonate most deeply with me. Along the way, I encountered Japanese pop music through anime and video games. The rhythmic energy and melodic character of Japanese pop music naturally permeate my compositions, often at an intuitive level. During my studies in the US, I also learned about modern art and became particularly interested in Wassily Kandinsky's works. Overall, my engagement with modern composers and abstract visual art has led me to incorporate elements of experimentation and modernism in my work. In particular, the study of Wassily Kandinsky's art has been transformative, providing a unique pathway to forge my artistic voice.

Additionally, my engagement with diverse influences from pop culture and visual art has contributed to the development of my interdisciplinary practice and collaborative approach to composition. Throughout my studies and research, I have collaborated with musicians and artists from various backgrounds. These collaborations have not only enhanced

the application of my artistic influences but also deepened my understanding of the importance of collaboration in compositional practice. Working closely with performers and artists has reinforced my belief that composition should be a dynamic and interactive process, where creative exchange enriches both the composer and the collaborators.

This doctoral research represents the culmination of my personal and artistic development, focusing on the hybridised influences of Japanese pop culture and Kandinsky's art, along with a collaborative approach to music composition. Through a detailed analysis of my own compositions, alongside relevant cultural and artistic contexts, I aim to explore the dynamic interplay between hybridisation and collaboration, offering insights into how these elements can enrich and expand the boundaries of contemporary music.

Research Questions

My background, a blend of high and popular culture, informs my intuitive choice to integrate influences from Japanese pop culture and Wassily Kandinsky's art into my creative practice. This unusual combination allows me to expand my creativity and explore my personal style.

This research will address the following questions:

- **Reappraising the Composer's Role:** How can an examination of the collaborative process between composer, performing musician, and artist lead to a new compositional approach that reappraises the role of the composer?
- **Developing Artistic Identity:** How can cross-genre and cross-disciplinary practices inspired by hybridised influences foster the development of an individual compositional voice?
- **Integrating External Influences:** How can specific elements of theory and practice from outside contemporary art music, such as the theories of Kandinsky and Japanese pop culture, be coherently embraced in a personal creative practice?

Developing Personal Hybridisation in My Compositions

Hybridisation is abundant in music and art, with numerous examples where influences from different disciplines or genres intertwine. Especially, pop music and pop culture frequently serve as inspiration within contemporary classical music. Composers like Louis Andriessen, Gabriel Prokofiev, Anna Meredith, and Oscar Bettison have demonstrated creative hybridisations of pop and classical music in their works. Their individuality of style is strong through unorthodox instrumentation, dynamic rhythmic profiles, and vibrant timbres. However, each composer's approach to hybridisation is distinct. Louis Andriessen's music reveals Stravinsky's influence and incorporates pop instruments like the electric guitar into concert music. British composer Gabriel Prokofiev (born 1975), on the other hand, takes a genre-bending approach, performing in unconventional venues like nightclubs and exploring new ways to connect with diverse audiences. Cultural background and social context significantly shape these compositional approaches.

As a composer and researcher interested in pop culture, I have studied the cross-genre hybridisations of these composers and their influences. However, I aim to develop my own hybridisation that reflects my personal interests. This is the primary motivation behind merging the influences of Japanese pop culture and Kandinsky's theory and philosophy into my compositional practice.

While few apparent connections exist between Japanese pop culture and Kandinsky, hybridising these two distinct sources has been a journey of creative exploration, cultural exchange, experimentation and collaboration. My choice of these two sources is intuitive, stemming from my long-standing enjoyment of them as hobbies. In Japanese pop culture, I am drawn to the creativity and individuality displayed in its hybridisations, of which there are numerous examples:

- Visual *kei*: A Japanese pop music movement, originating in the 1980s, often associated with rock and heavy metal genres. “While LA glam metal or the New York Dolls might have experimented with lipstick and lace, visual *kei* goes one step further in blurring the genders through cross-dressing and androgyny. It’s a theme that works for many of the bands’ story concepts, and also supports the Japanese appetite for idols and appreciation of male beauty and youth.”¹ By hybridizing pop music with distinctive visuals, visual *kei* establishes a unique identity.
- Cowboy Bebop²: This classic anime series (1998–1999) blends influences from American cowboys and jazz into both its animation and music, creating a unique fusion of Japanese style and American pop culture.
- Yoasobi³: A Japanese pop music duo, known for transforming novels into music. They started with releasing songs based on short stories posted on social media. Now they frequently collaborate with Japanese anime, and release songs based on the anime stories.

These examples, among many others, have taught me that hybridisation should be an intuitive practice that reflects my personality and creativity. I draw inspiration from Japanese pop culture’s approach to hybridisation. As Julian Cope aptly noted in *Japrocksampler*, “multiculturalism means nothing in Japan, for every outside culture must pass first through the Japanese filter, rendering it entirely Japanese in the process.”⁴ This concept of “the Japanese filter,” as articulated by Cope, provides a valuable framework for my creative process. By adopting a similar “filtering” approach, I am able to process diverse influences

¹ Time Out Tokyo Editors, “The Story of Visual Kei.” *Time Out Tokyo*. 11 June, 2015, Accessed 25 June, 2024. <https://www.timeout.com/tokyo/music/the-story-of-visual-kei>

² Fandom, “Cowboy Bebop,” accessed February 2, 2025, https://cowboybebop.fandom.com/wiki/Cowboy_Bebop

³ Fandom, “Yoasobi,” accessed February 2, 2025, <https://jpop.fandom.com/wiki/YOASOBI>.

⁴ Julian Cope, *Japrocksampler* (London: Bloomsbury Publishing Plc, 2008), 7.

through the prism of my personal perspective, aligning them with my artistic objectives. This approach facilitates the deconstruction of external influences and their subsequent reinterpretation in innovative and contextually relevant ways.

I have incorporated influences from Japanese pop culture into many compositions. However, my approach is not solely focused on cross-genre hybridisation. Instead, I concentrate on how specific aspects of Japanese pop culture resonate with my musical style. I am drawn to the fast-paced contrasts within short time frames and the relentless rhythmic textures found in rock and heavy metal genres of Japanese pop music. Moreover, the use of English in Japanese pop culture represents a fascinating example of cultural exchange. “The integration of foreign languages into Japanese pop music demonstrates meaning on a number of levels; this fusion combines aesthetic ideas regarding both sound and image.”⁵ Such hybridisation not only resonates deeply with my background but also highlights that engaging with interdisciplinary knowledge is a fundamental aspect of hybridity.

These aspects are filtered into my practice within the context of contemporary experimental music. This "filtering" approach also extends to my study of Kandinsky. While much of his theory and philosophy aligns with musical practices, his book *Point and Line to Plane* serves as my primary source of inspiration. Translating Kandinsky's influences into contemporary music has been an inspiring experiment, shaping both my graphic and conventional notation practices.

For my graphic scores, I explore how basic geometric elements not only convey musical information but also enhance creative interpretation and collaborative performance. In my conventionally notated scores, I focus on translating musical elements such as rhythm

⁵ Carolyn S. Stevens, *Japanese Popular Music: Culture, Authenticity and Power* (London: Routledge, 2008), 137.

and pitch into geometric forms and examining how these geometric structures within the fixed plane of the music staff can imply deeper musical meaning.

Hybridising Japanese pop culture and Kandinsky is not merely musical practice, but a philosophical and cultural exchange. Many of my compositions utilise pop music elements alongside compositional techniques derived from Kandinsky's theories. Learning from the cross-disciplinary collaborations in Japanese pop culture inspired an interpretation of Kandinsky's influences from different perspectives, leading to creative and diverse practices like graphic notation, electronic music, and using instruments made from unconventional materials. The cultural exchange within this hybridisation exhibits notable aspects. It is not just about the exchange between Asian and Western cultures, but also between high and popular culture. While this exchange might not be directly reflected in the compositions submitted, there is experimentation with the concept in my practice. For example, my project in collaboration with Andrew Scott, *Music for Recycled Materials*, involves creating instruments from waste and recycled materials. One of our goals is to make instruments more accessible to a wider audience by using inexpensive materials. We aim not only to create high art but also to engage a broader community through innovation.

In summary, by engaging with two distinctly different sources, the development of a personal hybridisation reflects my personality and artistic interests. Such a development is approached through multiple perspectives, including technology, cross-genre exploration, and cross-disciplinary collaboration.

Developing a Collaborative Approach in My Compositional Practice

During my research, I have forged connections with musicians, designers, and artists from diverse backgrounds, resulting in several cross-disciplinary collaborations. These collaborations have been instrumental in advancing both my practice and research. By

integrating hybridised influences from musical and artistic perspectives, I have significantly expanded the application of these influences. Additionally, these collaborations introduced me to interdisciplinary practices that were unfamiliar to me before my doctoral studies. Such experiences have motivated me to refine my collaborative approach, supporting my transition from a contemporary classical composer to one who embraces multidisciplinary knowledge and actively fosters interdisciplinary collaboration.

The hybridised influence of Japanese pop culture and Kandinsky's art and philosophy has profoundly shaped my interdisciplinary practice. Researching these areas has introduced fresh ideas and perspectives, encouraging me to explore connections between art, design, and technology. Kandinsky, in particular, pioneered interdisciplinary practice, blending multidisciplinary knowledge into his art and theories. For instance, he "challenged early twentieth-century notions of the place of dance by extending his artistic practice to collaborate with dancers, musicians, and other artists in a search for a new form of stage composition."⁶ Furthermore, in *the Art of Spiritual Harmony*, Kandinsky elaborates:

In dancing as in painting we are on the threshold of the art of the future. The same rules must be applied in both cases. Conventional beauty must go by the board and the literary element of " story - telling " or anecdote " must be abandoned as useless. Both arts must learn from music that every harmony and every discord which springs from the inner spirit is beautiful, but that it is essential that they should spring from the inner spirit and from that alone.⁷

⁶ Michael Huxley, "The Dance of the Future: Wassily Kandinsky's Vision, 1908–1928," *Dance Chronicle* 40, no. 3 (2017): 259–86. <https://www.jstor.org/stable/48539915>.

⁷ Wassily Kandinsky, *The Art of Spiritual Harmony*, trans. Michael Sadleir (London: Constable limited, 1914), 100.

Today, many contemporary artists across various fields have incorporated Kandinsky's influences into their work. For example, Matthias Dittrich's "Narrative 2.0" is a software program that visualizes music. Dittrich explains: "The music was segmented in single channels. The channels are shown fanlike and the lines move from the center away with the time. The angle of the line changes according to the frequency of the channel, while the frequency reaching a high level, the channel becomes highlighted by orange. The visualisation should not necessarily return exact information, even if the arrangement and uniformity of the music can be read. The purpose was to create even more an aesthetically responding visualisation with the music as an artist."⁸

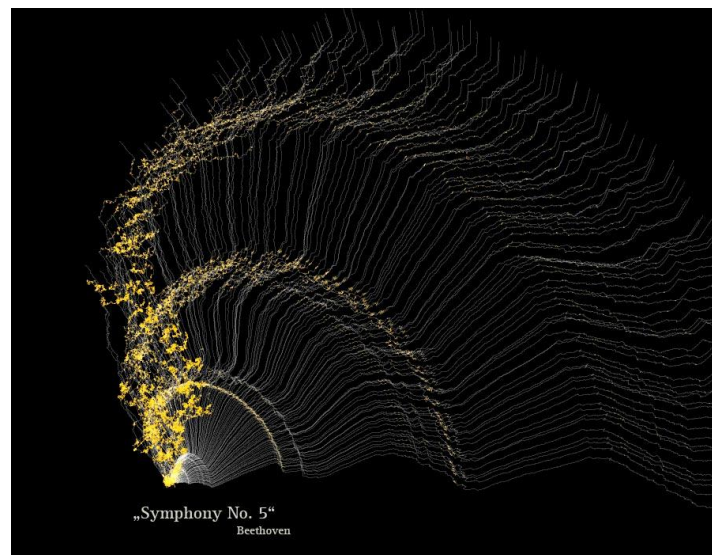


Figure 1: Beethoven's *Symphony No.5* visualised by "Narrative 2.0". Permission to reproduce this has been granted by Matthias Dittrich.

Interdisciplinary practice has been essential in developing my collaborative approach. Collaborating with artists, designers, and musicians has provided me with invaluable lessons and experiences. Working closely with collaborators has not only deepened my understanding of their work and aesthetics but also inspired me to see music from different perspectives. For instance, in the audiovisual project *Derelict Structure: Harefield*

⁸ Matthias Dittrich, "Narratives 2.0," *portfolio.matthias_dittrich*, March, 2008, Accessed December 10, 2024, <https://www.matthiasdittrich.com/projekte/narratives/visualisation/index.html>.

Limeworks, I collaborated with visual artists and designers, including Cainy Yiru Yan, Ruxing Xiao, Ruyun Xiao, Andrew Scott, and Howard Batchen. My discussions with visual artist Yiru Yan about the film's visual imagery allowed me to perceive the flow of the music from a visual perspective, fostering a closer connection between sound and art.

Working with musicians has also been invaluable for refining my collaborative approach. These collaborations provided insights into the musicians' instruments, personalities, and techniques. For example, in *Music for Recycled Materials*, a project with designer Andrew Scott, we created unique instruments from waste and recycled materials. During this project, I conducted workshops with woodwind players, particularly oboist and clarinetist Joel Dixon. These workshops explored Joel's techniques with Andrew's handmade instruments and his experimental and improvisational styles. The knowledge gained from these sessions became a valuable asset in tailoring my compositions to the musicians and deeply exploring the unique soundscapes of these handmade instruments.

Composers and musicians such as Jennifer Walshe, Matthew Shlomowitz, and the ensemble "Apartment House" have demonstrated various collaborative approaches in their works and performances, which have greatly inspired my own. Jennifer Walshe, for instance, is renowned for her innovative thinking and active engagement in cross-disciplinary collaboration. "The New Discipline", a term Walshe introduced in 2016, reflects her approach to interdisciplinary practice and collaboration in music composition. She explains, "The word 'discipline' in this context is not used to designate an artistic discipline; it's used to designate a disciplined, rigorous approach to making and critiquing compositions where physical, theatrical and visual elements are as important as the sonic."⁹ Walshe further elaborates, "the New Discipline isn't an aesthetic — it's a way of working... The term allows

⁹ Jennifer Walshe, "THE NEW DISCIPLINE," *Milker Corporation*, Accessed December 19, 2024, <https://milker.org/the-new-discipline>.

for a technical discussion, because it seeks to interrogate how these pieces function on their own terms, to see the rigour and discipline and technical achievements”¹⁰. Walshe’s works engage with a wide range of media, including video, text, electronics, and AI technology. Many of her collaborations involve individuals from diverse fields, such as visual artist Memo Akten, philosopher Timothy Morton, and electronic musician Jon Leidecker¹¹. “Since 2017 Jennifer Walshe has been engaged in a quixotic enterprise, the creation of a massive – one might say definitive – dataset of text scores. Walshe’s Text Score Dataset 1.0 now comprises over 3,000 text scores, running to almost half a million words, ranging from Fluxus event scores to compositions written in the last year.”¹² In collaboration with Ragnar Árne Ólafsson, Walshe uses the “Text Score Dataset 1.0” as “a training material for Machine Learning algorithms, so that new generations of text scores could be created.”¹³

Walshe’s approach inspires me to think differently about composition. Her methods elevate music into a multidimensional art form by emphasizing the integration of other media, such as visual art and technology. Similarly, my own collaborations with artists and designers have taught me the value of incorporating cross-disciplinary knowledge into music composition. Music can be a platform connecting various art forms, and I aspire to bring people together to create innovative art forms that further elevate interdisciplinary connections.

My collaborative experiences have significantly influenced how I view my role as a composer. Beyond simply writing music, I now see my role as encompassing all aspects of curating a project, including performance design, visual components, and improvisation. This

¹⁰ Jennifer Walshe, “THE NEW DISCIPLINE,” *Milker Corporation*, accessed December 19, 2024, <https://milker.org/the-new-discipline>.

¹¹ Milker Corporation, “JENNIFER WALSH: BIOGRAPHY,” accessed December 19, 2024, <https://milker.org/jenniferwalshebiography>.

¹² Milker Corporation, “Music, Language & Machine Learning: The Text Score Dataset 1.0,” accessed December 20, 2024, <https://milker.org/text-score-dataset>.

¹³ Milker Corporation, “Music, Language & Machine Learning: The Text Score Dataset 1.0,” accessed December 20, 2024, <https://milker.org/text-score-dataset>.

shift has made me more interested in co-creation and fostering a collaborative environment where composers, musicians, and other collaborators work closely toward a shared goal.

One compelling example of co-creation is *Six Scenes for Turntables and Orchestra* by Mariam Rezaei and Matthew Shlomowitz. This collaboration highlights the essence of idea exchange in developing a collaborative approach. Shlomowitz reflects on their experience: “I had a role which was to make the music for the orchestra, and she had a role which was to make her part. But we composed it together, so she would send me a clip of her improvising on the turntables or something she made, and I’d make some orchestra music, and I would send her some orchestra music and she’d like, make a part to go with it. And then we just would meet every Friday on a video call and have a chat about what to do and how it should start and what should come next.”¹⁴

I resonate with Shlomowitz’s method, as I have had similar collaborative experiences in my audiovisual project, *Derelict Structure: Harefield Limework*. While working with visual artist Yiru Yan on this project, we conducted several meetings to share work-in-progress and made adjustments based on each other’s feedback. However, I recognise that this method depends heavily on the specific circumstances and dynamics of the collaboration. The artistic visions of collaborators may not always align perfectly, which can pose challenges.

In general, I approach collaboration with an open and adaptable mindset. It is important to acknowledge and understand the differences in artistic vision between myself and my collaborators. I strive to engage with collaborators from a learning perspective, recognizing that their expertise and artistry can serve as powerful sources of inspiration. I

¹⁴ Darmstädter Ferienkurse (@imd_darmstadt), “Matthew Shlomowitz & Mariam Rezaei composed together!” Instagram, August 19, 2023, <https://www.instagram.com/p/CwIj46kB6Wo/>.

value hearing their ideas and reflecting on how my composition can integrate their artistry while preserving my own creative identity.

In conclusion, inspired by composers who actively engage in collaborations, I aim to further develop my collaborative approach and reimagine my role as a composer. This is a long-term endeavour, currently in its early stages. My collaborations with various artists, designers, and musicians have established a strong foundation for this journey, and I aspire to broaden the scope of these partnerships to explore new and innovative creative possibilities.

Developing a Personal Approach to Music Notation

Music notation is a significant focus of my research. By deeply exploring the hybridised influences of Japanese pop culture and the art of Wassily Kandinsky, I have investigated various ways to incorporate interdisciplinary knowledge into music composition. As the fundamental tool of music composition, notation plays a crucial role in shaping musical expression. I am particularly interested in developing a personal approach to notation that reflects my engagement with these hybridised influences and my collaborative approach to composition. My fascination lies especially in graphic notation, which captivates me through its visual impact and the creative freedom it enables. Furthermore, the knowledge and philosophy I have acquired from Kandinsky strongly support my efforts to develop a unique graphic notation style.

Graphic notation boasts a rich history, dating back to the 15th century, and continues to play a prominent role in contemporary experimental music. Composers such as Cornelius Cardew, Barry Guy, and John Cage have made significant contributions to this practice, influencing generations of composers. At its core, graphic notation seeks to alter performers' perceptions and interpretations of musical scores, liberating them from traditional constraints and establishing new methods of musical communication.

In *Graphic Scores*, British composer and double bass player Barry Guy (born 1947) reflects on his composition *Bird Gong Game*, stating: “I pursued the idea of a single page of music that offered a tapestry of tight formations through to total flexibility via a series of ‘hierarchies’ that could be modified during the performance by means of hand signals and flash cards according to the perceived progress of the piano soloist. This set-up would form a three-way conversation – soloist, director, and ensemble in a flexible scenario of give and take.”¹⁵

Guy’s approach captures some of the key aims of graphic notation. Unlike conventional music scores, which meticulously specify rhythm, pitch, and tempo with precise instructions, graphic notation encourages performers to interpret musical elements from different perspectives. It employs visual cues—such as colours, shapes, and geometric patterns—to guide performers while leaving room for their creativity and dynamic feedback. This approach allows performers to engage in imaginative exploration and adapt their interpretations freely. For instance, in John Cage’s *Aria* (1958), performers are guided by colours and abstract symbols to create a distinctive performance that reflects their individual musical instincts.

¹⁵ Barry Guy, “Graphic Scores,” *Point of Departure*, Accessed January 28, 2025, <https://www.pointofdeparture.org/PoD38/PoD38Guy.html>.

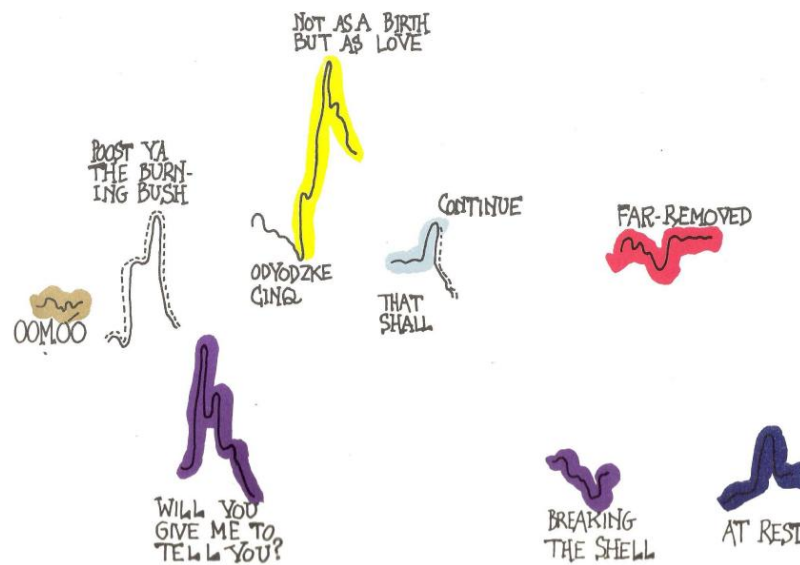


Figure 2: John Cage, *Aria*, page 6. © 1960 Henmar Press Inc., New York. Reproduced by permission of Faber Music Ltd. All Rights Reserved.

Cage's *Aria* is written for voice in any range, redefining traditional methods of notating time and pitch through graphic notation. This innovative approach encourages performers to infuse their own expressive interpretations based on individual abilities. As Cage explains in the programme notes, "the notation represents time horizontally, pitch vertically, roughly suggested rather than accurately described."¹⁶

Rather than employing a standard notation system to precisely indicate time and pitch values, Cage utilises visual perception and the fundamental principles of painting. This approach conveys information in an intuitive and unrestricted manner, granting performers significant creative freedom. The colours within the notation signify different singing styles, empowering performers to make interpretative choices. Additionally, Cage includes black squares positioned at the bottom of the score to indicate non-musical sounds, leaving their interpretation and execution entirely up to the performer.

¹⁶ John Cage, *Aria* (New York: Henmar Press Inc., 1960).

In essence, *Aria* unveils an expansive landscape, urging performers to liberate their improvisational instincts and explore their musical capabilities. Unlike conventional notation, which prescribes fixed instructions, music derived from graphic notation relies heavily on the performer's interpretation of the visuals. The intentionally imprecise notation offers ambiguous instructions, encouraging free improvisation and significantly influencing the performer's conception of crucial musical elements, such as time and pitch.

Another notable example of an innovative graphic score is *Ankhrasmation*, developed by the American composer and trumpet player Wadada Leo Smith (born 1941). Rather than considering it merely as graphic notation, Smith describes *Ankhrasmation* as a symbolic language that creates both visual art and music. “*Ankhrasmation*—a neologism formed of ‘Ankh,’ the Egyptian symbol for life, ‘Ras,’ the Ethiopian word for leader, and ‘Ma,’ a universal term for mother—is the systemic musical language that Smith has developed over nearly 50 years.”¹⁷ Using this language, Smith has created extraordinary graphic scores, such as *Kosmic Music* and *Four Symphonies* (Fall, Winter, Summer, and Spring). Compared to Cage's graphic scores, Smith's works resemble paintings more closely, with dazzling colours, meticulously designed geometric shapes, and an immersive visual aesthetic. Take *Symphony No. 1: Fall* as an example.

¹⁷ The Renaissance Society, “Wadada Leo Smith Ankhrasmation: The Language Scores, 1967-2015”, Accessed 6 January, 2025, <https://renaissancesociety.org/exhibitions/4/wadada-leo-smith-ankhrasmation-the-language-scores-1967-2015/>.



Figure 3: Wadada Leo Smith, *Symphony No. 1: Fall*. Permission to reproduce this has been granted by Wadada Leo Smith.

“In the score, *Symphony No. 1* has a red velocity-unit at the top of the Sun and a purple velocity-unit at the bottom of the Sun. Inside of the red velocity-unit is a Sun and inside of the purple velocity-unit is a moon, in a crescent form. The top velocity-unit is number 4, and the bottom velocity-unit is number 2.”¹⁸ The immediate visual impact of this score is striking, highlighting the distinctive aesthetics of *Ankhrasmation*. Just as Kandinsky integrated music into his paintings, Smith reversed this process, using graphics as his musical language. Smith’s work focuses on the construction of colour, line, and shape, conveying musical meaning through visual representations.

¹⁸ Wadada Leo Smith, “Ankhrasmation Gallery,” *Wadada Leo Smith*, accessed January 8, 2025, <https://www.wadadaleosmith.com/philosophy-and-language-of-music/ankhrasmation-gallery/>.

Unlike traditional notation, *Ankhrasmation* communicates a different kind of message to musicians, encouraging exploration through psychological and scientific perspectives. In *Symphony No. 1: Fall*, Smith explains, “the musicians using the *Ankhrasmation* language scores will use scientific information that is specific to that score and the scored symbols in order to create their performance. The laws of art making in creating a music-object are also governed by science but not limited just to science. Apart from the practice of composition and creation these principles are executed in the realm of performance where their inspiration allows them to create a fresh investigation into the area of creativity; where the performers’ imagination, fantasy, and their dream-state constructions introduces new information.”¹⁹ This approach elevates musical creation to another dimension, offering musicians immense creative freedom while grounding their performance in a structured system.

Smith’s methodology balances creative liberty with disciplined organisation. In an interview, Smith explains, “in my *Ankhrasmation*, there are lots of commands. There’s a rule of thumb for success or failure for any portion of it. There are elements that have to be referenced, like when there’s colour involved. The colours have to be referenced on various levels. For example, it could be referenced scientifically, according to nature or biology, or it can be referenced according to fantasy, imagination. So when all these components are connected, that guarantees the possibility of success; you can definitely, in a critical way, decide what’s not making it.”²⁰

Compared to Cage, Smith places greater emphasis on the role of visual elements in his scores. *Ankhrasmation* is a form of visual art, constructed with geometric structures and layered visual elements that immerse musicians in an exploratory environment. Smith’s symbolic music language does more than provide performance instructions; it serves as a

¹⁹ Wadada Leo Smith, “Ankhrasmation Gallery,” *Wadada Leo Smith*, accessed 8 January 2025, <https://www.wadadaleosmith.com/philosophy-and-language-of-music/ankhrasmation-gallery/>.

²⁰ Frank J. Oteri, “Wadada Leo Smith: Decoding Ankhrasmation,” *New Music USA*, May 1, 2012, accessed 8 January 2025, <https://newmusicusa.org/nmbx/wadada-leo-smith-decoding-ankhrasmation/>.

visual representation of the music itself, integrating aesthetic analogy and abstract thinking, which profoundly shapes the performer's interpretative approach.

In *Symphony No. 1: Fall*, the dominant image of the sun, with its immense size and vibrant colour, establishes a visually striking focal point. While this visual element does not convey explicit musical information, it organises the performance space and deeply influences the performers' psychological engagement with the music. The visual environment fosters a distinct interpretative mindset, reinforcing the interplay between sight and sound in Smith's musical works.

Overall, Smith's graphic scores illustrate an approach where creating visual art is as integral as composing music. The meticulously designed visual elements strongly influence musical performance, inspiring musicians to interpret the work from diverse perspectives. As a musical language, *Ankhrasmation* transcends traditional notation by fostering connections between music, science, and art, encouraging performers to think beyond conventional boundaries.

While my approach to graphic notation is inspired by composers like Cage and Smith, I recognise that their development of new notations was highly personal. This has encouraged me to cultivate my own graphic notation style. As highlighted in research on graphic scores, "the function of graphic scores is not limited to that of instructions for performers. Often the audience is given a chance to view and engage with the score as well."²¹ This perspective is particularly inspiring, motivating me to experiment with transforming the score into an object of art. Additionally, I aim to hybridise techniques and theories from visual art into music composition, realising the potential of how visual elements can reflect my hybridised influences.

²¹ Thor Magnusson, "Algorithms as Scores: Coding Live Music," *Leonardo Music Journal* 21 (2011): 19–23. <http://www.jstor.org/stable/41416818>.

Studying Wassily Kandinsky's art and philosophy has strongly supported the development of my graphic notation. In particular, his book *Point and Line to Plane* provides a foundational framework for my creative approach. His theories on how basic geometric elements—such as points and lines—can create powerful visual impact through variation serve as a guiding principle in constructing my graphic notations. Furthermore, Kandinsky's engagement with interdisciplinary practice inspires me to integrate visual art knowledge into music composition techniques. A more detailed discussion of this approach will be provided later in this section, *Open World Alpha: A Graphic Score Project*.

By utilising Kandinsky's theories and philosophy, my graphic notation reflects both my hybridised influences and collaborative approach. As an object of art, graphic notation not only conveys musical information but also has the potential to influence performers and audiences in non-musical ways. For example, I have been using *Krita*, “a sketching and painting program”²² commonly used for animation and pop art, to create my graphic notations. The software's pop art templates allow me to incorporate elements from video games and Japanese anime into my notation, blending abstraction and playfulness to influence performers' psychological engagement with the score.

Another important aspect of my graphic notation is the creation of a collaborative environment that not only encourages free improvisation but also fosters dynamic dialogue between performers and the composer. Unlike conventional notation, which provides precise instructions, graphic notation is an abstract musical language that often requires additional guidance before performance. While performance notes can be useful, I do not want to impose rigid constraints that may limit performers' creativity. Instead, I aim to develop an environment where the notation serves as both a musical and artistic stimulus, allowing performers to explore and interpret freely.

²² Krita, “Welcome to the Krita 5.2 Manual!” accessed February 1, 2025, <https://docs.krita.org/en/>.

In my approach, graphic scores function as immersive visual landscapes rather than strict instructions. Not every visual component conveys explicit musical meaning; rather, the elements work together to create a captivating artistic world. This openness invites performers to engage with the score in a personal way, fostering a sense of curiosity and exploration.

Traditional music notation often restricts communication between composers and performers to technical aspects such as pitch, rhythm, and articulation. Graphic notation, however, shifts this relationship, encouraging performers to actively shape the music through their interpretation of visual elements. Instead of providing pages of detailed performance notes, I focus on constructing visual structures that guide performance intuitively, allowing for flexibility while maintaining cohesion. My goal is to create a score that inspires and challenges performers, one that invites them to engage with the music beyond technical execution. By designing an open and interactive framework, I hope to establish a more dynamic and collaborative performance experience, where performers are encouraged to navigate the score creatively and contribute their own artistic perspectives.

Ultimately, my approach to graphic notation is driven by the idea that a score should not merely prescribe musical events but should function as an evolving, interactive space for artistic dialogue. By shifting the emphasis from rigid notation to fluid, interpretative structures, I seek to expand the role of performers from interpreters to co-creators. The relationship between composer and performer becomes dynamic, as each performance reveals new insights and creative possibilities. This transformation of the score into an interactive and collaborative medium fundamentally reshapes the way music is conceived and performed. By merging influences from Kandinsky's art, contemporary graphic notation, and digital media, I aim to develop a notation system that is visually stimulating, musically flexible, and deeply engaging for performers. Through this approach, I hope to bridge visual

art and music, creating a new model of composition that embraces openness, creativity, and performer agency.

Learning the Approach to Hybridisation and Indigenisation in Japanese Pop Culture

Despite drawing inspiration from composers such as John Cage, Jennifer Walshe, and Gabriel Prokofiev, two influences have been by far the most significant in shaping my creative development: Japanese pop culture and the art and theories of Wassily Kandinsky.

This interplay between external influences and cultural reinvention is central to my own artistic approach, mirroring broader trends in contemporary society. Contemporary society is rife with hybridised cultural phenomena that break down boundaries and forge new identities. Japan stands as a prime example, boasting one of the world's most prominent pop cultures. Post-World War II, Western influences flooded Japan during the Allied Occupation, initially dominating the cultural landscape. Western music genres like jazz and blues found a large audience, but Japan sought to establish its unique cultural identity through hybridisation.

The 1960s saw the rise of “*wasei pop*”, “a sentimental yet playful genre of pop music that integrated American style with Japanese sensibility”.²³ “Made in Japan” became a mantra, reflecting a modernization process that adapted global influences into the domestic cultural fabric. As Julian Cope mentioned, “for every outside culture must pass first through the Japanese filter, rendering it entirely Japanese in the process.”²⁴ This indigenization process transformed foreign elements into something distinctly “Japanese”.

²³ Carolyn S. Stevens, *Japanese Popular Music: Culture, Authenticity and Power* (London: Routledge, 2008), 43.

²⁴ Julian Cope, *Japrocksampler* (London: Bloomsbury Publishing Plc, 2008), 7.

Japanese pop music exemplifies this fusion. “Uneven and sporadic development marks much of this process, and the end result is often so intertwined and hybridised that it is difficult to discern its origins.”²⁵ Since the postwar era, Japanese pop has not only absorbed Western styles but also drawn inspiration from world music. Notably, “Western elements in Japanese popular music have already become assimilated or hybridised so much that the Japanese themselves have long tended not to consider them particularly westernized.”²⁶

Visual presentation and technology are integral to this hybridisation. From the 1960s onward, television propelled the trend of visualisation in Japanese pop music, shaping the industry for decades. “Anime is an important Japanese media that spans both television and film and is also linked to the music industry, as anime themes constitute the bulk of overseas Japanese pop music sales.”²⁷ By the early 2000s, “J-pop was firmly accepted as a term used to describe Japanese urban pop that uses globalized musical idioms and is often accompanied by visual components.”²⁸ Today, J-pop encompasses diverse genres, many influenced by global trends. Lyrics often blend Japanese with foreign languages (primarily English), not only for literal meaning but also for branding and sound. “Japlish” has even become a term to describe the use of English in Japanese pop culture. J-pop actively participates in the “media mix”, a “popular and industry term used in Japan to denote the multiple media formation developed across a single franchise”²⁹. Many J-pop songs gain global popularity through collaborations with anime, a common practice in the industry.

As a composer, I’m fascinated by how Japanese pop culture establishes its unique identity through hybridisation. It draws on international influences to its roots, transforming

²⁵ Stevens, *Japanese Popular Music: Culture, Authenticity and Power*, 8.

²⁶ Tōru Mitsui, *Popular Music in Japan: Transformation Inspired by the West* (New York: Bloomsbury Academic), 252.

²⁷ Stevens, *Japanese Popular Music: Culture, Authenticity and Power*, 98.

²⁸ Mitsui, *Popular Music in Japan: Transformation Inspired by the West*, 198.

²⁹ Alisa Freedman and Toby Slade, eds., *Introducing Japanese Popular Culture* (London: Routledge, Taylor & Francis Group, 2018), 291.

them with its own aesthetics. This deep hybridisation goes beyond simple combinations. Western products and culture, while popular in Japan, are indigenized for the domestic market and then re-exported globally.

The iconic “Hello Kitty” mascot exemplifies this process. Initially presented as “a middle-class British girl living the quintessential, comfortable life in a white family, coincidentally named White,”³⁰ Hello Kitty reflects a Japanese fascination with Western culture. However, she is portrayed through a distinctly Japanese aesthetic lens, creating an indigenized version that resonates with local audiences. Deeply assimilated foreign influences, intertwined with Japanese elements, showcase the unique identity of Japanese pop culture.

Japanese pop culture has deeply influenced my own artistic journey. It’s more than just incorporating J-pop elements into my compositions. Learning the approach to establishing a unique identity through hybridisation is a part of my ethos. Japan’s geopolitical background and its position outside the Western tradition have led to a fusion and invention in its pop culture that resonates with my own background and experience.

Inspired by Japanese pop culture, my research practice is a process of learning from diverse influences and building my own voice. Collaboration is essential, as working with people from different fields provides diverse influences. Many of my compositions are cross-disciplinary projects, involving collaborations with visual artists and designers. While these collaborations may not always involve elements from Japanese pop culture, the act of curating them reflects its influence. The visualization prevalent in Japanese pop music, whether through “visual bands” in the 1990s or the integration of anime into music videos, adds another layer of expression and challenges conventional performance norms. In my collaborations, experiments are made with various forms of visualization, including graphic

³⁰ Freedman and Slade, eds., *Introducing Japanese Popular Culture*, 53.

notations, unorthodox handmade instruments, and immersive video projections. Through these collaborations, different influences have been hybridised and my compositional style has been developed.

My research practice extends beyond contemporary classical music, drawing inspiration from pop music and abstract art. By not only studying the music of Japanese pop culture but also its cultural practices and approach to hybridisation, the dimension of my research is expanded, further establishing my compositional style.

Utilising Wassily Kandinsky's Philosophy and Art Theory in Music Composition

Wassily Kandinsky, a pioneer of abstraction in Western art, is renowned for his passion for music and its integration into his paintings. In *On the Spiritual in Art*, he wrote, "Colour is a means of exerting a direct influence upon the soul. Colour is the keyboard, the eyes are the hammers, the soul is the piano with its many strings. The artist is the hand that purposely sets the soul vibrating by means of this or that key. Thus, it is clear that the harmony of colours can only be based upon the principle of purposefully touching the human soul."³¹ Kandinsky was able to see colour and art through non-visual perspectives due to his synaesthesia, a rare neurological phenomenon. However, his theory and philosophy extend beyond this intuition.

In *Point and Line to Plane*, he explored art theories and techniques, demonstrating how basic geometric elements can connect to musical ideas and create sounds.³² See Figure 4 below.

³¹ Wassily Kandinsky, *On the Spiritual in Art* (New York: Solom R. Guggenheim Foundation, 1946), 43.

³² Wassily Kandinsky, *Point and Line to Plane* (Dover Publications, 1979).

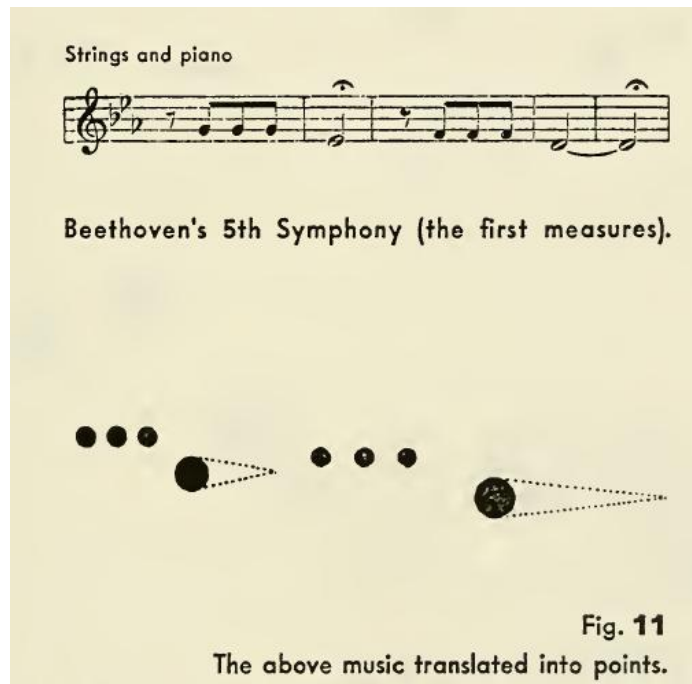


Figure 4: Wassily Kandinsky, *Point and Line to Plane*, Figure 11, page 43 - public domain.

Kandinsky's connection to music is further reflected in his relationship with Arnold Schoenberg. Upon hearing Schoenberg's atonal music in 1911, Kandinsky recognized "the parallels between Schoenberg's music, which was starting its trip towards serial music and atonality, and his own painting, which was trying to break from the traditional figurative style of painting."³³ Their friendship fostered numerous exchanges about modern art and music. In a letter to Schoenberg, Kandinsky wrote,

In your works, you have realized what I, albeit in uncertain form, have so greatly longed for in music. The independent progress through their own destinies, the independent life of the individual voices in your compositions, is exactly what I am trying to find in my paintings...I am certain that our own modern harmony is not to be found in the 'geometric' way, rather in the anti-geometric, antilogical way.³⁴

³³ Maureen Buja, "Musicians and Artists: Schoenberg and Kandinsky." *Interlude*, 14 April, 2019, Accessed 15 May, 2024, <https://interlude.hk/musicians-artists-schoenberg-kandinsky/>

³⁴ David Yang, "Schoenberg's String Quartet No. 2." *Newburyport Chamber Music Festival*, Accessed 25 June, 2024. <https://www.newburyportchambermusic.org/post/schoenbergs-string-quartet-no-2>

I am particularly drawn to *Point and Line to Plane* and have integrated its influence into my compositional practice. The art theory and philosophy presented in this book serve as invaluable tools for elevating my craft. I find that it influences my music composition in three key ways:

- Visualising Music: Conventional music notation can be visualized as geometric elements, offering a fresh perspective for analysis and interpretation.
- Inspiring Ideas: Kandinsky's art theory and techniques provide a wellspring of inspiration for musical composition, enhancing craftsmanship.
- Graphic Notation: Simple geometric elements, when thoughtfully constructed, can function as musical notation, paving the way for innovative graphic scores. Experimental composers like John Cage and Cornelius Cardew have explored this territory. However, *Point and Line to Plane* offers a more systematic methodology and in-depth analysis regarding the impact of individual geometric elements within this context.

Throughout my doctoral studies, I have experimented with various approaches to utilizing Kandinsky's theory and philosophy in my compositions, as detailed in my commentary. This journey has been both informative and inspiring, and integrating Kandinsky's influence has helped me shape my compositional style. Furthermore, it has catalysed multidisciplinary projects and collaborations with individuals from other fields.

Composition Commentary

I have selected five works (arranged in chronological order) for discussion in this commentary. The works represent a curated selection of the principles I have acquired

through research and study, applied cumulatively to each subsequent work and building upon the foundation established by earlier investigations. Together, these works offer a comprehensive overview of my compositional style and methodology, covering the entire research period and reflecting the evolution and transition to cross-genre and cross-disciplinary practice.

Metal Junkyard for Prepared Violoncello, Prepared Vibraphone, and Electronics

Metal Junkyard for prepared cello, prepared vibraphone, and electronics represents an early exploration of the rhythmic and timbral influences of Japanese pop music, particularly rock and heavy metal, within my research period. With six movements completed and more in development, this ongoing project has established a foundation for integrating pop music elements into my compositional practice. *Metal Junkyard* also exemplifies my definition of experimental music, which involves incorporating non-classical elements and unconventional ideas into musical composition, resulting in works that defy easy categorization.

This approach aligns with a broader trend among contemporary composers who draw inspiration from pop music. Their methods often include incorporating pop instruments (such as electric guitar), importing or imitating pop music elements (such as rhythm and timbre), and collaborating with artists across genres and disciplines.

A prime example of such hybridisation is Gabriel Prokofiev's *Concerto for Turntables and Orchestra No. 1* (2006). Prokofiev, whose background encompasses both contemporary classical composition and pop music production, collaborated with DJ Yoda to create a work that seamlessly fuses the sonic worlds of pop and classical music. As described by Prokofiev in the programme note, "as a composer I have a genuine interest in contemporary urban music styles such as hip-hop, so I knew that I could incorporate certain rhythms and musical ideas into the work that can bring the world of the DJ and the world of

the orchestra closer together. (In this concerto you can hear traces of hip-hop drum patterns, a Reggaeton beat, Grime, and even disco-house.)”³⁵ The concerto not only exemplifies the fusion of pop and classical music but also explores the full potential of a pop instrument (the turntable) within the context of classical concert music. “The central inspiration guiding the composition of this work was of course the instrument itself, the turntable. After a meeting with DJ Yoda, where he demonstrated the range of techniques on offer, I decided that the concerto would aim to explore all the main DJing techniques, with each movement focusing on a certain technique...However, if we put these classic ‘DJ sounds’ over a live orchestra I had a feeling that the concerto would sound forced and not the organic composition I was striving for. What seemed the most natural solution was that the DJ should scratch and play with sounds that were generated by the chamber orchestra themselves so that no foreign sounds would ever enter the piece.”³⁶

Rhythm and timbre play a pivotal role in Prokofiev’s compositional style, particularly in his fusion of pop and classical elements. The incorporation of pop-inspired rhythmic patterns and electronic sounds creates a distinctive sound world that reflects his unique identity as a cross-genre composer.

Prokofiev’s rhythmic approach can be observed in Figure 5 below. Here, the rhythmic texture is constructed through repetitive patterns characterized by clear pulses, displaced accents, and a propulsive energy. These rhythmic gestures, drawing inspiration from pop music genres, often layer upon one another, resulting in a complex and dynamic interplay.

³⁵ Gabriel Prokofiev, “Concerto for Turntables and Orchestra No.1 (2006)”. Accessed 24 September, 2021. <https://www.gabrielprokofiev.com/concerto-for-turntables-and-orchestra-no1-2006>

³⁶ Prokofiev, “Concerto for Turntables and Orchestra No.1 (2006).”



Figure 5: Gabriel Prokofiev, *Concerto for Turntables and Orchestra No.1, II Irreguluv*, bars 8 – 13. Reproduced by permission of Mute Song Limited.

In music by Oscar Bettison, whose “works explore boundaries of classical and rock, pitch and noise, convention and invention”³⁷, we can identify rhythmic approaches that resonate with Prokofiev’s style. A notable example is Bettison’s *Breaking and Entering With Aggravated Assault* (2006), which demonstrates a similar fascination with rhythmic density, layering, and the interplay between disparate musical elements.

Figure 6: Oscar Bettison, *Breaking and Entering With Aggravated Assault*, bars 1 – 3. © Copyright 2008 by Boosey & Hawkes. Reproduced by permission of Boosey & Hawkes Music Publishers Ltd. Solely for the use by Hangrui Zhang.

³⁷ Boosey & Hawkes, “Oscar Bettison”. Accessed 24 September, 2021.
https://www.boosey.com/pages/cr/composer/composer_main?composerid=18662&ttype=BIOGRAPHY

In a manner akin to Prokofiev, Bettison employs repetitive rhythmic patterns and accent displacement to create a consistent and energetic musical motion. In *Breaking and Entering With Aggravated Assault*, the rhythmic gesture is distinctly influenced by rock music, with stacked layers building a dense texture characteristic of the genre.

The utilisation of pop music elements, such as electronics, drum-kit-rhythm, and instrumentation, within a contemporary classical music context represents a prevalent method for hybridizing these seemingly disparate musical worlds. However, composers like Anna Meredith have ventured even further, blurring the lines between genres by creating works that embrace the stylistic conventions of pop music. Meredith's electronic music album, *FIBS* (2019), exemplifies this approach. The album's stylistic profile leans heavily towards pop music, incorporating elements of pop singing, club dance music, and electronic pop. Yet, *FIBS* resists easy categorization due to its complex form and unique sound palette, which are deeply rooted in Meredith's background as an experimental composer. Additionally, the track *moonmmons* showcases a cross-disciplinary collaboration with designer Arthur Carabott, featuring an app that provides a personalized and innovative listening experience for audiences. Overall, *FIBS* stands as an album that not only appeals to a wide audience but also possesses a distinct style that reflects Meredith's artistic identity. The album's fusion of pop sensibilities with experimental compositional techniques demonstrates the potential for cross-genre exploration and the creation of new musical hybrids that transcend traditional boundaries.

The works of such composers have influenced my own compositional practice, for example, in *Metal Junkyard* the rhythmic textures and use of timbre may draw inspiration from their works, but it also represents a journey to discover a personal approach to hybridizing pop influences.

Metal Junkyard integrates the influences from Japanese pop music and the art theory of Wassily Kandinsky. This fusion of influences allows for a broader range of musical ideas, while Kandinsky's theories provide innovative methods for processing and transforming these materials from a unique perspective, which I will elaborate on later in this commentary.

My First Story, a renowned Japanese rock band, serves as the primary source of inspiration for *Metal Junkyard*. Their music captivates me with its diversity and hybridisation of various pop music styles. In many of their songs, elements from different genres are blended to create their signature sound. This approach has impacted my compositional process. Emulating the concept of a pop music album, *Metal Junkyard* comprises multiple short movements. Each movement deconstructs and hybridises the influences from My First Story from distinct perspectives, culminating in a sound world that not only reflects the pop music inspiration but also reveals my individual artistic identity.

The Aspect of Rhythm

Rhythm serves as a cornerstone of my compositional approach, drawing heavily on the distinctive rhythmic profile employed by My First Story. While their rhythmic structures may be considered conventional within the rock genre, their skilful execution and manipulation create a captivating musical experience upon which I was able to build.

The band typically establishes a rhythmic foundation through a loop of crotchets or quavers on the drum set, with accents strategically placed on both the downbeats and offbeats. These accents, often played on snare drums or cymbals for their brighter timbres, contribute to a sense of rhythmic propulsion and energy. Syncopation plays a crucial role in their rhythmic profile, adding a layer of complexity and unpredictability to the otherwise straightforward rock beat. The strategic placement and frequency of syncopations within the fixed structure of their songs significantly impact the rhythmic pulse and overall momentum.

My First Story utilises subdivisions, such as quavers and semiquavers, effectively to enhance their rhythmic vocabulary. Rhythmic motifs like four semiquavers followed by an quaver and two semiquavers not only inject variety and intensity into the loop but also serve a formal function, often acting as transitional elements that connect different sections of a song.

This rhythmic texture, characterized by repetition, homophony, syncopation, subdivision, and displaced accents, can be observed in the opening (Figure 7) of their song 不可逆リプレイス (Fukagyaku Replace) (2016). This example showcases the band's ability to generate explosive energy and direct musical movement through the interplay of rhythmic elements.

[IMAGE REMOVED DUE TO COPYRIGHT]

Figure 7: My First Story, 不可逆リプレイス (Fukagyaku Replace), bar 1 – 8, score transcribed by Hangrui Zhang.

In *Metal Junkyard*, I have deconstructed the rock music rhythmic patterns found in My First Story's music and transformed them into new musical materials. While their rhythmic profile is typically consistent and repetitive, with changes and variations organized by sections to reflect musical form, I have taken a different approach.

In My First Story's music, rhythmic materials often remain similar across multiple layers of a song, working together to build a dense and powerful rhythmic texture. The consistent loop of quarter-note drumbeats establishes a clear and stable rhythmic pulse, while the strategic use of syncopation and off-beat accents generates a driving energy. Songs like *Missing You* (2016) and *REVIVER* (2018) exemplify this approach, featuring characteristic syncopation between the bass drum and cymbal, often occurring in the second half of a bar. In some passages, a double syncopation is placed every two bars, creating a shift in the rhythmic pulse that propels the music forward with increased energy. This can be observed in the following excerpt from the drum set part of *REVIVER* (Figure 8).

[IMAGE REMOVED DUE TO COPYRIGHT]

Figure 8: My First Story, *REVIVER*, bars 14 – 17, score transcribed by Hangrui Zhang.

The opening of the second movement (Figure 9) of *Metal Junkyard* presents a direct imitation of the common rhythmic material found in My First Story's music. The repeating crotchets on both the cello and vibraphone emulate the quarter-note pulse of the kick drum, while an off-beat electronic layer adds variation and intensity to the texture. This establishes a strong rhythmic presence that clearly outlines the initial rhythmic scheme.

The musical score for Figure 9 is divided into two systems. The first system (bars 1-4) features three staves: Electronics, Vibraphone, and Violoncello. The tempo is marked as c. 120. The Vibraphone and Violoncello parts play a steady quarter-note pulse, while the Electronics part plays an off-beat pattern. The second system (bars 5-8) features three staves: Elec., Vib., and Vc. The Vibraphone and Violoncello parts continue the quarter-note pulse, while the Elec. part introduces a quarter-note triplet and time signature changes in bars 7 and 8. The Vibraphone part also includes a triplet in bar 7. The Violoncello part includes a triplet in bar 7 and a 'l. arco' marking in bar 8.

Figure 9: *Metal Junkyard*, Movement II, bars 1 – 8.

However, this initial pattern is disrupted at bar 6 with the introduction of a quarter-note triplet, followed by consecutive time signature changes in bars 7 and 8. This disrupts and alters the rhythmic flow, creating a refreshing moment of contrast. The concept of syncopation is reinterpreted here, with both the quarter-note triplet and the time signature changes functioning in a way similar to the syncopations and off-beat accents found in My First Story's music. These elements shift the rhythmic pulse and inject renewed energy into the music, while also contributing to a unique hybridisation of pop and classical styles.

After this initial interruption, the quarter-note beat returns, but the disruptions grow in bars 13–17 (Figure 10). As the music develops, these interruptions merge with the quarter-

note motive, generating new materials and passages. The alternation of rhythmic pulse becomes more frequent due to the hybridisation of different materials and rapid changes in time signatures. While the character of the kick-drum rhythm persists, it is transformed and often interrupted by other rock-influenced rhythmic gestures.



Figure 10: *Metal Junkyard*, Movement II, bars 13 – 17.

In bars 16 – 17 (Figure 10), the cello part presents a variation on the quarter-note motive using quarter-note triplets followed by a quaver or crotchet, while the vibraphone utilises triplets to imitate the syncopation found in rock music. The rhythmic flow is in constant flux due to the shifting time signatures and accent placement, yet a sense of pattern and repetition emerges in a transformed manner. For instance, between bars 18 and 33, time signature changes occur every two or three bars.

Unlike the consistent rhythmic loop found in *My First Story*'s music, the texture here is a chain of fragments formed from deconstructed materials. This fragmentation itself becomes a pattern, highlighting the displacement of accents and irregular rhythmic pulses.

The second movement of *Metal Junkyard* demonstrates a reconstructed imitation of *My First Story*'s rhythmic characteristics. It retains the characteristic rhythmic gestures but eliminates the repetitive loop, opting instead for a different texture that emphasises syncopation and a shifting rhythmic flow. By deconstructing and reassembling the original rhythmic texture into distinct motives and employing techniques like variation, time signature changes, and rhythmic displacement, a new and unique rhythmic landscape emerges.

The varied approaches to rhythm continue in later movements. The opening of the fourth movement (Figure 11) presents a new idea using similar materials from the second movement, namely the kick-drum rhythm and the quaver followed by two semiquavers motif. While these materials are familiar, the treatment is distinct. The crotchet motive is now placed in a 7/8 bar, leaving a trailing quaver rest that creates rhythmic ambiguity, further enhanced by an immediate time signature change in bar 2.



Figure 11: *Metal Junkyard*, Movement IV, bars 1 – 2.

Another notable difference is the juxtaposition of contrasting materials. Bars 1 and 2 form a unified unit, repeated three times before development in bar 7. This juxtaposition generates dramatic movement and bursts of energy. Through repetition and development, the rock-influenced rhythmic materials from the second movement acquire a new character.

Unlike the second movement's rapid-fire contrasts, the fourth movement builds momentum and energy through repetition. The materials from the opening grow into larger sections of repetitive patterns (Figure 12). The main material for this loop is a variation of bar 2, incorporating influences from bar 1, with the cello motives effectively in 5/8 time. Combined with the fixed rhythmic texture of the vibraphone, the ambiguity of rhythmic pulse persists in a new form.



Figure 12: *Metal Junkyard*, Movement IV, bars 39 – 44.

The irregular rhythmic pulse in the fourth movement creates instability. There is contrast; bars 1 and 2 remain the foundation for the movement's structure, developing into larger sections with dramatic contrasts planned between them. This reflects a more classical approach to rhythmic materials, drawing inspiration from composers like Igor Stravinsky. However, compared to Stravinsky's works, the pace of shifting blocks and sections is notably faster, and the contrasts between rhythmic materials are more abrupt.

The balance between repetition and variation remains central to *Metal Junkyard*. The fifth movement introduces another aggressive approach to rock-influenced rhythms, this time heavily electronic-based, featuring synthesised instruments such as electric guitar and drum set. The sound world leans more towards heavy metal than contemporary classical music. Rhythmically, it relies on driving chords played in quavers on the electric guitar and rapid semiquaver drum patterns characteristic of the genre (Figure 13).

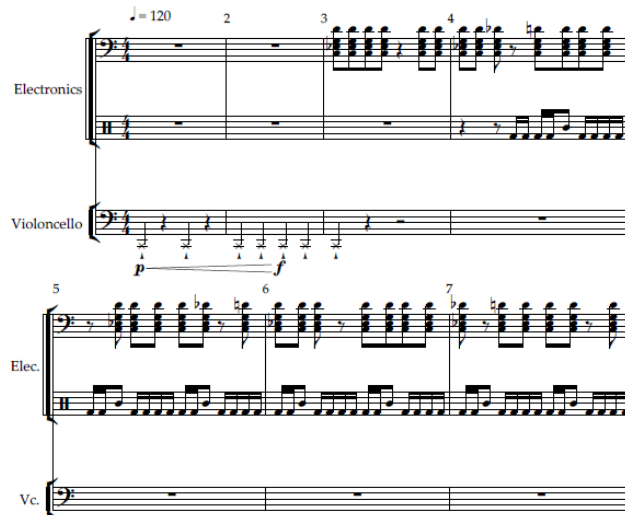


Figure 13: *Metal Junkyard*, Movement V, bars 1 – 7.

In contrast to the second movement, repetition dominates the fifth movement. The repetitive heavy metal motif on the electric guitar takes centre stage, supported by a dense electronic drum loop with minimal variation. This relentless repetition, akin to that of heavy metal, provides sustained energy. The electric guitar part also incorporates rhythmic motifs typical of the genre, with chords played in quavers, followed by syncopation or rests that shift accents to the offbeats, propelling the music forward. The electronic elements create a heavy rhythmic layer that defines the heavy metal style. Combined with the prepared cello, this movement becomes a cross-genre experiment, creating a stark contrast with other movements.

While the third and sixth movements don't emphasise rhythm heavily, they contain elements that connect to my broader rhythmic approaches. For example, in the sixth movement (Figure 14), a rhythmic figure in the electronic part—common in other movements—combines with long rests to create clear, consistent pulses rather than intense movement. These rests also provide space for other instruments. At bar 40, the figure is slightly varied with added semiquavers, and the rests are shortened. Despite this variation, the rhythmic flow remains consistent. The electronic sound adds a new dimension, but the rhythmic pulse continues as before.



Figure 14: *Metal Junkyard*, Movement VI, bars 35 – 46.

Overall, *Metal Junkyard* explores a wide spectrum of rhythmic approaches, drawing inspiration from Japanese rock and heavy metal while incorporating elements of classical and experimental music. The interplay of repetition, variation, syncopation, and rhythmic displacement creates a dynamic and engaging musical landscape that reflects my personal journey of hybridisation and exploration.

The Aspect of Timbre

My First Story's music is characterized by a rich variety of timbral elements. In addition to the standard rock instrumentation of electric guitar, bass, and drums, they incorporate electronic sounds to create their unique sonic signature. The band also utilises instruments not typically associated with rock music, such as classical piano and strings, particularly in slower, more romantic songs or as introductory elements in their more intense rock pieces. For instance, the slow, string-laden opening of *REVIVER* establishes a mysterious atmosphere that immediately captures the listener's attention.

The vocals of lead singer Hiroki Moriuchi contribute another significant timbral dimension. His versatile vocal range allows him to perform in diverse styles, from the energetic and aggressive rock style to the romantic pop style heard in songs like 告白

(*Kokuhaku*) and the relentless heavy metal style in songs like *MONSTER*. Hiroki often incorporates multiple singing styles within a single song, creating dynamic shifts and intensifying the emotional impact. The band also occasionally employs electronic modifications to the vocals, further expanding their timbral palette.

To interpret and integrate these timbral influences into *Metal Junkyard*, the concept of preparing the cello and vibraphone was explored. While the concept of prepared instruments is associated with composers like John Cage, George Crumb and Heiner Goebbels, the preparation techniques used in *Metal Junkyard* are not directly influenced by their work. Instead, this preparation was an experimental process based on the goal of imitating the sonic characteristics of rock and metal music. This experimentation aimed not only to integrate pop music elements but also to discover unorthodox timbres that could further enhance and elevate the pop music influence within the composition.

The cello preparations included:

- Hanging paper clips on the ends of selected strings, against the bridge, with the option of adding small “jingle bells” to create a metallic sizzling sound when the strings are played.
- Attaching a chopstick underneath the D string but above the A string near the top of the fingerboard, allowing the performer to pluck the chopstick for a percussive effect while also altering the tuning of those strings.
- In certain movements, installing double A strings with a paper clip placed between them, drastically changing the intonation and timbre of the A string, lowering its pitch and creating a noisy, distorted sound. Sliding the paper clip during performance further modified the pitch content.



Figure 15: Examples of Cello Preparations. Photo taken by author.

The vibraphone preparations varied slightly between movements, aiming to introduce a diverse range of timbres and enrich the metallic soundscape of the composition. These

preparations involved placing objects like tin cans, coins, and small bells on the keyboard, which primarily modify the attack, decay, and sustain of the prepared keys. For example, a tin can placed between D[#]4 and F[#]4 introduces a metallic, non-pitched element to the attack, while shortening and distorting the sustain and decay of the original pitched sound. Conversely, small bells and coins preserve the original pitch while adding a brighter effect and a layer of sizzling resonance.

One unique vibraphone preparation involved placing tin foil between specific keys and their resonators. This creates a distinctive timbre reminiscent of electronic sounds. In the second movement, this technique was applied to G[#]5 and A[#]5, immediately altering their attack and intonation, emphasizing higher partials, and producing a persistent sizzling tinfoil sound throughout the sustain. As the sound decayed, the metallic distortion intensified, culminating in a pronounced distortion of the harmonic resonance.

The preparations applied to the cello and vibraphone in *Metal Junkyard* reflect the metallic, dense, and contrasting timbral characteristics found in My First Story's music. Combined with diverse musical textures throughout the composition, the unique timbres of these prepared instruments are fully utilised to interpret and transform the timbral influences of the band.

For instance, the opening of the second movement employs percussive gestures and sounds from prepared materials to create a passage that evokes the sound of a rock band's drum set (Figure 16). Within this rock-influenced rhythmic pattern, the alternation between Bartok pizzicato and regular pizzicato mimics the distinct timbres of different drums. The F[#] on the vibraphone, prepared with a tin can, generates a metallic sizzling sound reminiscent of a snare drum, further amplified by the paper clips and small bells on the cello. Additionally, the sound of these small metal objects adds an extra timbral layer that resembles the sound of a hi-hat.



Figure 16: *Metal Junkyard, Movement II*, bars 1 – 8.

Another example of timbral transformation can be found in Figure 17, taken from the sixth movement, which demonstrates how the double A strings on the cello are used to emulate the heavy metal vocals prevalent in My First Story's music. The lyrical line alternates between normal and double A strings, with the latter's noisy, distorted timbre mirroring the harshness of heavy metal singing. This alternation also reflects the band's frequent shifts between different vocal styles within a song. The tremolo behind the paper clip on the double A strings, producing a distorted metallic sound in a higher register, further emulates the distorted electronic effects often applied to the vocal in My First Story's songs.



Figure 17: *Metal Junkyard, Movement VI*, bars 18 – 22.

These examples highlight how the prepared instruments in *Metal Junkyard* serve as a sonic bridge between the raw, visceral timbres of rock music and the more nuanced and experimental soundscapes of contemporary classical music. By reinterpreting and

transforming familiar timbral elements, I aim to create a unique musical language that pays homage to *My First Story* while forging my own artistic path.

The prepared vibraphone primarily functions to emulate the metallic sounds of a drum set, such as hi-hat and cymbal, due to its inherent percussive nature. An exception is the tin foil preparation, which represents the distorted sound of an electric guitar. Figure 18, taken from the fourth movement, demonstrates another approach to utilizing the diverse timbres of the prepared vibraphone.



Figure 18: *Metal Junkyard*, Movement IV, bars 10 – 16.

This brief vibraphone passage incorporates multiple preparations, including coins (C4 and C[#]4), jingle bells (B4, C5, D5, and E5), and tin foil (G[#]5). The rapid alternation of these timbres not only evokes various metal percussion instruments from a drum set but also creates a microcosm of the dense and metallic soundscape characteristic of *My First Story*'s music. The ever-changing rhythmic gestures further intensify the timbral contrast and density of colour.

Electronics constitute another crucial timbral component of *Metal Junkyard*. In response to *My First Story*'s extensive use of electronic sounds, I offer my personal interpretation of pop style electronics, utilizing two main components: electronically modified recordings of metal objects and virtual instruments from Ableton software.

The electronic part in the second movement combines these modified recordings with virtual instruments commonly found in rock bands, such as metallic bass and electric drum set. Through electronic modifications like reverb, amplification, and equalisation, the recordings of metal objects are transformed into new “instruments” with a sharper, brighter, and more resonant timbral quality that complements the metallic timbres of the virtual instruments. This creates a colourful sonic palette that retains a rock influence while possessing a distinctive character. The timbral quality blends well with the prepared cello and vibraphone. Moreover, from the perspective of an audio spectrum, the electronics fill in the gaps left by the live instruments, strengthening the overall sound, and enriching the sonic landscape.

The second movement adopts a mosaic-like texture (Figure 19), where point-like musical gestures from the instruments and electronics are strategically placed, allowing each part to speak individually. This juxtaposition creates contrast and movement throughout the passage, with small motives from one part triggering movement in another. This mosaic texture fosters abundant interactions and contrasts between electronics and instruments, highlighting the timbral influences from *My First Story* while maintaining the character of rock music in a transformed form.



Figure 19: *Metal Junkyard*, Movement II, bars 18 – 23.

In their early albums, such as “The Story Is My Life” (2013) and “ANTITHESE” (2016), My First Story often included short, primarily electronic tracks as opening pieces. These tracks, typically around two minutes in length, feature non-rock instrumentation like classical piano and strings, lack vocals, and adopt a slower pace with sustained, simple patterns. Structurally, these tracks serve to establish an atmosphere and capture the listener’s attention, setting the stage for the dramatic contrast of the heavy rock songs that follow.

My First Story further developed this concept of ambient music in their 2020 album “sleeping”, which exclusively features ambient pieces exploring the theme of sleep. The timbral profile of this album is gentle and soothing, with an abundance of synth pads creating sustained sounds and repetitive patterns.

The ambient music of My First Story demonstrates their versatility and how connecting different genres can create drama and contrast within an album’s structure. The third movement of *Metal Junkyard* draws inspiration from this approach, offering an imitation of My First Story’s ambient music. Utilizing the prepared vibraphone and synth pads from Ableton, the movement features a simple texture with a vibraphone melody built

upon a repetitive pattern that gradually evolves. The sustained sounds of the synth pads complement the vibraphone's resonance, supporting the harmony and establishing a soothing atmosphere.

Positionally between two fast and energetic movements, the third movement provides a stark contrast, allowing for a reset from the intensity of the second movement and preparing the listener for the energetic fourth movement. This dramatic contrast within the multi-movement structure draws the audience's attention from a different perspective.

In conclusion, my approach to timbre in *Metal Junkyard* aims to resemble the metallic, dense, and contrasting timbral characteristics of My First Story's music within an experimental framework. While imitating their timbre is part of this approach, the ultimate goal is to create a distinctive sound world that reflects both my personal artistic identity and my connection to rock influences. The prepared cello and vibraphone reinterpret these timbral characteristics within an experimental context, while the use of virtual instruments in the electronics represents a direct importation from rock music. By combining prepared instruments and electronics, I hybridise experimental and rock music genres, forging an individual musical style.

Integrating Art Theory from *Point and Line to Plane*

While *Metal Junkyard* focuses primarily on transforming influences from My First Story and creating a cross-genre work that hybridises experimental and rock music, the influence of Wassily Kandinsky's *Point and Line to Plane* plays a significant, albeit less visible, role. Kandinsky's painting techniques and art concepts have served as a wellspring of compositional ideas and techniques, providing a pathway to transform My First Story's influence and to connect the rock music genre with my personal musical style.

The relationship and exchange between Schoenberg and Kandinsky demonstrate that art and music can share a philosophy and forge deep connections. Their shared emphasis on

anti-logic, anti-geometry, and unconsciousness as fundamental concepts in constructing modern art and music has been particularly inspiring. Given this context, my approach to *Point and Line to Plane* involves interpreting Kandinsky's art theory through musical logic. As a non-expert in visual art, this interpretation is inherently intuitive, involving synaesthesia and personal artistic instincts.

Since *Metal Junkyard* is primarily focused on rhythm, I find that Kandinsky's concept of the "point" in *Point and Line to Plane* offers innovative ideas for utilizing the influences from *My First Story*. Kandinsky describes the musical point as follows: "In addition to beating the kettle-drum and striking of the triangle, points can be produced in music with all sorts of instruments – especially the percussion instruments."³⁸ By considering percussive sounds as a variety of points, the formal structure becomes the plane where these points interact, and the rhythmic texture serves as the medium that positions the points or transforms them into a flowing line. Visualising musical elements in this way allows for the application of Kandinsky's art theory to composition.

Kandinsky further elaborates on the "point" in artwork, stating,

In theory, the point, which is

1. a complex (size and form) and

2. a sharply-defined unit,

should constitute to some degree its relationship with the basic plane as a sufficient means of expression.³⁹

³⁸ Kandinsky, *Point and Line to Plane*, 43.

³⁹ Kandinsky, *Point and Line to Plane*, 35.

This description has been influential in shaping my approach to constructing percussive and rhythmic materials. Additionally, Kandinsky’s concept of “composition” serves as another source of inspiration:

A composition is the inwardly-purposeful subordination

1. of the individual elements and

2. of the build-up (construction)

toward the goal of concrete pictoriality.⁴⁰

The art theory presented in *Point and Line to Plane* provides a framework for deconstructing musical materials from *My First Story* and reconstructing them from a fresh perspective. This process will be elucidated in detail through the following example.



Figure 20: *Metal Junkyard, Movement II*, bars 28 – 34.

This passage from the second movement exemplifies the concept of “points” in my composition. Drawing inspiration from Kandinsky’s definition, “we look upon the geometric point as the ultimate and most singular union of silence and speech,”⁴¹ the “point” in my

⁴⁰ Kandinsky, *Point and Line to Plane*, 37.

⁴¹ Kandinsky, *Point and Line to Plane*, 25.

music encompasses two primary aspects: the audible sound and the space it creates within the musical texture.

Sound represents the immediate impact of a point, encompassing pitch, timbre, duration, and gesture. From a visual perspective, sound reveals the colour (timbre), form (gesture and duration), and vertical position (pitch) of a point. It serves as the internal factor in deconstructing and reconstructing musical materials from *My First Story*. As discussed earlier, the prepared cello and vibraphone collaborate to emulate the sound of a snare drum (Figure 16). In Kandinsky's terms, the single point of a snare drum is now split into two points distributed between the cello and vibraphone. These double points introduce a mixture of timbres and fundamentally transform the auditory identity of the original point. Due to their different pitch registers, the combined points significantly expand the vertical space occupied by the single point, creating a more pronounced impact on the musical texture. Thus, the sound of the snare drum is deconstructed and rebuilt into a new sound while retaining some of its original characteristics.

The rests between each note, as seen in the score, represent the horizontal space created by the points. This deconstruction and reconstruction of *My First Story*'s materials occurs externally. The space between each point provides opportunities to highlight points from other parts and allows for diverse interactions between instruments and electronics, as seen in bar 28. These rests not only indicate the horizontal positions of points but also influence the musical movement and the magnitude of the impact that points can create.

In *My First Story*'s music, the space between each point on the drum set is fixed, resulting in consistent energy and rhythmic flow. This fixed spacing is featured in some parts of *Metal Junkyard*, such as the opening of the second movement (Figure 16). However, it is short-lived, as subsequent passages either interrupt or develop this fixed spacing, creating varied horizontal positions for the points. This approach is most prominent in the second and

fourth movements. Unlike the fixed spacing, which eventually transforms points into layers of lines, the interruption and rapid development of space generates fragments and small blocks that serve as the building blocks for the larger form.

This approach to space and point reflects rhythmic displacement, fragmentation, and the structure of blocks from an artistic perspective. While these compositional techniques can be found in the works of composers such as Igor Stravinsky and Louis Andriessen, applying Kandinsky's theory to the development of these techniques refines their application and contributes to the distinctive style established in *Metal Junkyard*.

In conclusion, *Metal Junkyard* for prepared cello, prepared vibraphone, and electronics is a hybridisation of experimental and pop music. It is a cross-genre work that hybridises and transforms influences from Japanese rock music. Kandinsky's art theory elevates the compositional process, providing inspiration and methods for processing external influences. This artistic perspective is an essential factor in forging the individual style of this composition.

Workshop with Musicians

Lastly, I want to briefly discuss my experience working with musicians, which was instrumental in the development of *Metal Junkyard*. For a work involving prepared instruments, it is crucial to collaborate closely with musicians to test and refine every idea. In 2021, I held several workshops with cellist Peter Kibbe and percussionist Nonoka Mizukami. As both are based in the US, our workshops primarily took place online. While online meetings have their limitations, we successfully navigated these challenges and made significant progress in each session.

In our initial meeting, we discussed preliminary ideas and formulated a plan for subsequent workshops. Before each session, I regularly sent them drafts of the score and notes outlining my ideas and questions, inviting their feedback. During the online workshops,

Peter and Nonoka went beyond the scope of my notes, bringing various objects—such as tin cans of different sizes and small bells—for testing preparations. This collaborative experimentation compensated for gaps in my preparation notes and was instrumental in identifying the best techniques for preparing their instruments.

After finalising the preparation details and completing the score's final draft, Peter and Nonoka recorded demos of the piece. We then conducted feedback sessions to refine and enhance the project further. These collaborative efforts played a vital role in the development of *Metal Junkyard*. Not only did I gain technical insights into preparing their instruments, but I also received valuable compositional advice that led to substantial improvements in the work. For example, in *Movement II*, I received feedback from Peter regarding the rhythmic texture in the cello part. Due to the extensive preparations on the cello, the initial recorded demos revealed that complex rhythms did not effectively highlight the unique sounds produced by the preparations. After discussing this with Peter and Nonoka, I revised *Movement II* to make the cello part more practical and shifted the focus to the interaction between the cello and the vibraphone.

This experience marked a significant step toward developing a collaborative approach to composition. The process underscored the importance of learning from musicians and inspired me to actively engage with them during the creative development of my works. Building relationships through collaboration not only enriched my music but also fostered a dynamic and innovative creative environment.

Chase for Piano Trio

Chase for piano trio represents a distinct exploration of Kandinsky's art theory from *Point and Line to Plane*, particularly focusing on the aspect of the point. While Japanese pop music

is not a direct influence in this composition, *Chase* interprets Kandinsky's theory through multiple musical approaches.

In addition to the approaches found in *Metal Junkyard*, *Chase* presents my musical interpretation of the release of a point as described in *Point and Line to Plane*. Kandinsky suggests that the release of geometric points unleashes their tension and energy, making them more impactful and influential on the viewer/listener. He describes two primary cases of point release,

1. Let the point be moved out of its practical-useful situation into an impractical, that is, an illogical, position.

Today I am going to the movies.

Today I am going. To the movies

Today I. Am going to the movies

2. Let the point be moved so far out of its practical-useful situation that it loses its connection with the flow of the sentence.

Today I am going to the movies



These different positions of the point relative to its plane of context create varying meanings and impacts. Notably, in the second case, the unorthodox positioning of the point unleashes greater energy and exerts a stronger impact. Such placements disrupt anticipated patterns and structures within a given plane, thereby introducing tension and dynamism. These deviations from conventional norms compel the observer or listener to reevaluate their expectations, fostering a heightened sense of engagement. In the context of music

⁴² Kandinsky, *Point and Line to Plane*, 27.

composition, this phenomenon can manifest through irregular rhythms, unexpected accent placements, or the juxtaposition of contrasting musical gestures.

In the first case, I see a connection to music through juxtaposition and irregular rhythm. Consider Figure 21, below.

Figure 21: *Chase*, bars 24 – 31.

In bars 25–31, if we consider the A4 Bartok pizzicato on the violin as a singular point, it appears at different positions within the phrase. For instance, the pizzicato on the downbeat of bar 27 serves as a mid-phrase breakpoint, while the pizzicato on the third beat of bar 28, following a two-beat rest, acts as both the end of the previous segment and the beginning of the next. These varying positions create contrasting formal functions within the music.

I also interpret this first case from a reverse perspective. Instead of moving the point, I keep it relatively stationary and move the phrases around it. In Figure 22, the short piano motive for the left hand consistently falls on the first and third beats of each bar. However, the leading violin voice follows an irregular and ever-changing pattern, obscuring the rhythmic flow and continually affecting the presence of the piano points.

The image displays a musical score for a piece titled 'Chase', covering bars 57 through 77. The score is arranged in three systems, each featuring three staves: Violin (Vln.), Viola (Vc.), and Piano (Pno.).

- System 1 (Bars 57-63):** The Violin part begins with a rest, followed by a measure with a fermata and the instruction 'Tempo primo'. The Viola and Piano parts play a continuous, rhythmic pattern of eighth notes. The Piano part is marked with a forte (*ff*) dynamic.
- System 2 (Bars 64-70):** The Violin part continues with a series of eighth notes, marked with a forte (*ff*) dynamic. The Viola and Piano parts maintain their rhythmic patterns. The Piano part is marked with a forte (*ff*) dynamic.
- System 3 (Bars 71-77):** The Violin part features a 'pizz.' (pizzicato) instruction, followed by an 'arco' (arco) instruction. The Viola and Piano parts continue their rhythmic patterns. The Piano part is marked with a forte (*ff*) dynamic.

Throughout the score, various musical notations are used, including rests, fermatas, and dynamic markings. The overall texture is characterized by the contrast between the sustained, rhythmic patterns of the lower instruments and the more melodic, point-like sounds of the Violin.

Figure 22: *Chase*, bars 57 – 77.

The second case of point release inspires different musical ideas. A point disconnected from the sentence gains immense space and resonance. Beyond the sound it produces, the silence it creates within the picture becomes equally significant. This disconnected point forms its own entity, existing within the picture yet not belonging to it.

My interpretation of this involves drastically contrasting sounds and gestures that act as breakpoints, interrupting a continuous passage. This is not merely a single note or sound, but a short passage or motive composed of point-like sounds. For example, in bars 52–54

(Figure 23), the repetitive G3 on all three instruments serves as a disconnection from the previous passage, pausing the musical flow. The silence at the end of bar 54 provides space for resonance and prepares for the next section.

The musical score for Figure 23 shows two systems of music for Violin (Vln.), Viola (Vc.), and Piano (Pno.). The first system covers bars 49-51, and the second system covers bars 52-54. The music features a repetitive G3 note across all instruments, with various dynamics and articulations like 'arco sul pont.', 'col legno battuto', and 'pizz.'.

Figure 23: *Chase*, bars 49 – 54.

Compared to *Metal Junkyard*, *Chase* demonstrates a different approach to point placement, particularly in the piano part.

The musical score for Figure 24 shows the opening piano passage for Violin, Violoncello, and Piano. The Piano part is the focus, showing a steady, repetitive rhythm with percussive pitches. The tempo is marked 'Vivid ♩ = c. 116'.

Figure 24: *Chase*, bars 1 – 3.

This opening piano passage (Figure 24), central material throughout the composition, features percussive pitches across a wide range played in a steady, repetitive rhythm. Horizontally, the space between points is consistent, providing a subtle structural support to

the overall plane. Vertically, the pitches create diverse positions for the points, resulting in vast vertical space and a strong impact.

The irregular placement of high and low points defies the expected rhythmic scheme of the time signature. This alternation illustrates two distinct lines—high and low—on the piano. The points in each register naturally form small groups with their nearest neighbours on the same line. These groups become new points in a different form, adding another layer of impact. Due to the irregular horizontal placement, the size and shape of each group varies (Figure 25), creating constantly changing forms, positions, and spaces for these new points. These evolving points introduce further interactions within the texture, forming a secondary plane on top of the original.

The image displays a musical score for three instruments: Violin (Vln.), Viola (Vc.), and Piano (Pno.), covering bars 36 to 39. The score is written in 3/4 time. The Violin part begins at bar 36 with a measure rest, followed by a half note G4, a quarter note A4, and a half note B4. A bracket under the last two notes is labeled 'arco' and 'mf cresc.'. The Viola part starts at bar 36 with a half note G3, a quarter note A3, and a half note B3. A bracket under the last two notes is labeled 'col legno battuto' and 'ff'. The Piano part is shown in two systems. The first system (bars 36-37) features a complex rhythmic pattern with eighth and sixteenth notes. Red circles group notes on the treble staff, and yellow circles group notes on the bass staff. The second system (bars 38-39) continues this pattern. Above the Violin staff in the second system, there is a wavy line annotation: 'natural harmonic gliss. rapidly back & forth near the end'. At the end of the Violin staff in the second system, there is a 'sim.' (simile) marking with a wavy line. The Piano part in the second system also has red and yellow groupings.

Figure 25: *Chase*, bars 36 – 39.

In conclusion, this approach explores the relationship and interaction between the horizontal and vertical positions of points. The result is a colourful and lively musical texture

with irregular phrase movement, despite the overall rhythmic texture maintaining a fixed form.

Music for Recycled Materials, a Project for Special Instruments

Made with Waste and Recycled Materials

Music for Recycled Materials is an ongoing project in collaboration with artist and designer Andrew Scott. This project is driven by my interest in environmental protection, sustainable practices in music, and the exploration of unconventional sounds through instrument creation. Near the end of 2019, I conceived the idea of crafting musical instruments from recycled materials. I approached the Royal College of Art to find an artist who might share my vision. Fortunately, Andrew expressed similar ideas, and we naturally began collaborating. At the start of our partnership, we established minimal guidelines—our only requirements were that the instruments be audible and playable by musicians. It was fascinating to see how Andrew transformed scrap and waste materials into a variety of instruments, each with a unique sound and appearance. Through our meetings, I gained insight into Andrew's instrument-making process and artistic aesthetics, which helped guide the artistic direction of the project.

This project would not have been successfully developed without close collaboration with musicians. All of Andrew's instruments are woodwinds, so I introduced them to woodwind players from the Royal College of Music and organized several workshops. During these sessions, Andrew and I explored the unique timbres of the instruments and experimented with various performance techniques. Based on the musicians' feedback, Andrew gained a deeper understanding of the mechanisms of classical instruments and made several adjustments to his designs. Simultaneously, I collected numerous video recordings from the workshops, which became a valuable resource for developing musical materials.

Among the musicians involved in this project, I spent significant time collaborating with oboist Joel Dixon. Together, we explored various performance techniques on Andrew's instruments and conducted improvisation workshops. Joel's distinctive improvisational style and extraordinary skill inspired new ideas for my compositions and helped me tailor the music to highlight his strengths. On one occasion, Joel experimented with multiphonics on Andrew's instruments, producing fascinating and unconventional sounds. I recorded these multiphonics and later used them as material for electronic compositions. On another occasion, we explored the singing-while-playing technique, which revealed unique timbres. This technique subsequently became a prominent feature in *Music for Recycled Materials: Episode 1*.

Through collaborating with Andrew and the musicians, I recognised the audiovisual potential of *Music for Recycled Materials*. Kandinsky once mentioned in *On Spiritual in Art*, "A painter who finds no satisfaction in the mere representation of natural phenomena, however artistic, who strives to create his inner life, enviously observes the simplicity and ease with which such an aim is already achieved in the non-material art of music."⁴³ *Music for Recycled Materials* embodies the relationship between "material art" (handmade instruments) and "non-material art" (music). Composing music for these instruments has effectively portrayed the aesthetics of waste and recycled materials while exploring the artistic value inherent in Andrew's creations. Furthermore, the instruments' striking visual impact elevates the music they produce. The raw, unconventional appearance of the instruments provides a compelling context that enhances the music. Conversely, the music would lack the same effect if performed on traditional classical instruments.

Overall, *Music for Recycled Materials* is an innovative project that explores the creative potential of repurposed waste materials as musical instruments, combining

⁴³ Kandinsky, *On Spiritual in Art*, 35.

environmental sustainability with artistic expression. By transforming discarded objects into playable instruments, the project challenges conventional notions of instrument-making and sound production. Additionally, its integration of unorthodox timbres and unique audiovisual aesthetics deepens the dynamic interplay between sound and visual presentation. This project has allowed me to put my research into practice, demonstrating my commitment to creating cross-genre and cross-disciplinary works.

Through my collaboration with Andrew, the scope of this project has expanded significantly. It now goes beyond the initial focus on environmental protection to include the creation of more accessible instruments using recycled materials and the exploration of unorthodox soundscapes. Over the years, I have composed several pieces for this project, each featuring diverse instrumentations and performance forms. These works not only develop the original concept but also push our artistic exploration into new and innovative directions.

One of the key objectives of the project has been to bridge the gap between artistic expression and sustainability by demonstrating how recycled materials can be repurposed to create unique musical experiences. Each composition delves into the intricate relationships between the instruments' sonic qualities and their visual aesthetic, reflecting the raw and organic nature of the recycled materials. This approach has enriched my compositional practice, encouraging me to think more critically about the interconnectedness of sound, material, and visual impact.

I would like to focus specifically on *Episode 1* in this commentary, as it embodies the core practices of the project. Firstly, as mentioned before, the instruments themselves are all woodwinds, based on prototypes of flutes and clarinets. Most of the materials utilise waste and discarded materials, such as metal pipes, PVC pipes, and used brooms. Designed by Andrew, the positions of finger holes are roughly based on the theory of the harmonic series,

which means drilling the holes at specific locations over the length of the pipe ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, etc.). Because of practical limitations and the different materials collected, the positions of finger holes are not precise and vary among the instruments. The materials and positions of finger holes create unorthodox sounds, unexpected and fascinating. Each instrument has its own range, unique tuning, and overtones, which are unorthodox compared to traditional woodwind instruments. The sound quality can be described as earthy, raw, and exotic. From the visual perspective, these instruments are considered works of art. The rough appearance and unique shape of the instruments present a certain aesthetic which cannot be found in conventional classical music performance. The raw image of metal and PVC pipes turning into instruments with little modification evokes the subject of recycling waste and environmental protection. It is an attractive element for audiences when they see the instruments performed. The appearance matches well with the earthy sound quality. They come together to present a unique experience that is unlike conventional musical performance.



Figure 26: Instruments Made from Recycled Materials, Designed by Andrew Scott.
Permission to reproduce this has been granted by Andrew Scott.

The cross-disciplinary nature of this project requires special creative processes. During the development period, I worked closely with Andrew and the musicians to explore this project from various perspectives, which is reflected in each of the episodes.

Episode 1 is a deep exploration to discover the sound and potential of each woodwind instrument. I spent most of my time on this episode with the musicians to discover the range, tuning, and techniques of each instrument. Andrew's instruments can be divided into two categories. One is flute, which uses drilled holes as embouchures. The other is clarinet, which uses membrane reeds made from latex gloves. In the flute category, all the flutes are made from scrap metal pipe of various lengths and diameters. In the clarinet category, Andrew uses both PVC and metal pipes for the instruments. There is also a very special instrument in the clarinet category. I call it a "scrap metal contrabass clarinet" as its range is similar to a normal contrabass clarinet. As can be seen in the photograph (Figure 27), the curve-shaped tube provides extra length, which results in the extremely low register for the instrument. In addition, Andrew limits the numbers of the finger holes and does not position them around the half length of the tube; he positioned them near the end of the tube instead. Therefore, the tuning of this instrument is even more microtonal, and the range is very limited. The sound quality is robust and with raw energy, which invokes a feeling of something from an exotic culture. The first episode is a composition for chamber music in the contemporary classical context. However, composing for such instruments is not easy due to their unconventional construction, unpredictable tuning, and unique timbral characteristics. Moreover, their lack of standardisation necessitates extensive experimentation and adaptation to fully explore their sonic potential and integrate them effectively into a cohesive composition. The first version of this episode was completed in 2020; since that time it has been through multiple revisions, and the form has gradually shifted away from conventional concert music.



Figure 27: Metal Contrabass Clarinet Designed by Andrew Scott. Permission to reproduce this has been granted by Andrew Scott.

During the early compositional process for Episode 1, I notated everything in detail, as I do in most of my other compositions for contemporary classical music. The limitations of each instrument significantly impacted the creative process. For example, the scrap metal clarinet has an approximate range of D^b3 to $F^{\#}4$, while the scrap metal contrabass clarinet ranges from $F^{\#}1$ to $A1$. These restricted ranges influenced the tonal centres and harmonic language of the piece, which are centred around $F^{\#}$ and modulate within limited pitch choices. Additionally, the imprecise placement of finger holes, which do not adhere to precise scientific standards, adds a layer of difficulty for performers. Fast or complex passages are challenging to execute, especially given limited practice time with these unconventional instruments.

One notable feature of the clarinets, which also serves as a limitation, is the custom reeds designed by Andrew. As can be seen in the picture (Figure 26), instead of traditional reeds, Andrew crafted vibrating and elastic tubes from latex gloves to produce sound. While

these reeds create a unique timbre, they also limit the instruments' versatility. Techniques such as staccato lack the crispness of standard woodwinds, and legato passages or long notes require more time for the sound to develop due to the inconsistent vibration of the latex. Conversely, the scrap metal flute retains a mechanism similar to a traditional flute, resulting in a more familiar playing experience. However, it produces an airier tone and different tuning characteristics due to the materials and finger hole positions.

The limitations of the instruments influenced the music's texture in Episode 1. I opted for a more linear and layered structure for the woodwind trio, with each instrument occupying its own register. This approach reflects Kandinsky's description of instruments having a linear character: "The pitch of the various instruments corresponds to the width of the line; a very fine line represents the sound produced by the violin, flute, piccolo; a somewhat thicker line represents the tone of the viola, clarinet; and the lines become more broad via the deep-toned instruments, finally culminating in the broadest line representing the deepest tones produced by the bass-viol or the tuba."⁴⁴ The special instruments align well with this description, adding unique qualities that are not found in traditional woodwinds, further enhancing the textural and timbral character of the piece.

The opening of *Episode 1* (bar 1 – 43) presents the individual line drawn by the scrap metal contrabass clarinet. As the contrabass clarinet's range is limited to F[#]1 – A[#]1, it is a thick line that immediately draws audiences' attention and set up the tone for the episode. The dark and heavy colour of this instrument resembles the sound of a tuba. But the earthy and raw sound quality draws the line quite differently (as Kandinsky might say) compared to traditional bass instruments. The unstable tuning and extra vibration add some fuzziness and sparkle into the line, implying that the line has an unstable and unpredictable direction. Extended techniques add an extra layer to this monophonic line. The control of vibration and

⁴⁴ Kandinsky, *Point and Line to Plane*, 98.

flutter tongue creates contrast and varies the original form of the line. The singing-while-playing technique acts as a reflection and a parallel line of the bottom melody. It suggests a new direction, departing from the original line, which we will find out later in the piece. The polyphonic texture (singing while playing) builds up a plane, which will be further expanded later on, to support and highlight the original line of the instrument.

The scrap metal contrabass clarinet opening is followed by the entry of the scrap metal clarinet. The range of the scrap metal clarinet is similar to the typical range of tenor voice, which matches the singing line discussed earlier. With a timbre similar to the contrabass clarinet, this new line inherits some of attributes from the opening and prepares for the next development. It builds a continuation of the previous line from the contrabass clarinet and adds the improvisation as a new element. On the other hand, because of the register and timbre differences, the clarinet ‘moves’ the line to a different position on the picture and implies a bigger plane of music texture in the following development. Following the opening, the music demonstrates the use of microtones to add colour and highlight the unorthodox timbre of these instruments. While I do not expect all the instruments to perform accurately tuned quartertones, the implication of moving away from the standard tuning system further emphasises the unique acoustic quality of these instruments.

Episode 1’s revisions explore more suitable music texture for these special instruments. As can be seen in the screenshots below, this passage is a good example to show some of the objectives I aim to achieve in the revisions.

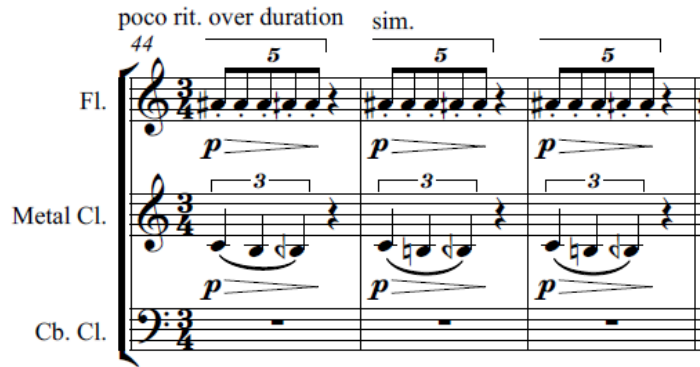


Figure 28a: *Music for Recycled Materials, Episode 1* (original version), bars 44 – 46.

Figure 28b: *Music for Recycled Materials, Episode 1* (current version), bars 44 – 48.

In the earlier version, the contrabass clarinet opening was followed by the duo between the flute and clarinet. The one-bar motive was repeated several times and then broken into fragments for further development. While the texture sounds fine on these instruments, it does have several weaknesses that I thought to improve in the later version. First, the line built by the flute and clarinet duo is quite dull. It suggested a slight downwards motion. However, it did not have a clear direction and the line overall looked quite straight, without any shape. Second, the texture did not highlight the individual character of each instrument. While the combination of flute and clarinet did picture a greater plane with extended register range and percussive effects on the flute, the sonic image created by these two instruments was not ideal, as the mixture of the two unique timbre diminished the effect of the individual characters. The sound of the special flute is like that of a normal flute. It has a stronger presence than the special clarinet, which sounds similar to the special contrabass

clarinet but does have a flatter and quieter sound overall. Bar 44 marks the introduction of the flute and clarinet following the contrabass clarinet solo. However, the homophonic-like texture diminishes some of their intricate details and nuances. The revised version fits better with the sonic image created in the opening and allows instruments to show their characteristics individually. The clarinet solo presents some materials and sonic images from the opening and the line now has a clearer direction and better shape, compared to the earlier version. Moreover, the improvisation is a surprising element that brings variations to the form of the line.

The flute part now comes later, at bar 48, creating a fragment of polyphonic texture. Compared to the earlier version, the flute part is now a decoration to the clarinet line, imitating the step-down direction with percussive staccato. It is a better-designed combination of point and line. The clarinet now has more room to show its individual characteristics with additional improvised elements, and the flute provides a stronger contrast, bringing further interaction and hinting at further expansion of the plane. Last but not least, from the visual perspective, introducing the instruments separately gives the audience more time to focus on the appearance and details of each instrument.

After the opening, the music gradually develops and the sonic image expands. The development method in the current version is similar to that of the previous one, which is based on repetition, fragmentation, and micro variations. Obviously, they are not identical, and the differences have mostly been influenced by workshops and rehearsals I had with the musicians. The contrabass clarinet part no longer switches to the PVC-pipe clarinet as it did in the previous version. Now the music has a strong and consistent bass line that supports the musical image and creates many interesting interactions with other instruments. One of the most important elements I have added to the current version is improvisation. During workshops and rehearsals, I have found that these instruments are quite inconsistent in tuning

and articulation because of their unique structure and the limited time the performers had with them. A notated passage on paper can sound different every time it is played. As I have indicated in the performance note, the notes in the score are for reference only and the performers are not required to produce them precisely. While the traditional notation of classical music does not fit these instruments perfectly, improvisation is a more effective choice as the performers do not have to worry about specific tuning and articulation. The example below shows that improvisation is a crucial part of the music texture in *Episode 1*.

Figure 29a: *Music for Recycled Materials, Episode 1* (current version), bars 69 – 74.

In this section, lines are fragmented, building a pointillistic and percussive texture. As part of the overall slow-paced development, it keeps stepwise motion, and the harmonic progression stays relatively stable. In the earlier version, the percussive points were supported by notated lines, as the example below.



Figure 29b: *Music for Recycled Materials, Episode 1* (original version), bars 68 – 70.

The solution in the earlier version is fine. However, it brings little contrast and character to the section. This section is built to bring combinations of point and line, building the energy and expanding the plane. Improvisation is great for such tasks. As the instruments' tuning is inconsistent, improvisation gives the performers great freedom to explore and express themselves without having to worry about precision. During the rehearsals, I have found that fixed notation can be a disadvantage for such instruments, limiting their expression and characteristics. The performers tend to focus more on pitch accuracy, and the instruments themselves are not consistent enough to “sound good” in the conventional manner. Improvisation is a way for the performers to perform with more confidence and comfort while maintaining the musical structure. During the rehearsals, I found great energy and raw power came from the improvisation, highlighting unique characteristics of the instruments. Moreover, the improvisation brings more unpredictable variants to the lines. With the improvisation, the lines no longer have a stable direction or still form. There are more ever-changing and interesting nuances for the audiences to pay attention to.



Figure 30: *Music for Recycled Materials, Episode 1* (current version), bars 112 – 117.

Starting at rehearsal letter C, the music shows more of the singing-while-playing technique featured in the opening, an important feature of these instruments. The singing lines add extra layers to the three-part structure, creating more complex interactions. The lines that have different directions and angles are combined to create greater movement and more dynamic images in the music. In *Point and Line to Plane*, Kandinsky emphasises the impact of angular lines, which “are composed of straight lines”.⁴⁵ He says, “the angular line is in much closer touch with the plane, and it already carries something plane-like within it. The plane is in the process of creation, and the angular line becomes a bridge.”⁴⁶ While this theory is implemented throughout *Episode 1*, the singing-while-playing technique is the best example in this work. The additional angles created by the singing line becomes a bridge that expands the plane of the musical texture. As the audiences hear more lines moving in different directions, they sense a greater force and energy. The singing lines also add new

⁴⁵ Kandinsky, *Point and Line to Plane*, 68.

⁴⁶ Kandinsky, *Point and Line to Plane*, 69.

colours to the picture. Because the human voice has a warm sound and slightly inconsistent tuning, it blends well with the instruments and further amplifies their unique timbre. The audiences can also hear the beating effect created between the instrument and the singing line, which makes the sonic image even more complex.

At rehearsal letter C, it has become more obvious that the music carries some elements from unfamiliar culture that are hard to identify. The unfamiliarity is caused not only by the instruments themselves, but also by the improvisation and the playing techniques. In *Music and Familiarity: Listening, Musicology and Performance*, Henry Stobart mentions that “musical unfamiliarity can be, and often is, a product of wider social and cultural processes, involving, for example, identity, politics, ideology, economics, gender, ethnicity, class and religion”⁴⁷ and “our social and cultural environments inevitably lead us to become attentive and receptive to particular forms and ways of structuring musical sounds, which in turn underlie the ongoing development of our aesthetic appreciation and values.”⁴⁸

The creative process of making the instruments is a social experiment itself, as it deals with the subject of recycling and environmental protection. The instruments, unfamiliar to general audiences, suggest a focus on broader cultural elements beyond traditional classical music. The materials and appearance of these instruments show elements from the industrial culture, which brings unfamiliarity and new contextual content to the audiences. Obviously, the tuning and timbre of these instruments are the most unfamiliar qualities to the audiences; improvisation amplifies the unfamiliarity and creates further cultural ambiguity, moving away from Western classical tradition. While improvisation is not rare in Western Classical Music, the sound quality, the inconsistency, and the ambiguous tuning of the instruments not only make the music sound unorthodox, but also influence the performers, who make

⁴⁷ Henry King Stobart, “Unfamiliar Sounds? Approaches to Intercultural Interaction in the World’s Musics” in *Music and Familiarity: Listening, Musicology and Performance*, edited by Elaine King and Helen M. Prior (London: Routledge, Taylor & Francis Group, 2016), 116.

⁴⁸ Stobart, “Unfamiliar Sounds? Approaches to Intercultural Interaction in the World’s Musics”, 118.

different choices in their improvisation. Instead of focusing on pitch, the performers think more about rhythm and what fingerings are more comfortable to play. There are many trills and stepwise motions in the improvisation. Combined with the microtonal temperament, the improvisation does resemble some elements from Arabic music, which was surprising and unintentional. The use of improvisation creates cultural ambiguity that sounds unorthodox and unfamiliar. Furthermore, given the nature of the instruments, extended techniques sound quite special compared to when the same techniques are used on normal woodwind instruments. The singing-and-playing technique on the special instruments creates additional beating effect due to the structure and tuning of the instruments, which resembles throat singing or multiphonic woodwind instruments from non-Western music. Overall, the unorthodox sound from these instruments resembles elements from different ethical cultures.

As the music develops, the unfamiliar sounds are utilised to create different musical textures, showing what the instruments are capable of and their unique identities. Having worked on *Episode 1* for a long time, I have realised that it is a gradual process for audiences to accept these unfamiliar instruments, and to eventually appreciate their unique sound. The composition plan of *Episode 1* sets up a good framework for this gradual process.

Open World Alpha: A Graphic Score Project

Since 2021, I have composed two graphic scores in the Project *Open World Alpha*, aiming to fuse pop culture and visual art within a musical composition. This exploration delves into notation and improvisation as a means to incorporate diverse influences.

As mentioned before, Project *Open World Alpha* takes inspiration from graphic scores such as *Aria* and *Four Symphonies*, while also blending influences from pop culture and Kandinsky's paintings. The concept is rooted in the idea of sandbox games—a popular video game genre that provides players with boundless creative freedom to interact and explore, typically without a predetermined goal. For instance, *Minecraft*, a well-known sandbox game,

allows players to play freely, setting their own objectives or choosing to engage without any specific goals. Some sandbox games are also referred to as “open world games,” as they present vast landscapes for players to explore at their own pace.

Drawing from this concept, I aimed to create a graphic score that encourages performers to unleash their musical creativity, explore various possibilities, and play without adhering to a predetermined structure. The title, *Open World Alpha*, reflects this video game-inspired framework, inviting performers to approach the graphic score with the same sense of freedom and exploration found in an open-world gaming experience.

This project is ongoing, and I have completed two works so far. The first, titled *Open World Alpha*, is designed for any instrumentation of up to four players. The second, *Open World Alpha: Materials, Building, and Exploring*, is written for solo prepared piano. Both works embody the open-ended, exploratory spirit of the concept, inviting performers to engage with the score as a creative sandbox for musical expression.

The initial idea is to give the performer(s) as much freedom as possible. As I stated in the program note, instead of having standard notes, rhythm, and articulations for the performer(s) to read, the score gives ideas, inspirations, textures, and environments that the performer(s) could use to create their own music. However, such a statement can be problematic for reasons I will explain later, and I have slightly changed my approach in the second score.

As can be seen in both scores, the graphic notation I have created is heavily influenced by Kandinsky’s art theory and paintings. In Kandinsky’s book *Point and Line to Plane*, he discusses the impact of simple geometric elements on a picture and how they can convey sounds through synaesthesia. In this quote, Kandinsky highlights the expressive qualities of horizontal and vertical lines positioned at the centre of a square plane. “These two straight lines are, as has already been said, things living solitary and alone, since they know

no repetition. They therefore develop a strong sound which can never be completely drowned out and, thereby, represent the proto-sound of straight lines.”⁴⁹

The concept of a prototype is central to Kandinsky’s theory, particularly in relation to synaesthesia. In this context, a prototype refers to the fundamental essence or archetype of a geometric element, such as a line, point, or plane, and its intrinsic ability to evoke specific sounds, emotions, or movements. By analysing the inherent properties of these basic elements, Kandinsky identifies their unique “sounds” and explores how they interact and transform when combined or varied. This analytical approach allowed Kandinsky to develop combinations and variations of geometric elements that became hallmarks of his artistic style. For example, consider his description of a point in the centre of a plane,

At the moment the point is moved from the centre of the basic plane—eccentric structure—the double sound becomes audible:

1. absolute sound of the point,
2. sound of the given location in the basic plane.⁵⁰

Inspired by this concept, I composed both graphic scores by using points and lines, which are the essential geometric elements discussed Kandinsky’s theory.

I want to explore how geometric elements from paintings can become inspirations for performer(s) to improvise and how they can influence performer(s)’ cognition of their performance. My first step is setting up the background, also known as the basic plane, according to Kandinsky’s theory. In *Point and Line to Plane*, Kandinsky describes the basic plane as such, “The term ‘Basic Plane’ is understood to mean the material plane which is

⁴⁹ Kandinsky, *Point and Line to Plane*, 65.

⁵⁰ Kandinsky, *Point and Line to Plane*, 37.

called upon to receive the content of the work of art. The schematic BP (basic plane) is bounded by two horizontal and two vertical lines and is thereby set off as an individual thing in the realm of its surroundings.”⁵¹ Some composers, such as Cage, in his graphic score *Aira*, have chosen blank papers as the basic plane and simply lays the materials on top of it. All the graphic notations are contained within the basic plane. While this method probably is the most straightforward way for performer(s) to read the information, it does lack visual depth. On the other hand, graphic scores such as *Treatise* (1963—1967) by Cornelius Cardew and *Makrokosmos* (1972) by George Crumb (see the examples below), use modified music staves to create additional layers of planes.

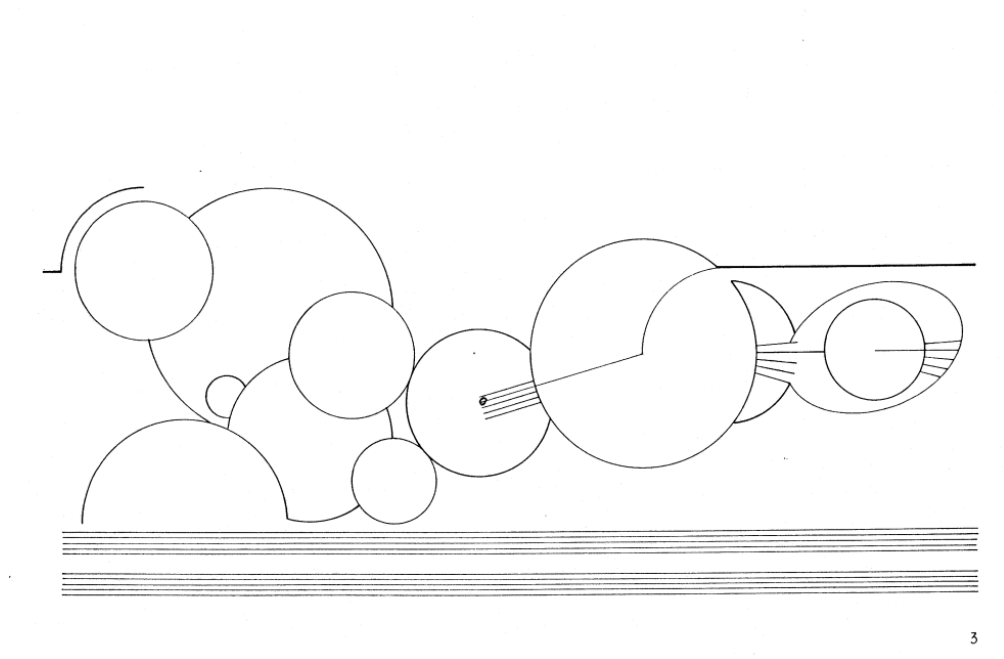


Figure 31: Cornelius Cardew, *Treatise*, page 3. © 1967 Gallery Upstairs Press, USA. © 1970 assigned to Peters Edition Limited, London. Reproduced by permission of Faber Music Ltd. All Rights Reserved.

⁵¹ Kandinsky, *Point and Line to Plane*, 115.

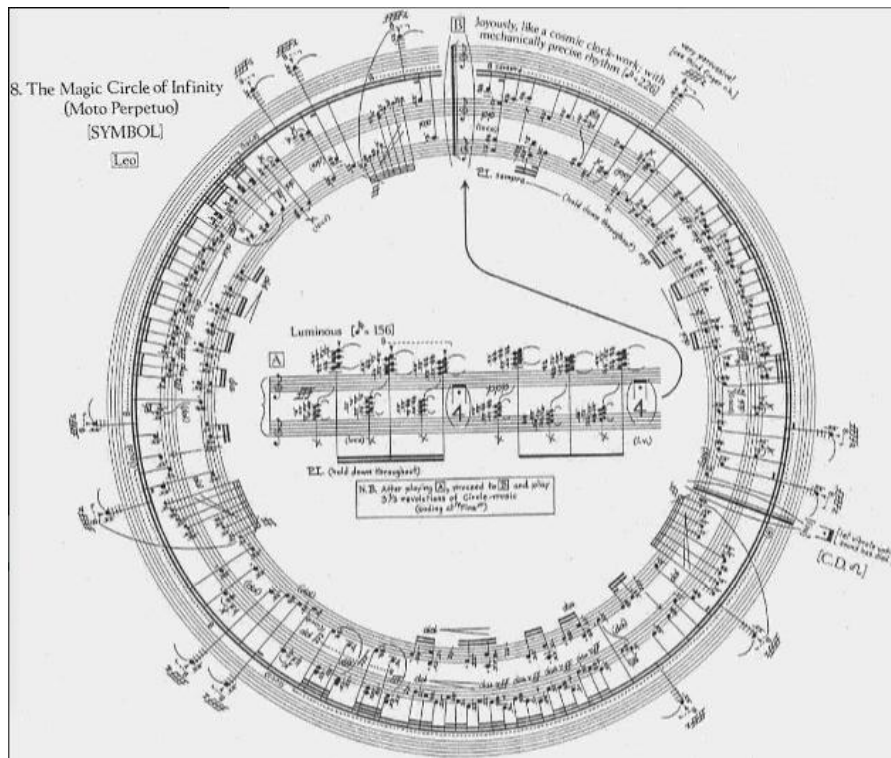


Figure 32: George Crumb, *Makrokosmos*, Movement 8: *The Magic Circle of Infinity*. © 1973 C.F. Peters Corporation, New York. Reproduced by permission of Faber Music Ltd. All Rights Reserved.

In Crumb's *Makrokosmos*, rehearsal B uses a reshaped music stave to form a circle. It becomes another layer of plane that contains rehearsal letter A as the interactive material. By using musical materials to create this additional plane to lay out the materials, Crumb suggests the interactive relationship between rehearsal letter A and B and visually brings more depth to the picture.

In Project *Open World Alpha*, I opted for standard music stave paper as the foundational canvas. It serves as contextual groundwork and an integral part of the music notation. The fixed horizontal lines, without alteration, segment the basic plane into equal parts, establishing subdivisions to organize various materials and construct the graphical structure's framework.

Following the framework outlined by the music stave paper, the subsequent step involves overlaying graphic notation onto it. Although both scores draw inspiration from Kandinsky for their graphic notation, the approaches to artistic creation differ slightly due to

the different compositional perspectives in *Open World Alpha* and *Open World Alpha: Materials, Building and Exploring*.

In *Open World Alpha*, the graphics are the essential materials for performer(s) to interpret and create their improvisation. They have the potential for different musical meanings such as pitch, dynamic, articulation, texture, and many others. There are few prerequisites and little context written into the graphic score, which is for open instrumentation. This means that the main source of influence for the performer(s) is the graphics themselves. On the other hand, in *Open World Alpha: Materials, Building and Exploring*, written specifically for prepared piano, the graphic scores (movement 2 and 4) are paired with standard music scores (movement 1 and 3) called *Materials 1* and *Materials 2*. *Materials 1* and *2* bring ideas and influences for the pianist's improvisation on the graphic scores. Therefore, the graphics are not independent information: they are responses to their related music materials in *Materials 1* and *2*. Compared to the graphics in *Open World Alpha*, the graphics in *Open World Alpha: Materials, Building and Exploring* carry different types of musical information that are tailored to the prepared piano and the pianist. Gestures of playing inside the piano are a major part of the information.

I would like to discuss the creative process and the artistic design in *Open World Alpha*, as they are the foundation of this project. Compared to many other graphic scores, where graphic design used is solely for conveying practical information, *Open World Alpha* has a different approach. First, let's look at the opening section of *Open World Alpha*.

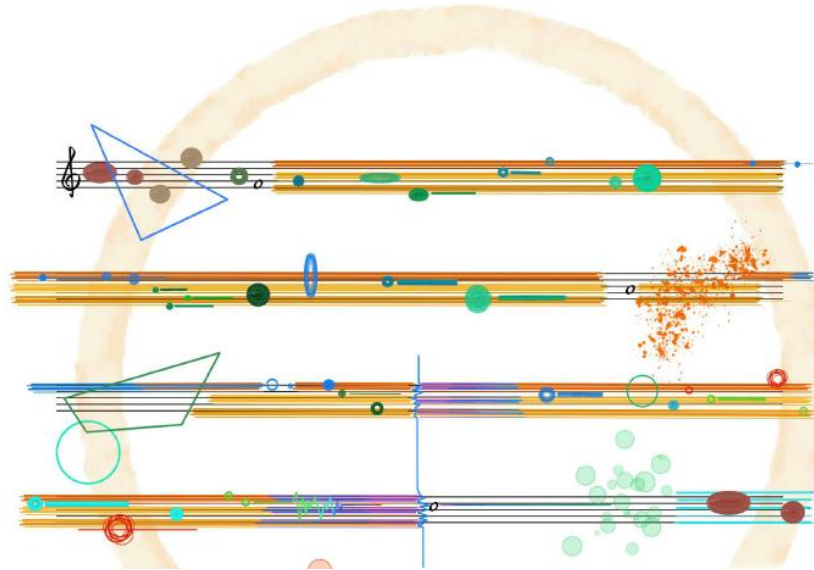


Figure 33: The opening section of *Open World Alpha*.

Inspired by Kandinsky's paintings and philosophy, my graphic notation consists of basic geometric elements (points and lines), presented in their original form. My method of laying out the graphics is influenced by standard music stave paper. It is not only a part of the basic plane that contains the graphics, but also a part of the notation that I can modify to create interactions with other elements. Most of the graphics are placed on the music staves, implying that they have functions similar to that of standard music notation. However, the majority of the music staves are modified by the graphics, as in the example below.

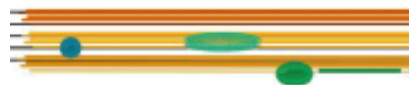


Figure 34: Screenshot from *Open World Alpha*.

While other graphics are placed in the same manner as in the previous examples, the yellow and orange lines completely cover the music staves, replacing them as an alternative stave. This design conveys a different message for the performer(s) to interpret, as the implication might not be as straightforward as with other graphic notations. Nearly all the music staves are obscured by coloured straight lines, divided into three sections from top to bottom, differentiated by colour. Additionally, short passages of gradient colour appear in

each section. At first glance, it might appear that the coloured lines serve as an alternative music stave for those notes-like graphic elements. Conversely, the score unmistakably utilises standard music stave paper, presenting a puzzle about the coexistence of multiple types of staves, which the performer and the performers must interpret.

There's a psychological intent behind using coloured lines to cover music staves. In a manner similar to that of colour psychology⁵², the mimicry of music staves, the evolving colours throughout the score, the interplay with other graphics, and various subtle factors (such as shape, angle, etc.) could all influence performance cognition and psychology. It is challenging to merely regard the lines as coloured music staves. The strong artistic presence of these lines encourages the performer(s) to delve deeper into the image's meaning and to approach their performance with greater creativity. For instance, the lines could suggest a drone-like texture beneath the melody, with different colours representing various moods or dynamics during the performance. Without detailed rules for interpreting these lines, the performer(s) have significant freedom to craft their own interpretations.

What is interesting about such a visual presence, similar to other graphic elements in the score, is that the inspiration and implications derived from it don't always directly convey musical information. Instead, they might evoke feelings or emotions that subtly influence the performer's musical interpretation. In *Open World Alpha*, superimposing coloured lines onto the music staves is just one of the many ways to introduce non-musical information that could affect musical performance. In its combination with other graphic elements, *Open World Alpha* presents an environment that has impact on performance psychology and encourages the performer(s) to think differently compared to other graphic scores. See the picture below as an example.

⁵² For an overview of colour psychology, see Angela Wright, *The Beginner's Guide to Colour Psychology* (Kyle Cathie, 1995); Andrew J. Elliot and Markus A. Maier, "Color and Psychological Functioning," *Current Directions in Psychological Science* 16, no. 5 (2007): 250–54.

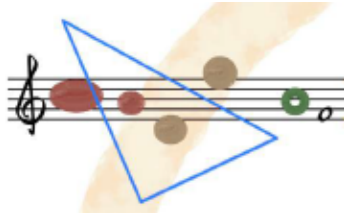


Figure 35: Screenshot from *Open World Alpha*.

In Figure 35, apart from the dash of light brown that serves as part of the broader picture, four distinct graphic elements stand out. These include the standard music stave adorned with a treble clef, the notation of a normal musical note (F4), assorted coloured circles in varying shapes and sizes, and a blue triangle intersecting the music stave. The design of the opening of the score maintains a simple and clean presentation. All the circles adhere to the music stave, suggesting a sequential progression towards the F4 note. However, the absence of an explicit explanation for the colour or shape differences leaves it to the performer(s)' discretion. From a composer's standpoint, there is an awareness that assigning information—such as dynamics or articulation—to different colours or shapes is feasible. Nevertheless, the deliberate use of varied colours, shapes of circles, and modifications to other graphic elements serves not only to convey musical information but also to enhance the visual aesthetics. Several circles and lines in the score are designed purely for visual appeal, devoid of specific musical information. This approach might spark controversy when contrasted with the traditional practice of contemporary music, where graphics primarily serve practical functions. While such graphic scores are appreciated for their visual and artistic merits, their musical value typically remains the dominant consideration, with the graphic design rooted in musical philosophies.

In *Open World Alpha*, I consciously elevated the significance of visual aesthetics, integrating it as a pivotal aspect of the creative process. The musical implications of some graphic elements are more obvious in the score due to their construction in relation to the music staves. However, it is at the performer(s)' discretion to distinguish between elements in

the score that have a practical function and those that are more for visual aesthetics. In Figure 35, after sketching several circles to represent musical information, I incorporated a blue triangle without any specific musical intention. This design choice was influenced by Kandinsky's painting principles. As Kandinsky articulated in *Point and Line to Plane*, "the diagonal line is the most concise form of the potentiality for endless cold-warm movement."⁵³ Moreover, diagonal lines possess the capability to create tension by intersecting the basic plane, as demonstrated in illustrations (Figure 36) from *Point and Line to Plane*.

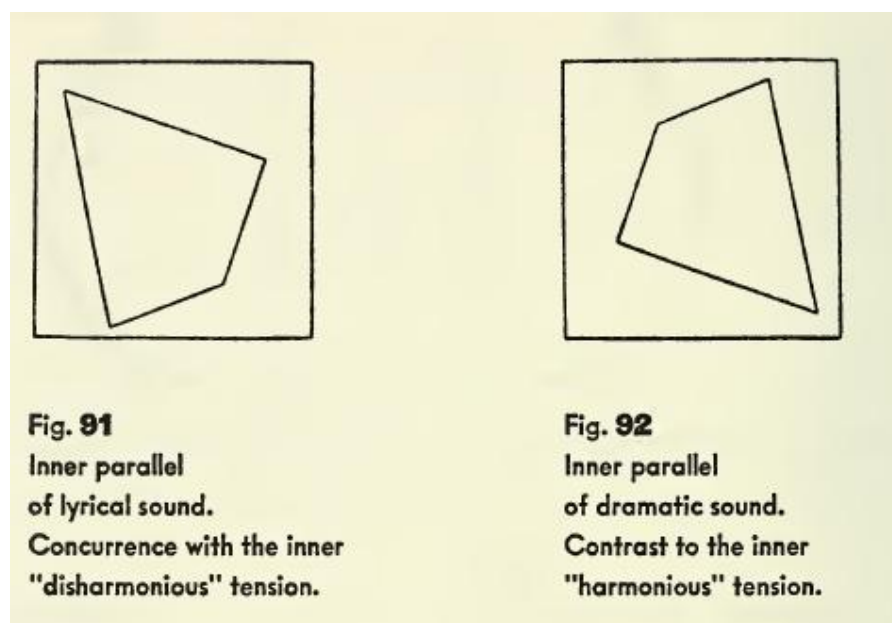


Figure 36: Wassily Kandinsky, *Point and Line to Plane*, Figure 91 and Figure 92, page 136 - public domain.

From the composer's perspective, the circles have given enough musical information, and it would be fine without the triangle fixed upon the picture. However, from a visual standpoint, the picture might lack interest and tension without contrasting elements. The inclusion of a blue triangle atop the stave creates significant visual impact. Its diagonal lines introduce dynamism, adding layers to the plane, fostering interaction and tension within the image. While the blue triangle lacks explicit musical information, it alters the visual environment where the musical data resides. Given the absence of detailed guidance, the blue

⁵³ Kandinsky, *Point and Line to Plane*, 59.

triangle introduces ambiguity, left to the performer(s) for interpretation. This visual element stimulates the performer(s) to creatively engage with the graphic elements, unveiling hidden musical information beneath the surface. Consequently, the abstract imagery exerts a psychological influence on the performer(s), impacting their musical interpretation and potentially inspiring their performance.

In open-world games like *Minecraft*, the environment significantly shapes players' gaming experiences. It's not merely about appearance; it also serves as a landscape for gathering material and creating adventures. Drawing inspiration from this concept, I believe that designing an environment within the score is integral to the composition process in *Open World Alpha*. This design encompasses elements such as background, structure, geometry, and colour. The background, akin to Kandinsky's "plane", comprises large-scale graphic objects. Serving as platforms for materials, they lack directional musical cues. Notably, coloured lines covering the music stave stand out in the background. Apart from the psychological impact already discussed, these colour variations across the score delineate musical forms, signalling changes in the environment and implying different musical behaviours. Numerous details in these coloured lines contribute further, as illustrated in the examples below.



Figure 37: Screenshot from *Open World Alpha*.



Figure 38: Screenshot from *Open World Alpha*.

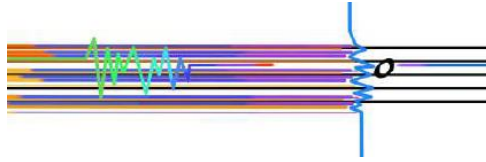


Figure 39: Screenshot from *Open World Alpha*.

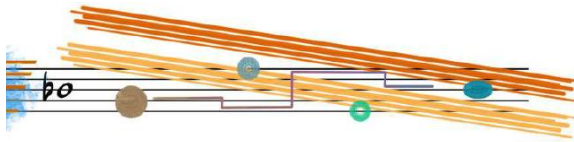


Figure 40: Screenshot from *Open World Alpha*.



Figure 41: Screenshot from *Open World Alpha*.

While the coloured lines within the composition delineate a straightforward ternary form, they introduce nuances that infuse the environment with complexity. They signify transitions, create contrasts, and introduce unexpected elements, indicating a lively and irregularly shifting environment.

Another noteworthy visual component is the sizable light-brown circle positioned prominently behind the music staves, occupying a substantial portion of the score (see Figure 33). Serving as an additional background layer, this circle presents a visually arresting feature that immediately captures the attention of the performer(s). In stark contrast to the coloured lines, it lacks any discernible musical information. Perceived as a decorative object, this circle introduces a “disharmonious” tension to the visual narrative, instilling a mysterious ambiance into the environment. While one might anticipate that such a striking element could wield psychological influence on performers’ interpretations, its effectiveness remains inconclusive, based on performances thus far. Performers either ignored it in their musical interpretation or considered it an imperfect blueprint implying the overall musical form.

Moreover, the potential psychological influence was overshadowed by the impact of other graphic elements. Future experimentation is warranted to explore this concept further.

The structure illustrates the proportional arrangement of diverse graphic elements within the plane, delineating distinct regions of the environment. Although the structure may not command immediate visual attention, it forms the foundational framework, providing constructive guidance for performer(s). From a macro perspective, the structure adheres to a square plane. The music staves, adorned with coloured horizontal lines, serve as the skeletal framework, neatly dividing the composition into three sections. In contrast, the expansive light-brown circle, functioning as an additional plane, introduces intricacy and depth. It acts as an abstract construction, encompassing the upper half of the page, marking a significant area within the environment. Significantly, the intentionally incomplete rendering of the circle, intercepted by cloudy blue paint at the page's midpoint, delineates boundaries between distinct areas. A closer examination at a micro level reveals a geometric symmetry in the arrangement of graphic elements, providing performer(s) with cues for interpreting the musical guidance inherent in the structural organization.

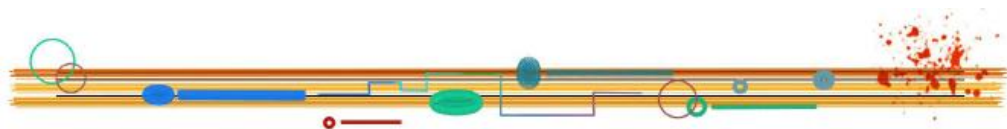


Figure 42: Screenshot from *Open World Alpha*.

Structure at the micro level is designed with more musical intentions. Figure 42 is a demonstration of how the microstructure of different graphic elements is built within a passage. The pairs of solid blue circles and lines are separated by roughly same distance, implying the musical structure of this passage. The hollow red circle near the bottom right responds to the hollow green circle at the top left. In addition, the blue circles and the green circles show an imperfect geometric symmetry and imply, as their opposing positions (left and right, bottom and top) imply, musical counterpoint and melodic shape.

The background and structure would not be effective without geometric design. Geometry is an essential aspect when building the environment. It is the foundation for all the elements and musical rules implied behind the graphics. The score is a display of various geometric elements. Among these, shape and symmetry are the two factors I pay the most attention to. As basic points and lines are the main graphic materials, the geometric shape is limited to a number of types that are simple and minimalistic. Circles and straight lines are the most common shapes. They are the subject of this environment, and directly relate to conveying musical information. Most of the circles and lines are superimposed upon the music staves, acting as musical notes. They are positioned within the square plane formed by the staves, reflecting the many types of movement, tension, and sounds described in *Point and Line to Plane* by Kandinsky. Overall, the texture is abstract and dense. The following example is a demonstration of the quantitative increase of points and its effect, as described by Kandinsky.

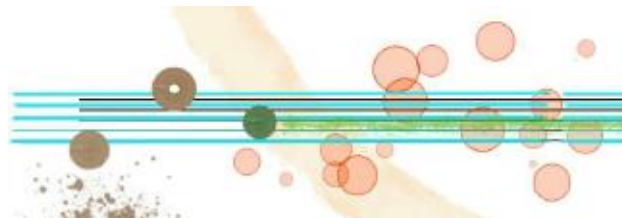


Figure 43: Screenshot from *Open World Alpha*.

In *Point and Line to Plane*, Kandinsky discussed the quantitative increase of points, “repetition is a potent means of heightening the inner vibration and is, at the same time, a source of elementary rhythm which, in turn, is a means to the attainment of elementary harmony in every form of art.”⁵⁴ He further illustrated with an example,

Elements: two points + plane.

Result: 1. inner sound of a point,

⁵⁴ Kandinsky, *Point and Line to Plane*, 38.

2. repetition of the sound,
3. double sound of the first point,
4. double sound of the second point,
5. sound of the sum of all these sounds.⁵⁵

In Figure 43, the two brown circles on the left represent a “double sound of the first point”, as both points are similar but positioned differently. On the other hand, the cluster of bubbly orange circles on the right represents a ‘repetition of sound’ and a ‘sum of all these sounds’, as the cluster occupies a significant portion of the plane, implying more impactful musical information. However, due to the high density of circles and lines within the limited space, the implied musical information becomes too complex and ambiguous to realise, and the environment naturally emerges. Not all the circles and lines should be interpreted as musical information; some are purely visual elements intended to complete the environment. However, it is unclear which circles and lines do not contain musical information. The environment becomes more immersive due to the high-density construction and the ambiguity of the information. Thus, there is another layer of psychological effect on the performer(s), encouraging free interpretation and deeper exploration through synaesthesia.

Colour creates a significant visual impact on the environment. The score dazzles with a variety of colours, providing immediate impressions for the performer(s). The subject of this score would be incomplete without colour. From a macro perspective, warm and cold colours are separated into roughly three sections, delineating the musical form. For contrast and distinct visibility, most informational graphics are coloured in the opposite hue of the textural graphics. For example, in Figure 42, most of the circles and lines are in blue and green, while the staff is painted in yellow and orange, creating clear contrast. From a micro perspective, various colour arrangements imply different musical information. Circles and

⁵⁵ Kandinsky, *Point and Line to Plane*, 38.

lines in the same colour are often paired together, representing musical motives and their extensions. The distances between different colours and how colours are spread within the plane imply various phrase structures.

Colour itself does not contain much musical information, or the information it carries is rather vague in most cases. Interpreting colour can be abstract and subjective. The colours could denote different dynamics, moods, or techniques related to timbral modification. Again, the performer(s) are encouraged to interpret freely. While the overall colour profile is too complex to translate everything into music, it contributes to building the environment, and the psychological effect from such an environment is influential. See the example below.

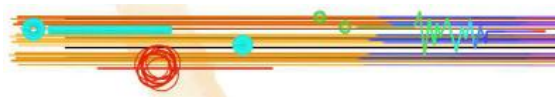


Figure 44: Screenshot from *Open World Alpha*.

Interpreting every colour in the passage would pose a considerable challenge for performers. The colour profile depicted is vibrant and dynamic, implying a passage rich in contrasts and energy. For instance, the gradient-coloured lines featured on the right side of Figure 44, although too abstract to be translated directly into practical musical information, suggest a transitional phase within the music, accompanied by a shift in the sonic landscape. This, in turn, can exert psychological influences on the performers. Moreover, the contrast between the gradient-coloured lines and the relatively simple colours on the left side, which represent a continuation of the preceding passage, not only underscores the complexity of the musical environment but also highlights how colour can shape impressions and influence the psychology of performance.

In sum, through considerations of background, structure, geometry, and colour, *Open World Alpha* constructs an environment for performers. Diverging from conventional graphic scores, where graphics primarily serve to convey musical information, *Open World Alpha* does not necessitate a direct translation of every graphic element into music. Instead, it draws

inspiration from the aesthetics of painting. The score employs an abundance of graphical elements, generating intricate layers of information that serve both practical and psychological purposes. It elicits immediate impressions that ignite inspiration and exert influence, encouraging performers to draw upon non-musical knowledge, such as synaesthesia, in their interpretation and fostering creative and unconventional improvisation.

As mentioned previously, Kandinsky describes the concept of “composition” as follows:

A composition is the inwardly-purposeful subordination

1. of the individual elements and
2. of the build-up (construction)

toward the goal of concrete pictoriality.⁵⁶

I consider a graphic score to be a more advanced media to approach this concept, as the graphic and the music need to come together to become one work. Unlike traditional music composition where all the elements and build-up (notes, motives, phrases, etc.) are constructed only for musical experience, a graphic score combines visual and musical elements together, and can be enjoyed both as an artwork and a piece of music. According to Kandinsky’s concept of ‘composition’, the construction of both graphic and musical elements in such a score should build toward the same “concrete pictoriality”. The graphics and music should be well correlated, and the hybridisation of visual and sonic is an essential factor for building the ‘pictoriality’. Therefore, compared to traditional score, there are more layers of complexity and interrelationships among individual elements in a score of this kind. Compared to traditional notation, graphic notation often emphasises certain attributes or

⁵⁶ Kandinsky, *Point and Line to Plane*, 37.

subjects from the music while making other information more abstract. The visual appearance creates an immediate artistic impression, which lets performer(s) and audiences feel the information emphasised directly through visual perspective. Combining visual impression and musical performance, a graphic score can achieve ‘concrete pictoriality’. There are many great examples from modern composers such as Cornelius Cardew, John Cage or even Peter Maxwell Davies.

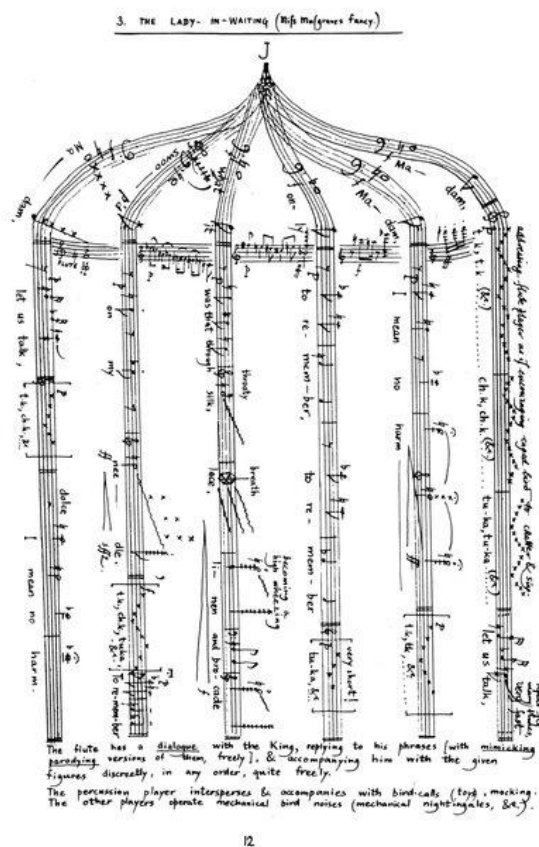


Figure 45: Peter Maxwell Davies, *Eight Songs of A Mad King, The Lady-In-Waiting*. © Copyright 1971 by Boosey & Hawkes Music Publishers Ltd. Reproduced by permission of Boosey & Hawkes Music Publishers Ltd. Solely for the use by Hangrui Zhang.

My approach in *Open World Alpha* diverges significantly from conventional graphic scores. Given its improvisational nature, the score affords considerable creative latitude in graphic construction, inviting performer(s) to derive ideas and inspirations directly from its graphic notation. Unlike traditional music composition where the musical concept precedes notation, *Open World Alpha* is conceived with the aim of creating a visual tableau akin to a

painting. Here, the graphic elements take precedence, initially inspired by abstract musical concepts, with the musical composition unfolding subsequently. Consequently, *Open World Alpha* presents a more intricate visual representation compared to conventional graphic scores. Its dense layers of visual elements not only serve as guides for musical interpretation but also stand as artworks in their own right. The notion of ‘concrete pictoriality’ transcends the boundaries of conventional music scores, aiming to evoke robust visual impressions that resonate through musical performance.

Collaborating with performers on Project *Open World Alpha* has proven to be an enlightening educational endeavour. The project comprises two scores, each designed within unique contextual frameworks. The first score, titled *Open World Alpha*, accommodates open instrumentation for up to four players, while the second, *Open World Alpha: Materials, Building and Exploring*, is tailored for solo prepared piano performance. Observations of performers from diverse backgrounds engaging with the graphic scores reveal intriguing variations in interpretation, as a result of the differences in knowledge and experiences.

In navigating the *Open World Alpha* score designed for open instrumentation, I collaborated with both a flautist and a chamber group, gaining invaluable insights, each offering unique perspectives. My collaboration with Beth Stone, a flautist from the Royal College of Music, characterized by her classical training and limited exposure to experimental music and contemporary improvisation, contrasted significantly with my experience working with the chamber group.

Discussions with Beth centred on interpreting the graphic notations and discerning potential influences derived from the visual elements. Due to her classical background, she demonstrated a propensity to focus on discrete geometric features—such as circles and lines—embedded within the musical stave, interpreting them as cues for pitch and rhythm.

Notably, the presence of three explicit music notes (F4, C5, Eb4) within the score prompted her to anchor her improvisational explorations around these discernible ‘tonal centres’.

While the graphical imagery subtly influenced her approach, manifesting in an inclination towards extended techniques, the resulting improvisation predominantly adhered to classical structural norms. This inclination towards conventionality, when juxtaposed with the experimental ethos inherent in graphic scores, was perhaps indicative of her classical background and limited exposure to avant-garde musical idioms. Despite venturing into timbral exploration and extended articulation, her improvisational palette appeared somewhat constrained by her classical training.

The experience of collaborating with the chamber group, specifically the St. Petersburg Improvisers Orchestra, on this score differed significantly from the collaboration with the flautist. The orchestra of musicians with extensive backgrounds in improvisation and experimental music operated within a distinct creative milieu. Because of logistical constraints exacerbated by the pandemic in 2022, communication between me and the ensemble was minimal following the distribution of the score. However, this lack of direct interaction did not diminish the potency of the resulting performance, which proved to be a fascinating exploration of the graphic notation. The ensemble, consisting of a flautist, a pianist, and a cellist, augmented their traditional instruments with unconventional tools such as a melodica and screwdrivers for innovative keyboard manipulation. In contrast to the flautist’s comparatively restrained approach, the trio’s improvisation was marked by a bold and experimental spirit. Embracing a wide palette of extended techniques and unorthodox sounds, their performance displayed influences from both experimentalism and modernism. Structurally, the improvisation followed a modified ternary form, with dynamic and aggressive opening and closing sections enveloping a softer, more atmospheric middle segment.

In summary, the two performances serve as compelling examples of how performers with various backgrounds interpret graphic notations. While both outcomes aligned with my expectations, they offered contrasting insights into the potential of the score.

The flute solo improvisation, while not as experimental as anticipated, still demonstrated a nuanced engagement with the graphical structure. Its simplicity and classical style underscored the notion that abstract graphic elements can indeed serve as a musical language understood by classical musicians. Conversely, the performance by the St. Petersburg Improvisers Orchestra exceeded all expectations, showcasing the transformative power of abstract imagery in inspiring innovative musical expressions. The rich sonic tapestry they crafted surpassed my imagination, challenging conventional notions of musical composition and performance.

By affording performers maximum creative freedom, *Open World Alpha* emerges as a platform for self-expression and reflection on individual backgrounds. Each rendition of the score is inherently unique, a testament to the diversity of artistic interpretation fostered by the project. While direct communication with performers may not always be feasible, it remains a valuable tool for fostering mutual understanding and inspiring collaborative creativity. My interactions with the flautist and the pianist during the development of *Open World Alpha: Materials, Building and Exploring* underscored the importance of exchanging ideas and articulating my approach, ultimately enriching the performers' improvisational endeavours.

In essence, the project celebrates the boundless potential of musical collaboration and the transformative impact of graphic notation on artistic expression.

More about *Open World Alpha: Materials, Building and Exploring* for solo prepared piano, it diverges from its predecessor by integrating traditional notation with Kandinsky-inspired graphic elements. The composition unfolds across four movements: *Materials 1*, *Building and Exploring 1*, *Materials 2*, and *Building and Exploring 2*. *Materials 1* and

Materials 2 adhere to conventional notation and are executed in a manner akin to standard concert music performance. In contrast, *Building and Exploring 1* and *Building and Exploring 2* present graphic scores designed as responses to *Materials 1* and *Materials 2*, respectively. These scores prompt the pianist to improvise within the piano and interact with various objects.

Compared to *Open World Alpha*, this piece provides the pianist with a more elaborate framework and greater guidance. *Materials 1* and *Materials 2* serve as repositories of ideas for each corresponding improvisation. The graphic scores specify the duration of each segment and outline the specific objects for the pianist to utilise throughout the performance timeline. These contextual details empower the pianist to plan her improvisation effectively and ensure coherence across all movements. Notably, the graphic notation in *Open World Alpha: Materials, Building and Exploring* transcends traditional musical information to encompass movement gestures for playing inside the piano. This expanded approach broadens the interpretive scope for the pianist, enriching the sonic and physical dimensions of the performance. See the example below.

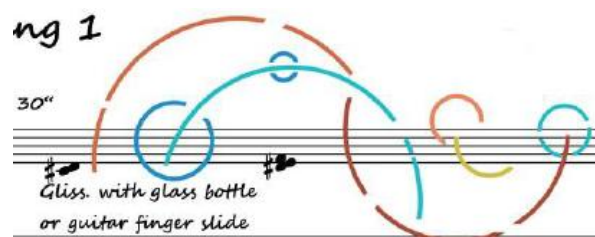


Figure 46: Screenshot from *Open World Alpha: Materials, Building and Exploring*.

In this example, the pianist is tasked with executing a glissando on the strings, as denoted by the notes. The sequence of circled and half-circled lines delineates the glissando gesture, offering the pianist the freedom to select which line(s) to follow. The breaks within a line suggest that the glissando is not executed as a single smooth gesture. Instead, it may incorporate a loosely rhythmic pattern, introducing variations and nuances within the gesture.

The collaboration with pianist Maria Grazia Bellocchio proved to be a rewarding experience. Initially, she introduced me to the various objects she utilised for preparing the piano and demonstrated her proficiency in playing techniques. Subsequently, we engaged in several workshops to experiment with my prepared piano setup and to delve into the interpretation of the graphic score. Given her specialisation in contemporary music, Maria adeptly navigated the notation, translating the graphics into movement and articulated techniques, allowing her improvisation to unfold effortlessly. While I offered some general guidelines and insights into the score's implications, I found that detailed guidance was unnecessary, as she demonstrated a keen understanding of contemporary music and seamlessly integrated influences from her repertoire into her improvisation.

Throughout our collaboration, I observed how she captured the essence of *Materials 1* and *Materials 2*, infusing her personal improvisational style with contextual nuances. As a result, the performance emerged as a dynamic interplay between two musical voices—the composer's and the pianist's. Despite the clear stylistic contrasts evident across the four movements, the structured context and guidance provided to the pianist ensured a cohesive and connected musical narrative.

In conclusion, Project *Open World Alpha* serves as a manifestation of the influences drawn from Kandinsky's art and theory, enriching my compositional practice with the philosophy of synaesthesia prevalent in his works. Through this approach, graphic notation transcends its conventional boundaries to become a dynamic musical language, enabling performers to create performances that defy traditional notation.

While this project may not directly relate to my Japanese pop culture influences, it reflects a spirit of hybridisation and transformation ingrained in Japanese popular culture. This ethos mirrors the concept of “Japlish”, which is “a term used to describe the phenomenon of integrating English terms into Japanese popular culture, most commonly seen

on T-shirts or billboards or heard in Japanese music.”⁵⁷ Integrating English into Japanese pop music transcends linguistic adaptation; it is also a nuanced artistic endeavour influenced by industry trends. Frequently, English words are interwoven into Japanese pop culture or songs not only for their linguistic fit, but also for their aesthetic appeal, such as in terms of rhyme. As discussed by Carolyn Stevens in *Japanese Popular Music*, “the integration of foreign languages into Japanese pop music demonstrates meaning on a number of levels; this fusion combines aesthetic ideas regarding both sound and image.”⁵⁸ Similarly, by incorporating Kandinsky’s painting techniques and geometric design into graphic notation, I am essentially integrating foreign languages into music composition. This fusion of artistic ideas not only enhances the aesthetic experience but also deepens my understanding of the symbiotic relationship between music and visual art. Just as English words are seamlessly woven into Japanese pop music for their aesthetic and sonic qualities, Kandinsky’s visual language finds resonance in the realm of music, enriching the creative landscape and fostering innovative expressions. Project *Open World Alpha* isn’t intended as a direct reflection on Kandinsky’s art; rather, it serves as an experimental venture aimed at introducing a novel musical language to performers. The project seeks to explore the potential impact of visual art on music performance, transcending traditional boundaries and opening up new avenues of creative expression. By integrating elements of Kandinsky’s visual language into graphic notation, the project endeavours to foster innovative interpretations and expand the horizons of musical expression, offering performers a fresh perspective on their craft.

Derelict Structure: Harefield Limeworks

Composed in 2024 in collaboration with artists and designers, including Cainy Yiru Yan, Ruxing Xiao, Ruyun Xiao, Andrew Scott, and Howard Batchen, *Derelict Structure*:

⁵⁷ Stevens, *Japanese Popular Music: Culture, Authenticity and Power*, 135.

⁵⁸ Stevens, *Japanese Popular Music: Culture, Authenticity and Power*, 137.

Harefield Limeworks is a comprehensive summary of my practice, which integrates pop cultural influences and studies in Kandinsky's theories into musical composition. Drawing upon field recordings and documentary footage captured at the Harefield Limeworks, an abandoned lime factory in northwest London, this work manifests as an immersive audiovisual performance that merges music, design, and visual art to unveil the evocative power of this derelict site.

The project is distinguished by three key features:

- **Original Compositions:** These encompass graphic scores, electronic elements, and improvisational passages.
- **Film:** A synthesis of digital art and documentary footage, offering a visual counterpart to the sonic experience.
- **Unorthodox Instruments:** Crafted from overlooked and repurposed materials, these instruments contribute a unique sonic palette to the performance.

Through the integration of these features, the project establishes a multi-dimensional, cross-disciplinary hybridisation.

The work is structured in four distinct chapters, interspersed with a prelude and an interlude positioned between *Chapter 1* and *Chapter 2*. Each chapter is characterized by unique instrumentation, fostering a diverse sonic landscape.

Collaboration plays a pivotal role in this work. The film, created by artist Yiru Yan, serves as the primary visual element. In the early stages of our collaboration, we held several meetings to establish a conceptual storyline and structural framework for the video, which also served as a blueprint for the music composition. However, due to practical constraints such as project deadlines and resource limitations, the composition and filmmaking processes were carried out mostly independently, with limited coordination. While the overarching artistic concept provided a guiding principle for both music and video, this independent

workflow initially resulted in some divergence, particularly regarding the duration of individual chapters and the stylistic contrast between the music and the video. Through additional meetings and iterative refinements, we successfully aligned the music and film to complement one another. Nonetheless, there remains potential for further development and expansion in this collaborative process.

In contrast, the collaboration with instrument designers in this project unfolded more smoothly. Drawing on the valuable experience I gained while working with Andrew in *Music for Recycled Materials*, I adopted a more developed approach to collaborating with designers and integrating their work into this project. For example, I met designer Howard Batchen at an experimental music concert and became intrigued by the unique instruments he created. After an initial conversation, we maintained contact through email exchanges. Through these communications, I became familiar with Howard's work and artistic aesthetic. I introduced his instrument to musicians, who experimented with it and provided feedback.

This collaboration allowed me to gain insight into Howard's thoughts on instrument making, and I conveyed the musicians' feedback to him, facilitating further refinement of his designs. Having a deeper understanding of Howard's work enabled me to effectively incorporate his instrument into this project, resulting in a cohesive and innovative integration of his designs into the composition.

Chapter 1 exemplifies the utilisation of compositional techniques derived from Kandinsky's theories. The film further contextualizes the composition, as it reflects the artistic concepts embedded within the video. The primary structure of "point and line" in *Chapter 1* manifests as a dynamic interplay between diverse points and parallel horizontal lines. See Figure 47 below.



Figure 47: *Derelict Structure: Harefield Limeworks, Chapter 1*, bars 31 – 33.

The parallel lines formed by the alto flute and cello establish a square ‘plane’ that serves as the backdrop for pointillistic gestures (‘points’) contributed by other instruments. These varied ‘points’ emerge in different registers and at irregular time intervals, generating diverse tensions and movements. Throughout *Chapter 1*, the parallel lines are carried by different instrumental combinations, and their amplitude shifts from section to section. The scope of the ‘plane’ gradually transforms as the parallel lines evolve, loosely mirroring the linear perspective technique employed in painting.

The film for *Chapter 1* primarily consists of semi-abstract digital art derived from nature. Although the film does not explicitly incorporate influences from Kandinsky, I find that I can still draw musical inspiration from it through the lens of Kandinsky’s theories.

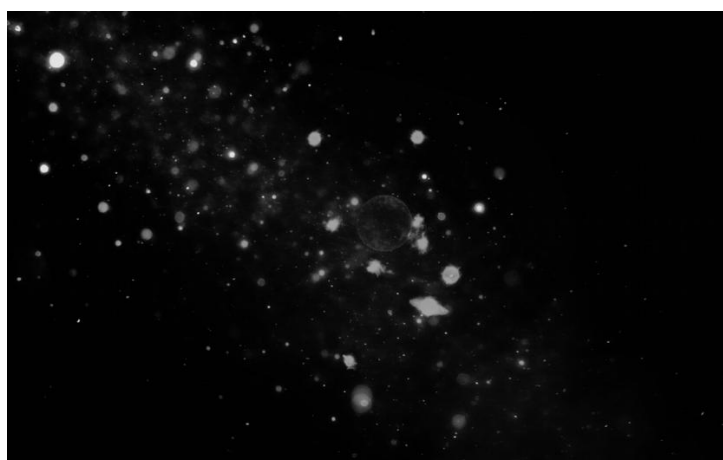


Figure 48: Screenshot from the film for *Derelict Structure: Harefield Limeworks*.

The screenshot above illustrates the dynamic interplay of various points within the established plane. Smaller points gradually coalesce to form a diagonal line that traverses the image. The emerging planet in the centre functions as a powerful singular point, creating a significant visual impact. This image resonates with an example in Kandinsky's *Point and Line to Plane*, which explores how the theory of the point is reflected in natural phenomena.



Figure 49: Wassily Kandinsky, *Point and Line to Plane*, Figure 5, page 38 – public domain.

Kandinsky states that:

“in nature’s unmixed realm, this accumulation of points occurs frequently; it is invariably purposeful and organically necessary. These nature forms are in reality small space particles and carry the same relationship to the abstract (geometric) point as to the pictorial. However, the whole ‘world’ can, on the other hand, be looked upon as a self-contained cosmic composition which, in turn, is composed of an endless

number of independent compositions, always self-contained even when getting smaller and smaller.”⁵⁹

Chapter 3 is a work for two improvisers and live controlled electronics. Incorporating field recordings from Harefield Limeworks and samples from instruments made from recycled materials, the work features a multichannel electronic soundtrack developed using Ableton Live. The field recordings undergo deconstruction and manipulation through a variety of electronic effects, resulting in a dense and distorted sound image achieved through layered tracks operating simultaneously.



Figure 50: Screenshot of the Ableton Project file for *Derelict Structure: Harefield Limeworks, Chapter 3*.

The utilisation of Ableton Live reflects the influence of pop music. Many electronic effects used here are from a broader trend in contemporary pop music production. Additionally, miniature samples extracted from the recordings function as rhythmic elements, analogous to traditional drumbeats, yet creating a distinct rhythmic language through manipulation via beat repeat and looping techniques.

⁵⁹ Kandinsky, *Point and Line to Plane*, 38.

I actively control the live electronics throughout the performance, shaping an overarching musical structure. The performers are tasked with improvising in response to this evolving sonic landscape. The integration of instrument recordings into the electronic textures facilitates their improvisation, fostering a dynamic interplay reminiscent of certain collaborative practices found in rock bands.

This performance configuration evokes the role of a DJ reacting to a film, where the musician using the live electronics controls the musical flow and responds to visual stimuli in real-time. However, the instrumentalists' improvisation does not directly reference the film's narrative or visual content; instead, it responds to the electronic soundtrack, creating an indirect yet potentially nuanced commentary.

This setup establishes a layered musical interpretation of the film, resulting in a multi-dimensional audiovisual experience. The initial layer of interpretation emerges through the electronic music, which is actively manipulated and responsive to the film's unfolding narrative and visual elements. This real-time control allows for a greater degree of nuance and responsiveness than a fixed, pre-composed soundtrack would. The second layer of interpretation stems from the performers' improvisation. By reacting to the electronic soundtrack rather than the film itself, their musical responses create an indirect commentary, potentially revealing emotional resonances not explicitly stated in the film's narrative.

A distinct feature of *Chapter 3* is the incorporation of specialised instruments crafted from waste and recycled materials. These instruments not only possess unique timbres but also create a visually striking presence. Their dystopian aesthetic aligns well with the film's visual themes. The improvisational context allows the performers to express themselves freely via the instruments and highlight the instruments' distinctive sonic characteristics.



Figure 51: Metal Contrabass Clarinet by Andrew Scott. Permission to reproduce this has been granted by Andrew Scott.



Figure 52: Metal Double Bass by Howard Batchen. Permission to reproduce this has been granted by Howard Batchen.

Overall, Chapters 1 and 3 exemplify my approach of integrating experimental art practices with elements drawn from pop music aesthetics and production techniques. The collaboration with visual artists and designers has revealed rich creative possibilities, prompting varied approaches to audiovisual performance. While practical constraints have

limited the full realisation of certain audiovisual concepts within these projects, I intend to pursue further development and collaboration in this vein, exploring the fertile ground where experimental and popular form intersections.

Appendix: Commentary on the Remaining Compositions

This appendix provides concise commentary on the remaining compositions within my portfolio. While these works may not hold the same level of research significance as those discussed in the main commentary, they remain integral components reflecting my artistic journey and evolution as a composer.

A City's Net

Completion Date: 2020 (refined in 2023)

Instrumentation: Concerto for oboe and chamber orchestra

A City's Net is an early work inspired by Kandinsky's art and theory. It represents an initial exploration of integrating Kandinsky's influences, particularly the concept of "lines" as described in Point and Line to Plane. The musical texture is predominantly linear, with the oboe serving as the principal line, weaving intricate interactions with the ensemble.

Microtones, a defining feature of this work, shape the contours of individual instrumental lines at a micro level. The constant flux in the interplay and tension between these lines creates a distinctive harmonic language and musical texture.

Demo #0 and Demo #1

Completion Date: 2021

Demo #0 and Demo #1 are part of my initial exploration into the influence of Japanese pop music. Departing from my personal compositional style, these works adopt a pop music aesthetic. While they do not carry the same artistic weight as other portfolio compositions, they were valuable exercises in enhancing my electronic music skills and establishing a foundation for integrating pop music influences into my creative practice.

Daydream

Completion Date: 2022

Instrumentation: Baroque flute and theorbo

Daydream juxtaposes elements of Chinese traditional music with baroque instrumentation within the framework of Western contemporary classical composition. While not directly engaging with the themes of Japanese pop culture or Kandinsky's theories, this piece reflects my approach to hybridizing diverse musical and cultural elements. This exploration of intersections between Chinese traditional music and baroque instruments enriched my research trajectory.

Eulogy for the International Space Station

Completion Date: 2023

Project Type: Music for installation

Composed for Ruxing Xiao's installation project at Central Saint Martins, this piece was inspired by Russian Cosmism and employed sonic fiction to create an immersive experience. Composing for an art installation was a first for me and proved to be an inspiring experience. The project's electronic medium allowed me to explore a diverse soundscape resonating with the subject matter and fostered interdisciplinary collaborations.

Mini Concerto for Chamber Ensemble

Completion Date: 2023

This composition demonstrates my evolved approach to integrating pop music influences into my practice. Characterised by dense, rhythm-driven textures and contrasting sections, it exudes relentless energy. Building on lessons from earlier works, this piece marks the solidification of pop music elements as an integral facet of my compositional style.

Metal Junkyard II

Completion Date: 2024

A sequel to *Metal Junkyard*, this composition inherits prepared instruments, rhythmic textures, and a compositional style from its predecessor. Notable refinements include more practical instrumental preparations and a more personalised compositional approach, influenced by the hybridisation of Japanese pop culture and Kandinsky's theories.

Conclusion

My research has been a transformative journey of artistic exploration and self-discovery. Initially, my compositional practice was rooted in conventional concert music, but engaging with the hybridised influences of Japanese pop culture and Wassily Kandinsky's art has broadened my creative scope, pushing me to explore interdisciplinary and collaborative approaches. This research has redefined my compositional identity, allowing me to integrate hybridisation and collaboration as central methodologies in my creative practice.

Through my exploration of hybridisation, I have realised that rather than merely imitating pop music elements, the deeper value lies in the integration of broader cultural, visual, and technological influences into my compositional process. Japanese pop culture's approach to hybridisation—where external influences are absorbed, transformed, and recontextualised—has significantly informed my own artistic practice. Similarly, Kandinsky's theories, particularly in *Point and Line to Plane*, have provided a structured framework for reinterpreting abstract visual principles within a musical context, influencing both my graphic and conventional notation practices.

Collaboration has emerged as a vital force in my development, shaping the way I compose and conceptualise music. My interactions with musicians, designers, and artists from various disciplines have not only expanded my creative possibilities but also reinforced the importance of dialogue and shared artistic ownership. Working with experimental instruments, developing collaborative compositions, and integrating digital media into my practice have further enriched my approach to contemporary composition. These experiences have confirmed that music is not an isolated discipline but a dynamic and evolving field that thrives on cross-disciplinary connections.

This research represents a pivotal shift in my artistic trajectory—from a composer focused on traditional concert music to one who actively engages with cross-genre, cross-disciplinary, and collaborative projects. Moving forward, I intend to expand these ideas further, embracing emerging technologies, immersive media, and experimental performance practices. The intersection of pop culture, abstract art, and contemporary composition continues to offer a wealth of possibilities, and I view this research not as a final conclusion, but as the foundation for ongoing artistic inquiry.

By embracing hybridisation and collaboration, I have cultivated a compositional voice that reflects my artistic identity and the complexities of contemporary culture. This research has laid the groundwork for long-term exploration, providing a methodological and conceptual framework that will continue to shape my work as a composer and researcher in the years to come.

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