

**Composing the Uncertainty:  
Exploring Different Possibilities of Indeterminacy  
in Composition**

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A portfolio of musical compositions and written commentary submitted of the requirements of the degree of Doctor of Philosophy

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## Summary

This PhD project ‘Composing the Uncertainty’ comprised of a portfolio of seven compositions - *To Define is to Limit*, *The Ecstasy of Liberation*, *Oblivion*, *Caprice of the Cosmos*, *String Quartet Part 1*, *Defining Chaos*, and *Detour* - with the duration of around 80-100 minutes accompanied by commentary. This project aims to 1) explore different possibilities of indeterminacy and uncertainty in music composition, 2) seek a balance between notated and open elements in the score and performance, and 3) develop new notations to encourage improvisation and co-creation from the performers.

This written commentary presents the rationale and motivation behind the pursuit of openness in the composition; explains the compositional philosophies including an in-depth discussion of improvisation, indeterminacy, and notations; then describes with references and notation examples on how indeterminacy is being explored and controlled in this portfolio. This analysis consists of four aspects: 1) indeterminate pitch – leaving the pitch open but limiting the range, adding interactive direction and interval, and experimenting with physicality; 2) open form – manipulating page sequences and using musical fragments, numbered events, and non-linear movement to offer a pathway for chances and choices; 3) time – various ways of using bar-lines to allow and control spontaneity in tempo; and 4) image – the implementation of indeterminate and external images into the score. Lastly, this commentary finishes with a description and reflection of the performances of two of the compositions.



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### List of compositions

	Title	Year	Instrumentation	Duration
<i>For Chamber Ensembles (specially written for CMC annual showcase)</i>	<i>To Define is to Limit</i>	2018	2 Soprano. Bass Flute, Clarinet in Bb, Percussion	Around 6 min
	<i>The Ecstasy of Liberation</i>	2019	Flute, Clarinet, Violin, Violincello	Around 4-6 min
	<i>Oblivion</i>	2019- 2020	Flute, Clarinet, Un- pitched percussion, Vibraphone, Violin, Violoncello	Around 5 min
<i>For Chamber Orchestra</i>	<i>Caprice of the Cosmos</i>	2018- 2021	Piccolo, Flute, Bass, Flute, Clarinet, Oboe, Bassoon, Horn, Trumpet, Piano, 2 Violin, Viola, Violoncello, Contrabass	Around 17 min
<i>For String Quartet</i>	<i>String Quartet Part 1</i>	2020	2 Violin, Viola, Cello	Around 20 min
	<i>Defining Chaos</i>	2018	Four indeterminate string instruments	Around 9-12 min
<i>For Piano Solo</i>	<i>Detour</i>	2020- 2021	Piano	Around 25 min

Total duration: 85-100 minutes

## Indeterminate compositional elements used in each composition

Indeterminate compositional elements		<i>To Define is to Limit</i>	<i>The Ecstasy of Liberation</i>	<i>Oblivion</i>	<i>Caprice of the Cosmos</i>	<i>String Quartet Part 1</i>	<i>Defining Chaos</i>	<i>Detour</i>
Pitch	Single-line stave	*	*	*		*	*	*
	Bracketed note	*						
	Interactive pitches	*	*			*	*	*
	Physicality		*	*	*	*		*
Form	Page sequence		*					*
	Musical fragments		*					*
	Numbered Events		*		*			
	Non-linear movement - 'Follow the dashed line'							*
Time	'Tempo free zone'	*	*		*			
	Dashed bar-lines				*			
	'Meeting point'	*	*		*			
Image (Chapter 4.4)							*	
New/Central Indeterminate Element		Interactive Pitches	Form	Physicality	Time	Scale-Based Improvisation	Image	Form

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## Chapter 1: Introduction and Overview

*Such certainty is beautiful,  
but uncertainty is more beautiful still.*

...

*Every beginning  
is only a sequel, after all,  
and the book of events  
is always open halfway through.*

*Wisława Szymborska*<sup>1</sup>

This PhD research project ‘Composing the Uncertainty’ is a continuation of the work I started in the MPhil Portfolio ‘Into the Unknown’ which, being my first attempt of indeterminacy in composition. The term ‘indeterminacy’ coined by John Cage has been used in composition since 1950s to describe the elements in a musical work that are left open to chance or to the interpreter’s free choice.<sup>2</sup> This project aims to explore different possibilities of indeterminacy, find a balance between notated material and the uncontrollable elements in music performance, and develop new notation to create new sounds and encourage improvisation of the performers.

The creation of this work is motivated by the idea that human variables are of paramount importance and the most interesting part in music creation. Compared with conventional Western music, indeterminacy in music composition presents ‘a revised paradigm to the traditional creative process by accenting the importance of the human

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<sup>1</sup> Wisława Szymborska, “Love at First Sight,” *Ten Poems to Open Your Heart*, 1993, 47–48.

<sup>2</sup> James. Pritchett, *The Music of John Cage* (Cambridge: Cambridge University Press, 1993), 108.

variable in performance'.<sup>3</sup> Personally, I have high regard to spontaneous creation, the 'here and now' reaction, and the interaction and communication among musicians. A performance that includes improvisation allows the audience to peek into the performers' musical world demonstrating their personality, musical taste, background, knowledge, and experiences. These personal distinctions are the most important essence in a music performance, especially when such performance is for aesthetic and artistic expression purpose. Music created for functional purposes such as films and games scores, disco music, or meditation music are exceptions. These kinds of music can also be a personal artistic expression, but their functions to provide dance movement, to match the film, or to provide a relaxing ambient space override the importance of personal or artistic expression.

Indeterminate music invites the musicians to have an active role in the music creating process. They are considered to be the co-creators. Musicians and composers often have different understandings of music and the musical instruments. Musicians, in most cases, know their strength, potential, and limitation better than composers whereas a composer's mind is always looking for new inspirations of sound and breakthrough. Higher proportion of musicians' input will further enrich the compositions with the musicians' understanding of music, their life-long trainings, their special techniques, and their experiences. I consider my score serves as 'a mere recipe for a performance' and my work as 'something that came into existence only in the moment of performance' as described by composer Gioachino Rossini.<sup>4</sup> Each composition has 'no fixed identity and could be adapted for a given performance, the performer has an important role in the

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<sup>3</sup> Rebecca Y. Kim, *In No Uncertain Musical Terms: The Cultural Politics of John Cage's Indeterminacy* (Columbia University, 2008), 2.

<sup>4</sup> Carl Dahlhaus, *Nineteenth-Century Music*, vol. 5 (Univ of California Press, 1989).

creation of musical works.’<sup>5</sup> To allow them to contribute more than mere interpretation of a fully notated work, different forms of improvisational opportunity with new and special notation are created to invite them, encourage them, stimulate them, and challenge them to input both thoughtful and spontaneous musical ideas. These improvisational opportunities will be discussed in greater depth in chapter three and four.

Another motivation to ‘open up’ the composition is to allow possible or new techniques that are beyond the knowledge of the composer and beyond the knowledge at the time of composition. Indeterminate notation can invite new techniques that have not yet developed. Music compositions and performances are often responding to or influenced by historical events, social practices, atmospheres, trend, and technology in music, the musical instruments, and other available resources in the era or generation they are composed. These factors limit the possibility of composition. For example, extended techniques or electronic elements are not found in Beethoven’s symphonies. Although many musicians and artists creatively reinterpret, reproduce, or even transform the compositions in a modern way, any alteration from the notation is not the original idea of the composers. The indeterminate elements in the compositions of this portfolio ‘legitimately’ allow and invite any new technique, new sound, new trends to be integrated into the performance.

This commentary begins by outlining the motivation behind this project in this chapter and follows by addressing the two fundamental concepts in the creation of this portfolio – the improvisation and the notation - in chapter two and three. Improvisation and notation represent two contrasting ideas: the uncertainty vs the certainty, the unknown vs known, the performers vs the composer, open vs control, the undefined vs

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<sup>5</sup> Bruce Ellis Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music* (Cambridge: Cambridge University Press, 2003).

the defined, the infinite vs the finite, the indeterminate vs predeterminate, or in John Cage's words, the indeterminacy vs determinacy.<sup>6</sup> On one side is the written down, structured materials provided by the composers; on the other side lies everything that happens in a performance that is not notated on the score. These two concepts merit deeper examination to comprehend the compositional philosophies in this portfolio. Chapter two looks into the different meanings of improvisation that underpin the improvisational ideas experimented in this portfolio and chapter three discusses the definition of notation and how it guides the function of the traditional and the development of new notations in this portfolio. Chapter four analyses the indeterminate compositional elements in this portfolio with references to the work of other composers. Lastly, chapter five is a reflection of the performance of some of the work in this portfolio.

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<sup>6</sup> Pritchett, *The Music of John Cage*.

## Chapter 2: Improvisation

*Entirely free improvisation does not exist, in the same way as it is impossible to make music based on a score without involving intentions of one's own.*

*Hans Fidom*<sup>7</sup>

The study of improvisation has a relatively short historical record but a very long past. Improvisation has always been part of human music history. David Borgo pointed out that ‘all instances of human music making, from the most ancient to the most avant-garde, arguably involve at least some degree of improvisation, if by this we mean making musical decisions in the course of performance’.<sup>8</sup> Derek Bailey also suggested that ‘improvisation is present to some degree in almost all musical activities it would seem that the ability to improvise might be a basic part of every player’s musicianship’.<sup>9</sup> Despite its long existence, scholars in Western music have shown more interest in studies on improvised music only after 1960, as a result of the increased profile of jazz, the greater influence of non-Western music, and the exploration of many kinds of experimentation in ‘new’ music.<sup>10</sup> Improvisation has been widely discussed in different contexts and defined with great depth. The term ‘improvisation’ is sometimes used interchangeably with ‘extemporisation’, and has been used to ‘designate any type, or aspect, of musical performance that is not expressive of the concept of the fixed musical work’ since the late 15th century.<sup>11</sup> It became popular in the nineteenth century when

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<sup>7</sup> Hans Fidom, “Improvisation: The Emancipation of an Ancient Musical Skill,” *The Haarlem Essays / Celebrating Fifty International Organ Festivals* 3 (2014): 353.

<sup>8</sup> David Borgo, “The Complex Dynamics of Improvisation,” in *Springer Handbook of Systematic Musicology* (Springer, 2018), 1017.

<sup>9</sup> Derek Bailey, *Improvisation: Its Nature and Practice in Music* (New York: Da Capo Press, 1992).

<sup>10</sup> Bruno Nettl et al., “Improvisation,” *Grove Music Online*, 2014, <https://doi.org/10.1093/gmo/9781561592630.article.13738>.

<sup>11</sup> *Ibid.*, 13.

music titles such as *impromptu* or *moment musicale* began to exist, suggesting that ‘the music was made up on the spot and was unplanned’.<sup>12</sup>

According to *Grove Music Online*, improvisation is ‘the creation of a musical work, or the final form of a musical work, as it is being performed’.<sup>13</sup> It involves ‘the immediate composition by its performers, or the elaboration or adjustment of an existing framework, or anything in between.’<sup>14</sup> It also includes anything that the composers considered unnecessary and unworthy to specify too clearly how and what to play or sing.<sup>15</sup>

Many scholars agree that every performance involves elements of improvisation, although its degree varies according to period and place.<sup>16</sup> Performers with good musicianship and interpretive ability will never play a piece of music in the same way but will always make modifications according to their feelings and judgement. These variations could be viewed as the minimalistic level of improvisation which consists of the filling-in details such as *tempi*, *timbre*, *attack*, *dynamics*, and *instrumentation*.<sup>17</sup> By this definition, Bruce Benson came to a conclusion that ‘no performance is possible without some form and degree of improvisation’.<sup>18</sup>

To summarise, improvisation is anything that happens in a performance that is not composed regardless of how minimal or how predominant they are in a performance, regardless of whether they are prepared or spontaneous, regardless of whether they are

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<sup>12</sup> Leo Treitler, “Medieval Improvisation,” in *With Voice and Pen* (Oxford University Press, 2007), 4, <https://doi.org/10.1093/acprof:oso/9780199214761.003.0001>.

<sup>13</sup> Nettl et al., “Improvisation,” 1.

<sup>14</sup> *Ibid.*

<sup>15</sup> Richard Freedman, *Music in the Renaissance* (New York: W.W. Norton, 2013).

<sup>16</sup> Nettl et al., “Improvisation.”

<sup>17</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*.

<sup>18</sup> *Ibid.*

accidental or intended. However, the definition of improvisation changes over time and varies in different contexts. Rather than listing all definitions or describing the whole historical development of improvisation, the focus of this section is on improvisation in the context of composed music. Three notions underpinning the improvisational ideas in this portfolio are: 1) Improvisation has always been part of human music history; 2) improvisation is highly structural and contextual, as opposed to its common impression as free; 3) improvisation provides the platform for performers' self-expression and interaction.

## 2.1 The three underpinning notions of improvisation in this commentary

### I. Improvisation has always been part of human music history.

It must be understood that ‘the modern notions governing the performance of western classical music, and specifically those disallowing improvisation, are a relatively recent phenomenon’.<sup>19</sup> Ernst Ferand emphasised improvisation has been an important element in the development of Western music:

There is scarcely a single field in music that has remained unaffected by improvisation, scarcely a musical technique or form of composition that did not originate in improvisatory performance or was not essentially influenced by it. The whole history of the development of [Western art] music is accompanied by manifestations of the drive to improvise.<sup>20</sup>

Paul Griffiths even describes improvisation as a ‘reawakened historical phenomenon’.<sup>21</sup> Indeed, techniques of improvisation were once an integral part of instrumental pedagogy and performance practice.<sup>22</sup> In many musical cultures, the role of performer, composer, and improviser is not separated or specialised; rather, every performing musician possesses a relative competence in assuming these three roles.<sup>23</sup> This had also been the case in Western classical music from the Middle Ages till the mid-19<sup>th</sup> century. Most Renaissance, Baroque, Classical, and Early Romantic musicians possessed a relative

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<sup>19</sup> Robin Moore, “The Decline of Improvisation in Western Art Music: An Interpretation of Change,” *International Review of the Aesthetics and Sociology of Music* 23, no. 1 (2009): 62.

<sup>20</sup> Ernest Thomas Ferand, *Improvisation in Nine Centuries of Western Music: An Anthology with a Historical Introduction* (Arno Volk Verlag, 1961), 5.

<sup>21</sup> Nettle et al., “Improvisation,” 66.

<sup>22</sup> Martin Iddon, *John Cage and David Tudor: Correspondence on Interpretation and Performance* (Cambridge: Cambridge University Press, 2013); Carl Czerny, *A Systematic Introduction to Improvisation on the Pianoforte: Opus 200*, ed. Alice L. Mitchell (London: Longman, 1983); Flavia Claudia Todea, “Eighteenth Century Techniques of Classical Improvisation on the Violin: Pedagogy, Practice and Decline,” accessed June 10, 2019, [https://ro.ecu.edu.au/theses\\_hons/189](https://ro.ecu.edu.au/theses_hons/189); Nettle et al., “Improvisation”; Dana Gooley, “Saving Improvisation,” in *The Oxford Handbook of Improvisation Studies*, ed. George E Lewis and Benjamin Piekut, vol. 2 (Oxford: Oxford University Press, 2016).

<sup>23</sup> Jean Philippe Després et al., “Expert Western Classical Music Improvisers’ Strategies,” *Journal of Research in Music Education* 65, no. 2 (2017): 139–62, <https://doi.org/10.1177/0022429417710777>.



degree of ability in improvisation, composition, and performing from a musical score.<sup>24</sup> The phenomenon of improvisation exists in many of the world's musical cultures and its prominence varies greatly from culture to culture. In some societies the improvisation typifies individual or exceptional genres like Jazz in the West, Sanjo in Korea, the Philippine Kulintang ensemble, and sections of the Cantonese opera from China, whereas in other societies such as those of the Middle East, and South and West Asia, improvisation characterises the dominant genres and the improvised portions of a performance that are the most valued.<sup>25</sup>

Coming from a jazz background in which improvisation performance and pedagogy are paramount, I am eager to see more improvisation in classical performances and practice. To encourage improvisation and increase exposure to improvised music among classical musicians and audiences is one of the motivations behind the creation of this portfolio.

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<sup>24</sup> Moore, "The Decline of Improvisation in Western Art Music : An Interpretation of Change."

<sup>25</sup> Nettl et al., "Improvisation."

## **II. Improvisation is highly structural and contextual, as opposed to its common impression as free**

It is important to point out that improvisation in this research does not refer to the pursuit of maximum unpredictability.<sup>26</sup> Improvisation often gives the impression that it is unplanned and unprepared: that musicians can make up music freely or react spontaneously regardless of context or reference to other musical material. This might be true in some cases; however, in most musical genres or contexts that involves improvisation, no matter as ancient as Renaissance music or as contemporary as modern jazz, the freedom within improvisation is much more limited than it sounds.

In each musical culture, the improvisation ‘derives a majority of its structure and aesthetic identity from the pre-existent guidelines of a musical tradition’.<sup>27</sup> Nettl points out that ‘every improvisation rests on a series of conventions or implicit rules.’<sup>28</sup> Instead of complete freedom, improvisation involves ‘a relative freedom’ to select materials within stylistic norms or rules proper to a given culture.<sup>29</sup> After considering the relationship of improvisation to an individual’s social environment and everyday experience, Robin Moore concluded that ‘improvisation is not free’ and defined improvisation as:

a performance- and event- based musical act deriving its structure and characteristic style from a combination of longstanding cultural models and individual interpretations of them. The models are so familiar to the performers and frequently other participants, that they have been internalized and are understood on both conscious and intuitive levels.<sup>30</sup>

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<sup>26</sup> Dan DiPiero, “Improvisation as Contingent Encounter, Or: The Song of My Toothbrush,” *Critical Studies in Improvisation / Études Critiques En Improvisation* 12, no. 2 (December 2018): 1–17, <https://doi.org/10.21083/csieci.v12i2.4261>.

<sup>27</sup> Moore, “The Decline of Improvisation in Western Art Music : An Interpretation of Change,” 64.

<sup>28</sup> Nettl et al., “Improvisation,” 1.

<sup>29</sup> Moore, “The Decline of Improvisation in Western Art Music : An Interpretation of Change,” 64.

<sup>30</sup> *Ibid.*, 66–67.

German composer Karlheinz Stockhausen also indicated that improvisation ‘always means there are certain rules: of style, of rhythm, of harmony, of melody, of the order of the sections’. He explained:

For example, music played freely without a score is sometimes called free improvisation, like let us say free jazz, though making free jazz has its own rules: as the word says, it should still sound like jazz, otherwise, people would just call it free music. Then there is improvisation in folk music, in India for example. But there is very little actual freedom in this music. The system is very restricted.<sup>31</sup>

Here are three situations to illustrate that improvisation is highly related to the historical, cultural, or musical context, and freedom is much more limited than it sounds.

### **Medieval music**

Precise visual notation for music was established by the 14<sup>th</sup> century and marked the beginning of improvisation in composed music such as improvising a vocal line above a ‘sighted’ chant (extemporising counterpoint), adding embellishments or ornamentations to a written piece, improvise the upper counterpoint melody or chords over a repeating bass pattern, etc.<sup>32</sup> Planning and preparing beforehand for multiple voices were highly appreciated to achieve a balance harmony,<sup>33</sup> which indicated that improvisation in this time was not completely unplanned and spontaneous, but creatively prepared following a set of rules.

### **Jazz music**

Jazz musicians often improvise over a variety of sources. Jazz composition mainly provides melodic material and the (chord) ‘changes’ - underlying harmonic progressions which form the basis for improvisations. The mechanism of jazz

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<sup>31</sup> Karlheinz Stockhausen and Robin. Maconie, *Stockhausen on Music : Lectures and Interviews* (M. Boyars, 1989), 113.

<sup>32</sup> Nettl et al., “Improvisation”; Daniel T. Galey, “Improvisation: The History of Unplanned Notes in Structured Music,” in *The Research and Scholarship Symposium*, 2016, [https://digitalcommons.cedarville.edu/research\\_scholarship\\_symposium/2016/podium\\_presentations/25/](https://digitalcommons.cedarville.edu/research_scholarship_symposium/2016/podium_presentations/25/).

<sup>33</sup> Galey, “Improvisation: The History of Unplanned Notes in Structured Music.”

improvisation is derived from the melody, scales and arpeggios associated with a harmonic sequence of a set length played in regular time. It is a ‘continuous process of renewal in which old material is re-shaped and adjusted, sometimes rejected, and new material introduced’ within these boundaries.<sup>34</sup> To improvise in a jazz context not only requires knowledge and understanding of the structures, harmonies, melodies, jazz theories, but also to have the jazz sense that can only develop by indulging oneself into its culture. The improvisation of any jazz musician reflects their training and experience over a lifetime. As English jazz tenor saxophonist Ronnie Scott said:

The realisation of improvisation grew with learning to play the instrument and then listening to records of jazz soloists and associating with other musicians of my own age who were trying to improvise. [...] I feel that my own ability to improvise, such as it is, arises from a combination of experience - one learns what one can play and what one can't play - and that conjunction of sounds which is pleasing to one's ear [...]... what seems to happen is that one becomes unconscious of playing, you know, it becomes as if something else has taken over and you're just an intermediary between whatever else and the instrument [...] I think you are conditioned by the instrument you play, also by the influences that other players before you or your contemporaries have had.<sup>35</sup>

### **Irish traditional music**

Irish traditional music is another good example to show that improvisation is contextual, bound by rules and expectation instead of aiming for free creation. The improvisational aspects of this genre include minor melodic and rhythmic transformations, the patterning of bowing figures, rhythmic and dynamic phrasing, and a variety of ornaments and double stops. It is a process of ‘creating something new out of the old’.<sup>36</sup> The word ‘tradition’ refers to ‘individual contributions emerging as parts of

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<sup>34</sup> Bailey, *Improvisation : Its Nature and Practice in Music*, 49.

<sup>35</sup> *Ibid.*, 51–52.

<sup>36</sup> Mats Johansson, “Paraphrase This: A Note on Improvisation,” *Ethnomusicology Forum* 26, no. 1 (January 2, 2017): 27, <https://doi.org/10.1080/17411912.2017.1302810>.

the collective effort to recreate and revise a shared heritage of musical style, rather than as autonomous acts of creation'.<sup>37</sup>

The listed three genres of improvisation demonstrated that when composers allow improvisation in their composition, they have certain expectations towards the outcome and require musicians to have deep knowledge about the contextual background in order to perform a satisfactory outcome. The art of improvisation is manifest since composers do not present every detail they want the performers to execute and trust that the performers have the ability, according to their experiences and knowledge, to interpret how to play or sing a piece of music without it being fully written or notated. That means an individual has to internalise musical idioms and vocabularies in the stylistic context and is able to understand and to express musical ideas spontaneously, in the moment of performance.<sup>38</sup>

In the compositions of this portfolio, performers are expected to extract musical idioms and vocabularies from the notated part to develop their musical ideas and construct their improvisation. Performers must endeavour to preserve the style of the music, to the extent that audiences would not be able to tell the difference between the improvised and composed part of the music. Jazz composer and musician Carla Bley stated in an interview that she did not prefer 'a clear dividing line between composition and improvisation because the goal was to make the transition as seamless as possible, so that audiences do not know where the composition ends and the improvisation begins'.<sup>39</sup>

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<sup>37</sup> Ibid.

<sup>38</sup> Lee Higgins and Roger Mantie, "Improvisation as Ability, Culture, and Experience," *Music Educators Journal* 100, no. 2 (2013): 38–44, <https://doi.org/10.1177/0027432113498097>.

<sup>39</sup> Andreas C. Lehmann and Reinhard Kopiez, "The Difficulty of Discerning between Composed and Improvised Music," *Musicae Scientiae* 14, no. 2\_suppl (September 1, 2010): 113–29, <https://doi.org/10.1177/10298649100140S208>.

### **III. Improvisation provides the platform for performers' self-expression and interaction.**

Improvisation, apart from being the result of vast knowledge and in-depth study of a piece or style is also an expression of oneself and the interaction with others musically. Higgins and Mantie defined improvisation, based on scholarship related to improvisational practices, in three ways:<sup>40</sup>

1. as a component of a holistic view of musicianship (i.e., ability),
2. as an aspect of a situated form of musical practice (i.e., culture), and
3. as a distinct way of being in the world, embodying such qualities as risk-taking, reflexivity, spontaneity, exploration, participation, and play (i.e., experience).

While the second point has already been discussed in the last section, the first and the third points are related to the personal characteristic of the musicians. Also, Tracy McMullen states that improvisation 'highlights intersubjectivity—the ways our actions and sense of self are constantly constructed through interaction with our environment'. Improvisation is the manifestation of humanity which would never be replaced by computer-generated music. This aspect of improvisation is the most attractive, primitive, and important quality of music. This is what makes one performance different from another one, makes an audience attracted and connected to a musician; this is why the same piece of music is worth performing again and again, and why this research portfolio aims to encourage the practice of improvisation in a broader sense among the classically trained musicians and their audiences.

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<sup>40</sup> Higgins and Mantie, "Improvisation as Ability, Culture, and Experience."

## 2.2 Indeterminacy and improvisation

There is an ambiguous and overlapping relationship between indeterminacy and improvisation and some people would consider them the same. Indeed, many composers such as John Cage, Pierre Boulez, Earle Brown attempted to discover and redefine ‘improvisation’ in their compositions since 1940s.<sup>41</sup> Due to the broad meaning of ‘improvisation’, many new terms and forms related to improvisation emerged such as ‘indeterminacy’, ‘aleatory’, ‘open form’, and ‘chance music’ to describe different attempts to involve indeterminate elements including improvisation in their music compositions. In the 1950s, Cage questioned the nature of music and composition and attempted to remove the composer from the act of composition. He introduced indeterminacy through a series of evolutionary stages in his technical and philosophical development.<sup>42</sup> He added elements that are uncontrollable by the composer to his composition. He believed that ‘one is to choose flexibility when can, as opposed to fixity’.<sup>43</sup> He exploited the possibilities for achieving freedom in content through unpredictability in performance by use of either graphic or conventional notations. In his work *Music of Changes for Piano*, he used the Chinese text *I Ching*, analogous to rolling dice, to determine various musical parameters such as pitch, duration, dynamics, and mode of articulation. He said, ‘I gave up making choices. In their place I put the asking of questions.’<sup>44</sup> The novelty, randomness and unpredictability in his music confused many musicians and audiences, not only does it bring a paradigm shift in music, but also

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<sup>41</sup> Paul Griffiths, “Aleatory,” in *Oxford Music Online* (Oxford University Press, 2001), <https://doi.org/10.1093/gmo/9781561592630.article.00509>; Jennie Gottschalk, *Experimental Music since 1970* (New York: Bloomsbury, 2016).

<sup>42</sup> Elliott. Antokoletz, *Twentieth-Century Music* (Englewood Cliffs, NJ: Prentice Hall, 1992).

<sup>43</sup> Richard. Kostelanetz, *Conversing with Cage* (Routledge, 2003), 277.

<sup>44</sup> Christopher Shultis, “Silencing the Sounded Self: John Cage and the Intentionality of Nonintention,” *Musical Quarterly* 79, no. 2 (1995): 312–50, <https://doi.org/10.1093/mq/79.2.312>.

to the notation system by introducing abstract symbols, images and text in the scores. Since then, the term ‘indeterminacy’ has been used in composition to describe the elements in a musical work that are left open to chance or to the interpreter’s free choice.

The definition of indeterminacy in literature is ambiguous as it is often used interchangeably or alongside other terms such as ‘improvisation’, ‘indeterminate music’, ‘open work’, ‘aleatory’, or ‘chance’, but some scholars argued that each term ‘encapsulated a disparate set of attitudes and cultural interests’.<sup>45</sup> While it is not the intention of this commentary to trace back the historical development of indeterminacy or resolve the complexity of terminology used in different contexts by different composers and scholars, it is important to explain some of these terms to clarify my understanding of indeterminacy and improvisation in this portfolio. John Cage drew a succinct distinction between indeterminacy and chance. For him, chance ‘refers to the use of some sort of random procedure in the act of composition’ and indeterminacy ‘refers to the ability of a piece to be performed in substantially different ways’.<sup>46</sup> Indeterminacy, as opposed to the more traditional Western music, is not a ‘consequence of the limitations of notational systems and human abilities to control all aspects of a musical performance, but a particular set of ideals and compositional techniques that aim to open various aspects of a work by incorporating human subjectivity and social interaction’.<sup>47</sup> Nevertheless, the term ‘indeterminacy’ has been applied in a much more broader sense in recent decades and indeterminacy does not necessarily operate in the same way from one work to another. It should be understood that ‘indeterminacy is not synonymous with

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<sup>45</sup> Lauren Valerie Coons, “Indeterminacy as Social Practice in Contemporary Art Music” (University of New Mexico, 2017), 18, [https://digitalrepository.unm.edu/mus\\_etds/27](https://digitalrepository.unm.edu/mus_etds/27).

<sup>46</sup> Pritchett, *The Music of John Cage*, 108.

<sup>47</sup> Coons, “Indeterminacy as Social Practice in Contemporary Art Music,” 23–24.



an absence of boundaries'<sup>48</sup> but an indeterminate piece must contain factors that cannot be known before a performance.<sup>49</sup> Christian Wolff's indeterminacy approach has two aspects: first, the space to allow performers freedom in the use of notated material; and second, interdependence among performers that requires them to 'play in some specific way specifically because some else has, unpredictably, played in some specific way'.<sup>50</sup>

Interestingly, the Oxford Companion to Music defines 'indeterminate music' as 'music over which the composer has to some degree relinquished control, perhaps by leaving some aspects to chance or to the performer's decision' and basically 'all composed music falls within this definition, since musical notation, however detailed, can never prescribe a performance with complete precision'.<sup>51</sup> John Cage shared a similar view. He implied that a composition is indeterminate with respect to performance if at least one of the musical parameters is not determined.<sup>52</sup> In his judging system, even classical composition such as Johann Sebastian Bach's *The Art of Fugue* is indeterminate<sup>53</sup> Cage considered the structure, method, form, and frequency and duration characteristics of the materials of *The Art of Fugue* are determined but the timbre and amplitude characteristics are indeterminate and such indeterminacy 'brings about the possibility of a unique overtone structure and decibel range for each performance of *The Art of Fugue*'.<sup>54</sup> This view is arguable. According to Umberto Eco, classical compositions such as Bach's *Fugue*, Verdi's *Aida*, or Stravinsky's *Rite of Spring* are

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<sup>48</sup> David P. Miller, "Indeterminacy and Performance Practice in Cage's Variations," *American Music* 27, no. 1 (March 2009): 62, <https://www.jstor.org/stable/25602254>.

<sup>49</sup> Gottschalk, *Experimental Music since 1970*.

<sup>50</sup> Christian Wolff, *Cues: Writing & Conversations*, ed. Gisela Gronemeyer (Köln: MusikTexte, 1998), 316.

<sup>51</sup> Paul Griffiths and Arnold Whittall, "Indeterminate Music" (Oxford University Press, 2011), <https://doi.org/10.1093/acref/9780199579037.013.3412>.

<sup>52</sup> David Cline, "Two Concepts of Indeterminacy in Music," *The Musical Quarterly* 102, no. 1 (October 1, 2019): 82–110, <https://academic.oup.com/mq/article/102/1/82/5528292>.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid., 89.

‘arranged in a closed, well-defined manner’.<sup>55</sup> Performers are obliged to ‘reproduce the format devised by the composer’ whereas the new musical work such as Pierre Boulez’s *Third Sonata for Piano* or Luciano Berio’s *Sequence for Solo Flute* are ‘open’ work which ‘reject the definitive, concluded message and multiply the formal possibilities of the distribution of their elements’.<sup>56</sup>

In light of the above definitions, the meaning of indeterminacy is quite different from improvisation. John Cage even emphasised that while indeterminacy was what he pursued, improvisation was what he wanted to avoid. He said, ‘improvisation is something that I want to avoid. Most people who improvise slip back into their likes and dislikes, and their memory, and they don’t arrive at any revelation that they’re unaware of’.<sup>57</sup> Cage rejected such kind of improvisation. He preferred the terms ‘nonintention’ or ‘indeterminacy,’ which emphasised the transformative potential of unforeseen interactions.<sup>58</sup> He looked for ‘descriptive of what happens’ which is characterised by absence of intention instead of ‘descriptive of the performer’.<sup>59</sup>

It is surmised that improvisation is more of interest to the performers whereas indeterminacy is predominantly used by composers or to describe compositions which are presented in the form of notation or score. On the other hand, improvisation, as explained in great depth earlier, does not necessarily involve the process of composition or a score at all. Improvisation can occur during the performance of previously composed works as well as in the creation of original compositions on the spot.

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<sup>55</sup> U. Eco, *The Open Work* (Cambridge: Harvard University Press, 1989), 2.

<sup>56</sup> *Ibid.*, 3.

<sup>57</sup> Gabriel Solis and Bruno Nettl, *Musical Improvisation: Art, Education, and Society*, ed. Gabriel Solis and Bruno Nettl (University of Illinois Press, 2009), 40.

<sup>58</sup> Richard Kostelanetz, *John Cage* (Praeger New York, 1970).

<sup>59</sup> George E Lewis, “Improvised Music after 1950: Afrological and Eurological Perspectives,” *Black Music Research Journal*, vol. 16, 1996, 118.

### 2.3 Aesthetic value of indeterminate music

Many argue the aesthetic value of improvised music and why composers risk the possibilities of undesirable or even unsuccessful outcome to include improvisation and indeterminacy in their compositions. Varese and Chou defined that music is organised sounds and the composer is the organiser of disparate elements.<sup>60</sup> The process of composing, more than simply bringing elements together, is also to bring them in a way that transforms those elements.<sup>61</sup> In each era, there were composers continuously looking for new sound and fashionable elements to add to the already established, existing musical system. Pierre Boulez considers that composer is ‘constantly on the horns of the same dilemma, caught in the same dialectic – the great models and an unknown future.’<sup>62</sup> Composers are working with both the past and the future – they are bound by the conventional musical system but also seeking breakthroughs and innovations to respond to reality, the historical and social context. Fashionable elements of each era and new sound are imparted and accumulated from generation to generation. However, novelty is not always welcomed. Varese pointed out that ‘to stubbornly conditioned ears, anything new in music has always been called noise,’<sup>63</sup> The unfamiliarity makes any new sound and attempt in composition to be regarded as unorthodox, disorganised, chaotic, vulgar, or even ‘not music’. This phenomenon was particularly noticeable in the 20<sup>th</sup> century when more fundamental questions about the nature of music were asked and experimented with by composers.

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<sup>60</sup> Edgard Varese and Wen-chung Chou, “The Liberation of Sound,” *Perspectives of New Music* 5, no. 1 (1966): 11, <https://doi.org/10.2307/832385>.

<sup>61</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*.

<sup>62</sup> Ibid.

<sup>63</sup> Varese and Chou, “The Liberation of Sound.”

Creativity is often associated with chaos. Robert Bilder said, ‘the truly creative changes and the big shifts occur right at the edge of chaos.’<sup>64</sup> Kleiman suggested that, ‘it is there, right on the edge of chaos, where levels of energy and emotion are high, where risk-taking, excitement and exhaustion coexist in a ferment of activity. It is characterised by encounters with uncertainty, anxiety, doubt, chance, error, and “muddling through”.’<sup>65</sup> The edge of chaos, as suggested by Goodwin and quoted by Coveney and Highfield, ‘is a good place to be in a constantly changing world because from there you can always explore the patterns of order that are available and try them out for their appropriateness to the current situation [...] the edge of chaos, poised for the creative step into emergent novelty that is the essence of the evolutionary process [...] you should avoid becoming stuck in one state of order which is bound to become obsolete sooner or later’.<sup>66</sup> Considering that creativity and change are often bred and arisen in chaos, it may explain why chaos is not uncommon in the development of music and composition, especially in the 20<sup>th</sup> century. In fact, John Cage held a positive view of chaos that derives from his study of Asian philosophies. In the western sense, the term ‘chaos’ is often linked to ‘a horror of the abyss, of infinite darkness, empty space, which we identify with confusion and discord’.<sup>67</sup> The Chinese term *hundun* for chaos, however, is often linked to creative forces. *Hundun* implies something physically and metaphysically impenetrable, it is ‘primordial and natural, something that is neither threatening nor negative.’<sup>68</sup> Cage

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<sup>64</sup> Robert M. Bilder and Kendra S. Knudsen, “Creative Cognition and Systems Biology on the Edge of Chaos,” *Frontiers in Psychology* 5 (September 30, 2014): 1104, <https://doi.org/10.3389/fpsyg.2014.01104>.

<sup>65</sup> Paul Kleiman, “Learning at the Edge of Chaos,” *All Ireland Journal of Teaching and Learning in Higher Education* 3, no. 2 (2011): 62.6, <http://ojs.aishe.org/index.php/aishe-j/article/viewFile/62/38>.

<sup>66</sup> Peter Coveney and Roger Highfield, *Frontiers of Complexity the Search for Order in a Chaotic World* (New York: Random House, Inc., 1995), 273.

<sup>67</sup> Eugene Eoyang, “Chaos Misread: Or, There’s Wonton in My Soup!,” *Studies* 26, no. 3 (1989): 271–84, <https://about.jstor.org/terms>.

<sup>68</sup> Eugene Eoyang, *East-West Symbioses: The Reconciliation of Opposites* (Cambridge Scholars Publishing, 2019), 133.

challenged the common opposition of order or disorder and embraced unintentional randomness as a positive value. Cage said, ‘our intention is to affirm this life, not bring order out of chaos or to suggest improvements in creation, but simply to wake up to the very life we’re living, which is so excellent.’<sup>69</sup>

Brown also argued that ‘a different set of aesthetic principles must be invoked’ when understanding and appreciating music or compositions that include improvisational elements.<sup>70</sup> It is intriguing that many composers who attempted indeterminacy mentioned ‘natural’ and let sounds be themselves in their rationales for choosing an indeterminate approach. John Cage believed the undetermined nature of his compositions reflect the ‘natural chaos’ and his effort was to liberate the sounds to let them be uniquely themselves:

... what will be done is to more and more completely liberate sounds from abstract ideas about them and more and more exactly to let them be physically uniquely themselves. This means for me: knowing more and more not what I think a sound is but what it actually is in all of its acoustical details and then letting this sound exist, itself...<sup>71</sup>

...What delights me in this thing... is that the performer, the improviser, and the listener too are discovering the nature of the structure ... Improvisation ... that is to say not thinking, not using chance operations, just letting the sound be, in the space, in order that the space can be differentiated from the next space which won’t have that sound in it.<sup>72</sup>

Morton Feldman also believed that ‘only by unfixing the elements traditionally used to construct a piece of music could the sound exist in themselves – not as symbols, or

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<sup>69</sup> Robert R Reilly, “The Music of the Spheres, or the Metaphysics of Music,” *The Intercollegiate Review-Fall*, 2001, 12–21.

<sup>70</sup> David Borgo, “Negotiating Freedom: Values and Practices in Contemporary Improvised Music,” *Black Music Research Journal* 22, no. 2 (2002): 165, <https://doi.org/10.2307/1519955>; Eric Porter, *What Is This Thing Called Jazz? African American Musicians as Artists, Critics, and Activists* (University of California Press, 2002).

<sup>71</sup> Michael Nyman, *Experimental Music: Cage and Beyond* (Cambridge: Cambridge University Press, 1999), 50.

<sup>72</sup> John Cage and Roger Reynolds, “John Cage and Roger Reynolds: A Conversation,” *The Musical Quarterly* LXV, no. 4 (October 1, 1979): 581, <https://doi.org/10.1093/MQ/LXV.4.573>.

memories which were memories of other music to begin with'.<sup>73</sup> About his transitioning to the indeterminate approach, Christian Wolff reflected:

One day I said to myself that it would be better to get rid of all that – melody, rhythm, harmony, etc. This was not a negative thought and did not mean that it was necessary to avoid them, but rather that, while doing something else, they would appear spontaneously. We had to liberate ourselves from the direct and peremptory consequence of intention and effect, because the intention would always be our own and would be circumscribed, when so many other forces are evidently in action in the final effect.<sup>74</sup>

Ray Murray Schafer's goal on inventing new art-forms is to search for 'natural expression' and in the hope that 'this integrity, never absent in the games of children, may return to all of us'.<sup>75</sup> In my opinion, the pursuit of such a liberated and natural outcome has a lot to do with the human variables as mentioned earlier. There is something delightful in the uncertainty that appeals to these composers and me. In particular, indeterminate music that allows group improvisation is even more remarkable because the success and the beauty of the performance relies on the collaboration of every performer. Stephen Nachmanovitch said,

The beauty of playing together is meeting in the One... we have become a group organism that has its own nature and its own way of being, from a unique and unpredictable place which is the group personality or group brain.<sup>76</sup>

The compositions in this portfolio are not necessarily composed with the intention for an aesthetic outcome; instead, it is intended to reflect how performers interact with themselves, with each other, and with the environment in every single performance. The script of *To Define is To Limit*, being the first completed and premiered composition in

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<sup>73</sup> Nyman, *Experimental Music: Cage and Beyond*, 43.

<sup>74</sup> *Ibid.*, 50.

<sup>75</sup> Cynthia van Eijden, "Creating Open Form Scores for Improvising Musicians," KC Research Portal, 2019, <https://www.researchcatalogue.net/view/300929/301039>.

<sup>76</sup> Stephen Nachmanovitch, *Free Play: Improvisation in Life and Art* (New York: Penguin Putnam Inc, 1990), 82.

this portfolio, represents the contrasting views of the enthusiasts and the antagonists over indeterminate music. The script of the two sopranos evokes the idea of two characters engaged in a rehearsal that holds opposite views about the composition they are rehearsing. The enthusiasts appreciate the novelty and are willing to embrace that the musical outcome is beyond their understanding, whereas the antagonists think it is absurd and ridiculous.



*Figure 1. The two sopranos representing two different responses to indeterminate music (Sylvia O'Brien and Elizabeth Hilliard performing To Define is To Limit)*

### Chapter 3: Notation

*Beyond this, beyond the notation, lies my and your collaboration, my and your knowledge, what the performer and the listener bring to bear on the notation from their own experience...*

*Paul Roberts*<sup>77</sup>

To notate is to communicate.<sup>78</sup> In musical contexts, notation is used to communicate musical ideas, thoughts, or sounds. It is defined as:

A visual record of heard or imagined musical sound, or a set of visual instructions for performance of music. It usually takes written or printed form and is a conscious, comparatively laborious process. Its use is occasioned by one of two motives: as an aid to memory or as communication. By extension of the former, it helps the shaping of a composition to a level of sophistication that is impossible in a purely oral tradition. By extension of the latter, it serves as a means of preserving music ...over long periods of time, facilitates performance by others, and presents music in a form suitable for study and analysis.<sup>79</sup>

The Encyclopaedia of Aesthetics regards notation as ‘tools for the production of music’ because it is ‘through the process of translating notational signs into bodily acts that produce sounds’ and ‘through the reference of notations to performance traditions and to the numerous organising principles on which musical production is based’.<sup>80</sup> In the context of composition, a written notation provides a way of remembering a musical work, provides the means to sketch and draft musical ideas during the composing process, and provides a framework for improvisation.<sup>81</sup> It also facilitates performance in the absence of the composer and helps preserve music over a long period.<sup>82</sup> In Benson’s words, ‘the

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<sup>77</sup> Paul Roberts, “The Mysterious Whether Seen as Inspiration or as Alchemy,” in *Sound & Score: Essays on Sound, Score and Notation*, ed. Paulo de Assis, William Brooks, and Kathleen Coessens (Leuven University Press, 2013), 35.

<sup>78</sup> Pedro Rebelo, “Notating the Unpredictable,” *Contemporary Music Review* 29, no. 1 (2010): 17–27, <https://doi.org/10.1080/07494467.2010.509589>.

<sup>79</sup> Ian D. Bent, “Musical Notation,” *Britannica Academic*, 2019, <https://academic-eb-com.elib.tcd.ie/levels/collegiate/article/musical-notation/110127>.

<sup>80</sup> Michael Kelly, “Notation,” in *Encyclopedia of Aesthetics* (Oxford University Press, 2014), 3, <https://doi.org/10.1093/acref/9780199747108.001.0001>.

<sup>81</sup> Ian D. Bent et al., “Notation,” *Grove Music Online*, 2014, <https://doi.org/10.1093/gmo/9781561592630.article.20114>; Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*.

<sup>82</sup> Bent et al., “Notation.”



existence of a score (or even simply a chart in a fake book) enables a musical work not only to live beyond its author and the historical circumstances in which it arose but also to become part of other musical discourses'.<sup>83</sup>

There are notations that were designed to provide all necessary information and there are also notations that give only a small part of what composers consider as sufficient.<sup>84</sup> For the former one, composers set up boundaries to define the work and to restrict the activity of the performer including giving strict instruction on the exact number and role of performers, precise bowing directions, or even a different pitch to be used for tuning. Composers such as Paul Hindemith, Aaron Copland, Igor Stravinsky, and philosopher Roman Ingarden shared the same view of Nelson Goodman that the score is the 'authoritative identification of a work from performance to performance'<sup>85</sup> and notations are the 'imperative symbols' that carry a moral force that the performers must obey and comply with.<sup>86</sup> Goodman believed that notations identify compositions and only performances that comply fully and exactly with the notations can be considered as the valid performance of a work.<sup>87</sup>

Composers use scores and notations to record their ideas and communicate with the performers. According to Nelson Goodman, the performance of a musical work is one compliant with its score and full compliance with the specifications given is categorically required.<sup>88</sup> Notation and the score represent the order, the guidance, and the instruction in music.

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<sup>83</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*, 78.

<sup>84</sup> Bent et al., "Notation."

<sup>85</sup> Nelson Goodman, *Languages of Art: An Approach to a Theory of Symbols* (New York: The Bobbs-Merrill Company, Inc, 1968), 128.

<sup>86</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*, 13.

<sup>87</sup> Daniel Miller, "Are Scores Maps? A Cartographic Response to Goodman," *Proceedings of the International Conference on Technologies for Music Notation and Representation -- TENOR'17*, 2017, 57–67, [https://www.udc.es/grupos/ln/tenor2017/sections/node/40-scores\\_maps.pdf](https://www.udc.es/grupos/ln/tenor2017/sections/node/40-scores_maps.pdf).

<sup>88</sup> Goodman, *Languages of Art: An Approach to a Theory of Symbols*.

### 3.1 Limitation of notation

Although notations clearly provide some essential elements of a musical work to preserve the composers' idea across different performance, there is a significant difference between what is notated and what is heard in performance. Behrman pointed out that 'many of the things done by the musician, and absolutely essential to good performance, were not to be found in the score: deviation from the metric values, differentiation in timbre and intonation, types of pedalling...'.<sup>89</sup> Even the most detailed scores would not be sufficient to comprehend how a musical work sounds.<sup>90</sup> Stravinsky, who believed that 'the performer need do nothing more than read the notated instructions',<sup>91</sup> was frustrated by how musical notation could not define the tones:

No matter how scrupulously a piece of music may be notated, no matter how carefully it may be insured against every possible ambiguity through the indications of tempo, shading, phrasing, accentuation, and so on, it always contains hidden elements that defy definition because verbal dialectic is powerless to define musical dialectic in its totality.<sup>92</sup>

Musical notation, however detailed, can never prescribe a performance with complete precision.<sup>93</sup> Fidom pointed out that it is impossible to perform music based on a score without the involvement of the performer's own intention.<sup>94</sup> Every performance comprises certain elements of improvisation with varying degrees according to period and place.<sup>95</sup> Earle Brown acknowledged the limitations of the notations and scores. He described that 'notation has been a constant difficulty and frustration to composers'.<sup>96</sup> For him, notation is 'a relatively inefficient and incomplete transcription of the infinite

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<sup>89</sup> David Behrman, "What Indeterminate Notation Determines," *Perspectives of New Music* 3, no. 2 (1965): 58–73, <http://www.jstor.org/stable/832504>.

<sup>90</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*.

<sup>91</sup> Lois Fitch, *Brian Ferneyhough* (Bristol: Intellect, 2013), 34.

<sup>92</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*.

<sup>93</sup> Griffiths and Whittall, "Indeterminate Music."

<sup>94</sup> Fidom, "Improvisation: The Emancipation of an Ancient Musical Skill."

<sup>95</sup> Nettl et al., "Improvisation."

<sup>96</sup> Earle Brown, "The Notation and Performance of New Music," *The Musical Quarterly* 72, no. 2 (1986): 186.

totality which a composer traditionally “hears,” and it should not be at all surprising that it continues to evolve.’<sup>97</sup> As a result, many new forms of notation emerged in the 20<sup>th</sup> century during the pursuit of new music.<sup>98</sup> Chew and Rastall explained that:

This occurred where the music makes relatively little use of notes of definite pitch or definite duration, or of traditional temperament systems. It occurred also in prescriptive notation for indeterminate music, when precise specification is at a minimum; and, perhaps paradoxically, also in descriptive notation at the other end of the spectrum of precision, when scientific accuracy of notation is required – as, for example, in ethnomusicological notations.<sup>99</sup>

Unlike a statement that can be transmitted clearly and precisely through language from an author to the reader, notation is very limited in conveying musical ideas, the sound, and the impression inside the composers’ head to the performers. Cage said, ‘notation does not – and cannot precisely indicate all aspects of the composer’s sound ideal.’<sup>100</sup> A score is like a construction kit that includes only certain parts, and not even all of the most basic ones for much of what is necessary to bring these parts to sound stands outside of the piece. The Western notation system might seem to fix pitch and rhythm precisely, but, in fact, both of these parameters admit interpretative variation. A violinist can raise a note slightly if it is serving as a leading tone or lower it slightly if it is about to resolve down.

In Cage’s experimenting with his ideas, he requested performance and sound outcomes that are beyond notation and cannot be fully represented in a score. He said, ‘I don’t hear the music I write. I write it in order to hear the music I haven’t yet heard.’<sup>101</sup> In his *Concert for Piano and Orchestra*, he used 84 different kinds of notations, written

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<sup>97</sup> Ibid.

<sup>98</sup> Brown, “The Notation and Performance of New Music”; Borgo, “Negotiating Freedom: Values and Practices in Contemporary Improvised Music.”

<sup>99</sup> Bent et al., “Notation,” 183.

<sup>100</sup> Judith Irene Lochhead, “Performance Practice in the Indeterminate Works of John Cage,” *Performance Practice Review* 7, no. 2 (1994): 235, <https://doi.org/10.5642/perfpr.199407.02.11>.

<sup>101</sup> John Cage, “An Autobiographical Statement,” *Southwest Review* 76, no. 1 (1991): 59–76.

on 63 pages for the piano part. The pianist may play the material in whole or in part, choosing any notations, elements, or parts, and playing them in any order. Score is used to establish his notion, his new concept, his philosophy, and to create a structure for spontaneous playing of musicians.

It is believed by some that the more the composers try to control, the more that the performers must concentrate on the notations, and the more predictable will be their performances of individual elements, which more or less are ‘the technical reflexes built up in the course of training’.<sup>102</sup> In order to grasp the unconventional sound and experience, many composers such as John Cage, Earle Brown, Pierre Boulez, moved away from conventional notation and involved new notations. Brown believed ‘the possibilities of a notational system...will produce an aural world which defies traditional notation and analysis and creates a performance ‘reality’ which has not existed before’.<sup>103</sup> This portfolio of compositions is composed with a similar pursuit of such ‘performance reality’ – a unique musical outcome for each performance and, perhaps, an unprecedented performance experience for the musicians and audiences. The notation of the compositions in this portfolio has aimed to achieve the following five motives : 1) To provide a way of remembering a musical work, 2) To provide the means to sketch and draft musical ideas during the composing process, 3) To provide a framework for improvisation, 4) To facilitate performance in the absence of the composer, and 5) To help preserve music over a long period, or in Benson’s words, ‘enables a musical work not only to live beyond its author and the historical circumstances in which it arose but also to become part of other musical discourses’.<sup>104</sup>

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<sup>102</sup> Behrman, “What Indeterminate Notation Determines,” 59.

<sup>103</sup> Brown, “The Notation and Performance of New Music,” 181.

<sup>104</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*, 78.

### 3.1 *Guqin* and its notation system

The ideology behind the notation system of *guqin*, a fretless Chinese ancient string instrument, has inspired several aspects of the notation system in this portfolio, especially the gesture/action-based notation (see section Chapter 4.1 III “Physicality”)<sup>105</sup> *Guqin* is the oldest string instrument that has existed in Chinese history. The music of *guqin* as a solo instrument is quite different from all other sorts of Chinese music. For 3000 years, people play *guqin* to meditate, to cultivate their mind and soul and hope to reach the highest level of pure and peaceful mind - the supreme state described in *Tao Te Ching*, the book of Taoism.<sup>106</sup> The music of *guqin* is not primarily melodic. The aesthetic principle ‘lies not so much in the succession of notes as in each separate note in itself’ as ‘each note is an entity in itself’ and ‘the timbre being thus of the utmost importance’.<sup>107</sup>

*Guqin* has a peculiar system of notation of its own. The ancient notation system of *guqin* describes the hand movements, hand techniques, and positions without indicating the pitch directly or including any note value or rhythm.<sup>108</sup> The earliest manuscript used was called ‘long form’ (*wenzi pu* 文字譜, literal translation: ‘written notation’).<sup>109</sup> The long form used texts instead of symbols or tablature to describe how the tune should be played. To a certain extent, this ancient long form/written notation is similar to the text scores or text-based notation in contemporary compositions, which is

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<sup>105</sup> *Guqin* is also referred to as qin, ch’in, ancient Chinese lute, or ancient Chinese zither in different literature.

<sup>106</sup> Jin Jie, *Chinese Music: Echoes in Ancient and Modern Times* (Cambridge: Cambridge University Press, 2011); Lao Tse and Stephen Mitchell, *Tao Te Ching: A New English Version* (New York: Harper & Row, 1988), <https://doi.org/10.22201/fcpys.2448492xe.1992.147.51555>; Robert H Van Gulik, *The Lore Of The Chinese Lute: An Essay on the Ideology of the Ch'in*, *Monumenta Nipponica*, vol. 1 (Thailand: Orchid Press Publishing Limited, 1938).

<sup>107</sup> Van Gulik, *The Lore Of The Chinese Lute: An Essay on the Ideology of the Ch'in*, 1:387.

<sup>108</sup> Frank Kouwenhoven, “Meaning and Structure - the Case of Chinese Qin (Zither) Music,” *British Journal of Ethnomusicology* 10, no. 1 (January 2001): 39–62, <https://doi.org/10.1080/09681220108567309>.

<sup>109</sup> Zha Fuxi, ed., *Cunjian Guqin Qupu Jilan (Guide to Existing Guqin Manuscripts)* (Beijing: Central Conservatory of Music, 1958).

also called event, action, or verbal scores sometimes. A major type of text scores, according to Virginia Anderson, is instruction score wherein ‘the performer reads the instructions and follows them to achieve a performance’.<sup>110</sup> Below is the translation of the first line of the long form of a *guqin* piece *Youlan*.

Lay straight the (left) middle finger about half a cun (one cun is around 3 cm) to the right of the tenth position on the second string. Then perform a ‘paired pull’ with the (right) index and middle fingers on the first and second strings. With the pluck, quickly glide the (left) middle finger to about one cun to the left of the thirteenth position. Rest.<sup>111</sup>

The long form/written notation was later simplified to ‘abbreviated character notation’ (jianzi pu 減字譜). The score of abbreviated character notation comprises the title, subtitles, mode/key, tunings of the strings, and specially formed characters. Instead of using texts, the specially formed characters were used to describe the hand motions and positions. Each character consists of two sections - upper half and lower half – and each section contains two symbols. The upper half describes the left-hand techniques and specifies the finger position. The lower half describes how the right hand plays the strings and which string is involved. Figure 2 shows the breakdown of the meaning of the character:



Blue: typical Chinese number – indicating the designated string or marker  
 Red: an abbreviated word representing a technique  
 Upper half - left hand: **use the side of the thumb to press** on the **seventh marker**  
 Lower half - right hand: **use the index finger to strum the sixth string outward**

Figure 2. Meaning of a specially formed character

The meaning of each *guqin* technique is beyond mere finger movement, as mentioned before, the ultimate goal of playing *guqin* music is not for performance or

<sup>110</sup> Virginia Anderson, “The Beginning of Happiness: Approaching Scores in Graphic and Text Notation,” *Sound & Score: Essays on Sound, Score and Notation*, 2013, 132.

<sup>111</sup> Fuxi, *Cunjian Guqin Qupu Jilan (Guide to Existing Guqin Manuscripts)*.

aesthetic outcome, the practice of *guqin* is to nourish the heart and to reach a higher state of mind and become one with the nature.<sup>112</sup> Therefore, each hand gesture is correlated to the nature with specific meaning (Figure 3).

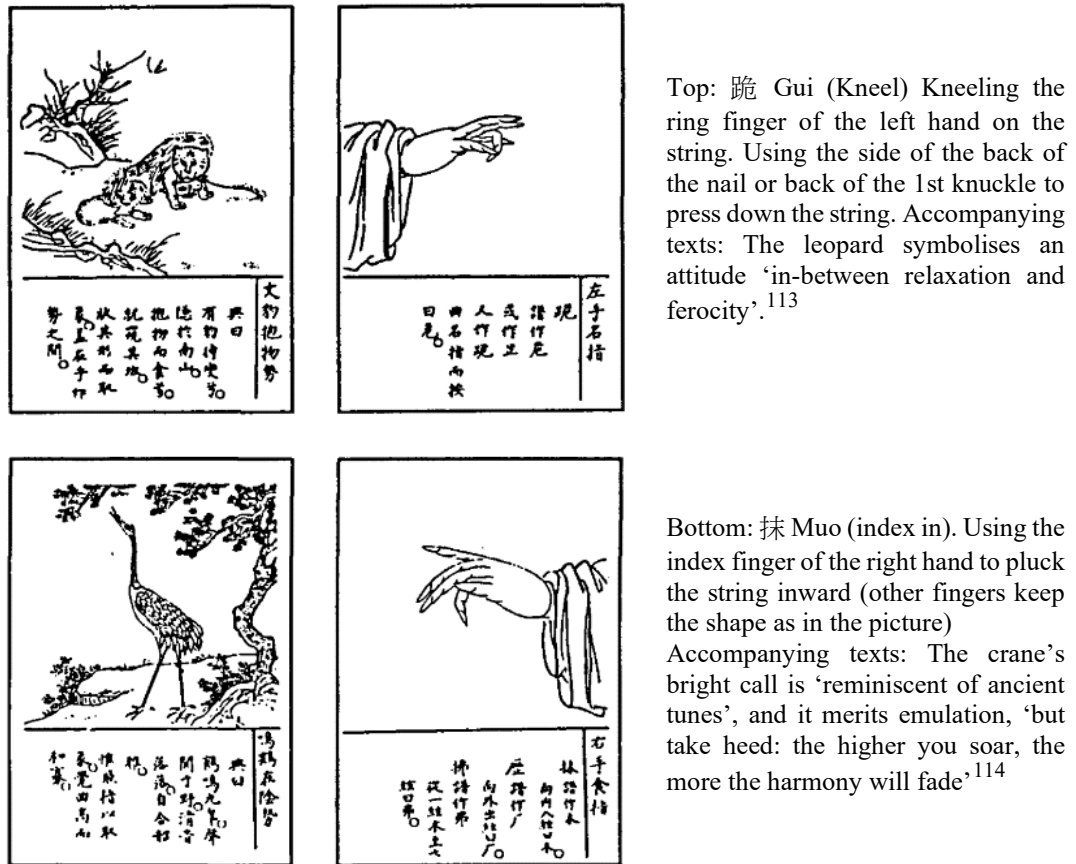


Figure 3. Hand-postures from the 15th century *guqin* handbook *Taigu Yiyin*, with suggested correlates in nature.

The notation of *guqin* contains no direct indication of the pitch and no clear indication of rhythm. From ancient times to nowadays, music of *guqin*, including details omitted in the notation such as the rhythm, is taught through oral and intangible heritage as well as mentor-mentee simultaneous playing.<sup>115</sup> Some argued that rhythmical freedom

<sup>112</sup> Kouwenhoven, "Meaning and Structure - the Case of Chinese Qin (Zither) Music."

<sup>113</sup> Judy Chang, "The Playing And Notation of The Left Hand," Chinese *Guqin* playing and Notation, 2013; Kouwenhoven, "Meaning and Structure - the Case of Chinese Qin (Zither) Music."

<sup>114</sup> Judy Chang, "The Playing And Notation of The Right Hand," Chinese *Guqin* Playing and Notation, 2013; Kouwenhoven, "Meaning and Structure - the Case of Chinese Qin (Zither) Music."

<sup>115</sup> John Thompson, "Rhythm in Early Ming Qin Tablature," n.d., <http://www.silkqin.com/08anal/rhtm.htm>.

is a major and conscious feature of the *guqin* tradition wherein ‘the same melody can be played in many different ways depending on the interpretation of its prosody, and no repeated performance of a qin piece will ever sound exactly the same’.<sup>116</sup> It is also within the *guqin* tradition ‘to use the written material as inspiration for one’s own music’.<sup>117</sup>

Several of the ideologies behind the *guqin* notations resonate with the rationale of the compositional ideas of this portfolio. First, the aesthetic principle of *guqin* has a focus on the inner self-cultivation and training of the mind rather than achieving a pleasant outcome. In this portfolio, the sonic outcome is secondary or is not important at all comparing with the personal performing experiences of the performers – how they relate to their voices or instruments, their interaction with the music and other performers, their state of mind and expression at the moment through the musical judgement and techniques, their perspectives of playing indeterminate music, etc. Whether the performance will be an interesting, mind-opening experience or a cautious, dull one relies on the extent to which the performers are open and willing to explore the indeterminate elements. Second, hand postures or gestures play a more significant role than sound. For example, in the score of *Oblivion*, the gesture and action notated for the violinist holds the essence of the composition: the one single direction gliding of the two fingers towards the bridge with different motions of the other fingers representing the subtle, oblivious, ongoing, and irreversible struggles of life. Third, the notated, written material of *guqin* music can be considered as the inspiration of one’s own creation. In this portfolio, a lot of details are notated but more are left open. The notated materials set the character of the music and act as the guidance and framework for the improvisation of the performers. The notation acts as the invitation, rather than instruction, to the performers’ own creation.

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<sup>116</sup> Kouwenhoven, “Meaning and Structure - the Case of Chinese Qin (Zither) Music,” 47.

<sup>117</sup> Thompson, “Rhythm in Early Ming Qin Tablature.”



### 3.2 The notated materials in this portfolio

The compositions in this portfolio are notated in the manner of Western classical notation and involve new symbols such as special note-heads to indicate undefined pitch or non-conventional playing. Although many composers choose to abandon the conventional notation and signs for graphics or text, it is also considered possible to use traditional notation in an indeterminate way. Stockhausen's *Zeitmasse* (1955-6) is a good example of using conventional notation to compose indeterminate music (Figure 4).<sup>118</sup>

The image displays a musical score for Stockhausen's *Zeitmasse* (1955-6). It features several staves with various performance instructions and dynamics. The instructions include:

- As fast as pos** (so schnell wie möglich, wenigstens ca 76)
- Ritard** (schnell-verlangsamen)
- Accel** (langsam-beschleunigen)
- so fast as pos** (so schnell wie möglich)
- Ritard** (schnell-verlangsamen)

The dynamics range from *p* (piano) to *ff* (fortissimo). The score includes measures 108, 109, 110, 111, and 112. The instruments are Flöte (flute), Oboe, and Klarinette (clarinet). The score is written in a traditional Western classical notation style, with various note heads and stems.

Figure 4. Stockhausen's *Zeitmasse* (1955-6)<sup>119</sup>

The predominant employment of the Western classical notation system in this portfolio could satisfy the 'syntactical and semantic conditions which would guarantee a logical and stable system of signs or characters, and a clear definition of what they represent'.<sup>120</sup> The conventional Western notation system enables classically trained

<sup>118</sup> Karlheinz Stockhausen, *Zeitmaße*, ed. Jerome Kohl (Routledge, 2017), <http://stockhausenspace.blogspot.com/2015/11/zeitmasze.html>.

<sup>119</sup> Ibid.

<sup>120</sup> Jean-Charles François, "Writing without Representation, and Unreadable Notation," *Perspectives of New Music* 30, no. 1 (1992): 9, <https://doi.org/10.2307/833281>.

musicians to understand and to comprehend complex ideas using the shared language. The notations also allow the demonstration and embrace of specialised and advanced skills of the classical music training and the musicianship of the performers.

The notation should be understood as an exemplification rather than a prescription in all its musical details.<sup>121</sup> The musical idea and style are represented in great detail in the notation, whereas the withheld information is an invitation to the performers (including the conductor) to participate in the construction of the final work. As Fred Mauk suggested, ‘the performer is the one who constructs his own work from the notation that the composer has left. Even though the performer is truly part of the construction.’<sup>122</sup> In this way, the notations are like the components of a construction kit and the performers are the one who put them together using their judgement and reactions.<sup>123</sup> All the scores in this portfolio function as a catalyst for musical collaboration whereby decision-making is distributed among the composer, the conductor and the performers. The notated materials of this portfolio aim at setting the character of the music and inform the context for improvisation. The notated materials including the form, some pitches, rhythms, dynamics, articulations, and expression are notated with details. For example, in *To Define is To Limit*, the notation comprises contrasting tempi between sections with a majority in fast tempo; short fragments with semiquaver rhythms and rests; dissonant, clashing intervals at downbeats; frequent rhythmic unisons of two parts or all parts; consecutive use of extreme dynamics; and ambiguous tonality (see Figure 5). These all

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<sup>121</sup> Kelly, “Notation.”

<sup>122</sup> Fred Mauk, “Resurrection and Insurrection: Conflicting Metaphors for Musical Performance,” *The Journal of Aesthetics and Art Criticism* 45, no. 2 (1986): 143, <https://doi.org/10.2307/430555>.

<sup>123</sup> Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music*.

suggest the atonal nature and a joyful, dynamic, adventurous, and whimsical character of the music (Table 1).

Figure 5. Examples of rhythmic unisons, semiquaver rhythms, extreme dynamics in *To Define is To Limit* (p.6).

Section	A	B	C	D	E
<b>Tempo</b>	Slow and freely, 60bpm	Fast 130bpm	Slow and freely 40bpm	Fast 130bpm	Fast 130bpm
<b>Pitch</b>	S: unspecified W: unspecified M: unspecified	S: unspecified W: written M: written	S: unspecified W: mostly unspecified M: mostly unspecified	S: unspecified W: mostly unspecified M: written	S: unspecified W: mostly written M: written
<b>Dynamics</b>	<i>ppp</i> to <i>mp</i>	<i>pp</i> to <i>fff</i> (mostly <i>f</i> or louder)	<i>pp</i> to <i>mp</i> (except some sforzando)	<i>p</i> to <i>ff</i>	<i>pp</i> to <i>fff</i>
<b>Rhythms</b>	Mainly long notes	Semiquaver rhythm	Mainly long notes	Semiquaver rhythm	Semiquaver rhythm
<b>Important features</b>	No definite note	Main character of the music	More space for free improvisation (slashes)	No interactive interval	Recapitulation of section B

Table 1. Features of each section of *To Define is To Limit*. (S – Sopranos; W – Woodwinds; M – Marimba.)

It is noteworthy to mention that almost all rhythms, rhythmic unisons, musical expressions, and most pitches in the first five bars of section B and E are identical. Notes for the woodwind parts are notated with definite pitch on five-line stave in section B while in section E they are notated in single-line stave (see Figure 6). This change in notation invites the woodwinds to recreate the theme with their own melodies, very much

like giving them a colouring page with the outlines of a picture and asking them to fill it with their choices of colour. The notated and definite materials set up the framework and context for the improvisation.

Figure 6. A comparison of the first three bars of section B (p.2) and E (p.10) in *To Define is To Limit*.

Regarding the notated pitches in this portfolio, atonal harmony and symmetric scales are used vastly to convey the characters of the compositions. The main tonal approach of the compositions in this portfolio is to create ambiguity by avoiding a tonal centre which represents predictability and certainty. Atonal music lacks a tonal hierarchical structure and is often considered hard to predict.<sup>124</sup> Symmetric scales such as whole tone scales and chromatic scales are very effective to achieve this atonal style (Figure 7. An example of using chromatic/whole tone scale (Oblivion, p.2)

(Oblivion, p.2) b11:

Figure 7. An example of using chromatic/whole tone scale (*Oblivion*, p.2) b11: chromatic scale; b12: whole tone scale.

<sup>124</sup> Iris Mencke et al., “Atonal Music: Can Uncertainty Lead to Pleasure?,” *Frontiers in Neuroscience* 12, no. JAN (January 8, 2019): 979, <https://doi.org/10.3389/fnins.2018.00979>.

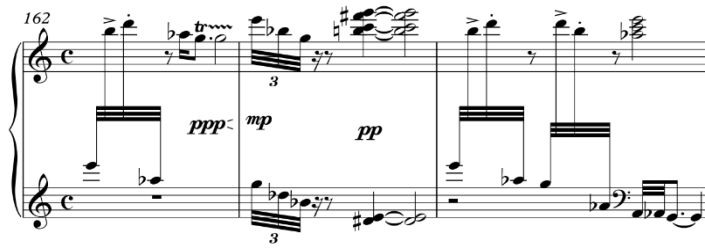


Figure 8. An example of using harmonic major scale to construct the melody in b.162 and 164. (Detour, p.4)

chromatic scale; b12: whole tone scale.). Both the augmented chord and the augmented 5<sup>th</sup> interval suggest the whole tone

scales and they are used frequently to guide the improvisation to achieve the ambiguous and atonal harmony. Another scale that is used frequently in this portfolio is the harmonic

major scale (Figure 8). Harmonic major scale can be considered a major scale with the sixth degree lowered. The major scale is the most familiar scale for performers and listeners, but the flat 6<sup>th</sup> or sharp 5<sup>th</sup> note offer a little surprise, a little treat, and effectively deviate from the tonal cadence structure. Similarly, the augmented major seventh chord (maj7#5) which carries the most characteristic tones of the harmonic major scale (root, 3rd, #5th/b6th, 7th) is not uncommon in this portfolio (Figure 9).

Performing and improvising melodic based on the harmonic major scale provides enough familiarity for the performers but also challenge them to move away from their habitual playing.

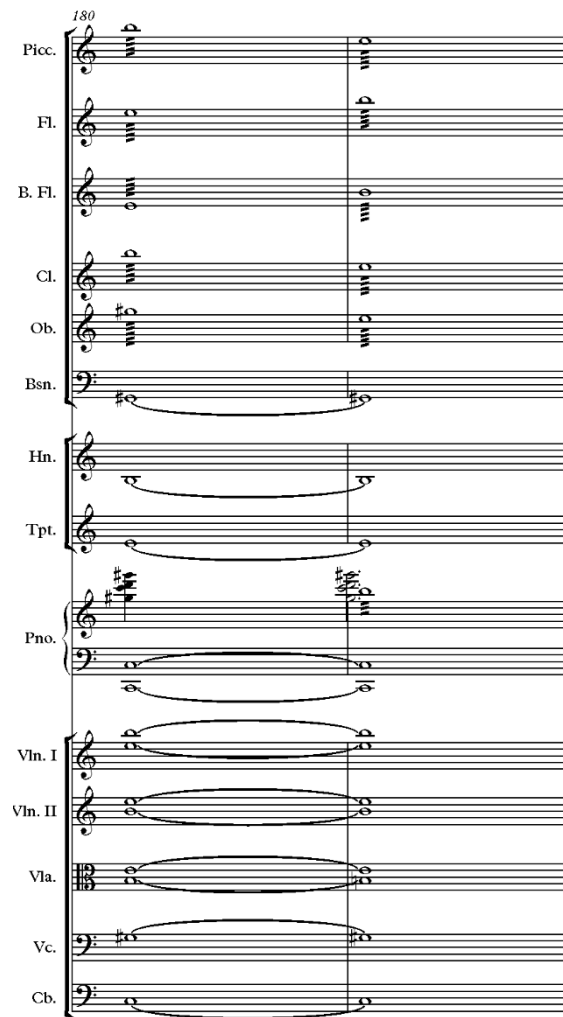


Figure 9. An example of augmented major seventh chord. (Caprice of the Cosmos, p.28)

#### Chapter 4: Analysis of the compositional ideas in this portfolio

*“Vital lives are about action.  
You can't feel warmth unless you create it,  
can't feel delight until you play,  
can't know serendipity unless you risk.”*

*Joan Erikson*<sup>125</sup>

In this portfolio, the main focus is to explore different possibilities of indeterminacy to bring in the uncontrollable elements as well as performers' personalities, creativity, their intentional musical judgements, and their unplanned, spontaneous, immediate reactions and interactions into the composed music. Performers are invited to contribute their ideas beyond the written notes and conventional notation while following the themes, tones, and rules set in each composition. This portfolio is also an endeavour to seek balance between the three parties - the composer, the performers, and the unknown. In each composition, there is the composer's idea and the performers' musical input, and then there are always some elements that neither the composer nor the performer can control. Therefore, the approach taken to outline this commentary is different from the traditional way. It is almost impossible to 'analyse' each composition as it is so open to the extent that the outcome is unknown and as a result, they are all similar in some ways. It is also the nature of this kind of composition that ambiguity exists. Very much like the notion 'to define is to limit', the more the compositions are being defined and explained the more they are limited. Perhaps, like what Joan Erikson said, "Vital lives are about action. You can't feel warmth unless you create it, can't feel

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<sup>125</sup> As cited in Mae Gilliland Wright and Neve Kelley, "The Art of Serendipity | PeoriaMagazines.Com," *Peoria Magazine*, accessed July 21, 2021, <https://www.peoriamagazines.com/pm/2021/jul/art-serendipity>.

delight until you play, can't know serendipity unless you risk.”<sup>126</sup> I would like to think that in all the compositions in this portfolio is a serendipity, a caprice, something vital and delightful, both intentional and unintentional, with lots of engagement and more of letting go. Hence, rather than describing one composition after another one, this commentary will discuss the indeterminate compositional elements or techniques involved systematically.

Four main areas – pitch, form, time, and use of images - are explored and experimented in this portfolio. Each area is described in the subchapters with examples of notations and references to historical and contemporary compositions. The four areas and the specific indeterminate compositional elements are listed in the following table:

*Table 2. Summary of the main indeterminate compositional elements in this portfolio*

Indeterminate compositional elements		<i>To Define is to Limit</i>	<i>The Ecstasy of Liberation</i>	<i>Oblivion</i>	<i>Caprice of the Cosmos</i>	<i>String Quartet Part 1</i>	<i>Defining Chaos</i>	<i>Detour</i>
Pitch (Chapter 4.1)	Single-line stave	*	*	*		*	*	*
	Bracketed note	*						
	Interactive pitches	*	*			*	*	*
	Physicality		*	*		*		*
Form (Chapter 4.2)	Page sequence		*					*
	Musical fragments		*					*
	Numbered Events		*		*			
	Non-linear movement - 'Follow the dashed line'							*
Time (Chapter 4.2)	'Tempo free zone'	*	*		*			
	Dashed bar-lines				*			
	'Meeting point'	*	*		*			
Image (Chapter 4.4)							*	
New/Central Indeterminate Element		Interactive Pitches	Form	Physicality	Time	Scale-Based Improvisation	Image	Form

<sup>126</sup> Ibid.

## 4.1 Pitch

One of the most crucial compositional ideas in this portfolio of compositions is to release control of the pitch. The pitch is the main and foremost parameter that is open to performers to impose their desires, judgements, and reactions. The single-line staff is used to instruct performers to choose any pitch at their liberty (Figure 10). The single-line staff is used solely for all instruments in *Defining Chaos* and the vocal parts in *To Define is To Limit*. In all other compositions in this portfolio except *Caprice of the Cosmos*, single-line staff and the five-line staff are used alternately (Figure 11). The line of the staff represents different notes to different vocalists and

Figure 10. An example of the single-line staff in compositions (*Defining Chaos*, p.2).

musicians instead of a fixed pitch. Vocalists and musicians can even choose to perform pitches that are outside the twelve-tone system and would not be considered a mistake or out of tune.

Figure 11. An example of the alternative use of five-line staff and single-line staff. (*The Ecstasy of Liberation*, p.2)



Notes of the single-line staves are positioned on, above, or below the single line with predetermined rhythms and patterns. Despite leaving the pitch undetermined and open, the pattern of the notes offers an impression of repeating, rising, or falling in small or big leaps (Figure 10 & Figure 11). In each phrase or section, the performers can choose the starting pitch freely and that pitch becomes the reference point for the development of the following pitches and thus the melody within the same phrase or section. In the next phrase or new section, the performers have the freedom to pick another starting pitch regardless which pitch they choose for the same position previously. This notation allows the composer to design the contour of the melody while leaving the pitch open. With each performer using different pitches in each performance, there are infinite possibilities of melodies, but all melodies share the same rhythm, similar musical expressions and contours.

Other than using standard notation to indicate rhythms, contour, and pattern, different indeterminate compositional techniques are experimented in the compositions of this portfolio to encompass the composer's musical ideas, break the random/habitual playing, and encourage interaction among the performers. These indeterminate compositional techniques include limiting the range, forcing performers to react to themselves or each other according to the designated direction and intervals, and controlling the physicality. These predetermined parameters form the skeleton for the performers' improvisation, offer a framework of the composer's idea on the construction of the melodic outcome, and allow a truly co-created indeterminate outcome. In such way, although the compositions are filled with the composer's musical idea and the performers are given the liberty to choose their preferred pitches, the melody is neither fully determined by the performers nor the composer.

## I. Range (bracketed note)

In *To Define is To Limit*, brackets are sometimes used alongside the single-line stave to indicate the preferred octave of the pitch in relation to the most comfortable or

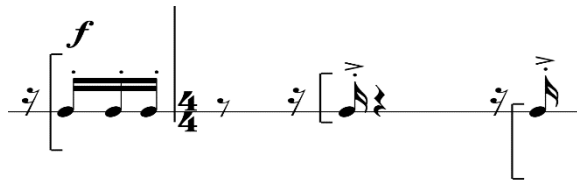


Figure 12. Bracketed note on a single-line stave (*To Define is to Limit*, p.5).

the middle range of the instrument or voice. It is different from person to person and depends on the instruments the performers use in a specific performance.

The bracket provides a rough idea of the desired range of the pitch – whether it should be in the middle register, higher register, or lower register. For example, in Figure 12, if the performer feels the most comfortable range is D3 to D4, the first note with a bracket would be approximately the mid-point of that range (any pitch between G3-A3); the second note with a bracket would be in the low-point of the same range (D3-E3); and the third note with a bracket would be in the high-point of the same range (D4-C4).

## II. Interactive pitches (arrow and diamond note-head)

A special notation - arrows followed by diamond note-heads – is used to indicate that the designated direction and intervals from the previous note to the successive note (in diamond note-head). Neuroscientist Daniel J. Levitin states that the way human brains process melody is relational rather than absolute.<sup>127</sup> Human brains appear to notice the distances between pitches and create a pitch-free template of the melody and that is how we are able to recognise songs in transposition.<sup>128</sup> Under this theory, it is inferred that intervals, much more than pitches, are the basis of the melody. Considering the intervals have a more defining role than the pitches in the formation and recognition of a melody, a specific way of notation is used in this portfolio to indicate the intervals of the indeterminate pitches. In the following examples, the intervals are indicated between two undetermined notes in the same part (Figure 13) or two undetermined notes across two parts (Figure 14). Notes with diamond note-heads should have the indicated interval apart from the previous note.

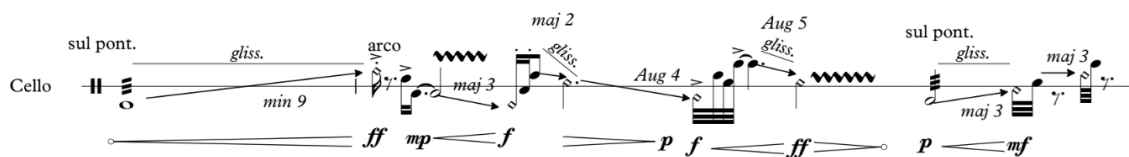


Figure 13. An example of notated intervals in the same part (*The Ecstasy of Liberation*, p.1).

<sup>127</sup> Daniel J. Levitin, *This Is Your Brain on Music: The Science of a Human Obsession* (Dutton, 2006).

<sup>128</sup> Robert J. Zatorre and Andrea R. Halpern, "Identification, Discrimination, and Selective Adaptation of Simultaneous Musical Intervals," *Perception & Psychophysics* 26, no. 5 (1979): 384–95, <https://doi.org/10.3758/BF03204164>.

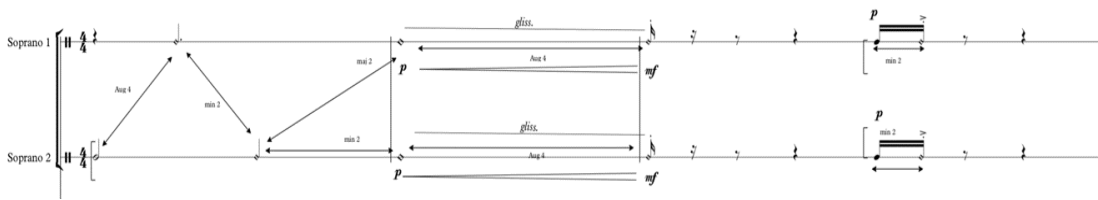
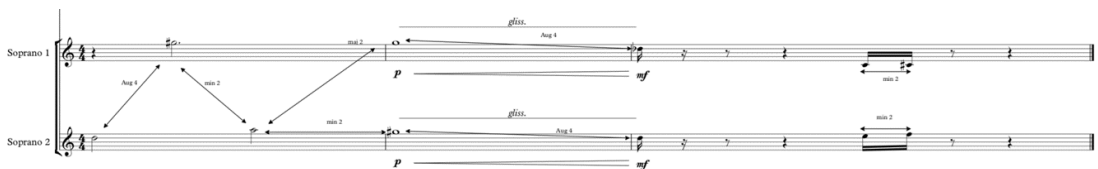


Figure 14. The reduction of the singing part from the two soprano parts (*To Define is To Limit*).

When the interactive intervals are placed between two undetermined notes on the same part, similar to the previous section on interactive contour direction, the performer should follow the direction of the arrows. On the other hand, when the interactive intervals are placed between two different parts or when a contour/direction is not indicated, Performers have the autonomy to choose the direction of the intervals - up or down the indicated interval from the previous note. For example, in Figure 14, if Soprano 2 (S2) picks the note D4 as her starting note, Soprano 1 (S1) can choose to respond with either going augmented 4th up to the higher G#4 or going augmented 4th down to the lower Ab3, and then S2 can choose between going up to A4 or going down to G3.



Choices available	Selected Pitch	Direction of interval (destinated pitch)			Selected Pitch	Direction of interval
Soprano 1		Up (G#)		Down (G)	<b>Down (Db)</b>	C Up (C#)
Soprano 2	D		Up (A)	Down (G#)	<b>Down (D)</b>	E Up (F)
Harmony created				Minor 2nd	<b>Minor 2nd</b>	Major 3rd Major 3rd

Figure 15. A possible version of the realisation of the excerpt in figure 7.

Figure 16 and Figure 17 demonstrate two other possible versions of the melody if S2 chooses to start with G#. These two examples of realisation of the melody result in two different harmonies (minor 3rd in Figure 16 and major 6th in Figure 17) according to different choices made by the performers. The resulting harmony is indeterminate as the outcome of the composer’s indicated intervals and the performers’ chosen directions.

The musical score shows two staves for Soprano 1 and Soprano 2. Soprano 1 starts with a note, moves up by an augmented 4th (Aug 4), then down by a minor 2nd (min 2), then up by a minor 2nd (min 2) to a note marked 'gliss.'. Soprano 2 starts with a note, moves up by a minor 2nd (min 2), then down by a minor 2nd (min 2) to a note marked 'gliss.'. Both staves end with a note marked 'gliss.'. Dynamics are marked 'p' and 'mf'.

Choice	Selected Pitch	Direction of interval			
Soprano 1		Up (D)		UP (E# or F)	<b>Down (B)</b>
Soprano 2	G#		Up (D#)	Down (D)	<b>Down (Ab)</b>
Harmony created				Minor 3rd	<b>Minor 3rd</b>

Figure 16. Second version of the realisation of the excerpt in figure 7.

The musical score shows two staves for Soprano 1 and Soprano 2. Soprano 1 starts with a note, moves up by an augmented 4th (Aug 4), then down by a minor 2nd (min 2), then up by a minor 2nd (min 2) to a note marked 'gliss.'. Soprano 2 starts with a note, moves up by a minor 2nd (min 2), then down by a minor 2nd (min 2) to a note marked 'gliss.'. Both staves end with a note marked 'gliss.'. Dynamics are marked 'p' and 'mf'.

Choice	Selected Pitch	Direction of interval			
Soprano 1		Up (D)		UP (E# or F)	<b>Down (B)</b>
Soprano 2	G#		Up (D#)	Down (D)	<b>UP (G#)</b>
Harmony created				Minor 3rd	<b>Major 6th</b>

Figure 17. Third version of the realisation of the excerpt in figure 7.

This phenomenon is not unprecedented in classical music. Basso continuo, or the figured bass, shares a similar concept. The bottom line and the figures underneath are the composed materials while the upper parts or the chords are to be realised or improvised by the performer. The starting note has a decisive role towards the contour and range of the melody (the highest part). The directions of notes are also open for the performer to choose and it is open to adding passing or auxiliary notes, though they must comply with the harmony and rules at that time such as avoidance of doubling third or parallel fifth. Figure 18 shows two possibilities of the same basso continuo.<sup>129</sup>

<sup>129</sup> Marla Hammel, "The Figured-Bass Accompaniment in Bach's Time: A Brief Summary of Its Development and An Examination of Its Use, Together With a Sample Realization, Part I on JSTOR," *Bach* 8, no. 3 (1977): 26–31, [https://www.jstor.org/stable/41640029?read-now=1&seq=6#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/41640029?read-now=1&seq=6#page_scan_tab_contents).

Ex. 1. Divided Hands Accompaniment (after J. D. Heinichen, *General-Bass*, pp. 345-547).



Ex. 2. Ornamental Right Hand Part. Heinichen, pp. 548-551).



Figure 18. An example of two realisation of Basso Continuo.

To further open up the options for performers in *Defining Chaos*, only directions, not interval, are indicated alongside the arrow. Letter H or L is used to describe the direction for the successive pitches (Figure 19).

**A** The arrow indicates the relationship between the notes. The arrow with an H means the next note(s) are higher than the previous note(s) and L means lower.

Diagram illustrating the notation for indeterminate pitches. The diagram shows three staves. The top staff has a dotted line with an arrow labeled 'L' pointing right, and another arrow labeled 'H' pointing up and right. The middle staff has a dotted line with an arrow labeled 'H' pointing up and right, and another arrow labeled 'H' pointing down and right. The bottom staff has an arrow labeled 'H' pointing down and right. The diagram includes dynamic markings like 'ppp' and 'p', and performance instructions like 'sul pont.', 'Touch 4 slide up', and 'A.H.---'. There are also symbols for 'Touch 4' and 'A.H.'.

Figure 19. An example of indicating direction of the indeterminate pitches (*Defining Chaos*, p.1).

Aside from controlling the interval and direction of the indeterminate pitches, another purpose of the interactive notation using arrow is to connect different parts, promote engagement and interaction among the performers. British composer Larry Goves also used similar method to demand close communication between the performers. In his work *The Two from Rastibon Could Start a Hailstorm* (2018)<sup>130</sup>, the diagonal arrows are used to indicate a visual and sonic passing of the note from one performer to another and vertical arrows indicate the performer to cue the sound of the next note (Figure 20). Larry Goves referred to this communication and interaction between the performers as multimodal performer coordination.<sup>131</sup> As all the notes are notated in Goves' work, the use of the arrows is mainly related to the timing of the notes. On the other hand, in the compositions of this portfolio, the arrows are essential to create desired contour and melody from open pitches.

Figure 20. Excerpt from Larry Goves' *The Two from Rastibon could Start a Hailstorm* (2018). Above: b2; below b3.

<sup>130</sup> Larry Goves, "The Two from Rastibon Could Start a Hailstorm" (Composers Edition, 2018), <https://issuu.com/larrygoves/docs/thetwofromrasiton23042018>.

<sup>131</sup> Larry Goves, "Multimodal Performer Coordination as a Creative Compositional Parameter," *Tempo* 74, no. 293 (2020): 32–53, <https://doi.org/10.1017/S004029822000025X>.

### III. Physicality (pitches determined by the hand/finger movement or bowing)

Another compositional idea being experimented within this portfolio is to notate the physicality including the hand movement, fingerings, bowings, and expressions instead of the musical pitches. The notion of action-based notation proposes that ‘action itself can be a pure manifestation of expression impregnated with information and aesthetic meaning’,<sup>132</sup> and musical expression, or expressivity, is primarily constituted by musical elements such as dynamics, articulation, touch, phrasing, vibrato, etc.<sup>133</sup> This action-based notation is also employed by many contemporary composers in their compositions such as Aaron Cassidy’s *The Crutch of Memory* for indeterminate solo string instrument (2004)<sup>134</sup>, Simon Steen-Andersen’s *Study for String Instrument #1* (2007)<sup>135</sup>, Richard Barrett’s *Earth* for trombone and percussion (1987-88)<sup>136</sup>, Helmut Lachenmann’s *Guero* for solo piano (1969/70)<sup>137</sup> and *Pression* for solo cello (1969)<sup>138</sup>, Mark Applebaum’s *Tlön* for three conductors (1995)<sup>139</sup>. For example, the score of *Pression* describes mainly and excessively the physical and gestural aspect of the

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<sup>132</sup> Juraj Kojs Leonardo, “Notating Action-Based Music,” *Music Journal*, vol. 21, 2011, 65.

<sup>133</sup> Pieter Jan Maes et al., “Action-Based Effects on Music Perception,” *Frontiers in Psychology* 4, no. JAN (January 2014): 1008, <https://doi.org/10.3389/fpsyg.2013.01008>.

<sup>134</sup> Aaron Cassidy, *The Crutch of Memory for Indeterminate String Instrument (2004)* (New York: Buffalo, 2004), <http://www.aaroncassidy.com/download/crutch.pdf>.

<sup>135</sup> Simon Steen-Andersen, *Study for String Instrument #1* (Frederiksberg: Edition·S – music–sound–art, 2007), <https://issuu.com/edition-s/docs/studyforstringinstrument>.

<sup>136</sup> Richard Barrett, *BARRETT, Richard : EARTH* (Suffolk: United Music Publishing), accessed July 29, 2021, <https://ump.co.uk/catalogue/richard-barrett-earth/>.

<sup>137</sup> Helmut Lachenmann, *Guero Für Klavier* (Wiesbaden: Breitkopf & Härtel, 1969).

<sup>138</sup> Helmut Lachenmann, *Pression* (Wiesbaden: Breitkopf & Härtel, 1969).

<sup>139</sup> Mark Applebaum, *Tlön* (San Diego: UC San Diego Department of Music, 1995), <http://www.markapplebaum.com/tlon.html>.



performer on the cello including squeezing, pressing, jerking, sliding, hitting and stroking various parts of the instrument and the bow (Figure 21).<sup>140</sup>

für Werner Taube  
**Pression**  
für einen Cellisten

Helmut Lachenmann, 1969/2010

SAITEN-HALTER: Bogen unhörbar aufsetzen sul pont. I V *distinto poss.* (tonlos) al pont. (helles Rauschen) arco stop (Bogen unbewegt stehen lassen) (crescendo durch Beschleunigung)

STEG: I *ppp flaut.* (non flag.) Tonhöhenglissando, quasi lontano (wahrnehmbar) ab hier nur noch Fingerkuppen auf Saiten, hörbar II mit Daummennagel gewischt (untere Dynamik gilt nur für Daumen)

GRIFFBRETT: I mit locker aufgesetzter Fingerkuppe auf der Seite entlang fahren; mindestens zwei Finger benutzen (um Flageolette zu vermeiden) II

scordatura: SADDL: Hälse aufwärts - rechte Hand Hälse abwärts - linke Hand

SAITEN-HALTER: I V sul pont. tonlos Bogen bei IV aufsetzen tonlos bei IV *espressive* 3

STEG: + Daummennagel (II) *p* *distinto* *quasi rit.* *meno* *f* *ff* *sub.* plötzlich mit Fingernägeln

GRIFFBRETT: nächste Position der rechten Hand vorbereiten: Bogen beim Frosch unbewegt auf dem Steg aufsetzen (Metall berührt Steg) Daumen auf Bogenhaar stop (Bogen bleibt stehen) zusätzlich Fingerkuppen auf Bogenstange gepresst und so sich verlagernd vollends bis zur Bogenspitze

scordatura: \*) innehalten; nicht die Hand wegnehmen! Kinn auf alle vier Saiten auflegen

Edition Breitkopf 9221 © 1972 by Musikverlage Hans Gerig, Köln 1980 assigned to Breitkopf & Härtel, Wiesbaden

Figure 21. First page of Lachenmann's *Pression*<sup>141</sup>

In this portfolio, some pitches are unspecified and are determined by the gesture or hand movements in four compositions in this portfolio: *Oblivion*, *The Ecstasy of Liberation*, *Detour*, and *String Quartet Part I*. The involved gesture notations ranged from as simple as using curvy lines to guide hand movement in the continuous demisemiquaver passages in *String Quartet Part I*, limiting the use of fingers in *Detour*

<sup>140</sup> Tanja Orning, "Pression-a Performance Study," *Music Performance Research* 5, no. CMPCP/PSN Special Issue (2012): 12–31; Tanja Orning, "Music as Performance – Gestures, Sound and Energy," *Journal for Research in Arts and Sports Education* 1, no. 0 (December 2017), <https://doi.org/10.23865/jased.v1.946>.

<sup>141</sup> Lachenmann, *Pression*.

and *The Ecstasy of Liberation*, to controlling the violin part with specific fingers and movements in *Oblivion*. Rather than saying I notate the desired gesture or actions; it is more accurate to say that I impose limitations and restriction on the performers' autonomy in their movements during their improvisation. As discussed in the first chapter earlier, one of the rationales for this portfolio is to create compositions that allow co-creation and collaboration between the composer and performers and to offer an experience for the performers to connect with their musical mind and body. By limiting the fingering in the open notation, although the performers have some autonomy on their musical outcomes such as choosing the pitches, the intervals/harmony, the speed of their movements, the timing, they have to use certain fingers according to the notation. Another purpose of using gesture-based notation is to stimulate performers to generate new musical outcomes or improvisational ideas. Improvisation is sometimes considered as inferior to composition due to its simplicity or aimless playing.<sup>142</sup> As previously mentioned, John Cage despised improvisation because 'most people who improvise slip back into their likes and dislikes, and their memory, and they don't arrive at any revelation that they're unaware of'.<sup>143</sup> From my observation, improvisation is often superficial playing with mere repetitive habitual finger movement. The use gesture-based notation aims to break those habits and stimulate something novel and unpredictable.

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<sup>142</sup> Sabine Feisst, "Losing Control: Indeterminacy and Improvisation in Music Since 1950," *New Music Box*, 2002, <https://nmbx.newmusicusa.org/Losing-Control-Indeterminacy-and-Improvisation-in-Music-Since-1950/>.

<sup>143</sup> Kostelanetz, *Conversing with Cage*.

### *Using curvy lines to guide hand movement*

Curvy lines are used frequently in this portfolio and they often are not limited to a certain aspect. The performers can interpret the curves freely according to pitches, dynamics, movements, or other technical skills. The curvy lines in certain passages of the *String Quartet Part 1* are the guidance to the left-hand movements (Figure 22). The outcomes of the pitches and harmony depend on how the performers move their hands,

The image shows a musical score for a string quartet, specifically page 4 of Part 1. It consists of four staves, each representing a different instrument: Violin I (top), Violin II, Viola, and Cello/Double Bass (bottom). The music is in 4/4 time and features a continuous demisemiquaver (eighth note) rhythm. The score is marked with dynamics such as *ppp* (pianissimo) and *sf* (sforzando). Above each staff, there are large, flowing, curvy lines that span across multiple measures. These lines are intended to guide the left-hand movements of the performers, indicating the pitch and harmonic progression they should follow. The text 'col legno battuto' is written above each staff, indicating that the strings should be played with the back of the bow. The curvy lines are most prominent in the upper staves, showing a wide range of pitch movement.

Figure 22. Example of using curvy lines to guide hand movements in *String Quartet Part 1* (p.4)

where the hands land on, and are completely indeterminate. In passages like the example in Figure 22, performers are required to hold the initial finger shape of the given notes and then slide according to the curvy lines intuitively with their own interpretation while playing continuous demisemiquaver rhythm. Wherever the fingers reach at the timing of the triangular note-heads, they have to accent those notes. Melody is created out of the accented notes of different parts in these passages and is determined by the positions of the performers' hand as well as their spontaneous interpretations of the curvy lines.

### *Limiting the use of fingers as a creative parameter*

In *Detour* and *The Ecstasy of Liberation*, sometimes specific fingerings are indicated with the intention to break habitual playing, evoke creativity, and explore new performing experience for the performers. For example, few left-hand tremolos of *Detour* require the pianist to play with the thumb and the 5<sup>th</sup> finger or the thumb and the ring finger only (Figure 23); certain passages of *The Ecstasy of Liberation* requires the

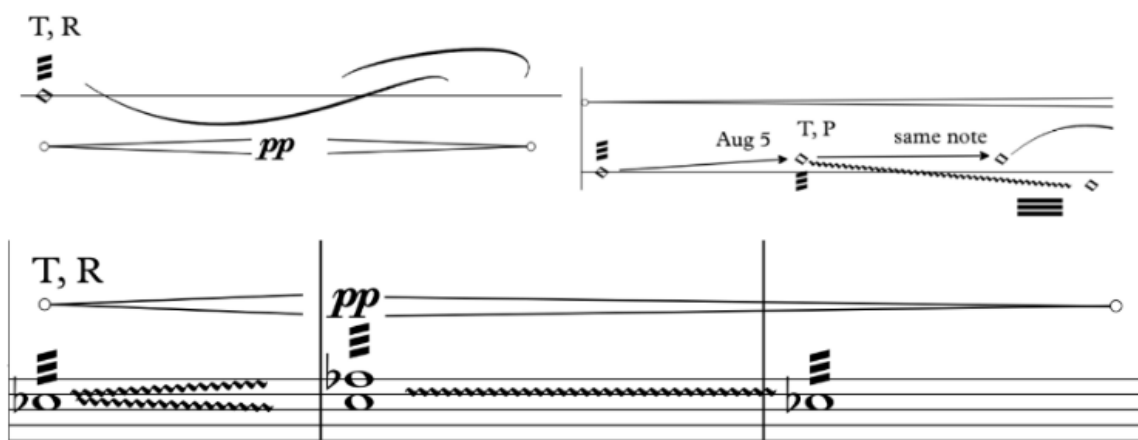


Figure 23. Examples of the notated fingering in *Detour* for piano solo (p.1). T: Thumb; R: Ring finger; P: Pinky

woodwind or string performers to improvise with only two fingers (Figure 24). The required fingerings are probably not the easiest and most convenient. This is written with the intention, not to torment the performers, but to open up new possibilities with limited movements.

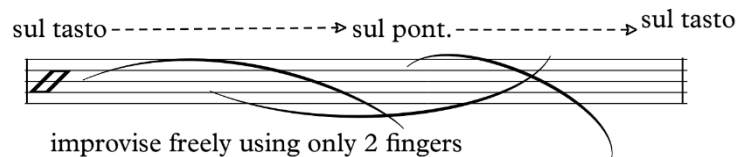


Figure 24. Example of limited use of fingers in *The Ecstasy of Liberation* (p.1 & 3)

### *Hand and finger movement-notation in Oblivion*

In *Oblivion* for chamber ensemble, the violin part is notated in four colours representing the four fingers (red: index; blue: middle finger; yellow: ring finger; green: pinky) on the left hand (Figure 25). The whole violin part of the performance is required

Red – Index finger  
Blue – Middle finger  
Yellow – Ring finger  
Green – Pinky

The musical score for the opening of *Oblivion* (p.1) is presented in a multi-staff format. The instruments and their parts are as follows:

- Flute:** Treble clef, 4/4 time signature. The first measure contains a quarter note G4, followed by a quarter rest. The dynamic is *pp*.
- Clarinet in Bb:** Bass clef, 4/4 time signature. The first measure contains a quarter note Bb3, followed by a quarter rest. The dynamic is *pp*.
- Cymbals:** Two vertical lines representing cymbals. The first measure contains a half note with a wavy line above it, indicating a tremolo. The dynamic is *mp*. The instruction "arco (gestrichen) bowed" is written above the staff. The instruction "Let it ring" is written to the right of the staff.
- Vibraphone:** Treble clef, 4/4 time signature. The first measure contains a quarter note G4, followed by a quarter rest. The dynamic is *mp*. The instruction "Bowing" is written above the staff. The instruction "arco" is written below the staff.
- Violin:** Treble clef, 4/4 time signature. The tempo is marked as  $\text{♩} = 70$ . The instruction "arco sul pont." is written above the staff. The first measure contains a half note G4, followed by a half rest. The dynamic is *p*. The second measure contains a half note G4, followed by a half rest. The dynamic is *ppp*. The third measure contains a half note G4, followed by a half rest. The dynamic is *mp*. The instruction "arco" is written below the staff. The instruction "sul pont." is written above the staff. The instruction "pizz." is written below the staff.
- Violoncello:** Bass clef, 4/4 time signature. The first measure contains a half note G2, followed by a half rest. The dynamic is *mp*. The instruction "A.H." is written below the staff.

The score is divided into two systems by a vertical bar line. The first system covers the first two measures, and the second system covers the next two measures. The dynamic markings *p*, *ppp*, and *mp* are used throughout the score. The instruction "arco" is used for the violin and vibraphone parts, and "sul pont." is used for the violin part. The instruction "pizz." is used for the violin part. The instruction "A.H." is used for the violoncello part.

Figure 25. The opening of *Oblivion* (p.1).

to be one glissando using the index and middle fingers in an augmented-fifth handshape on any pair of adjacent strings of performer's choice from the top of the neck to the bridge with the right-hand performing tremolo throughout. The glissando has to be a forward (not backward) movement and the performer's fingers need to reach the bridge of the violin at the end of the composition, Other than these requirements, the performer can decide which pair of strings to play, the movement of the fingers, and how the glissando

develops: the fingers can slide gradually, abruptly, or in a mixed way; the fingers can stay at any position for any length of duration,

On top of this single glissando movement, different expressions and articulations are required from each finger. For example, in the excerpt shown in Figure 26: the middle finger (blue) needs to perform a wide vibrato with the index finger (red) reacting to the red curve lines in the first bar and with the ring finger (yellow) performing a single finger trill and glissando simultaneously in the second bar. In the third bar, the actions of the middle and index fingers (blue and red) switch. Now the index finger (red) plays a wide vibrato while the middle finger reacts to the blue curve lines with the ring finger and the pinky tapping on any string at any position as the performer wishes. To perform all the notated expressions simultaneously could be challenging at times. The performers are encouraged to experiment with different ways of using and controlling their fingers creatively.

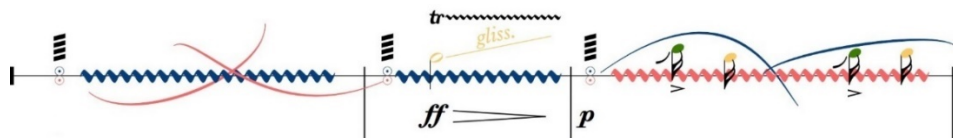


Figure 26. An excerpt from *Oblivion* (p.7).

Table 3. Summary of the indeterminate elements in relation to pitch

Indeterminate compositional elements		<i>To Define is to Limit</i>	<i>The Ecstasy of Liberation</i>	<i>Oblivion</i>	<i>Caprice of the Cosmos</i>	<i>String Quartet Part 1</i>	<i>Defining Chaos</i>	<i>Detour</i>
Pitch (Chapter 4.1)	Single-line stave	*	*	*		*	*	*
	Bracketed note	*						
	Interactive pitches	*	*			*	*	*
	Physicality		*	*		*		*

## 4.2 Form

The main feature of indeterminacy that is explored in this portfolio is the form and structure. The openness or mobility in form and structure is viewed as a ‘genre genotype of new music’,<sup>144</sup> and such forms are often described as ‘open form’, ‘moment form’, or ‘mobile form/musical mobile’. ‘Open form’, in a broad sense, is used interchangeably by many composers and scholars to refer to aleatoric music or indeterminate music - compositions that is undetermined and is open for the performers to realise. In a more restricted definition, a composition is described as having an open form when the order of events is not determined by the score and is left up to the performer to co-create the performance. It is ‘a structural procedure whereby the sequence or construction, or both, of parts of a notated work are variable’.<sup>145</sup> Earle Brown added that there must be fixed sound content to establish the character of the work, in order to be called ‘open’ or ‘available’ form.<sup>146</sup>

Similar to ‘open form’, ‘musical mobiles’ refer to forms which ‘are not predetermined by the composer, not fixed in a score and without clear contours, precise number of the sections, direction of dramaturgical process and even ways of the exposition and development of material’.<sup>147</sup> The indeterminate structures of these compositions differ from one another by the choice of elements, degree of mobility,

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<sup>144</sup> Marina Pereverzeva, “Musical Mobile as a Genre Genotype of New Music,” *Lietuvos Muzikologija* 14 (2013): 120.

<sup>145</sup> Alison Latham, “Open Form,” *The Oxford Companion to Music* (Oxford University Press, 2011), <https://www.oxfordreference.com/view/10.1093/acref/9780199579037.001.0001/acref-9780199579037-e-7933>.

<sup>146</sup> van Eijden, “Creating Open Form Scores for Improvising Musicians.”

<sup>147</sup> Pereverzeva, “Musical Mobile as a Genre Genotype of New Music,” 119.

stability of sounding text and acoustic recognisability of the work. Pereverzeva concluded three forms to differentiate those varieties:

- 1) mobile form (as suggested and used by Earle Brown): there is an invariable disposition of sound material, but some fragments are improvised, so piece duration may change.
- 2) variable form (as used by Karlheinz Stockhausen): there is an alternating sequence of material exposition, but the quantity of form's versions is limited by certain conditions or the author's directions, which do not influence the common work's conception and type of form.
- 3) modular form: it is possible to have any succession of material and random order of the movements, which are not fixed in a text and preconditioned by the composer [...]it can be based on the various structural principles and change musical conception, type of form and sound aspect on the whole.<sup>148</sup>

In Earle Brown's word, 'a 'mobile' score subject to physical manipulation of its components, resulting in an unknown number of different, integral, and 'valid' realization.'<sup>149</sup> The *Oxford Companion to Music* defines 'mobile form' as:

A form used in aleatory music whereby the order of events is flexible. Players may be asked to choose the order on the spur of the moment, or be given instructions from which to create different permutations.<sup>150</sup>

'Moment form' is a term coined by Karlheinz Stockhausen to specifically describe his music that avoids directed narrative curves.<sup>151</sup> Strictly speaking, 'moment form' is 'a mosaic of moments' and each moment is a 'self-contained (quasi-)independent section, set off from other sections by discontinuities'.<sup>152</sup> According to Stockhausen, the component moments in moment form are 'related by a nonlinear

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<sup>148</sup> Ibid., 120.

<sup>149</sup> John P Welsh, "Open Form and Earle Brown's Modules I and II (1967)," *Perspectives of New Music* 32, no. 1 (1994): 261, <https://doi.org/10.2307/833173>.

<sup>150</sup> Alison Latham, "Mobile Form" (Oxford University Press, 2011), <https://doi.org/10.1093/acref/9780199579037.013.4463>.

<sup>151</sup> Arne Eigenfeldt, "Exploring Moment-Form In Generative Music," in *Proceedings of the Sound and Music Computing Conference*, 2016.

<sup>152</sup> Jonathan D Kramer, "The Time of Music New Meanings, New Temporalities, New Listening Strategies," 1988, 453.



principle of proportions' and the form is 'open' if this system of proportions does not have a set of possibilities or if the series of proportions is not finite.<sup>153</sup>

Mobility or indeterminacy in compositional materials is not only a feature in 20<sup>th</sup> century music. One of the most well-known early examples of mobile form is W.A. Mozart's *Musikalisches Würfelspiel KV516f* (*Dice Game*) written in 1787.<sup>154</sup> Modern mathematicians suggested that Mozart's Dice Game can generate up to  $11^{16} = 45,949,729,863,572,161$  different yet similar waltzes.<sup>155</sup> For this 16-measures *minute*,

2.

**ZAHLENTAFEL.**  
**TABLE de CHIFFRES.**

	A	B	C	D	E	F	G	H
2	96	92	141	41	106	122	11	20
3	32	6	123	63	140	46	134	81
4	63	93	128	13	143	58	110	24
5	40	17	112	84	161	3	169	100
6	148	74	163	43	80	87	36	107
7	104	157	27	167	154	64	118	81
8	149	60	171	43	39	123	91	127
9	119	54	114	50	140	86	169	94
10	98	142	42	152	75	129	69	123
11	3	87	163	81	133	47	147	33
12	54	130	10	103	68	37	108	4

**A B C D E F G H**

	A	B	C	D	E	F	G	H
2	70	121	97	9	112	43	108	14
3	117	30	126	82	174	18	126	83
4	68	139	15	122	73	28	143	79
5	50	170	7	34	67	100	32	170
6	46	143	64	125	76	126	1	93
7	128	71	130	29	101	162	23	121
8	16	153	47	175	43	168	89	179
9	120	88	45	166	51	115	72	111
10	63	77	19	82	137	35	140	8
11	102	4	51	164	144	49	173	78
12	84	20	104	22	12	124	44	131

**A B C D E F G H**

**TABLE de MUSIQUE.** 5.

Figure 27. Mozart's Dice Game.

Mozart wrote 176 measures of musical fragments and organised the measure numbers in a specific way in the 'Table de Chiffres' (Figure 27). Performers are instructed to throw two dices to determine which measure to be played for each measure in the *minute*. This

<sup>153</sup> Karlheinz Stockhausen, "Momentform: Neue Beziehungen Zwischen Aufführungsdauer, Werkdauer Und Moment," *Texte Zur Musik* 1 (1963): 189–210.

<sup>154</sup> Wolfgang Amadeus Mozart, *Musikalisches Würfelspiel KV516f* (Bonn: N. Simrock, 1793).

<sup>155</sup> Bill Manaris and Andrew R. Brown, *Making Music with Computers: Creative Programming in Python* (Florida: CRC Press, 2014).

work is an example of the variable form, whereby each performance would have alternating sequence of the fragments, but the quantity of measures and duration is limited by the composer and do not influence the form of *minute*.

In this portfolio, mobile form, such as indeterminate sequence of musical fragments, is employed in three compositions - *The Ecstasy of Liberation* for chamber ensemble, *Caprice of the Cosmos* for chamber orchestra, and *Detour* for piano solo in this portfolio. Some contemporary open-form compositions that inspire my work include several of Earle Brown's work, Morton Feldman's *Intermission 6* for one or two pianos,<sup>156</sup> Karlheinz Stockhausen's piano piece *Klavierstück XI*,<sup>157</sup> and Haubenstock-Ramati's *Interpolation* for 1-3 flutes,<sup>158</sup> and Terry Riley's *In C* for any number of any kind of instruments.<sup>159</sup> *The Ecstasy of Liberation* for chamber ensemble (flute, clarinet, violin, cello, and a conductor) has three different kinds of mobility – the page sequence, the musical fragment, and the numbered events.

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<sup>156</sup> Morton Feldman, *Intermission 6: For One or Two Pianos*, vol. 6928 (Peters, 1963).

<sup>157</sup> Karlheinz Stockhausen, *Klavierstück XI* (Vienna: Universal Edition, 1957).

<sup>158</sup> Roman Haubenstock-Ramati, *Interpolation - Mobile Für 1, 2 Oder 3 Flöten* (Vienna: Universal Edition, 1957).

<sup>159</sup> Terry Riley, *In C* (New York: Associated Music Publishers Inc, 1964).

## I. Page Sequence

The first type of mobility in the structure is the page sequence. *The Ecstasy of Liberation* consists of three A-3 pages of score which can be performed in any order with as many repeats of each page as the conductor wishes. Page numbers are intentionally omitted on the score. The three pages can be easily recognised as ‘the page containing number 1 & 2’, ‘the page containing number 3, 4 & 5’, and the ‘wild card’. The ‘wild card’ is notated without any clef sign and can be played in any side up as the performers’ wish. Figure 28 shows the conductor’s plan for a 5–6-minute performance of this work on the 22<sup>nd</sup> May 2019.

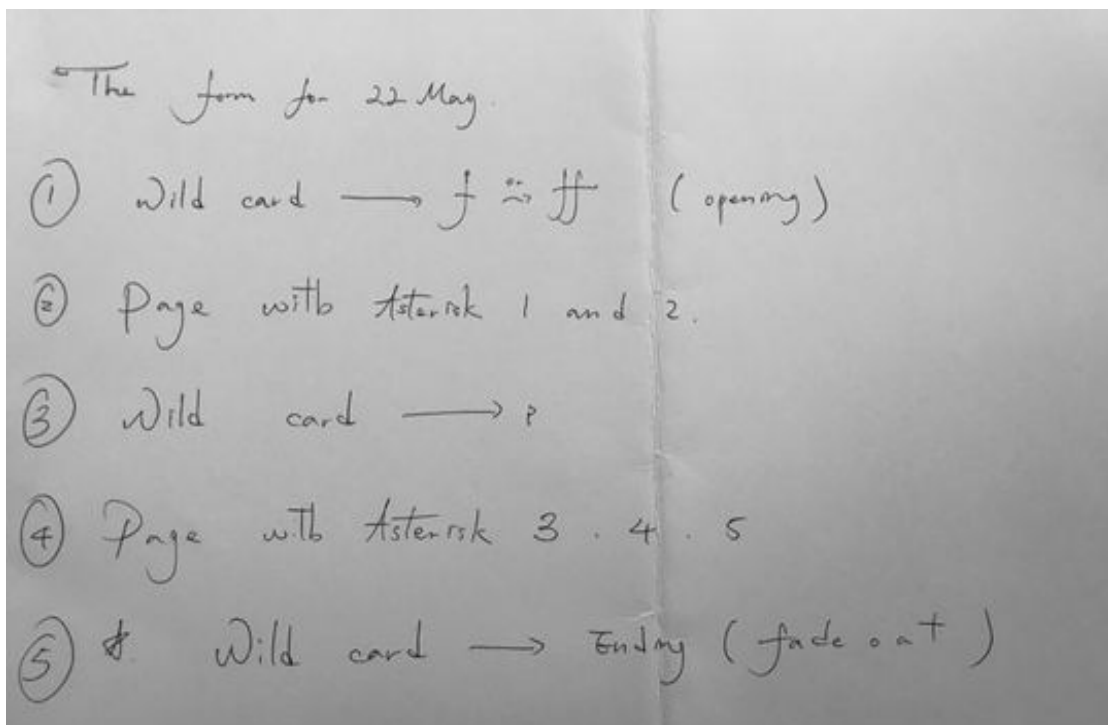


Figure 28. The conductor's plan of *The Ecstasy of Liberation* for a performance on 22nd May 2019.

Earle Brown’s first open-form composition *Twenty-Five Pages* also experimented on the idea of indeterminate page order.<sup>160</sup> The 25 pages of the score are to be arranged

<sup>160</sup> Earle Brown, *Twenty-Five Pages for 1-25 Pianos* (New York: Edition Peters, 1953).

in any sequence and each page can be performed either side up. In Brown's other open-form compositions such as *Modules I-III*<sup>161</sup> which have a limited number of pages, an



Figure 29. The arrow indicator suggested in Earle Brown's open form composition.

arrow indicator is suggested to be used by the conductor to show the musicians which page to perform from (Figure 29).<sup>162</sup> This system can be adopted to the performance of *The Ecstasy*

*of Liberation*, but it is not mandatory. The conductor and performers can agree on their own system to communicate which page to play depending on their experiences, habits, and the available technology.

<sup>161</sup> Earle Brown, *Modules I, II & III (1966-1969)* (New York: Edition Peters, 2012), [https://issuu.com/editionpeters/docs/ep11133\\_earle\\_brown\\_module\\_i-iii\\_score](https://issuu.com/editionpeters/docs/ep11133_earle_brown_module_i-iii_score).

<sup>162</sup> Ibid.

## II. Musical Fragments

The second type of mobility utilised in *The Ecstasy of Liberation* is the musical fragments. On the 'Wild Card', there are 16 musical fragments for woodwind instruments and 13 for string instruments (Figure 30). Performers are instructed to pick the fragments freely or in response to the musical outcome. They can choose to loop one fragment, develop the fragment, shift between two or more fragments, or play all of them in any order. They must also follow the directions of the conductor. The conductor can ask any specific performer to stay on one fragment, to change to a new fragment or stop playing.

*The Ecstasy of Liberation*

**Woodwind**

**String**

Performers pick musical ideas and segments freely or in response to the existing musical outcome and follow the instruction of the conductor. They can loop the chosen idea, shift between two or more ideas, or play all of them in any order. (Involved musicians can play any given phrase in the box in any order, but must follow the tempo, dynamics, and other expressions led by the conductor.) Clefs are not indicated in most of the phrases, musician can interpret the written notes freely

Figure 30. *The Wild Card* (*The Ecstasy of Liberation*, p.3)

The conductor can offer tempo, dynamics, and other expressions or do none of them. On the other two pages, music is notated in the conventional linear way with a boxed double

arrow (Figure 31). Similar to the Wild Card, performers can loop and play the given fragments in any order as they wish when they arrive the ‘boxed double arrow’.

*The Ecstasy of Liberation*

The image displays a musical score for 'The Ecstasy of Liberation'. It features several staves: Woodwind, Flute, Clarinet in Bb, Vc (Violin), and Vi (Viola). The score includes various performance instructions such as 'Flutter tongue', 'Bend the note freely', 'pizz.', 'sul tasto', and 'sul pont.'. There are three boxed double arrows labeled \*3, \*4, and \*5, indicating points where performers can loop or choose from fragments. The \*3 box is green, \*4 is purple, and \*5 is orange. The score also includes dynamic markings like *pp*, *f*, and *mp*.

**String**

Touch four artificial harmonics, slide up and down freely sul pont.

A.H. ....

Figure 31. An example of notation with boxed double arrow (*The Ecstasy of Liberation*, p.2).

Terry Riley's *In C*, Morton Feldman's *Intermission 6*, and Karlheinz Stockhausen's *Klavierstück XI* also use musical fragments predominantly on the score and allow certain liberty for the performers to loop or choose from.<sup>163</sup> Among these three works, Riley's *In C* for any number of any kind of instrument (a group of 35 is desired) is more restricted than the other two. *In C* is a work more inclined to minimalism rather than aleatoric. There are 53 melodic patterns on the score of *In C* and these patterns are to be played consecutively with performers having the freedom to determine how many times they will repeat each pattern before moving on the next (Figure 32).<sup>164</sup> This idea of

<sup>163</sup> Riley, *In C*; Feldman, *Intermission 6: For One or Two Pianos*; Stockhausen, *Klavierstück XI*.

<sup>164</sup> Riley, *In C*.

repeating a specific fragment an arbitrary number of times is used by other composers using the term *repeated ad libitum*. In *The Ecstasy of Liberation*, performers are also instructed to repeat the same fragment as many

in C.

The image shows the musical score for Terry Riley's 'In C'. It consists of 53 numbered fragments of music, each on a single staff. The fragments are arranged in a grid-like fashion across the page. The notation includes various rhythmic patterns, such as eighth and sixteenth notes, and rests. The key signature is one flat (B-flat), and the time signature is common time (C). The fragments are numbered 1 through 53, with some fragments having multiple measures. The score is written in a clear, legible font.

Figure 32. Terry Riley's *In C*.

times as they wish or not repeat at all. Performers do not have to follow a certain order. The liberty and space they are given is more like Feldman's *Intermission 6* and Stockhausen's *Klavierstück XI*. Feldman's *Intermission 6* is a single page with 15 fragments scattered across the page (Figure 33). Each fragment is either a chord, a single note, or an octave. The instruction relating the form given by Feldman is 'composition

The image shows the musical score for Morton Feldman's 'Intermission 6'. It is a single page with 15 fragments of music scattered across the page. The fragments are arranged in a grid-like fashion. The notation includes various rhythmic patterns, such as eighth and sixteenth notes, and rests. The key signature is one flat (B-flat), and the time signature is common time (C). The fragments are numbered 1 through 15. The score is written in a clear, legible font.

Figure 33. Morton Feldman's *Intermission 6*

begins with any sound and proceeds to any other.'<sup>165</sup> In Stockhausen's piano piece *Klavierstück XI*, there are 19 musical fragments spread around a poster-sized page (Figure 34). The performer is asked to randomly glance at any musical fragment and play with personal choices of tempo, dynamic and articulation to start the performance. Each fragment contains

<sup>165</sup> Feldman, *Intermission 6: For One or Two Pianos*.

information on the tempo, dynamic and articulation for the next fragment the performer chooses to play with another random glance. The performance finishes after the same fragment has been chosen and performed for the third time.<sup>166</sup> The musical fragments in *The Ecstasy of Liberation* are to be performed with greatest liberty like Feldman's *Intermission 6* but performers are expected to choose the next fragment based on their musical judgement rather than unintentionally by a random glance as in Stockhausen's *Klavierstück XI*.<sup>167</sup>



Figure 34. Stockhausen's *Klavierstück XI*.

<sup>166</sup> Stephen Truelove, "The Translation of Rhythm into Pitch in Stockhausen's *Klavierstück XI*," *Perspectives of New Music*, 1998, 189–220.

<sup>167</sup> Stockhausen, *Klavierstück XI*.



### III. Numbered events

The third type of mobility in *The Ecstasy of Liberation* is the numbered events. On the two pages except the Wild Card, certain parts of the music are connected with a dashed line, highlighted with colour, and labelled with an asterisk and a number (Figure 31). They are called the ‘Numbered Meeting Points’ in this portfolio. As the performers

The figure consists of two musical score pages. The left page is titled 'MODULE 1' and 'SCORE IN C' by Earle Brown (1926-2002). It shows a full orchestral score with five vertical columns of staves, each labeled with a large grey number from 1 to 5. A large grey number '1' is positioned above the third column. The right page is titled 'FROM HERE 1960' by Earle Brown (1926-2002). It shows a score with a large red number '1' spanning across the staves. To the right of the score are three boxes, each containing a musical excerpt with a large red number (3, 4, and 5) overlaid on it. A small box with the number '1' is at the top right of the page.

Figure 35. Example of numbered events in Earle Brown's work. left: *Module I*; right: *From Here*.

play without a united tempo and are performing the musical fragments at their liberty, the conductor can signal a number anytime and the involved performers must perform the highlighted point and play from there. Numbered events are used vastly in Earle Brown's compositions. Some examples are orchestra pieces *Module I-III*, *Available Forms I & II*, *Cross Sections and Colour Fields*, *Time Spans*, *From Here*, and *Event: Synergy II*. Brown's numbered events can be as simple as one chord as in *Module I-III* or a musical passage as in *From Here* (Figure 35). In many of these compositions, the numbered

events constitute the entire composition. There is no passage or notes not included in the numbered sections. The 'Numbered Meeting Point' in this portfolio is very different. They only exist when there is no united tempo. In the 'Meeting Points' (with or without number), the indicated parts or all parts synchronise briefly.

*Caprice of the Cosmos* for chamber orchestra is another composition in this portfolio that has employed the technique of 'Numbered Meeting Point' along with repeated ad libitum. In *The Ecstasy of Liberation* and Brown's composition, the conductor has sole authority on the sequence, duration, and expression of the numbered events. In *Caprice of the Cosmos*, there are numerous of 'Meeting Points' and two moments of 'Numbered Meeting Points' which take place during the pianist's repeated ad libitum (Figure 36). In these two moments, the pianist loops a passage as many times as he or she likes and decides when to finish the repeated ad libitum. During this repeated ad libitum, the conductor signals other musicians to perform the Numbered Meeting Points. For the first time, these points are to be performed consecutively and then the conductor can cue the number and lead other musicians to play the preferred numbered meeting points as many times and in any sequence the conductor wishes. It must be understood that the pitches within the Numbered Meeting Points are determined by the musicians and they must remember their choices of pitches in this section. When the conductor signals a specific number, the musicians must play the same pitch that they choose in the first place. Therefore, when the conductor chooses the number and the sequence after the first round, the decision is based on the sound outcomes that have been created in the first round and how these outcomes can interact with the pianist's part rather than randomness.

The image displays a musical score for a section titled "Repeat (Pianist's repeated ad libitum)". The score is written for a grand piano, with staves for the right and left hands. The music is divided into seven numbered measures, each highlighted with a different color: 1 (yellow), 2 (light blue), 3 (green), 4 (purple), 5 (orange), 6 (cyan), and 7 (light green). The dynamics range from piano (*p*) to fortissimo (*ff*). A "Tempo free zone" is indicated below the main score, showing a dynamic contour with markings for *ff*, *mf*, *p*, *mf*, *p*, and *ff*. Below this, the same seven numbered measures are repeated, with the piano part featuring a complex rhythmic pattern of chords and arpeggios.

Figure 36. An excerpt from Caprice of the Cosmos

#### IV. Non-linear movement - Follow the dashed line

Another major composition in this portfolio that explores open form is *Detour* for piano solo. *Detour* is notated linearly with many parts of the musical segments and text commands in boxes connected with dashed lines (Figure 37). Text commands include instructions such as improvising with the whole tone scale, stopping, going back to the

The figure displays a musical score for piano solo, titled 'Detour'. The score is presented in a non-linear format, with several segments of music and text boxes connected by dashed lines. The main score starts at measure 168 and includes dynamic markings such as *pp*, *f*, *p*, *pp*, *ff*, and *sfz*. Above the score, there are tempo markings: 'rit.' followed by a dashed line and 'A tempo'. The score includes various musical notations, including triplets and slurs. Below the main score, there are several boxes containing musical segments and text instructions:

- A box at the top right contains a musical segment with dynamic markings *ppp* and *f*, and a text box that says 'Improvise freely with only one hand for around 10 second'.
- A box on the left contains a musical segment with a text box that says 'stop for 3 second'.
- A box in the middle contains a musical segment with dynamic markings *f*, *p*, *mf*, and *sfz*, and a text box that says 'Develop this idea for around 30 second'.
- A box on the right contains a musical segment with dynamic markings *f* and *ppp*, and a text box that says 'improvise freely then finish this composition'.
- A box at the bottom left contains a musical segment with dynamic markings *f*, *p*, *ff*, and *sfz*.
- A box at the bottom right contains a musical segment with dynamic markings *pp*.

Figure 37. An excerpt from *Detour* for piano solo (p.5).

beginning, or finishing the performance. Each box is connected to another segments or boxes with dashed lines. Whenever the pianist reaches a box, there is more than one path to continue the music and the pianist has to choose intuitively on the spot which dashed line to follow. The dashed lines can lead to a detour or short-cut of performance depending on which boxes are reached. They may bring the performance around the linear development of the music, may lead the music back and forth, may bring the pianist

back to the beginning of the whole process on the last page, or end the performance unexpectedly on the first page. This notation is inspired by the ‘ladder lottery’ (also called ghost legs or *amidakuji*), an Asian method of lottery commonly used to distribute things among people. Ladder lottery consists of vertical lines with horizontal lines (legs) connecting two adjacent vertical lines placed randomly (Figure 38). The general rule is to choose a vertical line on the top then follow this line downwards, follow any ‘leg’

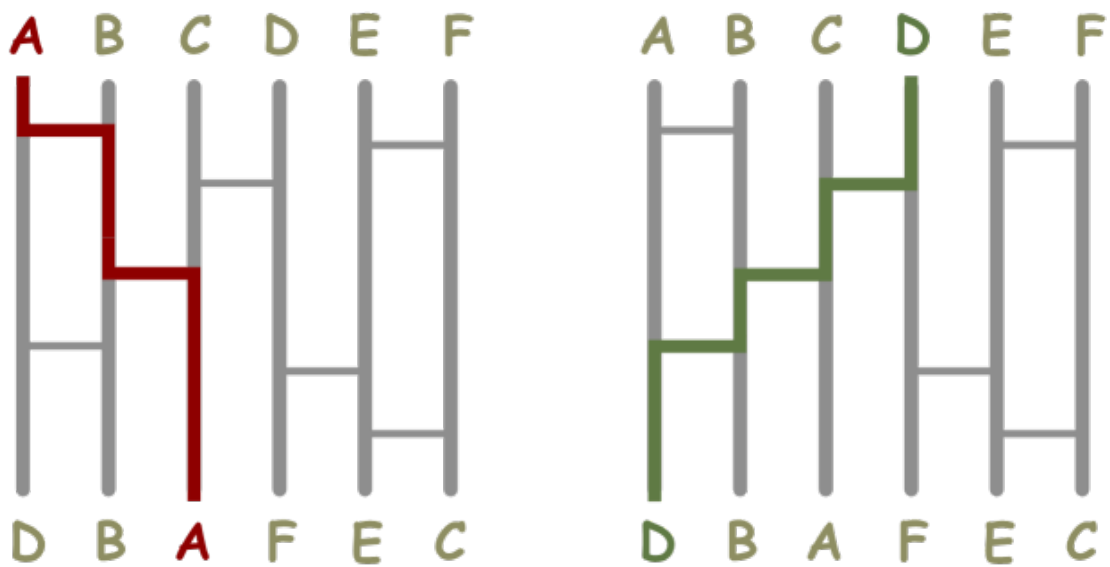


Figure 38. Ladder lottery

encountered to another vertical line and continue downwards until reaching the end of the line. Using ghost legs to make decisions in a sense is similar to throwing dice or flipping coins but the ghost legs method reveals the process of each decision-making and allows this journey to be visible. Another popular metaphor for mobility in *Detour* is the game of snakes and ladders. The flow and duration of the music depends on which dashed line the pianist follows, and which box the pianist lands on. The music may return to the same box or the beginning again and again or skip a certain passage and ‘fast-forward’ to the end.

Haubenstock-Ramati's *Interpolation* for 1-3 flutes also uses dotted line to direct the open structure of the score. *Interpolation* consists of twenty-five fragments of varying

Figure 39. Haubenstock-Ramati's *Interpolation* for 1-3 flutes

lengths connected by dotted lines (Figure 39). The composer has illustrated a network of paths by which the performer may switch from one fragment to another in either direction on the dotted lines. The fragments can be played in standard direction or retrograde.

In addition to the 'follow the dashed lines' way, there are three other options to perform this composition. Among these four ways of performance, two have open forms and two have fixed forms. In summary, the four ways of performance are:

1. 'Follow the dashed lines' (Figure 40): the pianist chooses intuitively which dashed line to follow.

2. ‘Boxes only’ (Figure 40): the pianist treats all boxes including the text commands as musical fragment and performs each box freely with any sequence or any numbers of repeats. The pages can be rearranged in any order for this option.

The figure displays two versions of a musical score for 'Detour (p.2)'. The left version features pink dashed lines that trace a path through various boxed musical fragments and text commands, illustrating a non-linear performance sequence. The right version shows the same score with yellow boxes highlighting individual musical fragments, representing the 'boxes only' option where each box is treated as a separate, freely performed unit.

Figure 40. The two open-form options to perform *Detour* (p.2). Left: ‘Follow the dashed line’; right: ‘boxes only’.

3. ‘Linear - no box’ (Figure 41): the pianist ignores all the boxes and dashed lines and performs the musical passage linearly.
4. ‘Linear – everything except text command’ (Figure 41): the pianist performs the music linearly like the standard way of reading notation, playing all the musical passages whether they are boxed or not.

The figure displays two musical score arrangements for 'Detour (p.2)'. The left arrangement, titled 'Linear - No box', uses blue highlights to indicate specific sections of the score. The right arrangement, titled 'Linear - everything except text commands', uses green highlights. Both arrangements include musical notation with dynamic markings such as *pp*, *p*, *f*, and *ppp*, and performance instructions like 'Repeat for around 20 times go back to the beginning' and 'Repeat for around 20 times then go back to the beginning'. The notation includes staves for piano and violin/viola.

Figure 41. The two fixed-form options to perform Detour (p.2). Left: 'Linear - No box'; right: 'Linear - everything except text commands'

Table 4. Summary of the indeterminate elements in relation to form.

Indeterminate compositional elements		<i>To Define is to Limit</i>	<i>The Ecstasy of Liberation</i>	<i>Oblivion</i>	<i>Caprice of the Cosmos</i>	<i>String Quartet Part 1</i>	<i>Defining Chaos</i>	<i>Detour</i>
Form (Chapter 4.2)	Page sequence		*					*
	Musical fragments		*					*
	Numbered events		*		*			
	Non-linear movement - 'Follow the dashed line'							*



### 4.3 Time

Indeterminacy in time, tempo, or rhythm is not a modern phenomenon. Indeed, it is the oldest and most common improvisational element in composed music. Music is a temporal art; it is expressed in time and ‘require time in order to be realised’.<sup>168</sup> Unlike visual arts such as painting, photography, or sculpture which are tangible and approachable by sight, music is constructed in space and time. Most of the musical elements such as melody, harmonic flow, meter, rhythms, or phrases are organised in time.<sup>169</sup> Music is an art of time also in the sense that ‘the composer exploits time as a formal element.... controls certain features of the temporal ordering of tones for musical perception’.<sup>170</sup> Rhythm, tempo, and meter are the main elements of the temporal structure. The duration of notes and space between them constructs rhythm. Polish pianist and composer Ignacy Jan Paderewski expressed his opinions on rhythm:

Rhythm is order. But this order in music cannot progress with the cosmic regularity of a planet, nor with the automatic uniformity of a clock. It reflects life, organic human life, with all its attributes, there it is subject to moods and emotions, to rapture and depress. There is no absolute rhythm. In the course of the dramatic developments of a musical composition, the initial themes change their character, consequently rhythm changes also, and, in conformity with that character, it has to be energetic or languishing, crisp or elastic, steady or capricious.<sup>171</sup>

Rhythm is organic and is subject to moods and emotions. A performed rhythm of the same notation can sound ‘rush’, ‘laid-back’, ‘mechanical’, or ‘animated’ depending on the subtle difference in the performers’ perception and execution of the duration of each note.<sup>172</sup> The interpretation of the timing of a phrase relies on many parameters. In a study,

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<sup>168</sup> Joan Stambaugh, “Music as a Temporal Form,” *Journal of Philosophy* 61, no. 9 (1964): 265, <https://doi.org/10.2307/2022918>.

<sup>169</sup> Maja Marijan, “The Perception and Organisation of Time in Music,” *Accelerando Belgrade Journal of Music and Dance* 3, no. 4 (2018).

<sup>170</sup> Philip Alperson, “‘Musical Time’ and Music as an ‘Art of Time,’” *The Journal of Aesthetics and Art Criticism* 38, no. 4 (1980): 408, <https://doi.org/10.2307/430322>.

<sup>171</sup> Ignacy Jan Paderewski, “Tempo Rubato,” *Polish Music Journal* 4, no. 1 (2001).

<sup>172</sup> Henkjan Honing, “Structure and Interpretation of Rhythm and Timing,” *Tijdschrift Voor Muziektheorie* 7, no. 3 (2002): 227–32.

three pianists were asked to perform the melody of Brahms's *Variations on an Original Theme* presented in six different settings: 1) a single line melody without bar-lines and notes grouping; 2) with bar-lines, rhythmic beams, and phrase marking; 3) the counter melody; 4) the melody with the countermelody; 5) the melody with block chords; and 6) the original Theme containing the melody, counter melody and block chords.<sup>173</sup> Analysis of the performance showed that the diversity of performances increased with the number of explicit musical dimensions in the score and when the melody was given without bar-lines, rhythmic beams and phrase indications was timed in the least idiomatic manner.<sup>174</sup> The study also demonstrated that whether it is indicated on the score or not, performers often modify the tempo and rhythm in relation to the context and parameters of the music.

Composers often use musical terms such as *tempo rubato*, *ad libitum*, *a piacere*, or *a capriccio* to encourage such personal and organic expression of the tempo or rhythm. *Rubato* means literally 'in robbed time'. Although the definition of rubato varies in different historical period or musical context,<sup>175</sup> when the term *rubato* is written on a score it generally refers to a 'temporary disregarding of strict tempo to allow an expressive quickening or slackening, but usually without altering the overall pace of the piece'.<sup>176</sup> On the other hand, expressions like *ad libitum*, *a piacere*, and *a capriccio* allow a greater freedom and modification of the tempo at the will of the performer. *Ad libitum* means at liberty; *a piacere*, at pleasure; and *a capriccio*, at the caprice (of the performer).<sup>177</sup>

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<sup>173</sup> Renee Timmers et al., "The Influence of Musical Context on Tempo Rubato," *Journal of New Music Research* 29, no. 2 (June 2000): 131–58, <https://doi.org/10.1076/jnmr.29.2.131.3095>.

<sup>174</sup> Ibid.

<sup>175</sup> Barton Hudson, "'Stolen Time: The History of Tempo Rubato.' By Richard Hudson.," *Performance Practice Review* 9, no. 2 (1996): 194–200, <https://doi.org/10.5642/perfpr.199609.02.07>.

<sup>176</sup> "RUBATO | Definition of RUBATO by Oxford Dictionary on Lexico.Com," 2021, <https://www.lexico.com/definition/rubato>.

<sup>177</sup> Karl Wilson Gehrkens, *Music Notation and Terminology...* (New York: AS Barnes Company, 1920).

## I. Indeterminate time in compositions for solo instrument

To indicate the free interpretation of time and rhythm, sometimes composers omit time signature or bar-lines or both on the score. This is common in the written-out cadenza section in classical music and in many 20<sup>th</sup> century or contemporary compositions. Some composers even deliberately removed the rhythm of the melody and left to the performer to interpret the duration of each note, like the unmeasured preludes in the 17<sup>th</sup> century. Unmeasured preludes are notated without bar-line and are sometimes notated with whole notes only.<sup>178</sup> They are generally playable in free rhythm. It is believed that the unmeasured pieces represent ‘a style in which notes cannot satisfactorily be grouped into regular rhythmic and harmonic patterns, independent of the presence or absence of notated rhythm’.<sup>179</sup>

Numerous pieces were written without rhythmic notation for lute and harpsichord at that time. Louis Couperin’s unmeasured preludes are good examples of this genre. He used long groups of whole notes and various types of curved line (slur) to notate his music (Figure 42).<sup>180</sup> Although he also wrote eight preludes in measured notation for ‘the ease with which one can teach or learn them’ but emphasised that the preludes were to be played freely. Frank Couperin said, ‘a prelude is a free composition in which the imagination is allowed free expression...those who use these non-improvised preludes should play them in a relaxed manner without being concerned about strict rhythm.’<sup>181</sup> It

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<sup>178</sup> Davitt Moroney, “Prélude Non Mesuré,” in *Oxford Music Online* (Oxford University Press, 2001), <https://doi.org/10.1093/gmo/9781561592630.article.22290>.

<sup>179</sup> *Ibid.*

<sup>180</sup> Beverly Scheibert, *Jean-Henry d’Anglebert and the Seventeenth-Century Clavecin School* (Indiana University Press, 1986).

<sup>181</sup> François Couperin, *L’art de Toucher Le Clavecin* (Wiesbaden: Breitkopf & Härtel, 1933), 33.



Figure 42. Louis Couperin's *Prelude in C*, Bauyn MS facsimile. Example of the notation of unmeasured prelude.

seems that neither the measured nor the unmeasured notations were sufficient to translate the genuine rhythm structure in the composer's mind. Similar to the ideas of using all semibreves in the unmeasured preludes, modern composer and scholar Lars Brøndum's uses note heads without stems to represent free rhythmical section in his work *The Serpentine Line* (Figure 43).<sup>182</sup>

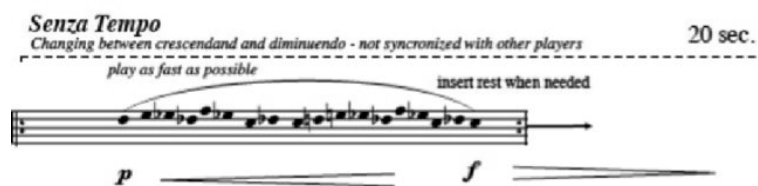


Figure 43. *Senza Tempo* section of Brøndum's *The Serpentine Line*.

<sup>182</sup> Lars Brøndum, "Graphic Notation, Indeterminacy and Improvisation: Implementing Choice Within a Compositional Framework," *Open Cultural Studies* 2, no. 1 (n.d.): 639–53, <https://doi.org/https://doi.org/10.1515/culture-2018-0058>.

## II. Indeterminate time in compositions for ensemble

Performing *ad lib* or *rubato* in ensemble or orchestra playing is very different from a solo performance, the group leader or the conductor holds the authority to unify the performers, set the tempo, shape the sound of the ensemble, and coordinate the rubato. The ensemble members are not supposed to interpret the tempo or rubato in their own ways but to follow the leader or the conductor to have a unified rubato outcome. To deviate from the sole authority of the conductor and to create a new sound effect - an organised chaos, Alan Hovhaness created an aleatory notation called ‘spirit murmur’ (later labelled ‘*senza misura*’, meaning ‘without meter’) in his work *Meditation on Orpheus* (1958).<sup>183</sup> Each performer is asked to play and repeat phrases freely and in unsynchronised fashion, producing a complex ‘cloud’ or ‘carpet’ of sounds.<sup>184</sup> Lutosławski also had his first experiment with similar technique in his composition *Venetian Game* (1960-61).<sup>185</sup> *Venetian Games* is scored for a chamber orchestra of twenty-nine soloist with aleatorism. In the aleatoric portions of *Venetian Games*, each part is ‘independent in time’ and has ‘no identical time organisation or common pulse’.<sup>186</sup> Lutosławski used the term ‘aleatoric counterpoint’ to describe ‘the loose rhythmic structure between simultaneously sounding instruments and groups of instruments’.<sup>187</sup> The purpose of this technique is to loosen up of time relations between sounds with strictly fixed pitch and create moments of collective *ad libitum*. Steven Stucky described

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<sup>183</sup> Alan Hovhaness et al., *Alan Hovhaness* (First Edition Music, 1954).

<sup>184</sup> Ibid.; Lynn Fisher, “Early Aleatory Counterpoint,” *AleaCounterpoint*, 2010.

<sup>185</sup> Steven Stucky, *Lutosławski and His Music* (Cambridge: Cambridge University Press, 1981); Witold Lutosławski, *Jeux Vénitiens (Venetian Games) for Orchestra* (Polskie Wydawnictwo Muzyczne, 1963).

<sup>186</sup> Micael O’Brien, “Witold Lutosławski’s Venetian Games,” in *Library of Congress, Washington, DC The Rosaleen Moldenhauer Memorial. Music History from Primary Sources: A Guide to the Moldenhauer Archives*, 2000; Bálint András Varga and Witold Lutosławski, *Lutosławski Profile* (Chester Music, 2012).

<sup>187</sup> O’Brien, “Witold Lutosławski’s Venetian Games.”

the outcome of all instruments playing the same material but scrambled in different orders as ‘kind of not chaos, but organised chaos.’<sup>188</sup>



	
<p><b>Alan Hovhaness</b>  <b>Meditation on Orpheus (1958)</b>  <b>Publisher: CF Peters</b></p>	<p><b>Witold Lutosławski</b>  <b>Jeux vénitiens (1961)</b>  <b>Publisher: Edition Moeck</b></p>

Figure 44. Examples of aleatoric counterpoint by Hovhaness and Lutosławski.<sup>189</sup>

Lutosławski's *Symphony No.2* is another example of his aleatoric counterpoint. Except the fourth *evolutionary* stage of the second movement is conducted in traditional manner, all other sections are *ad libitum* sections: no bar-lines are displayed, each part has a different length, and the performers loop a segment of their parts until the conductor signals to transit to a new section. Each performer is instructed to play ‘with the expressive freedom of a solo or a cadenza’.<sup>190</sup>

<sup>188</sup> Philharmonia Orchestra (London UK), “Witold Lutosławski: Aleatoric Method,” 2013, <https://www.youtube.com/watch?v=v0H3HC12VG0>.

<sup>189</sup> Fisher, “Early Aleatory Counterpoint.”

<sup>190</sup> Witold Lutosławski, *Lutosławski on Music* (Rowman & Littlefield, 2007); Stucky, *Lutosławski and His Music*.

### III. Indeterminate time in this portfolio

In the compositions of this portfolio, rhythm is one of the parameters that is notated with great complexity in this portfolio. Short rhythmic motives with often irregular division can be found in all compositions. They should be performed with liveliness and precision to convey the whimsical character of the music, except in *The Ecstasy of Liberation* for chamber ensemble and *Caprice of the Cosmos* for chamber orchestra. *The Ecstasy of Liberation*, as described in the last section, is a composition about liberation and an experiment on open structure. There is no united tempo at all, and no bar-line or time signature is indicated. *Caprice of the Cosmos*, consisting of seven movements, explores the concept of ‘chaos’ and ‘order’. There are three different kinds of ‘tempo-states’ in this composition and they are distinguished by the various uses of bar-line: 1) no bar-line – the unmeasured ‘tempo free zone’: performers establish their preferred tempi and avoid synchronising with the others; 2) with bar-line - standard measured notation: performers play in a steady pulse and tempo; and 3) dashed bar-lines – *ad lib* section for the conductor: similar to stand measured notation where all performers follow the direction of the conductor, but the conductor can and is recommended to change the tempo freely and dramatically.

The first movement *Formless*, as the name suggested, portrays the how the beginning of the world looked like as described in many different cosmogonic myths – formless, chaotic, and void. *Formless* is one single tempo free zone for the duration of three minutes (see Figure 45). The conductor only cues the entrance of each part and the five meeting points then retreats to a bystander role to let the music evolve itself until all parts finish at their own paces. The 14 instruments establish their own tempi and change anytime according to their understanding and interpretation of their musical phrases.

Each part has its own entry point. Some parts are grouped to start together but they can establish different tempo as they wish. For example, the piccolo, flute, and bass flute start together. The piccolo can play in 50bpm, the flute in 70bpm, and the bass flute in 100bpm. Each performer is required to make personal sense out of the given materials and to explore the pulse, tempo, length, and duration of each note according to their preferences and personal interpretations of the musical ideas. Consistency to their beginning tempi is not necessary, they can change their tempi freely. While it is indicated that the whole section should not exceed three minutes, performers can finish their parts as quick as they think the music should flow and then wait for the others to finish. The only requirement is they have to react and play the ‘meeting point’ together when the conductor signals the five ‘meeting points’ no matter where they are at the music or even when they have finished their parts.

Figure 45. Example of Tempo Free Zone in *Caprice of the Cosmos* (p.1).

As the composition develops from one movement to another movement, the control of the conductor grows. ‘Order’ gradually emerges in the midst of chaos as the conductor holds a more and more leading role. Measured notation with bar-lines begin to



appear and the performers no longer play in their own tempi but to follow a steady pulse. The tempo free zone and the measured notation sometimes co-exist (**Error! Reference source not found.**) which means some parts follow a steady pulse while some parts play

The image shows a musical score for five instruments: Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Contrabasso (Cb.). The score is divided into measures. A section is labeled 'Tempo free zone' at the top. Various performance instructions are present, such as 'glin.', 'sul pont.', 'Make sound effect freedy (with pitch)', 'pizz.', 'sul tasto', 'Pizzicato with slapped string sound', 'arco', and 'Slap all the strings'. Dynamics like 'pp', 'mf', 'f', and 'mp' are also indicated. Two specific areas are highlighted with colored boxes: a green box and a purple box, both containing pizzicato notation with 'slapped string sound' instructions.

Figure 46. An excerpt from *Caprice of the Cosmos* (p.10). The co-existence of the tempo free zone and standard measured notations.

freely without connecting with the rest of the music in tempo. The meeting points happen more frequently and ‘gather’ more parts together. The synchronisation reaches its peak in the fourth movement *All is One* – the middle of the seventh movements. This movement is constructed by rhythmic unisons of all parts (except the piano) including the tempo free zones (Figure 47). This feature shares a lot of similarities Lutosławski’s aleatoric counterpoint. The main difference is that Lutosławski endeavoured to avoid any vertical alignment on the score,<sup>191</sup> I deliberately put meeting points in the tempo free zone to create a contrast between the chaos and order.

<sup>191</sup> Jadwiga Paja, “The Polyphonic Aspect of Lutosławski’s Music” 62 (1990): 183–91.

"Tempo free zone"

10

1

2

3

4

"Tempo free zone"

1

2

3

4

**Repeat**  
(Pianist's repeated ad libitum)  
Repeat as many times as the pianist likes.  
Improvising during the repetition.  
Pianist signals to move forward.

Figure 47. An excerpt from *All is One* (*Caprice of the Cosmos*, p.19) - featuring unisons of all parts except the piano.

After the fourth movement, the episodes of tempo free zone and meeting points gradually reduce and completely disappear in the sixth movement *Sabbath* and the seventh movement *New Order*. *Sabbath* is the second last section and is filled with long notes harmony, creating a suspended, dream-like time-feel without any uncertainty and improvisation. The tempo is fixed, unified, and steady. In *New Order*, the conductor has full control over the tempo and is expected to change it dramatically across the dashed

bar-lines in any way they like (Figure 48). All parts are unified in pulse and following the temperamental tempo of the conductor. In a way, the conductor is like a person listening to a CD or a disc jockey, he or she can control when to play or stop the recording, change the volume and the speed in any way, but has no control of the content of the CDs or the records.

The image shows a musical score for six woodwind instruments: Piccolo, Flute (Fl.), B. Flute (B. Fl.), Clarinet (Cl.), Oboe (Ob.), and Bassoon (Bsn.). The score is divided into sections by dashed vertical lines. Annotations above the staves include 'Make sound effect freely (without pitch)', 'Slap tongue (with less pitch sound)', and 'wind tone (without pitch, wind sound only)'. Dynamics markings such as *pp* and *mp* are present throughout. The Piccolo part has a 'To' marking at the end of the section.

Figure 48. An excerpt from *Caprice of the Cosmos* (p.32). An example of the dashed bar-line section.

In short, the tempo free zone is the *ad lib* of the performers, the standard measured notation preserves most of the composer's thoughts of the music, and the dashed bar-line section is the *ad lib* of the conductor.

Table 5. Summary of the indeterminate elements in relation to time.

Indeterminate compositional elements		<i>To Define is to Limit</i>	<i>The Ecstasy of Liberation</i>	<i>Oblivion</i>	<i>Caprice of the Cosmos</i>	<i>String Quartet Part 1</i>	<i>Defining Chaos</i>	<i>Detour</i>
Time (Chapter 4.2)	'Tempo free zone' (no bar-line)	*	*		*			
	Dashed bar-lines				*			
	'Meeting point'	*	*		*			

#### 4.4 Image

It is unarguable and has been studied in multiple disciplines including music, art, education, psychology, neuroscience, and physics that there is a close relationship between sounds and colours.<sup>192</sup> In physics, sound and light share the fundamental nature of vibration and the perception of pitch and hue are determined by the wavelength of energy or the frequency.<sup>193</sup> People with synaesthesia, a neurological condition that causes the brain to process data in the form of several senses at one, might see music as colours in the air or hear sounds while looking at different colour.<sup>194</sup> Indeed, composers such as Alexander Scriabin, Nikolai Rimsky-Korsakov, and Olivier Messiaen were influenced by this neurological condition and associated colours with various harmonic tones.<sup>195</sup> Music and art nurtured the appreciation and creation of one another. Victoria Pavlou and Georgina Asthanasiou's study showed that listening to music prompted stronger emotional responses to art and improved the participants' ability to derive meaning from artworks.<sup>196</sup> Music and visual art share many structural elements; musical elements including form, style, timbre/colour, flow, contrasts of tension and release, mood, and cultural derivation or influences also appear in visual works of art.<sup>197</sup> The two artforms

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<sup>192</sup> Theodor W Adorno and Susan Gillespie, "On Some Relationships between Music and Painting," *The Musical Quarterly* 79, no. 1 (1995): 66–79; José Luis Caivano, "Color and Sound: Physical and Psychophysical Relations," *Color Research & Application* 19, no. 2 (April 1994): 126–33, <https://doi.org/10.1111/j.1520-6378.1994.tb00072.x>.

<sup>193</sup> Caivano, "Color and Sound: Physical and Psychophysical Relations."

<sup>194</sup> Jamie Ward et al., "Synaesthesia, Creativity and Art: What Is the Link?," *British Journal of Psychology* 99, no. 1 (February 2008): 127–41, <https://doi.org/10.1348/000712607X204164>.

<sup>195</sup> Jonathan W. Bernard, "Messiaen's Synaesthesia: The Correspondence between Color and Sound Structure in His Music," *Music Perception: An Interdisciplinary Journal* 4, no. 1 (January 1986); Kenneth Peacock, "Synesthetic Perception: Alexander Scriabin's Color Hearing," *Music Perception* 2, no. 4 (July 1985): 483–505, <https://doi.org/10.2307/40285315>.

<sup>196</sup> Victoria Pavlou and Georgina Athansiou, "An Interdisciplinary Approach for Understanding Artworks: The Role of Music in Visual Arts Education.," *International Journal of Education & the Arts* 15, no. 11 (2014): n11.

<sup>197</sup> Glenda Cosenza, "Play Me a Picture, Paint Me a Song: Integrating Music Learning with Visual Art," *General Music Today* 19, no. 2 (January 2006): 7–11, <https://doi.org/10.1177/10483713060190020103>.

have invoked each other since long ago in history and continue to draw inspiration from each other. American artist Arthur Dove painted two paintings based on George Gershwin's *Rhapsody in Blue*;<sup>198</sup> Russian painter Wassily Kandinsky found a breakthrough from traditional figurative style of painting after hearing the serial music and atonality in a concert of Arnold Schoenberg.<sup>199</sup>



Figure 49. Dove's *Rhapsody in Blue Part I* (left) and *Part II* (right)

Compositions inspired by visual art were not uncommon in classical music compositions: Franz Liszt's *Hunnenschlacht* was inspired by Wilhelm von Kaulbach's painting of the same name in 1857;<sup>200</sup> Modest Mussorgsky's *Pictures at an Exhibition* based his musical material on drawings and watercolours that his artist friend Viktor

<sup>198</sup> George Gershwin, *Rhapsody in Blue* (Gershwin Music, 1924).

<sup>199</sup> Maureen Buja, "Musicians and Artist," Interlude, 2019, <https://interlude.hk/musicians-artists-schoenberg-kandinsky/>.

<sup>200</sup> Franz Liszt, *Hunnenschlacht*, S.105 (Leipzig: Breitkopf & Härtel, n.d.).



Hartmann produced and displayed in an exhibition in St Petersburg in 1874.<sup>201</sup> Sergei Rachmaninoff's *Isle of the Dead* was composed after he saw a black and white reproduction of Arnold Böcklin's painting with the same name in Paris in 1907; Debussy's orchestral work *La Mer* was inspired by Katsushika Hokusai's 'The Great Wave off Kanagawa' and the seascapes available in other artworks by Claude Monet and J.M.W. Turner.<sup>202</sup> More recently, modern composer Nell Shaw Cohen drew inspiration from the watercolour paintings of Charles Ephraim Burchfield and wrote *Watercolours* (2011) for wind quintet.<sup>203</sup> Ensemble Ériu's album *Stargazer* (2017) was composed as a response to the J.B. Yeats' paintings held in the Model Arts Centre in Sligo.<sup>204</sup>



Figure 50. Examples of paintings that inspired compositions. Left: One of Hartmann's picture that inspired Mussorgsky's *Pictures at an Exhibition*, Right: Katsushika Hokusai's 'The Great Wave off Kanagawa' inspired the creation of Debussy's *La Mer*.

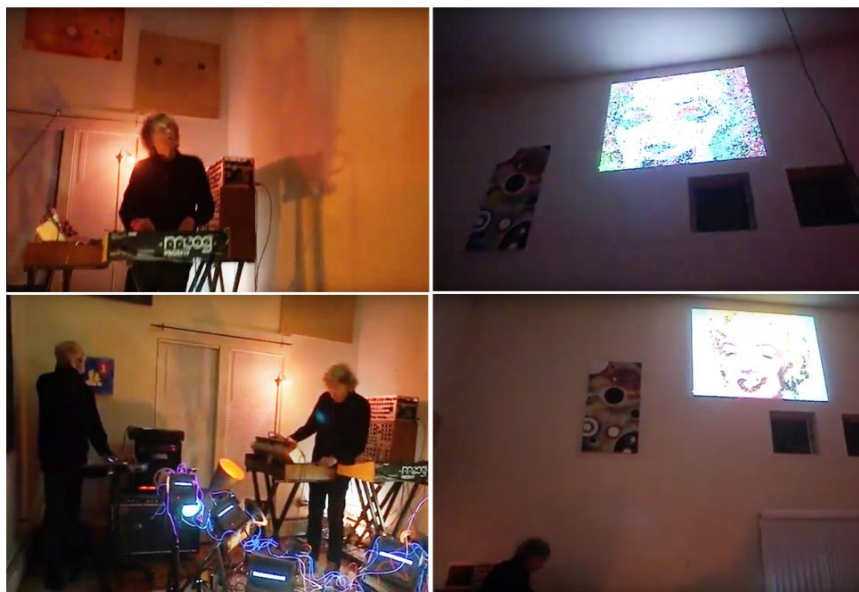
<sup>201</sup> Alfred Frankenstein, "Victor Hartmann and Modeste Musorgsky," *The Musical Quarterly* 25, no. 3 (1939): 268–91.

<sup>202</sup> Ariane Charton, *Debussy* (Editions Gallimard, 2013).

<sup>203</sup> "Beyond the Notes: Music Inspired by Art," n.d.

<sup>204</sup> Guillaume, "Ensemble Ériu: Stargazer," Spellbinding Music, 2017.

Paintings and images are also popular prompts used in improvisations and music creation. Cosenza described a pedagogical activity ‘Play me a picture’ to integrate music learning with visual art. Students were asked to create a movement piece and soundscapes with percussion, vocalised sounds, harmonies, melodies, and rhythms after examining an artwork.<sup>205</sup> ‘Let images inspire you’ is also the first jazz improvisation exercises given by Jazz master Herbie Hancock in his master class.<sup>206</sup> Numerous improvisation projects were inspired by or based on visual artwork. For example, in collaborative art projects *Intermodulation I and II*, a series of collaborative improvisations were undertaken in conjunction with three groups of amateur and professional musicians to understand features of improvisation.<sup>207</sup> The performers reported that the art piece invoked them to produce new musical expression. One of them described,



...it made me think of certain sorts of sounds that would go with that type, glitching type sounds. High frequencies, I was thinking. The visual image was invoking me to produce certain sorts of sounds.<sup>208</sup>

Figure 51. Performers interacting with the artwork in the *Intermodulation* project.

<sup>205</sup> Cosenza, “Play Me a Picture, Paint Me a Song: Integrating Music Learning with Visual Art.”

<sup>206</sup> MasterClass, “Learn Jazz Improvisation With Tips From Herbie Hancock,” November 2020.

<sup>207</sup> Laewoo Kang, Steven J Jackson, and Phoebe Sengers, “Intermodulation: Improvisation and Collaborative Art Practice for HCI,” 2018, <https://doi.org/10.1145/3173574.3173734>.

<sup>208</sup> Ibid.

No matter whether it is composition or improvisation, regardless of how long the creation process takes – instant or well-planned with numerous correction – these composers and performers attempted to translate the visual aspects into musical expressions or sonic outcomes.

In this portfolio of compositions, visual image is one of the indeterminate and improvisational elements employed to encourage and invoke performer's expression and musical idea. In a similar manner, the images are utilised as a source of musical ideas. In *Defining Chaos* for four *indeterminate string instruments*, two indeterminate images are placed in various positions on the score in varied sizes and angles. The images are interwoven among the four parts and entwined with the notations – as part of the notation. There are moments that the performers construct their own musical ideas from the images on their own and moments that the performers develop the improvisation with another performer or with all performers. When the images are shown the first time in the score, all performers interpret and realise the same image together (for at least 15 seconds until the ensemble leader indicates to move on). This process not only invites the performers to interact with the images but also with each other.

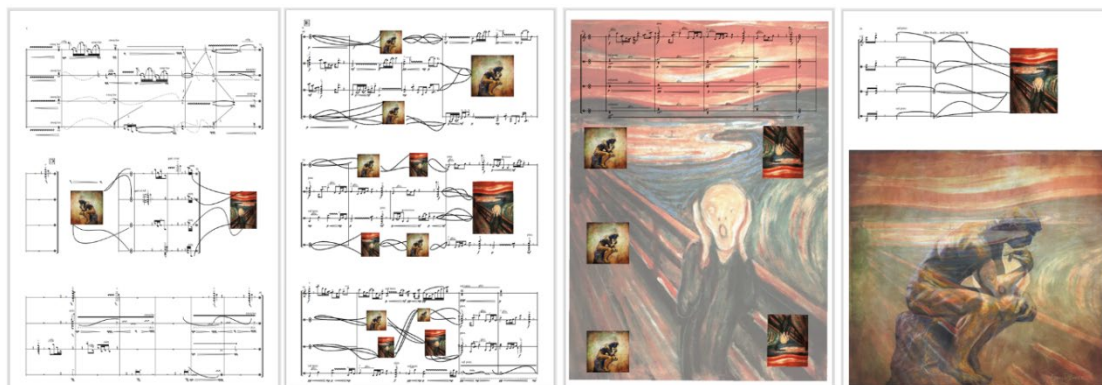


Figure 52. An excerpt from *Defining Chaos*.



The inclusion of the reproductions of the images in the score make *Defining Chaos* different from the aforementioned compositions and projects. In the above examples, most classical compositions were published or performed without the presence of the paintings that inspired the work. In the era without modern technology to reproduce, store, and retrieve the related artworks, performers or audience needed to attend an exhibition or visit a museum to see the related artwork. It is also highly likely that they did not have any access to the artworks to fully comprehend what the compositions or performance conveyed. Debussy's *La Mer* was an exception. He asked for the permission from the Japanese artist Hokusai Kaisushika to use his work *The Great Wave off Kanagawa* as the cover of the original score of *La Mer*.<sup>209</sup> The cover allows the performers to have a vague idea of the visual impact that Debussy experienced. Modern projects can easily include the artworks that inspired their music in their productions; collaborative projects often use the artworks on the album cover and include them in the album booklet. Websites make presenting the music and the artwork side by side easier and music videos were often produced with the images of the related artwork. For example, people can easily watch a video of Mussorgsky's *Pictures at an Exhibition* along with the paintings by Hartmann on YouTube.<sup>210</sup> In *Intermodulation*, the visual images were shown on the screen and were designed to interact with the performance or audience's reaction.<sup>211</sup> The presence of the images in the performance offered the opportunity to create the 'here and now' music expression.

Similarly, in *Defining Chaos*, the two images are presented to the performers on the score and exhibited in a performance – it could be two paintings in a gallery, two

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<sup>209</sup> Charton, *Debussy*.

<sup>210</sup> "Mussorgsky - Pictures at an Exhibition (Original Piano Version) - YouTube," n.d.

<sup>211</sup> Kang, Jackson, and Sengers, "Intermodulation: Improvisation and Collaborative Art Practice for HCI."

posters stuck on the wall, two images projected from a computer to a screen, or any possible display the performers or curators prefer. Different from all the compositions and projects whereby the artworks inspired either the composer or the performers, in *Defining Chaos* neither the composer nor the performers have the full control of how the artworks are to be interpreted. This uncertainty makes each performance unique and enables the composition to evolve. The composer only decides where and how the images ‘implant’ in the score and how they connect to the composer’s notation. The leader of the quartet chooses the images and assigns one aspect of the images to the following performers to interpret.

For example, performer A plays according to the colour of the images, performer B plays according to the lines and contours displayed, performer C plays according to the

Figure 53. An excerpt from *Defining Chaos without the paintings* (p.6)

meaning, and performer D plays with the emotion revealed in the images. Each performer has a specific aspect, and they can react and interact with that specific aspect using musical phrases, harmony, random notes, or sound effects. The two images are indeterminate but have to be two contrasting concepts. In this portfolio, Gary Baker’s painting of *The Thinker* and Edvard Munch’s *The Scream* are chosen to represent two contrasting

emotions for a dramatic musical outcome. The leader of the quartet will choose two images representing two contrasting concepts for each performance. It can be two paintings, two portraits, two photographs, or two front pages of the newspapers supporting two opposite political parties. If *Defining Chaos* is performed during or after the pandemic, image 1 can be a picture of people wearing face masks and maintaining social distancing, image 2 can be a picture of people from different generations hugging and kissing each other. In this way, this composition is ‘modified’ to match the theme of the time of the performance.

*Table 6. Summary of the indeterminate elements in relation to the use of image*

<b>Indeterminate compositional element</b>	<i>To Define is to Limit</i>	<i>The Ecstasy of Liberation</i>	<i>Oblivion</i>	<i>Caprice of the Cosmos</i>	<i>String Quartet Part 1</i>	<i>Defining Chaos</i>	<i>Detour</i>
Image (Chapter 4.4)						*	

## Chapter 5: Performance and reflection

Supported by the Visual & Performing Arts Fund, five compositions were performed or scheduled to be performed. *To Define is To Limit* and *The Ecstasy of Liberation* were premiered in 2018-2019. While another three compositions were scheduled to be premiered in May 2020, the concerts were cancelled due to restrictions imposed in response to the Covid-19 pandemic. *String Quartet Part 1* and *Defining Chaos* were scheduled to be premiered by ConTempo Quartet in May 2020 and *Oblivion* was scheduled to be performed by Ensemble Parabasis on 21<sup>st</sup> May 2020 at the National Concert Hall, Dublin.

The performances of the two compositions *To Define is To Limit* and *The Ecstasy of Liberation* provided important insights and validation into the compositional philosophies in this portfolio. First of all, the engagement of the musicians and positive feedback from both musicians and audiences affirmed the potential of these compositional and improvisational ideas. Second, I was beyond thrilled to hear the realisation of the indeterminate work. The experience of composing indeterminate music is very different from my other compositions with no or little openness, and several questions have arisen in my mind during the writing process: When is a musical work to be considered existent in the world - when the score is finished or when it is performed? Is the finished score without performance an ideal rather than real existence? Having only some of my compositions performed, I feel that the mere existence of the score without performance is not fully complete. The sound, the music, or sometimes the concepts are there on the scores awaiting the performers to bring them to life. For me, performers are vital for the existence of a musical work. Therefore, in a sense, I felt that the performance of the two compositions marked the birth of those compositions.

## 5.1 To Define is To Limit

The rehearsals and performance of *To Define and to Limit* can be viewed in the following links:

1<sup>st</sup> rehearsal : <https://www.youtube.com/watch?v=BfVSR4Po2PA>

2<sup>nd</sup> rehearsal : <https://www.youtube.com/watch?v=yXEacyD4KGO>

Live performance : <https://www.youtube.com/watch?v=NBST1IXkl-4>



Figure 54. The premiere of *To Define is To Limit* on 31<sup>st</sup> May 2018 at Beckett Theatre, TCD.

*To Define is to Limit* along with other work by various composers were premiered by Richard O'Donnell, Sylvia O'Brien, Elizabeth Hilliard, Bill Dowdall, and Paul Roe on 31st May 2018 at the Beckett Theatre, Trinity College Dublin. In this performance, the marimba part was modified into vibraphone part to match the setting of the venue. This performance was considered an experiment of the feasibility of this composing idea.

### Intervals

At first, the sopranos have expressed it was challenging to sing the assigned intervals, but after two thirty-minute rehearsals, they found it manageable. This feedback suggested that it might be beneficial to insert special exercise for 'interactive interval' section as part of the practice in the future.

### **Single-line stave**

In all rehearsals and the performance, the percussionist's note-choice of the bracketed note showed a higher tendency to be the same as the written note. This might be the result of using the five-line stave for the percussion part which has triggered the musician's immediate reaction from the sight-reading training. The biggest difference in the musical outcomes of the two rehearsals and the live performances was found in those sections notated in single-line stave. These discoveries justified the use of one-line stave as a more effective way to generate new and original ideas in improvisation.

### **Tonality**

It was noteworthy to mention that the musical outcome of the rehearsals and performance did not reflect the intended tonality of the composition. Compared to the atonal, clashing intervals and the absence of key centre in the notated materials, the improvised music was more tonal. Although deviant from the composer's intention, this tonal outcome reflected the musical taste, preference, and personality of the performers, and this fulfilled the intention of including improvisation in *To Define is To Limit*.

### **Ambiguity between composed and improvised materials**

An audience member gave me this feedback: at first, he assumed all musicians were improvising freely without score until he noticed that they turned their pages and were following the conductor. He then realised that the musicians were following notations, so he started paying attention to any pattern and structure in the music. This feedback was an affirmation that the performance achieved the the goal of making the transition 'as seamless as possible, so that audiences do not know where the composition ends, and the improvisation begins'.<sup>212</sup>

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<sup>212</sup> Lehmann and Kopiez, "The Difficulty of Discerning between Composed and Improvised Music."

## 5.2 The Ecstasy of Liberation

The rehearsals and performance of *The Ecstasy of Liberation* can be viewed in the following links:

Final rehearsal : <https://youtu.be/RGHziNCHowk>

Live performance : <https://youtu.be/2XkP3enoGcQ>



Figure 55. The premiere of *The Ecstasy of Liberation* on 22<sup>nd</sup> May 2019 at the National Concert Hall, Dublin.

*The Ecstasy of Liberation* was premiered by Parabasis Ensemble consisting of Bill Dowdall, Martin Johnson, Sebastian Liebig, Fintan Sutton, and conducted by me on 22nd May 2019 at the National Concert Hall, Dublin.

In this performance, I have two roles – the composer and the conductor. While this was not the first performance of my indeterminate compositions, it was my first time involved in an indeterminate composition as the conductor, who also considered as the

performers. This gave me some new perspectives on interpreting my indeterminate composition.

There were three rehearsals in total before the concert. In the performers' first attempt to perform this work in the first rehearsal, the music the performers created was very joyful and liberating. They created sounds from their instruments in a way I never imagine and experience. It was after the first rehearsal that this composition was named 'The Ecstasy of Liberation' because of the joy and freedom the performers expressed.

### **Performers' reaction**

Upon receiving the scores, some performers, especially performer with little or no experience of improvisation, expressed confusion and reluctance over the composition. They felt quite insecure and thus challenged, even though their skills are phenomenal. On the other hand, performers who have more experience in improvisation had a very positive reaction. They looked forward to the performance and showed enthusiasm over the opportunities to explore and demonstrate different skills. After some encouragement and reassuring the performers that the process is more important than the outcome, they are more open to explore the compositions.

### **As the conductor**

As the conductor of this work, I held the role and the authority to make important decisions and musical judgements before the performance and on the spot. These decisions include the overall form, structure, tempo, expression, the continuity or change of any musical ideas in the performers' improvisations. Even though the composition is written by myself, I still found having the autonomy to arrange and rearrange the sequence of the musical events very delightful, particularly making judgement based on what was played by the performer on the spot. There was a lot of liveliness and energy in this process. One had to highly engage and indulge oneself in the music and the process.



It was unpredictable, risky, but at the same time very freeing as there is no such thing as mistake in this kind of performance and composition.

I deliberately withheld the plan for the performance or the sequence of the pages until the final rehearsal, which was only few hours before the concert, with the intention to let the performance emerge with least planning and maximum spontaneity. Instead of ‘rehearsing the performance’, the rehearsals were mostly used to discuss how to communicate effectively through different gestures and practice the five ‘numbered meetings points’. The plan made on the day of the performance (22nd May 2019) was as follows:

1. Wild card (f – ff) - openly
2. Page with asterisk 1 & 2
3. Wild card (p – cello solo)
4. Page with asterisk 3, 4, & 5
5. (optional) Wild card

This plan consisted of the sequence of the pages and some expressions. In addition, I

chose the cello to be the central of the

performance and added a cello solo section. The cello was given more space than other instruments to improvise and experiment with different ideas. Although there is no instruction on the score to plan such an arrangement, it gives the conductor’s option to direct which performer continue to play or stop playing. In a way, adding a solo to the performance does not deviate from the score.



*Figure 56. Picture of Martin Johnson performing The Ecstasy of Liberation.*

## Reflections

A few discoveries were made as the conductor, audience, and composer. First of all, there was so much presented during the performance which was not notated in the score or assigned in my conducting. I noticed that I was appreciating the performance as an audience and surprised by their performance. I felt that their contribution has improved and 'ignited' the composition. The work was personalised, contextualised, and contained a lot of originality. The performers' musical choices, tastes, and exceptional skills were presented. An audience member asked me after the concert to show him the score because he could not figure out how such sounds were notated and was very curious. This reaction from the audience proved that the indeterminate notation allows performance to be 'beyond notation'. This performance has shown the beauty of the indeterminate composition and achieved all the intentions behind the creation of this portfolio.

Second, I made some observations about the characters of the performers' improvisation or choice of musical fragments. The characters of the cello's solo became quite explicit in two moments when the cellist used a more tonal approach in his improvisation. The first moment happened during 2:40 -2:42, I attempted to signal the clarinet to react, but that tonal idea changed to something else. The next moment happened during 3:00 – 3:08. The cellist used a pentatonic scale which was not presented in any rehearsal. I personally felt that it could be influenced by or a reaction to the previous performance in the same concert which featured a Chinese flute, or it could be related to my ethnicity as an Asian. This interesting and unique outcome was exactly what this kind of compositions hoped to achieve.

Another observation was the frequent appearance of trills from the woodwind performers which prominently affected the timbre of the overall sound. This was an

interesting discovery and made one wonder if the improvisation, the notation, or other factors that might lead to such a decision.

Third, this performance was the first attempt of having the ‘numbered meeting points’ and this compositional idea was proven to be successful. These meeting points connected the performers together in the midst of the playing in free tempo or free improvisation. The meeting points created a sense of unison and togetherness, and provided an anchor to the uncertain atmosphere, or some would say chaos.

Another reflection I had was based on my experience as the conductor. While I could easily use movement or gesture to indicate the tempo or dynamics, I found it difficult to direct the performers to develop a specific idea, change to a different idea, or modulate to different keys. I did not use any cue card as suggested in my performance note, using cue cards to facilitate such kinds of direction would have been clearer.

Lastly, when the final rehearsal and the live performance were compared, I noticed the performers played quite similarly. It was unclear if they made certain plans or if those reactions were ‘limited’ by the same venue and context. Upon this discovery, withholding the performance plan might avoid such planning or habitual behaviour. Perhaps, the arrow indicator as used in many of Earle Brown’s open form compositions should be used instead of showing a plan to the performers. This could make the performers’ reactions more spontaneous.

When I reviewed this performance with my adjunct supervisor, it was suggested to me that there could be a separate ‘score’ to ‘notate’ the movement of the conductor. To notate the movement of the conductor was attempted by Mark Applebaum in his work *Tlön* for three conductors (and no player). The action-based notation is worth further exploration and has led to the development of the gesture notation in other compositions.

To conclude, the creation of this portfolio is a process of experimenting with and discovering new possibilities. As Bob Gilmore summarised in the ‘Five maps of the experimental world’:

‘Experimental’ in music should mean more or less what it does in the sciences. The composer would write a piece of music, try certain things out, and judge if they worked, did not work, or only partly worked. Then in the next piece, that experiment could be followed up: like a scientist, one could go further down the same line...It’s more literally an experiment, like a scientific experiment. And in science, in scientific work, one experiment always does lead to another one... There is no such thing as post-experimental...My sense of ‘experimental’ is just ongoing research.<sup>213</sup>

The performances of *To Define is To Limit* and *The Ecstasy of Liberation* were like two experiments that informed me what worked and what partly worked, and the results influenced the other compositions in this portfolio. The success of the notation system encouraged me to develop them more expansively whereas the performers’ cautious and predictable improvisation provoked me to discover new ways to challenge them for breakthrough and new sound. It is with great disappointment that the cancellation of concerts in 2020 hindered the realisation and experiments on the uses of gesture notation and images in *Oblivion* and *Defining Chaos*. Among all the techniques discussed in this commentary, the gesture notation and use of images are in their early days of development and are worth further exploration.

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<sup>213</sup> Gottschalk, *Experimental Music since 1970*.

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Chamber ensemble



Kai Chung Fung

# *To Define is to Limit*

"What are you?"  
"To define is to limit."

— Oscar Wilde

*for chamber ensemble*

KAI CHUNG FUNG



## **DURATION**

around 6 minutes

## **INSTRUMENTATION**

2 – Soprano

1 – Bass flute

1 – Clarinet in B♭

1 – Percussion (Marimba, cymbals, etc)

## PERFORMANCE NOTE

This composition has an emphasis on the indefinite elements and includes a certain amount of improvisation. Performers are expected to contribute their own imaginations and musical ideas into the performance outcome. They are required to interact with each other and react instantly and spontaneously.

Perform this composition with precision and playfulness.

### INTERACTIVE PITCHES

A special notation - arrows followed by diamond note-heads – is used to indicate the intervals between two undetermined notes in the same part or across two parts. Notes with diamond note-heads should have the indicated interval apart from the previous note. When the interactive intervals are placed between two undetermined notes on the same part, the performer should follow the direction of the arrows. When the interactive intervals are placed between two different parts or when a contour/direction is not indicated, performers have the autonomy to choose the direction of the intervals - up or down the indicated interval from the previous note. Below is an example of the realisation of bar 100-102.

The image shows a musical score reduction for two soprano parts, Soprano 1 and Soprano 2, in 4/4 time. The score is divided into three measures. In the first measure, Soprano 1 has a diamond note-head with an 'Aug 4' interval arrow pointing up to the next note, and Soprano 2 has a diamond note-head with a 'min 2' interval arrow pointing down to the next note. In the second measure, Soprano 1 has a diamond note-head with a 'min 2' interval arrow pointing down to the next note, and Soprano 2 has a diamond note-head with a 'min 2' interval arrow pointing down to the next note. In the third measure, both parts have diamond note-heads with 'gliss.' markings above them, and dynamic markings of 'p' and 'mf' are indicated. The notes are represented by diamond-shaped heads.

Figure 1. The reduction of the singing part from the two soprano parts (b.100-102).

If Soprano 2 (S2) picks the note D4 as her starting note, Soprano 1(S1) can choose to respond with either going augmented 4th up to the higher G#4 or going augmented 4th down to the lower Ab3, and then S2 can choose between going up to A4 or going down to G3.

The image shows a specific realization of the excerpt from Figure 1. It shows two staves, Soprano 1 and Soprano 2, in 4/4 time. Soprano 1 starts with a diamond note-head on G#4, followed by a 'min 2' interval arrow pointing down to Ab3. Soprano 2 starts with a diamond note-head on D4, followed by a 'min 2' interval arrow pointing down to C3. In the second measure, Soprano 1 has a diamond note-head on C4, followed by an 'Aug 4' interval arrow pointing up to G#4. Soprano 2 has a diamond note-head on E4, followed by a 'min 2' interval arrow pointing down to D4. In the third measure, both parts have diamond note-heads on C4 and E4 respectively, with 'gliss.' markings above them. Dynamic markings of 'p' and 'mf' are indicated.

Choices available	Selected Pitch	Direction of interval (destinated pitch)			Selected Pitch	Direction of interval	
		Up		Down			
Soprano 1		Up (G#)		Down (G)	<b>Down (Db)</b>	C	Up (C#)
Soprano 2	D		Up (A)	Down (G#)	<b>Down (D)</b>	E	Up (F)
Harmony created				Minor 2nd	<b>Minor 2nd</b>	Major 3rd	Major 3rd

Figure 2. A possible version of the realisation of the excerpt in figure 1.

# TECHNICAL INSTRUCTIONS

## *Sopranos*

This composition should be conducted by one of the sopranos. The vocalists are required to read and perform two parts simultaneously and shift between whispering voice and singing voice. The decision of note-choice is partially given to the vocalists. They should react instantly and spontaneously.

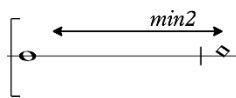
**Whispering part:** In the whispering part, attention should be paid to the dynamics. When the dynamic exceeds forte (e.g. *ff*), it should sound like almost using the real voice.

Notes on the single-line staff should be performed like talking with whisper in the indicated dynamic levels. Notes below or above the line roughly guide the contour of the melody.

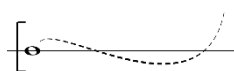
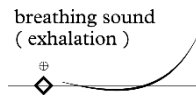
**Singing part:** In the singing part, no definite pitch is given. The bracket on the single-line staff represents the mid-range of the vocalist's range.



Note with bracket - pick any note according to the position within the bracket. The bracket represents the mid-range of the range of the performer or the instrument.



Sing the note with diamond note-head up or down the indicated interval from the previous note. If the interval is indicated within one part, the vocalists should follow the contour. If the interval is indicated between the two sopranos, the vocalists can decide whether the interval go upward or downward. [see "interactive pitches" for detailed explanation]



Breathing sound effect.

The dotted curve represents the movement of the glissando.

Slashes - vocalists have the autonomy to sing or not sing any NON-PITCHED effect in the whispering part or PITCHED effect in the singing part.

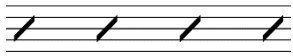
## TECHNICAL INSTRUCTIONS (CONT.)

### *Woodwind*

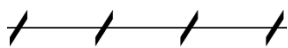
This composition consists of a certain amount of improvisation. Music for woodwind is presented on both five-line stave and single-line stave. Notes below or above the line roughly guide the contour of the melody. Performers are encouraged to explore atonal pitches rather than following a major scale.



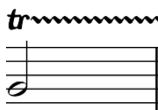
Note with bracket - pick any note according to the position within the bracket. The bracket represents the mid-range of the range of the performer or the instrument.



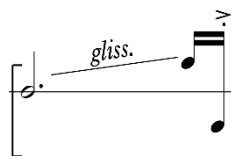
Slashes on five-line stave - performers have the autonomy to play or not play any NON-PITCHED sound effect.



Slashes on single-line stave - performers have the autonomy to play or not play any PITCHED note.



All trills should be played with a semitone higher or lower than the written note as the performers wish.



*Gliss* - the beginning note and the ending note of the glissando should be played with tongue.



Flutter tongue.

## TECHNICAL INSTRUCTIONS (CONT.)

### *Percussion*

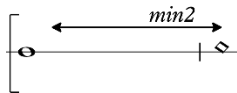
The marimba is the main instrument notated with details in the score, but the percussionist is encouraged to explore other instruments or sound effects within the improvisational section. The improvisation or note-choice should be the reaction of or the response to the other parts during the performance. Soft mallet is recommended but the percussionist can choose any mallet according to their preference.



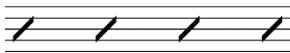
Note with this note-head should be played with bow on the marimba.



Note with bracket - pick any note according to the position within the bracket. The bracket represents the mid-range of the range of the performer or the instrument.



Play the note with diamond note-head up or down the indicated interval from the previous note. If the interval is indicated within one part, the performer should follow the contour. If the interval is indicated between two parts, the performer can decide whether the interval go upward or downward. [see “interactive pitches” for detailed explanation]



Slashes – Performers have the autonomy to play or not play any NON-PITCHED sound effect.

# To Define Is To Limit

Kai Chung Fung

"What are you?  
To define is to limit."  
-Oscar Wilde

This composition will be conducted by one of the two sopranos who will also be responsible to cue musicians at 'Q'.

All musicians are encouraged to explore different sound effects or extended techniques in the improvisation section.

Improvisations or note of choice should be the reaction of or the response to the other parts of the music.

Duration of section A : around one minute

**A**

♩ = 60 Freely

Voice (whisper)

Soprano. 1

Soprano. 2

Soft mallet is recommended; but the percussionist can choose any mallet according to his/her preference

motor on

**A** ♩ = 60 Freely

Marimba

Slashes on the five line - musician has the autonomy to play or not play any NON- Pitched sound effect

2

6

V. w *pp* breathing sound (exhalation) *Q* *ff* *pp* *mf*  
 is that po.... po.... po ssi ble list en

S. 1 *ppp* *pp* *P* *ppp* Slashes on line: musician have the autonomy to play or not play any Pitched notes

V. w *pp* breathing sound (exhalation) *Q* *ff* *pp* *mf* *ff* snapping finger *pp*  
 it's po ssi ble list en list en list en c are ful ly

S. 2 *ppp* *p*

Slashes on the five line - musician has the autonomy to play or not play any NON- Pitched sound effect  
 Bass Flute *ppp* *Q* *gliss.* *p* *mp* *pp* *mp* *p* *ppp*

Slashes on the five line - musician has the autonomy to play or not play any NON- Pitched sound effect  
 Clarinet in B $\flat$  *ppp* *Q* *gliss.* *p* *mp* *pp* *gliss.* *tr* *pp* *p* *ppp*

Mar *ppp* *mp* *ppp* *mp* *pp* *mp* *pp* *mp* *pp*  
 min 2 *Q* Min 3 Aug 4 min 3 min 2 Aug 6 min 2 Aug 5 Aug 4

wait until conductor counts in **B**

13

V. w *f* *rit.* *A tempo* *rit.*  
 what is that? come on Tell me what should i do

S. 1 *mp* *pp < ff* *f*  
 No..... pe

V. w *ff* *pp < ff* *f*  
 shush Ye.....s.....

S. 2 *pp < ff* *f*

B. Fl. *mp* *ff* *pp* *mf* *p* *f* *p* *f*

Cl. *mp* *ff* *pp* *mf* *p* *f* *p* *f*

Mar **B** *mp* *ff* *pp* *mf* *p* *f* *f*  
*f* *p* *f* *mf* *f*

wait until conductor counts in

**A tempo**

*pp* breathing sound (exhalation) *ff*

18

V. w

S. 1

No No...No No No...

V. w

*ff*

Shush

S. 2

B. Fl.

*p* *ff*

Cl.

*p* *ff*

Mar.

*p* *mp* *ff*

*f* *mp* *p*

stop to say NO Just list en

Bend the note

*mp* *f* *p* *mp* *f* *p* *f*

*mp* *f* *p* *f*

**A tempo**

*f*

*f*



wait until conductor counts in

**A tempo**

22

V. w

*pp*

S. 1

*mp*

*gliss.*

Aug4

V. w

*pp*

min 2

*ff*

Ha

S. 2

B. Fl.

*mp* *f* *p* *f* *ff* *p* *ff* *pp* *f*

*tr*

*gliss.* Bend the note

Cl.

*f* *f* *p* *f* *pp*

Bend the note

Mar.

*f* *mp* *f*

*rit.*

*f* *mp* *f*

*mp* *f*

*mp* *f*

This is in ter est ing

**A tempo**



26

V. w

S. 1

V. w

S. 2

*pp*

per 5

min 2

Aug 4

ascending chromatically

per 5

maj 3

maj 3

No

No way

Se rio us ly?

so much

fun!

min 2

min 2

min 2

B. Fl.

Cl.

*p < f > p*

*f*

*ppp*

*mp*

*mp*

Mar.

To W.Ch. Wind Chimes

*mp*

*mp*

wait until conductor counts in

31

V. w

S. 1

V. w

S. 2

B. Fl.

Cl.

Mar.

*f*

*ff*

No way

Slashes on line - musician has the autonomy to play or not play any NON- Pitched sound effect

*pp*

*f*

*gliss.*

Aug 4

chromatic descending

Slashes on line - musician has the autonomy to play or not play any NON- Pitched sound effect

*pp*

*f*

*gliss.*

Aug 4

chromatic ascending

*ff*

*mp*

*f*

*p*

*f*

*pp*

*f*

*pp*

*pp*

*f*

*pp*

*p*

*mp*

*pp*

35

V. w *ff* *fff*  
This is not right No

S. 1 *f* *pp* *gliss.* Aug 4  
WR...ONG.....

V. w *ff* *fff*  
This is so fun Ha Ha Ha

S. 2 *f*

B. Fl. *f* *fff* *pp* *f*

Cl. *f* *fff* *pp* *f* *p* *gliss.*

Mar. *f* *fff* *mp*

*p*  
Hm Let's do it a.gain

*Hm...*

*p*

*mp* *p* *f*

*p* *f*

39

V. w No, no way ri - di cu lous! all wrong

S. 1 *mf* *f* *pp* *gliss.* Aug 5  
That's ri di.... cu lous

V. w *pp* *ff*  
ri - di cu lous?

S. 2 *pp* *gliss.* Aug 5 *mp*  
*min 2* *mai 2* *8<sup>ma</sup> 1*

B. Fl. *f* *ff* *p* *pp* *ff* *mp* *ff* *mp* *ff* *mp* *ff*

Cl. *pp* *ff* *mp* *ff* *mp* *ff* *mp* *ff*

Mar. *mp* *pp* *ff* *mp* *ff* *p*

45

V. w *f* no no no wait *ff* no stop it oh no

S. 1 *mp* *pp* *gliss.* *Aug 4* *min 2*

V. w *f* Ha Ha Ha yes yes a gain *ff* oh yes

S. 2 *mp* *pp* *gliss.* *Aug 4* *min 2*

B. Fl. *mp* *ff* *mp* *ff* *mp* *ff* *p* *f*

Cl. *mp* *ff* *mp* *ff* *mp* *ff* *p* *f*

Mar. *mp* *ff* *mp* *ff* *mf* *ff*

51

V. w *ff* No come on please *ff* ar ha

S. 1 *p*

V. w *ff* Ha come on try *pp* *ff* ar ha

S. 2 *p* *Aug 4* *p*

B. Fl. *f* *p* *ff* *mp* *ff* *p < f* *mp < ff* *mp* *mp*

Cl. *f* *p* *ff* *p < f* *ff* *mp* *pp* *f* *ff* *p* *gliss.* *f* *mp*

Mar. *ff* *ff* *mp* *mf* *ff* *mp* *ff* *mp*

56

V. w *ff*  
see e asy? NO!!

S. 1 *p*

V. w *ff*  
see e asy YES!!

S. 2 *p*  
8<sup>va</sup> min 2

B. Fl. *f mp f mp ff* *gliss.* *tr*

Cl. *f mp ff* *tr* *pp* *mp* *f* *mp*

Mar. *f mp ff* *f mf* *f mp*

61

V. w *rit.*

S. 1

V. w *pp* *ff*

S. 2

B. Fl. *mp ff p ff* *tr*

Cl. *f p f* *pp* *ff* *gliss.* *gliss.*

Mar. *rit.* *f p ff*

Duration for section C:  
around one and half minute

**S...TOP.....!**

**C** wait until conductor counts in

$\text{♩} = 40$

No No No i can't

*p* snapping finger *gliss.* Aug 4

Ha

*pp* *ff* Ha in terst ing

mouth click

**C**  $\text{♩} = 40$  superbball mallet *φ* Gong

66

V. w  
p lease i. NO.. just stop stop!

S. 1  
gliss. per 5 min 2

V. w  
p lease Try! just try stop?

S. 2  
Aug 4 gliss. Aug 5

B. Fl.  
Slashes on line: musician has the autonomy to play or not play any Pitched notes

Cl.  
Slashes on line: musician has the autonomy to play or not play any Pitched notes

Mar.  
arcco Aug 4 min 2 Aug 5 Octave min 2 Aug 6 min 2 Aug 4

73

V. w  
no way no

S. 1  
min 6 maj 2

V. w  
no way no

S. 2  
gliss. min 3

B. Fl.

Cl.

Mar.  
arcco Aug 4 min 6 Aug 6 min 2 Aug 5 Aug 5 min 2 Aug 6

wait until conductor count in

**D** ♩ = 130  
come on

**D** ♩ = 130  
f mp < ff

80

V. w *f* Please some things wrong *ff* en joy?

S. 1

V. w *f* shush! *mf* i real... ly *ff* en joy !

S. 2 *mp*

B. FL *f* *mp* *f* *mf* *ff* *p* *f* *ff* *gliss.*

Cl. *f* *p* *f* *mf* *ff*

Mar. *p* *mf*



85

wait until conductor counts in

V. w **Come on! KAI ....**  
**What is That?**

S. 1 *f*

V. w

S. 2 *f* **Hahahaha.....**

B. FL *ff*

Cl. *ff*

Mar. *ff*

wait until conductor counts in







THE  
ECSTASY  
OF  
LIBERATION



KAI CHUNG FUNG

# *The Ecstasy of Liberation*

*for chamber ensemble*

KAI CHUNG FUNG

## **DURATION**

around 4-6 minutes

## **INSTRUMENTATION**

1 – Flute

1 – Clarinet

1 – Violin

1 – Violoncello

## PERFORMANCE NOTE

This composition is very much open to interpretation.

A conductor is required. The three page score can be played in any order or read from any direction as the conductor wishes. The order or arrangement can be planned ahead or assigned randomly by the conductor during performance. The conductor can also decide which musician should play or not play.

Musicians are expected to choose musical ideas from the score and to develop them freely with regards to their personal taste and decision but should actively interact and engage with the conductor.

This composition has employed the concept of aleatoric counterpoint whereby musicians can explore and choose different tempi based on their preferences and understanding of the musical phrases.

A different improvisational section is created deliberately to invite musicians to contribute their own imagination and musical ideas into the outcome of the performance. Musicians are required to interact with each other and react instantly and spontaneously. Slashes are only used to provide a brief sense of the beat; musicians do not need to follow the exact beats.

Dynamics are marked to provide the sense of volume change; they should be interpreted in relation to one another instead of individually.

Boxed arrow: Musicians pick musical ideas and segments from the big box freely or in response to the existing musical outcome and follow the instruction of the conductor. Performers can loop the chosen idea, shift between two or more ideas, or play all of them in any order. (Involved musicians can play any given phrase in the box in any order, but must follow the tempos, dynamics, and other expressions led by the conductor.) Clefs are not indicated in most of the phrases; musicians can interpret the written notes freely.

Black star with number: a point that all involved parts play simultaneously at the signal of the conductor. They can be assigned as many times and in any order as the conductor wishes.

## TECHNICAL INSTRUCTIONS

### *Conductor*

The conductor can prepare cue cards for any musical expression or direction to support the conducting of the music. Be creative!

Dramatic movement will be helpful to inform audience the indication of the conductor.

The score can be played in any order or read from any direction as the conductor wishes. The conductor can assign the order and arrangement beforehand or spontaneously during the performance. A timer can be used to guide the duration.

The conductor can direct which musician should play or not play, according to the musical output.

Black star with number (meeting point): Signal all relevant parts to play at the same time. They can be assigned as many times and in any order as the conductor wishes.

## TECHNICAL INSTRUCTIONS (CONT.)

### *Woodwind*

This composition consists of a certain amount of improvisation. Music for woodwind is presented on both five-line staff and one-line staff. The line in the one-line staff represents the mid-range of the instrument whereas an octave higher or lower can be reached easily. Notes below or above the line roughly guide the contour of the melody. Musicians are encouraged to explore atonal pitches rather than following a major scale.

All curves do not directly address to specific aspect. Musicians can interpret them according to pitch, dynamics, movement, or other technical skills.



Flutter tongue.



Slap Tongue



Wind tone (without pitch)



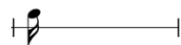
Jet whistle



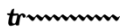
Fast random fingering, air in (without pitch)



Crescendo from silence



Some part for woodwind is presented on one-line staff. The line represents the mid-range of the instrument whereas an octave higher or lower can be reached easily. Notes below or above the line roughly guide the contour of the melody.



All trills should be played with a semitone higher or lower than the written note as the musicians wish

## TECHNICAL INSTRUCTIONS (CONT.)

### *Strings*

This composition consists of a certain amount of improvisation. Music for strings is presented on both five-line stave and one-line stave. The line in the one-line stave represents the mid-range of the instrument. Notes below or above the line roughly guide the contour of the melody. Musicians are encouraged to explore atonal pitches rather than following a major scale.

All curves do not directly address to specific aspect. Musicians can interpret them according to pitch, dynamics, movement, or other technical skills.



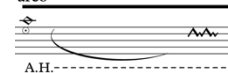
Slapped string sound only (percussive sound without pitch)

pizz.

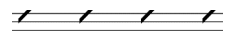


Bartok Pizzicato (Pizzicato with slapped string sound)

sul pont.  
arco



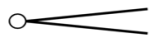
Touch four artificial harmonics - slide up and down freely to create a bird-like sound. The curved lines are open to interpretation, they can refer to the pitch, dynamics, range of the movement, etc.



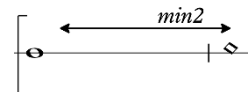
Slashes - performers have the autonomy to play any pitched or non-pitched sound effects



Certain parts are presented on the one-line stave. The line represents the mid-range of the instrument. Notes below or above the line roughly guide the contour of the melody.



Crescendo from silence



Play the note with diamond note-head up or down the indicated interval from the note before/after. E.g. If the first note is A and the given interval is min 6, musician should play either F (above) or C# (below) for the successive note.

Alcatoric counterpoint (without time signature and bar-line):

No united tempo. Each individual musician explores and plays in any tempo that suits his/her understanding and preference of each musical phrase. It is not necessary to establish a steady tempo or to match with each other.

Star (meeting point):

a point that all involved parts start simultaneously at the signal of the conductor

### Woodwind

Jet Whistle

Flutter tongue

Slap Tongue

Fast random fingering, air in( without pitch )

Fast random fingering, air in( with pitch )

wind tone ( without pitch )

★1

Flute

Clarinet in B $\flat$

Grave

Cello

Violin 1

★2

Slap Tongue

Choppy sound

Boxed double arrow:

Performers pick musical ideas and segments from the big box freely or in response to the existing musical outcome and follow the instruction of the conductor. They can loop the chosen idea, shift between two or more ideas, or play all of them in any order. (Involved musicians can play any given phrase in the box in any order, but must follow the tempos, dynamics, and other expressions led by the conductor. ) Clefs are not indicated in most of the phrases; musicians can interpret the written notes freely

### String

Touch four artificial harmonics, slide up and down freely sul pont.

A.H.-----

pizz.

improvise freely using only 2 fingers



### Woodwind

Woodwind section musical notation. Includes Flute and Clarinet in B $\flat$ . Dynamics range from *mf* to *pp*. Techniques include trills, glissandos, and breath marks.

Flute: Flutter tongue

Clarinet in B $\flat$ : arco

Vc. (Violoncello): arco

Vi (Violino): arco

Violoncello (Vc.) and Violino (Vi) parts include dynamic markings: *pp*, *mp*, *f*, *p*, *pp*, *f*, *pp*, *f*, *pp*, *f*, *mp*. Techniques include gliss., *Aug 4*, *maj 3*, *maj 2*, and *Aug 4*.

Violoncello (Vc.) part includes dynamic markings: *pp*, *mp*, *f*, *p*, *f*, *pp*, *f*, *pp*, *f*, *pp*, *f*, *mp*. Techniques include *gliss.*, *Aug 4*, *maj 3*, *maj 2*, and *Aug 4*.

Violino (Vi) part includes dynamic markings: *ppp*, *ff*. Technique includes *gliss.*

Violoncello (Vc.) part includes dynamic markings: *pp*, *mp*, *f*, *p*, *f*, *pp*, *f*, *pp*, *f*, *pp*, *f*, *mp*. Techniques include *gliss.*, *Aug 4*, *maj 3*, *maj 2*, and *Aug 4*.

Violino (Vi) part includes dynamic markings: *ppp*, *ff*. Technique includes *gliss.*

### String

String section musical notation. Includes techniques: *pizz.*, *sul tasto*, *sul pont.*, *arco.*, *gliss.*, *Touch four artificial harmonics, slide up and down freely sul pont.*

Dynamic markings: *pp*, *mp*, *f*, *pp*, *mp*.

# Wild card

## Woodwind

Woodwind exercises include:

- Trill exercise:  $f$  to  $p < mf$
- Fast fingering, randomly:  $mf$
- Improvisation using only 2 fingers:  $mp$
- Wind tone (without pitch):  $mp$
- Improvisation (without pitch):  $pp$  to  $mf$  to  $pp$
- Jet Whistle:  $pp$  to  $mf$
- Fast fingering, randomly:  $mf$  to  $p$  to  $mf$
- Improvisation (without pitch):  $pp$  to  $mf$  to  $pp$
- Trill exercise:  $p$  to  $mp$  to  $f$

Performers pick musical ideas and segments freely or in response to the existing musical outcome and follow the instruction of the conductor. They can loop the chosen idea, shift between two or more ideas, or play all of them in any order. (Involved musicians can play any given phrase in the box in any order, but must follow the tempos, dynamics, and other expressions led by the conductor.) Clefs are not indicated in most of the phrases; musicians can interpret the written notes freely

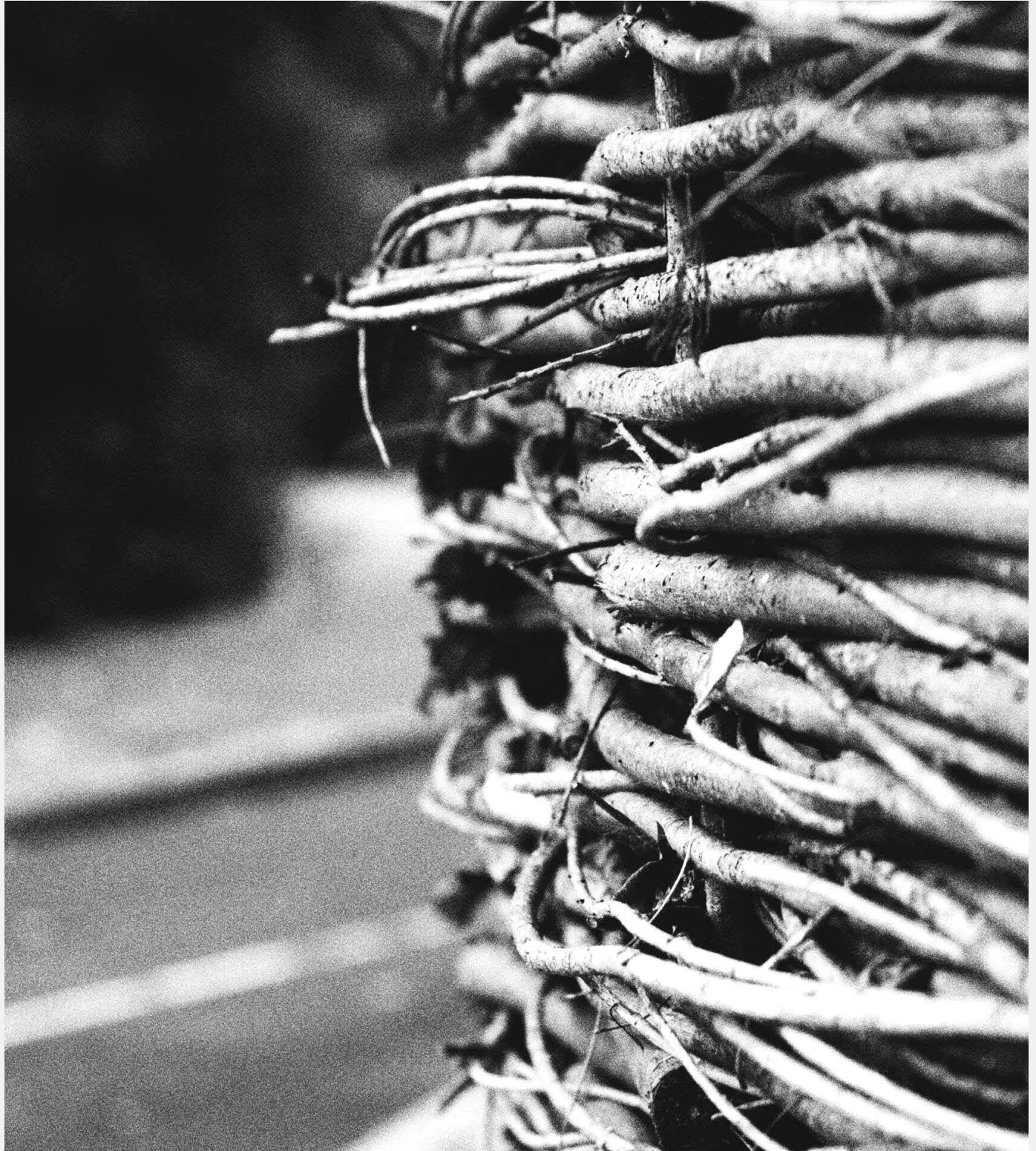
## String

String exercises include:

- Sul pont. exercise:  $p$
- A.H. (Artificial Harmonics): Touch four artificial harmonics, slide up and down freely
- Sul tasto exercise:  $ppp$  to  $p$
- Improvisation (without pitch):  $pp$  to  $mp$
- Sul tasto exercise:  $pp$  to  $mf$
- Sul tasto exercise:  $pp$  to  $mf$
- Sul tasto exercise:  $pp$  to  $mf$
- Fast fingering, randomly:  $pp$  to  $mf$
- Sul pont. exercise:  $p$  to  $mf$  to  $pp$  to  $f$
- Sul pont. exercise:  $p$  to  $mf$  to  $pp$  to  $f$
- Sul tasto exercise:  $pp$  to  $f$
- Improvisation using only 2 fingers:  $pp$  to  $mp$  to  $pp$
- Gliss. exercise:  $p$  to  $mf$  to  $pp$  to  $f$
- Arco exercise:  $p$  to  $mf$  to  $p$  to  $mf$

# OBLIVION

The only reasonable option



COVERING

SUFFERING

KAI CHUNG FUNG

# *Oblivion*

The only reasonable option.

*for chamber ensemble*

KAI CHUNG FUNG

## **DURATION**

around 5 minutes

## **INSTRUMENTATION**

1 – Flute

1 – Clarinet in B $\flat$

1 – Percussion (Vibraphone, cymbals, etc)

1 – Violin

1 – Violincello

## **PERFORMANCE NOTE**

### *Violin*

The whole performance of the violin part should be built on ONE glissando movement of two fingers (index and middle), in an augmented 5th shape, on any pair of adjacent strings from the top of the neck to the bridge. The violinist can decide which pair of strings to be played, the movement of their fingers, and how the glissando develops. The fingers can slide gradually, abruptly, or in a mixed way throughout. They can stay at any position for any length of duration. However, the fingers can only slide forward, NOT backward. The fingers should reach somewhere near the bridge at the end of the performance.

All curves do not directly address to specific aspect. Performers can interpret them according to pitch, movement, or other technical skills.

# Oblivion

*the only reasonable option*

Kai Chung Fung

The whole performance of the violin part should be built on ONE glissando movement of two fingers (index and middle), in an augmented 5<sup>th</sup> shape, on any pair of adjacent strings from the top of the neck to the bridge. The violinist can decide which pair of strings to be played, the movement of their fingers, and how the glissando develops. The fingers can slide gradually, abruptly, or in a mixed way throughout. They can stay at any position for any length of duration. However, the fingers can only slide forward, NOT backward. The fingers should reach somewhere near the bridge at the end of the performance.

All curves do not directly address to specific aspect. Performers can interpret them according to pitch, movement, or other technical skills.

The colours represent different fingers of the left hand as follows:

- Red – Index finger
- Blue – Middle finger
- Yellow – Ring finger
- Green – Pinky

The musical score is for the piece "Oblivion" by Kai Chung Fung. It is in 4/4 time and features several instruments: Violin, Violoncello, Cymbals, Vibraphone, Flute, and Clarinet in Bb. The score includes various performance instructions and dynamics.

**Violin:** The score starts with a tempo marking of  $\text{♩} = 70$ . The violin part begins with a glissando movement, indicated by a wavy line. The left hand is color-coded: Red (Index finger), Blue (Middle finger), Yellow (Ring finger), and Green (Pinky). The violin part includes instructions for *arco* (gestrichen) bowed, *sul pont.*, *pizz.*, and *arco*. Dynamics range from *p* to *ppp* and *mp*.

**Violoncello:** The cello part includes instructions for *sul pont.*, *arco*, and *A.H.* (Ampio Harmonico). Dynamics range from *p* to *ppp* and *mp*.

**Cymbals:** The cymbals part includes instructions for *arco* (gestrichen) bowed and *mp*. The instruction "Let it ring" is placed above the staff.

**Vibraphone:** The vibraphone part includes instructions for *Red.* and *mp*.

**Flute:** The flute part includes the instruction *pp*.

**Clarinet in Bb:** The clarinet part includes the instruction *pp*.

7

2 Fl. *ppp* *pp* *p* *rit.*

Cl. *ppp* *pp*

Cym. arco (gestrichen) bowed Let it ring Slashes - musician has the autonomy to play any Non-pitched sound effect

Vib. *pp* *mp* *mp*

Vio. *ppp* *f* *ppp* *mp* *pp* *rit.*

Vc. sul pont. pizz. *mp*

A.H.-----

sound with breath noise normal sound jet whistle

arco (gestrichen) bowed Let it ring Slashes - musician has the autonomy to play any Non-pitched sound effect

sul tasto sul pont. *rit.*

11 *rit.*

Fl. A tempo *mf* *pp* *mf* *pp* *ff* slap tongue A tempo

Cl. *pp* *mf* *pp* *mf* *ff* *pp* *tr*

Cym. arco (gestrichen) bowed *p*

Vib. *pp* *ppp* *mf* *ff*

Vio. A tempo sul tasto *ppp* *mp* *rit.* *p* *gliss.* A tempo *ff* *p*

Vc. pizz. *mp* *mf* *f* *ff*

15

Fl. *f* *pp* *mf* *pp* *mf* *p < mf* *p*

Cl. *f* *pp* *mf* *pp*

Cym. *mf* *pp* *mf* *pp* *mp* *f*

Vib. *mf* *pp* *mf* *mp* *f*

Vio. *mp* *pp* *mf* *f* *ff* *pp* *ff*

Vc. *pp* *f* *pizz.* *mp* *ff* *mf*

arco *gliss.*

19

Fl. *p* *gliss.* *ff* *p*

Cl. *p* *gliss.* *ff* *p*

Cym. *Sus. Cym* *mf* *p* *p*

Vib. *p* *ff* *p*

Vio. *p* *ff* *pp* *mf* *pp* *ff* *mf*

Vc. *arco* *gliss.* *pizz.* *mp* *ff* *mf*

*sul tasto* *sul pont.*



23

Fl. *pp* *f* *pp* *f* *mf*

Cl. *pp* Edge of cymbal *p* *f* *mf* *gliss.*

Cym. *p* arco (gestrichen) bowed *mp*

Vib. *pp* Ped. *f* *mf* Ped.

Vio. arco *pp* *f* *pp* *gliss.* sul tasto sul pont.

Vc. pizz. *mp* arco *f* *mf* *gliss.*

28

Fl. *p* *pp* *mf* *f* *p* *mf*

Cl. *p* *pp* *mp* *pp* *mf* *tr*

Cym. *p* *mf*

Vib. *pp* Ped. sul tasto sul pont.

Vio. *pp* *mp* *pp* *mf* *tr*

Vc. sul pont. *pp* *mp* *pp* *mf* *arco* *gliss.*

34

Fl. *mf* *p* *mp* *p* *pp*

Cl. *mf* *p* *mp* *p* *pp*

Cym. *mf*

Vib. *p* *Red.*

Vio. *arco* *mf* *p* *gliss.* *gliss.* *gliss.* *mf* *ff*

Vc. *mf* *p* *mp*

40

Fl. *pp* *mf* *pp* *mf* *ff*

Cl. *pp* *mf* *pp* *mf* *ff*

Cym. *mf* *f*

Vib. *pp* *Red.* *mp* *mf* *ff* *Red.*

Vio. *pp* *mp* *f* *pp* *mf*

Vc. *pizz.* *mp* *mf* *ff*

45

Fl. *pp*

Cl. *mp*

Cym. *ppp*

Vib. *mp*  
Red.

Vio. *pp* *gliss.* *mf* *pp* *mf*  
sul tasto sul pont. sul tasto arco

Vc. *pp* *mf*

50

Fl. *ff* *pp* *ff* *ff*

Cl. *ff* *pp* *ff* *ff*

Cym. arco (gestrichen) bowed *mf* *p*

Vib. *ff*

Vio. *f* *mp* *p* *f* *p* *mf*  
*gliss.*

Vc. *ff* *pp* *ff*

54

Fl. *pp* *mf* *pp* *mf*

Cl. *pp* *pp* *mf* *pp*

Cym. arco (gestrichen) bowed *f*

Vib. *p* *ff*

Vio. *ff* *p* *gliss.*

Vc. *pp* *arco* *gliss.* *pizz.*

58

Fl. *p* *mf* *p* *mf* *p* *f* *p*

Cl. *mf* *p* *f* *p*

Cym. 5/8 2/4 3/4 4/4

Vib. *ped.*

Vio. *gliss.* *sul pont.* *mf* *p*

Vc. *f* *arco* *gliss.*

61

Fl. *ff*

Cl. *ff*

Cym. *f*

Vib. *ff*

Vio. *ff* *ff* *mp* *gliss.*

Vc. *ff*

65

Fl. *tr.*

Cl. *tr.*

Cym. *f*

Vib. *ff*

Vio. *fff* *mf* *sul pont.*

Vc. *ff*

67

Fl. *p* *f*

Cl. *p* *f*

Cym.  $\text{||} \frac{2}{4}$

Vib. *pp*

Vio. *fff* *p* *ppp*

Vc. *p* *f* *mp*

free to move around with fast fingering

sul tasto = 50

pizz.

72

Fl. *p* *pp* *mp*

Cl. *pp* *pp* *mp*

Cym.  $\text{||} \frac{2}{4} \frac{4}{4}$

Vib. *pp*

Vio. *p* *ppp* *p* *ppp*

Vc. *mp* *ppp* *p*

sul pont. sul tasto sul pont.

gloss.

10  $\text{♩} = 70$

78

Fl. *pp* *mf* *pp* *mp* *p* *pp* *tr*

Cl. *pp* *mf* *pp* *mp* *pp* *tr*

Cym. *p*

Vib. *pp* *mp*

Vio.  $\text{♩} = 70$  *arco* *p* *mp* *f* *pp* *gliss.*

Vc. *arco* *mp* *mf* *pizz.* *sul tasto* *p*

Slashes on five-line staff - musicians have the autonomy to play any pitched sound effect

84

Fl. *tr* *jet whistle* *p*

Cl. *tr* *p*

Cym. *Bowing* *f* *arco (gestrichen) bowed*

Vib. *pp*

Vio. *sul tasto* *ppp* *p* *sul pont.* *ppp*

Vc. *pp* *sul pont.* *pizz.* *mp*

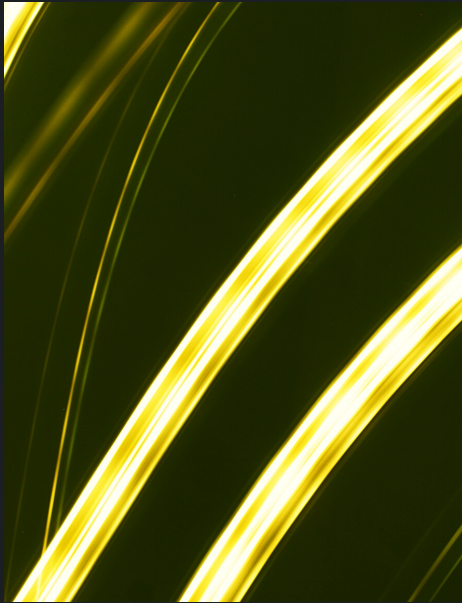
A.H.-----



# CAPRICE OF THE COSMOS

"FOR IN ALL CHAOS THERE IS A COSMOS,  
IN ALL DISORDER A SECRET ORDER, IN ALL CAPRICE A FIXED LAW,

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FOR EVERYTHING THAT WORKS IS GROUNDED ON ITS OPPOSITE

CARL JUNG

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KAI CHUNG FUNG



# *Caprice of the Cosmos*

"For in all chaos there is a cosmos,  
in all disorder a secret order, in all caprice a fixed law,  
for everything that works is grounded on its opposite."

Carl Jung

*for chamber orchestra*

KAI CHUNG FUNG

## DURATION

Written material without improvisation and repeated ad libitum: around 17 minutes

## INSTRUMENTATION

1 – Piccolo	1 – Bassoon
1 – Flute	1 – Piano
1 – Bass Flute	2 – Violin
1 – Clarinet	1 – Viola
1 – Horn	1 – Violoncello
1 - Trumpet	1 – Contrabass
1 – Oboe	

## MOVEMENTS

Movements	Titles	Page Number
A	<i>Formless</i>	P. 1
B	<i>Sky And Earth</i>	P. 6
C	<i>Let There Be Light</i>	P. 13
D	<i>All Is One</i>	P. 18
E	<i>The Big Bang</i>	P. 22
F	<i>Sabbath</i>	P. 28
G	<i>New Order</i>	P. 30

## PERFORMANCE NOTE

This composition has three different tempo concepts:

- 1) No bar line [“tempo free zone”]: performers establish their preferred tempi and avoid synchronising with the others
- 2) With standard bar line: performers play in a united, steady pulse and tempo, following the conductor
- 3) Dashed bar lines [*ad lib* section for the conductor]: similar to stand measured notation where all performers follow the direction of the conductor, but the conductor can and is recommended to change the tempo freely and dramatically.

Different improvisational section is created deliberately to invite performers to contribute their own imaginations and musical ideas into the performance. Performers are required to interact with each other and react instantly and spontaneously. Slashes are only used to provide a brief sense of the beat, performers do not need to follow the exact beats.

Dynamics are marked to provide the sense of volume change, they should be interpreted in relation to one another instead of individually.

Meeting point (in colour): Performers must play the coloured note when the conductor signal the meeting points. Different colours are used to make it clear which parts play together. No special meaning for each colour.



## TECHNICAL INSTRUCTIONS

### *Conductor*

Meeting point (vertical dashed line): Signal all relevant parts to play the coloured notes at the same time.

In *Formless*, after signalling the entries of the instruments, the conductor only needs to cue the meeting points without giving other instructions.

In *All is One*, the conductor cues the timing of the “Numbered Meeting Point” during the pianist’s repeated ad lib section. After the first round of each number, the conductor decides which number to be played, how many times and when to play each number.

In *New Order*, the conductor has full control over the tempo and is expected to change it dramatically across each dashed bar-line.

### *Piano*

In *Let There be Light*, the pianist takes the role of the conductor.

There are various ‘Pianist’s Repeat Ad Libitum’ moment in the composition. The pianist can repeat those bars as many times as the pianist wishes.

All curves do not directly address to specific aspect. Musicians can interpret them according to pitch, dynamics, movement, or other technical skills.



Strum the strings with a guitar pick to create harsh sound



Palm mute on the piano string



Use a guitar pick to scratch the string of the piano. The curved line is open to pianist’s interpretation,



Slashes on five-line stave - musicians have the autonomy to play any pitched or non-pitched sound effect

## TECHNICAL INSTRUCTIONS (CONT.)

### *Woodwind*

All curves do not directly address to specific aspect. Musicians can interpret them according to pitch, dynamics, movement, or other technical skills.



Flutter tongue.



Slap Tongue



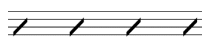
Wind tone (without pitch)



Jet whistle



Fast random fingering, air in (without pitch )



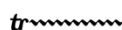
Slashes on five-line staff - musicians have the autonomy to play any pitched or non-pitched sound effect.



Crescendo from silence



Certain parts are presented on one-line staff. The line represents the mid-range of the instrument. Notes below or above the line roughly guide the contour of the melody.



All trills should be played with a semitone higher or lower than the written note as the musicians wish

## TECHNICAL INSTRUCTIONS (CONT.)

### *Strings*

All curves do not directly address to specific aspect. Musicians can interpret them according to pitch, dynamics, movement, or other technical skills.

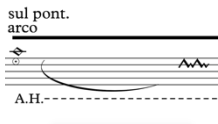


Slapped string sound only (percussive sound without pitch)

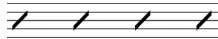
pizz.



Bartok Pizzicato (Pizzicato with slapped string sound)



Touch four artificial harmonics, slide up and down freely to create a bird-like sound. The curved lines are open to interpretation, they can refer to the pitch, dynamics, range of the movement, etc..



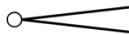
Slashes – the percussionist have the autonomy to play any pitched or non-pitched sound effect.



Extremely wide vibrato



Certain parts are presented on the one-line staff. The line represents the mid-range of the instrument whereas an octave higher or lower can be reached easily. Notes below or above the line roughly guide the contour of the melody.



Crescendo from silence

# Caprice of the Cosmos

"For in all chaos there is a cosmos,  
in all disorder a secret order, in all caprice a fixed law,  
for everything that works is grounded on its opposite."  
Car Jung

Kai Chung Fung

A conductor is essential for this composition.

Performers are encouraged to explore and experiment on different ideas and extended techniques. The experimental process and the performers' experiences are prioritised over the ultimate musical outcome.

Time-free zone ( without time signature and bar-line): No united tempo. Each performer explores and plays in any tempo that suits their preference and understanding of each musical phrase. It is not necessary to establish a steady tempo or to match with each other.

## Tempo free zone

Formless

\*Duration of this section  
2:00-3:00

The score is divided into sections with specific performance instructions:

- Adagio** (Yellow background): Clarinet in Bb and Oboe. *ff* dynamics.
- Tempo free zone** (Blue background): Piccolo, Flute, Bass Flute. *mp*, *p*, *pp* dynamics. Includes instruction: "Slap tongue (with less pitch sound)".
- Adagio** (Yellow background): Bassoon, Horn in F, Trumpet in Bb. *mp*, *pp*, *mf* dynamics. Includes instruction: "Fast random fingering, air in (without Pitch)".
- Adagio** (Yellow background): Piano. *mp*, *pp* dynamics. Includes instruction: "Make sound effect freely (without pitch)".
- Tempo free zone** (Green background): Violin I, Violin II, Viola, Violoncello, Contrabass. *mp*, *pp*, *p* dynamics. Includes instructions: "arco", "sul pont.", "sul tasto", "gliss.", "Touch 4 (artificial harmonics), slide up and down according to the curve", "A.H.", "Make sound effect freely (without pitch)".

Tempo free zone

7

Picc. *mp* *f* *mp*

Fl. *Jet whistle* *mf* *ppp* *f* *mp*

B. Fl. *mp* *ppp* *mp*

Cl. *mp* *pp* *mf* *pp*

Ob. *Wind tone (without pitch)* *p* *mp* *Slap tongue (with less pitch sound)* *pp*

Bsn. *Slap tongue (with less pitch sound)* *mp* *pp*

Hn. *mp* *f*

Tpt. *mp* *f*

Pno. *p* *mp*

Tempo free zone

Vln. I *sul tasto* *gliss.* *pp* *mp* *p* *f* *Pizzicato with slapped string sound* *pizz.*

Vln. II *sul tasto* *gliss.* *pp* *mp* *f* *Pizzicato with slapped string sound* *pizz.*

Vla. *gliss.* *pp* *mp* *pp* *mp*

Vc. *ppp* *mp* *p* *slapped string sound only* *gliss.*

Cb. *pizz.* *gliss.* *slapped string sound only* *f* *gliss.* *mp*



Tempo free zone

Picc. *f* *mp* *f* *p* *mf* *f*

Fl. *f* *mp* *f* *p* *mf* *f*

B. Fl. *f* *mp* *f* *mp* *f*

Cl. *mf* *mp* *f* *p*

Ob. *f* *p* *pp* *mp*

Bsn. *mf* *p* *pp* *f* *pp*

Hn. *f*

Tpt. *f*

Pno. *f*

*Make sound effect freely ( without pitch )*

Tempo free zone

Vln. I *mp* *f* *gliss.*

Vln. II *gliss.* *gliss.* *gliss.* *gliss.* *Make sound effect freely ( without pitch )*

Vla. *arco* *mf* *pp* *mf* *pizz.* *f* *pp* *mp* *pp* *gliss.* *gliss.*

Vc. *f* *Slap all the strings*

Cb. *f* *gliss.*

Tempo free zone

14

Picc. *Jet whistle*  
*mf* *pp* *ff* *pp* *mp* *pp*

Fl. *Jet whistle*  
*mf* *pp* *ff* *pp* *mf*

B. Fl. *p* *ff* *ff* *pp* *mp* *pp*

Cl. *pp* *mp* *ff* *p* *f* *p*

Ob. *mf* *ff* *pp* *ff* *mp* *f*

Bsn. *mp* *ff* *mp*

Hn. *mf* *mp*

Tpt. *mf* *mp*

Pno. *ff* *mp*

Tempo free zone

Vln. I *gliss.* *mf* *p* *pizz.* *sul pont.* *Make sound effect freely (without pitch)* *pp* *mf*

Vln. II *Make sound effect freely (without pitch)* *mp* *Make sound effect freely (without pitch)*

Vla. *sul pont.* *pp* *mp* *f* *gliss.* *pp* *mf*

Vc. *pizz.* *gliss.* *f* *f* *arco* *pp* *mf*

Cb. *gliss.* *pizz.* *f* *arco*

Touch 4 (artificial harmonics), slide up and down according to the curves

Tempo free zone

Performers signal when they finish their parts. The conductor waits until all parts are finished then starts the next session.

Musical score for woodwinds, brass, and piano. The score includes parts for Piccolo (Picc.), Flute (Fl.), Bass Flute (B. Fl.), Clarinet (Cl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), Trumpet (Tpt.), and Piano (Pno.). The woodwinds and brass parts feature complex rhythmic patterns and dynamic markings such as *mf*, *f*, *mp*, and *ff*. The piano part includes a section with *pp* and *mp* dynamics.

Tempo free zone

Performers signal when they finish their parts. The conductor waits until all parts are finished then starts the next session.

Musical score for strings, including Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Contrabass (Cb.). The Violin I part features a long, sustained note with a dynamic marking of *mp* and a hairpin indicating a gradual increase in volume. The Violin II, Viola, and Violoncello parts include *arco* markings and *gliss.* (glissando) markings. The Contrabass part has a dynamic marking of *mp*.

Touch 4 (artificial harmonics), slide up and down according to the curves sul pont.



Tempo free zone

Musical score for woodwinds and brass instruments. The score includes parts for Piccolo (Picc.), Flute (Fl.), Bass Flute (B. Fl.), Clarinet (Cl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), and Trumpet (Tpt.). The woodwinds and bassoon parts feature a yellow highlighted section and a green highlighted section. The brass parts (Hn. and Tpt.) are marked with 'Make sound effect freely (without pitch)'. The Piano (Pno.) part is also present.

Tempo free zone

Tempo free zone

Musical score for string instruments. The score includes parts for Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Contrabass (Cb.). The Violin I part features glissando markings. The Violin II part features pizzicato markings. The Viola part features pizzicato markings and a blue highlighted section. The Violoncello part features pizzicato markings and a purple highlighted section. The Contrabass part features pizzicato markings and a blue highlighted section.

Tempo free zone

Tempo free zone

Musical score for woodwinds and brass instruments. The score includes parts for Piccolo (Picc.), Flute (Fl.), Bass Flute (B. Fl.), Clarinet (Cl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), and Trumpet (Tpt.). The score is marked with various dynamics such as *f*, *pp*, *mf*, and *mp*. A section of the score is highlighted with a green vertical bar, and another section is highlighted with a purple vertical bar. A large cyan vertical bar highlights the final section of the score. Performance instructions include "wind tone (without pitch, wind sound only)", "Jet whistle", and "Make sound effect freely (without pitch)".

Tempo free zone

Musical score for string instruments. The score includes parts for Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Contrabass (Cb.). The score is marked with various dynamics such as *f*, *pp*, *mf*, and *ppp*. A section of the score is highlighted with a yellow vertical bar, another with a green vertical bar, and a third with an orange vertical bar. A large cyan vertical bar highlights the final section of the score. Performance instructions include "gliss." and "pizz.".

Tempo free zone

39 *gliss.*  
Picc. *pp*  
*mf* *f* *pp*  
Fl. *gliss.*  
*pp* *mf* *f* *pp*  
B. Fl. *gliss.*  
*pp* *mf* *f* *pp*  
Cl. *pp* *f* *ppp* *mf* *pp*  
Ob. *pp* *pp* *f* *mf* *f* *pp*  
Bsn. *wind tone (without pitch, wind sound only)* *f* *pp* *f* *pp*  
Hn. *pp* *mp*  
Tpt. *pp* *mp*  
Pno. *p* *pp* *ff*

Tempo free zone

*pizz.* *gliss.* *gliss.* *gliss.*  
Vln. I *mp* *f*  
*gliss.* *gliss.* *sul pont.* *gliss.* *pizz.*  
Vln. II *p* *f* *pp* *f*  
*pizz.* *gliss.* *sul pont.* *gliss.* *pizz.*  
Vla. *mp* *f*  
*gliss.* *gliss.* *gliss.* *gliss.* *pizz.*  
Vc. *p* *p* *f*  
Cb. *gliss.* *gliss.* *gliss.* *gliss.* *p* *f* *f*

Tempo free zone

45

Picc. *mp* *ff* *pp* *fmp* *f*

Fl. *f* *ff* *pp* *f* *fmp* *f*

B. Fl. *mp* *ff* *pp* *f* *fmp* *f*

Cl. *mp* *ff* *pp* *f* *fmp* *f* *Slap tongue (with less pitch sound)* *mp* *mf*

Ob. *f* *mp* *ff* *pp* *f* *pp* *mp* *ff* *mp* *f* *mp* *Slap tongue (with less pitch sound)*

Bsn. *f* *mp* *ff* *pp* *f* *pp* *mp* *ff* *mp* *f* *mp* *Slap tongue (with less pitch sound)*

Hn. *ppp* *gliss.*

Tpt. *ppp* *gliss.*

Pno. *ff* *mp* *Make sound effect freely (with pitch)*

Tempo free zone

Vln. I *pp* *mf* *gliss.* *sul pont.* *Make sound effect freely (with pitch)* *pizz.* *sul tasto* *Pizzicato with slapped string sound* *pizz.*

Vln. II *Make sound effect freely (with pitch)* *mp1* *Pizzicato with slapped string sound* *pizz.*

Vla. *pp* *mf* *gliss.* *f* *mp* *pp* *arco* *mf* *pp* *mf*

Vc. *pp* *mf* *f* *pizz.* *Slap all the strings* *gliss.*

Cb. *arco* *pizz.* *gliss.* *f*

Touch 4 (artificial harmonics), slide up and down according to the curves sul pont.





Tempo free zone

57

Picc. *ppp*

Fl. *mp* *pp* *mp*  
*wind tone (without pitch, wind sound only)*  
*Jet whistle*

B. Fl. *ppp* *p*  
*wind tone (without pitch, wind sound only)*  
*Fast random fingering, air in (without pitch)*

Cl. *To Cl.*

Ob. *mp* *pp* *mp*  
*Fast random fingering, air in (without pitch)*  
*wind tone (without pitch, wind sound only)*

Bsn. *p* *mp*  
*wind tone (without pitch, wind sound only)*

Hn. *To*  
*Make sound effect freely (without pitch)*

Tpt. *To*  
*Make sound effect freely (without pitch)*

Tempo free zone

Pno. *mp* *pp* *mf* *pp* *mf*  
*Make sound effect freely (with pitch)*

Vln. I *mp* *pp* *mp*  
*Touch 4 (artificial harmonics), slide up and down according to the curves*  
*sul pont.*

Vln. II *gliss.* *mp*  
*Touch 4 (artificial harmonics), slide up and down according to the curves*  
*sul pont.*

Vla. *pp* *mp* *pp* *mp*  
*Touch 4 (artificial harmonics), slide up and down according to the curves*  
*sul pont.*

Vc. *pp* *mp* *pp* *mp*  
*Touch 4 (artificial harmonics), slide up and down according to the curves*  
*sul pont.*  
*Make sound effect freely (with pitch)*

Cb. *pp* *mp*  
*Make sound effect freely (with pitch)*

# Let There Be Light

## Tempo free zone

Q

Slap tongue (with less pitch sound) Free to improvise (with or without pitch)

ppp p ppp mp p

Flute Q Slap tongue (with less pitch sound) Free to improvise (with or without pitch) Jet whistle mp p

Bass Flute Q Jet whistle wind tone (without pitch, wind sound only) mp p ppp

Clarinet in Bb Q Free to improvise (with or without pitch) ppp p ppp

Oboe Q wind tone (without pitch, wind sound only) Free to improvise (with or without pitch) wind tone (without pitch, wind sound only) ppp p ppp ppp p

Bassoon Q Free to improvise (with or without pitch) Fast random fingering, air in (without pitch) wind tone (without pitch, wind sound only) ppp mp p sfz ppp mp p mf p pp

Horn in F Q Free to improvise (with or without pitch) Slap tongue (with less pitch sound) p

Trumpet in Bb Q Fast random fingering, air in (without pitch) Free to improvise (with or without pitch) p pp mf p sfz

Arpeggiation: Scratch the strings across a broad range of the note

Scratch the piano string with the guitar pick

Free to improvise (with or without pitch)

mp pp f mp f pp mf ppp

Pay extra attention to the use of pedal

mp sfz

## Tempo free zone

Violin I Q sul tasto Free to improvise (with or without pitch) sul pont. sul tasto ppp mp f ppp

Violin II Q Slowly move from sul tasto to sul pont. sul tasto gliss. sul pont. sul tasto gliss. sul pont. ppp mp ppp mp

Viola Q Touch 4 (artificial harmonics), slide up and down according to the curves sul pont. A.H. pp

Violoncello Q Slowly move from sul tasto to sul pont. sul tasto gliss. sul pont. gliss. sul pont. ppp mp ppp mp

Contrabass Q Touch 4 (artificial harmonics), slide up and down according to the curves sul pont. Free to improvise (with or without pitch) ppp mp

## Repeat

(Pianist's repeated ad libitum)

Repeat as many times as the pianist likes.

Pianist signals to move forward.

Pno.

mp

Please take your time!

Focusing on the note deeply, Nice and strong

# Tempo free zone

*Free to improvise (with or without pitch)*  
*Fast random fingering, air in (without pitch)*

*Free to improvise (with or without pitch)*  
*wind tone (without pitch, wind sound only)*

**Tempo free zone**

*Free to improvise (with or without pitch)*  
*Free to improvise (with or without pitch)*

*Fast random fingering, air in (without pitch)*

*Free to improvise (with or without pitch)*  
*Fast random fingering, air in (without pitch)*  
*wind tone (without pitch, wind sound only)*

*Free to improvise (with or without pitch)*  
*Free to improvise (with or without pitch)*

*Free to improvise (with or without pitch)*  
*Free to improvise (with or without pitch)*

*Free to improvise (with or without pitch)*  
*Scratch the piano string with the guitar pick*

**Tempo free zone**

*Free to improvise (with or without pitch)*  
*Touch 4 (artificial harmonics), slide up and down according to the curves sul pont.*

*Free to improvise (with or without pitch)*  
*Free to improvise (with or without pitch)*

*Free to improvise (with or without pitch)*  
*Heavy bow pressure, light fingered, free bowing to create harsh sound effect*

*pizz.* *gliss.*

*ppp* *ff*





94

Picc. *mf* *p*

Fl. *Free to improvise (with or without pitch)* *ppp* *p* *Free to improvise (with pitch)* *mp* *Jet whistle*

B. Fl. *Free to improvise (with or without pitch)* *pp* *Slap tongue (with less pitch sound)* *p* *Free to improvise (with or without pitch)* *pp* *Make some sound effect freely (with or without pitch)*

Cl. *Free to improvise (with or without pitch)* *mf* *p*

Ob. *Free to improvise (with or without pitch)* *p* *Free to improvise (with pitch)* *mf* *Fast random fingering, air in (without pitch)*

Bsn. *Free to improvise (with pitch)* *p* *mp* *p*

Hn. *mf* *Tb*

Tpt. *mf* *Tb*

Pno. *Scratch the piano string with the guitar pick* *mp* *f* *pp* *Free to improvise (with or without pitch)* *P.Mk.* *pp*

Vln. I *Free to improvise (with or without pitch) sul tasto* *p* *pp* *mp*

Vln. II *Free to improvise (with or without pitch) sul pont.* *p* *mp* *pp*

Vla. *Free to improvise (with or without pitch)* *mf* *p* *mf*

Vc. *Free to improvise (with or without pitch)* *mf* *p* *mf*

Cb. *Free to improvise (with or without pitch)* *sfz* *mf* *p* *mf*

Q

*Free to improvise (with or without pitch)* *mp* *Jet whistle*

*Scratch the piano string with the guitar pick* *pp* *f* *pp* *mp* *Arpeggiation: Scratch the strings across a broad range of the note* *Free to improvise (with or without pitch)*

**Repeat**  
 (Pianist's repeated ad libitum)

Repeat as many times as the pianist likes.  
 Improvise during the repetition.  
 Pianist signals to move forward.

# All is One

(Piano solo section): This session should be tight, neat, and precise. The conductor resumes conducting. The pianist can use symmetric scales and atonal harmony in their improvisation.

Numbers: Whatever note the performers play on each number should be repeated the same way when conductor signals the indicated number.

The conductor signals the time for each number. During repetition, conduct can pick the number randomly.

102  
Picc. *ff*  
Fl. *ff*  
B. Fl. *ff*  
Cl. *ff*  
Ob. *ff*  
Bsn. *ff*  
Hn. *ff*  
Tpt. *ff*  
Pno. E.M.-I P.M. P.M. E.M.  
Vln. I arco *ff*  
Vln. II arco *ff*  
Vla. arco *ff*  
Vc. arco *ff*  
Cb. arco *ff*

## Repeat (Pianist's repeated ad libitum)

Repeat as many times as the pianist likes.  
Improvise during the repetition.  
Pianist signals to move forward.

1  
2  
*p*

1  
2  
*p*

## Tempo free zone

1  
2  
*pizz.*  
*p*





118

Picc. *ff* *p* *ff* *p* *ff*

Fl. *ff* *p* *ff* *p* *ff*

B. Fl. *ff* *p* *ff* *p* *ff*

Cl. *ff* *p* *ff* *p* *ff*

Ob. *ff* *p* *ff* *p* *ff*

Bsn. *ff* *p* *ff* *p* *ff*

Hn. *ff* *p* *ff* *p* *ff*

Tpt. *ff* *p* *ff* *p* *ff*

Improvise using whole tone scale

Pno.

Vln. I *arco* *ff* *p* *ff* *p* *ff*

Vln. II *arco* *ff* *p* *ff* *p* *ff*

Vla. *arco* *ff* *p* *ff* *p* *ff*

Vc. *arco* *ff* *p* *ff* *p* *ff*

Cb. *arco* *ff* *p* *ff* *p* *ff*

126

Picc. *ff* *ff*

Fl. *ff* *ff*

B. Fl. *ff* *ff*

Cl. *ff* *ff*

Ob. *ff* *ff*

Bsn. *ff* *ff*

Hn. *ff* *ff*

Tpt. *ff* *ff*

Pno.

1 2 3 4 5 6 7

**Repeat**  
 (Pianist's repeated ad libitum )  
 Repeat as many times as the pianist likes.  
 Improvise during the repetition.  
 Pianist signals to move forward.

Vln. I

Vln. II

Vla.

Vc.

Cb.

Tempo free zone

1 2 3 4 5 6 7

# The Big Bang

134

Picc. *p* *ff*

Fl. *p* *ff*

B. Fl. *p* *ff*

Cl. *p* *ff*

Ob. *p* *ff*

Bsn. *p* *ff*

Hrn. *p* *ff*

Tpt. *p* *ff*

Pno.

Vln. I *p* *ff*

Vln. II *p* *ff*

Vla. *p* *ff*

Vc. *p* *ff*

Cb. *p* *ff*

**Adagio**  
 Q Free to change the pitch only on repeat  
*pp* *f* *pp* *f*

## Repeat (Pianist's repeated ad libitum)

Repeat as many times as the pianist likes.  
 Improvise during the repetition.  
 Pianist signals to move forward.

**Adagio**

wind tone  
 Q (without pitch, wind sound only)

Flute *ppp* *p* *pp* *p*

Bass Flute *ppp* *ppp*

wind tone  
 (without pitch, wind sound only)

Viola *pizz.* *mp*

Violoncello *pizz.* *mp*



"Tempo free zone"

152

Picc. *mp PPP mp* *pp* *pp* *p* *pp* *p* *pp* *p*

Fl. *mp PPP mp* *pp* *pp* *p* *pp* *p* *pp* *p*

B. Fl. *pp* *p* *pp* *p* *pp* *p* *pp* *p*

Cl. *pp* *pp* *p* *pp* *p* *pp* *p* *pp* *p*

Ob. *ppp* *p* *pp* *p* *pp* *p* *pp* *p* *pp* *p*

Bsn. *ppp* *p* *pp* *p* *ppp* *p* *ppp* *p*

Hn. *ppp* *mp* *ppp* *ppp*

Tpt. *ppp* *mp* *ppp* *ppp*

Pno. *pp* *mp* *sfz*

Vln. I

Vln. II

Vla.

Vc. *pizz.* *mp*

Cb. *pizz.*

*gliss.* *Jet whistle* *Fast random fingering, air in (without Pitch)* *wind tone (without pitch, wind sound only)*

The score is divided into several sections highlighted with colored backgrounds: a yellow vertical bar covers measures 152-154, a green vertical bar covers measures 155-157, and a blue vertical bar covers measures 158-160. The score includes various musical notations such as dynamics (ppp, pp, p, mp, mf, sfz), articulation (pizz.), and performance instructions (gliss., Jet whistle, Fast random fingering, air in (without Pitch), wind tone (without pitch, wind sound only)).

160

Picc. *pp* *mp* *pp* *p* *mp* *pp*

Fl. *mp* *mp* *pp* *p* *mp* *pp*

B. Fl. *pp* *mp* *pp* *p* *pp* *mp* *pp*

Cl. *pp* *p* *pp* *mp*

Ob. *pp* *p* *pp* *mp*

Bsn. *ppp* *mf* *ppp* *p* *ppp* *p*

Hn. *pp* *p* *mp* *p* *pp* *p* *pp*

Trpt. *pp* *p* *mp* *p* *pp* *p* *pp*

Pno. *mp* *sfz*

Vln. I

Vln. II

Vla.

Vc.

Cb.

*gliss.*

*Jet whistle*

*Fast random fingering, air in (without Pitch)*

*wind tone (without pitch, wind sound only)*

168

Picc. *mp* *pp* *pp* *mf*

Fl. *mp* *pp* *pp* *mf*

B. Fl. *mp* *pp* *pp* *mf*

Cl. *mp* *pp* *pp* *mf* *gliss.*

Ob. *mp* *pp* *pp* *mf* *gliss.*

Bsn. *pp* *mf*

Hn. *pp* *pp* *mf*

Tpt. *pp* *pp* *mf*

Pno. *ppp* *mf*

Vln. I *ppp* *mf*

Vln. II *ppp* *mf*

Vla. *ppp* *mf*

Vc. *ppp* *mf*

Cb. *ppp* *mf*

**Play freely**  
 (do not need to follow the notation  
 after the first time)

wind tone  
 (without pitch, wind sound only)

*ppp* *p*

**Repeat**  
 (Pianist's repeated ad libitum)

Repeat as many times as the pianist likes.  
 Improvise during the repetition.  
 Pianist signals to move forward.

**Play freely**  
 (do not need to follow the notation  
 after the first time)

Touch 4 (artificial harmonics),  
 slide up and down according to  
 the curves

sul pont.

Violin I *mp*

**Play freely**  
 (do not need to follow the notation  
 after the first time)



# Sabbath

172

Picc. *pp* *mf* *pp* *mf*

Fl. *ppp* *p* *mf* *p* *mf*  
*wind tone (without pitch, wind sound only)*

B. Fl. *pp* *mf* *pp* *mf*

Cl. *pp* *mf* *pp* *mf*  
*sul tasto*

Ob. *p* *mf* *p* *mf*

Bsn. *ppp*

Hn. *pp* *mf* *pp* *mf*

Tpt. *pp* *mf* *pp* *mf*

**A**

Pno. *p* *mp* *mp*

Vln. I *pp* *mf* *pp* *mf*  
*sul tasto*

Vln. II *pp* *mf* *pp* *mf*  
*sul tasto*

Vla. *pp* *pp* *mf* *pp* *mf*  
*sul tasto*

Vc. *pp* *pp* *mf* *pp* *mf*  
*sul tasto*

Cb. *pp* *pp* *mf* *pp* *mf*  
*sul tasto*

178

Picc. *pp* *mf* *pp* *mf* *pp* *mf*

Fl. *p* *mf* *p* *mf* *p* *mf*

B. Fl. *p* *mf* *p* *mf* *p* *mf*

Cl. *pp* *mf* *pp* *mf* *pp* *mf*

Ob. *p* *mf* *p* *mf* *p* *mf*

Bsn.

Hn. *pp* *mf* *pp* *mf* *pp* *mf*

Tpt. *pp* *mf* *pp* *mf* *pp* *mf*

Pno. *p* *mp*

Vln. I *pp* *mf* *pp* *mf* *pp* *mf* *sul tasto*

Vln. II *pp* *mf* *pp* *mf* *pp* *mf* *sul tasto*

Vla. *pp* *mf* *pp* *mf* *pp* *mf* *sul tasto*

Vc. *pp* *mf* *pp* *mf* *pp* *mf* *sul tasto*

Cb. *pp* *mf* *pp* *mf* *pp* *mf* *sul tasto*

184

Picc. *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Fl. *p* *mf* *p* *mf* *p* *mf* *p* *mf*

B. Fl. *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Cl. *p* *mf* *p* *mf* *p* *mf* *p* *mf*

Ob. *p* *mf* *p* *mf* *p* *mf* *p* *mf*

Bsn.

Hn. *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Tpt. *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Pno. *p* *mp* *p* *p*

Vln. I *sul tasto* *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Vln. II *sul tasto* *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Vla. *sul tasto* *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Vc. *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Cb. *sul tasto* *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

# New Order

New Order: (with dashed bar-lines): No fixed tempo over different bars, the tempo of each bar can be changed dramatically according to the conductor.

192

Picc. *pp* *mf* *pp* *mf*

Fl. *p* *mf* *p* *mf*

B. Fl. *p* *mf* *p* *mf*

Cl. *p* *mf* *p*

Ob. *p* *mf* *p* *mf*

Bsn.

Hn.

Tpt.

Pno. *p* *mf*

Vln. I *pp* *mf* *pp* *mf* *sul tasto*

Vln. II *pp* *mf* *pp* *mf* *sul tasto*

Vla. *pp* *mf* *pp* *mf* *sul tasto*

Vc. *pp* *mf* *pp* *mf* *sul tasto*

Cb. *pp* *mf* *pp* *mf* *sul tasto*

*Make sound effect freely (without pitch)*

*Slap tongue (with less pitch sound)*  
*mp* *p*

*Slap tongue (with less pitch sound)*  
*mp* *p*

*Slap tongue (with less pitch sound)*  
*p*

*wind tone (without pitch, wind sound only)*  
*ff* *ppp* *mp*

*Free to improvise (without pitch)*

*Free to improvise (without pitch)*

*Make sound effect freely (without pitch)*

*arco* *sul pont.* *p* *ppp* *p*

*Make sound effect freely (without pitch)* *sul pont.* *ppp*

*Touch 4 (artificial harmonics), slide up and down according to the pitch sul pont.* *ppp*

*A.H.* *ppp*

*pizz.* *mp*

200

Picc. *Slap tongue (with less pitch sound)* *pp* *mp* *Make sound effect freely (without pitch)* *mp*

Fl. *Slap tongue (with less pitch sound)* *pp* *mp* *Jet whistle* *pp* *mp* *p* *mp* *Jet whistle*

B. Fl. *Slap tongue (with less pitch sound)* *pp* *Make sound effect freely (without pitch)* *pp* *mp* *p* *mp*

Cl. *Slap tongue (with less pitch sound)* *pp* *mf* *Make sound effect freely (without pitch)* *mp* *p* *Make sound effect freely (without pitch)*

Ob. *Slap tongue (with less pitch sound)* *p* *mf* *pp* *mp* *wind tone (without pitch, wind sound only)* *ppp* *mp*

Bsn. *pp* *mp* *pp* *mp*

Hn. *Make sound effect freely (without pitch)* *mp*

Tpt. *Make sound effect freely (without pitch)* *mp*

Pno. *f* *mf*

Vln. I *Touch 4 (artificial harmonics), slide up and down according to sul point.* *mp* *ppp* *mp* *Make sound effect freely (without pitch)* *ppp* *mp* *sul pent.* *sul tasto* *pizz.*

Vln. II *Make sound effect freely (without pitch)* *p* *mf* *pizz. gliss.*

Vla. *sul tasto* *pp* *mf* *pp* *pizz.* *mf* *pizz.*

Vc. *A.H.* *p* *mp* *pp* *mf* *arco* *pp* *mp* *pizz.*

Cb. *f* *pp* *arco* *pizz.*



rit.

213 *Make sound effect freely (without pitch)*

Picc. *Jet whistle*

Fl. *Free to improvise (with or without pitch)*

B. Fl. *Free to improvise (with or without pitch)*

Cl. *Make sound effect freely (without pitch)*

Ob. *Free to improvise (with or without pitch)* *wind tone (without pitch, wind sound only)*

Bsn. *wind tone (without pitch, wind sound only)*

Hn. *Free to improvise (with pitch)*

Tpt. *Make sound effect freely (without pitch)*

Pno. *Free to improvise (with or without pitch)*

Vln. I *Touch 4 (artificial harmonics), slide up and down according to sul pont.* *Free to improvise (with or without pitch)*

Vln. II *Touch 4 (artificial harmonics), slide up and down according to sul pont.* *Free to improvise (with or without pitch)*

Vla. *Touch 4 (artificial harmonics), slide up and down according to sul pont.* *Free to improvise (with or without pitch)*

Vc. *Free to improvise (with or without pitch)*

Cb. *Free to improvise (with or without pitch) pizz.*

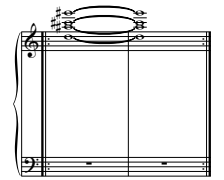
*mp* *ppp* *p* *ppp* *p* *mp* *ppp* *mp*

*sul tasto* *sul pont.* *gliss.*

To

# Repeat

As many time as you like



PART 1



# STRINGET QUARTET

Kai Chung Fung



# *String Quartet Part 1*

*for string quartet*

KAI CHUNG FUNG

## **DURATION**

Around 20 minutes

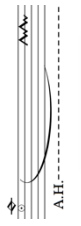
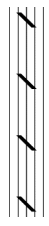

## **INSTRUMENTATION**

2 – Violin    1 – Viola    1 – Cello

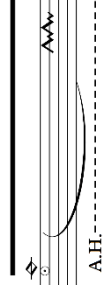
## **PERFORMANCE NOTE**

In the performance, each performer has their own improvisation section (slashes section in the score). Performers can improvise freely using any symmetric scale (e.g. whole tone, chromatic) but follow the given expressions such as dynamics or bowing techniques.

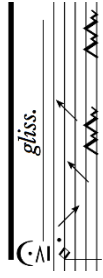
## TECHNICAL INSTRUCTIONS

All curves do not directly address to specific aspect. Performers can interpret them according to pitches, dynamics, movements, or other technical skills.	
X	Slapped string sound only (percussive sound without pitch)
pizz. ♭ ○	Bartok Pizzicato (Pizzicato with slapped string sound)
sul pont. arco  A.H.-----	Touch four artificial harmonics, slide up and down freely to create a bird-like sound. The curved lines are open to interpretation, they can refer to the pitch, dynamics, range of the movement, etc.
	Slashes – improvise freely using symmetric scales (e.g. chromatic scale, whole tone scale, or diminished scale)
	Extremely wide vibrato

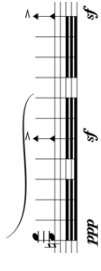
## TECHNICAL INSTRUCTIONS (CONT.)



Bird-like effect: Use touch four artificial harmonics (note-head  $\odot$  indicates which string to be played.) Slide finger up and down freely to create a bird-like effect. The curved line and  $\sim$  are open to interpretation, they can refer to the pitch, dynamics, the range of movement, etc.



Slow bow speed with extreme pressure. The arrow refers to the direction of glissando. Add extra vibrato when there is  $\sim$  during glissando.



Hold the initial finger shape of given notes on L.H., then slide according to the curvy lines with performer's interpretation. Play extremely soft except the accented note and play the accented notes dramatically. Triangular note-heads refer to any notes the initial finger shape reach during the slide.



Certain parts are presented on the single-line staff. Notes below or above the line roughly guide the contour of the melody.



Crescendo from silence.



Play the note with diamond note-head up or down the indicated interval from the note before/after. E.g. If the first note is A and the given interval is min 6, musician should play either F (above) or C# (below) as the note with diamond note-head.







A tempo

col legno battuto

Musical score for measures 41-45. The score is written for a wood block and a string instrument. The wood block part consists of rhythmic patterns marked with *ppp sf* and *sf*. The string part features sixteenth-note patterns with *arco* (heavy bow pressure) markings and dynamic markings of *pp* and *ff*. The wood block part concludes with a *ppp* dynamic marking.

A tempo

col legno battuto

Musical score for measures 46-50. The score continues with wood block and string parts. The wood block part includes a *rit.* (ritardando) marking in measure 46. The string part includes *pizz.* (pizzicato) markings and dynamic markings of *ff*. The wood block part concludes with a *ppp* dynamic marking.





Musical score for measures 72-79. The score is written for four staves: Violin I, Violin II, Viola, and Cello/Double Bass. The key signature is one sharp (F#) and the time signature is 4/4. The music features a variety of dynamics including *pp*, *p*, *mp*, *f*, *ff*, and *ppp*. Performance techniques such as *pizz.* (pizzicato) and *arco* (arco) are indicated. The score includes slurs, accents, and dynamic markings.

Musical score for measures 80-87. The score is written for four staves: Violin I, Violin II, Viola, and Cello/Double Bass. The key signature is one sharp (F#) and the time signature is 4/4. The music features a variety of dynamics including *ff*, *pp*, *f*, *p*, *mp*, *mf*, and *fff*. Performance techniques such as *pizz.* (pizzicato) and *arco* (arco) are indicated. The score includes slurs, accents, and dynamic markings.

Musical score for measures 90-99. The score is written for four staves: Treble 1, Treble 2, Bass 1, and Bass 2. It features various musical notations including notes, rests, and dynamic markings such as *f*, *mf*, *p*, *ppp*, *ff*, and *pp*. Intervallic relationships are indicated with labels like "maj 3", "min 2", "aug 4", "maj 6", "min 3", "gliss.", "maj 2", "aug 5", and "min 2". Measure numbers 90 through 99 are clearly marked at the beginning of each staff line.

Musical score for measures 100-109. The score is written for four staves: Treble 1, Treble 2, Bass 1, and Bass 2. It features various musical notations including notes, rests, and dynamic markings such as *f*, *mf*, *p*, *ppp*, *ff*, and *pp*. Intervallic relationships are indicated with labels like "maj 3", "min 2", "maj 2", "min 2", "gliss.", "maj 2", "min 2", and "gliss.". Measure numbers 100 through 109 are clearly marked at the beginning of each staff line.





Musical score for measures 143-154. The score is written for a single melodic line on a grand staff (treble and bass clefs). The notation includes various articulations and dynamics. Measure 143 starts with a piano (*p*) dynamic and a *ppp* dynamic. Measure 144 features a *pp* dynamic and a *ppp* dynamic. Measure 145 includes a *mf* dynamic and a *ppp* dynamic. Measure 146 has a *mf* dynamic and a *ppp* dynamic. Measure 147 features a *mf* dynamic and a *ppp* dynamic. Measure 148 includes a *mf* dynamic and a *ppp* dynamic. Measure 149 has a *mf* dynamic and a *ppp* dynamic. Measure 150 features a *mf* dynamic and a *ppp* dynamic. Measure 151 includes a *mf* dynamic and a *ppp* dynamic. Measure 152 has a *mf* dynamic and a *ppp* dynamic. Measure 153 features a *mf* dynamic and a *ppp* dynamic. Measure 154 includes a *mf* dynamic and a *ppp* dynamic. The score includes various articulations such as *pizz.*, *arco*, *sul tasto*, *gliss.*, and *pp*. There are also dynamic markings like *mf*, *ppp*, *f*, *mp*, and *p*. A *ma7* chord is indicated in measure 145.

Musical score for measures 155-166. The score is written for a single melodic line on a grand staff (treble and bass clefs). The notation includes various articulations and dynamics. Measure 155 starts with a piano (*p*) dynamic and a *ppp* dynamic. Measure 156 features a *pp* dynamic and a *ppp* dynamic. Measure 157 includes a *mf* dynamic and a *ppp* dynamic. Measure 158 has a *mf* dynamic and a *ppp* dynamic. Measure 159 features a *mf* dynamic and a *ppp* dynamic. Measure 160 includes a *mf* dynamic and a *ppp* dynamic. Measure 161 has a *mf* dynamic and a *ppp* dynamic. Measure 162 features a *mf* dynamic and a *ppp* dynamic. Measure 163 includes a *mf* dynamic and a *ppp* dynamic. Measure 164 has a *mf* dynamic and a *ppp* dynamic. Measure 165 features a *mf* dynamic and a *ppp* dynamic. Measure 166 includes a *mf* dynamic and a *ppp* dynamic. The score includes various articulations such as *pizz.*, *arco*, *sul tasto*, *gliss.*, and *pp*. There are also dynamic markings like *mf*, *ppp*, *f*, *mp*, and *p*. A *aug 4* chord is indicated in measure 157, and *min 2* and *min 3* chords are indicated in measure 160. A *sul pont.* instruction is present in measure 164.

♩ = 55

Musical score for measures 158-165. The score is written for four staves (treble and bass clefs). It features various articulations and dynamics including *pizz.*, *sul tasto*, *arco*, *gliss.*, *pp*, *ppp*, and *f*. The notation includes slurs, accents, and dynamic markings.

Musical score for measures 166-173. The score is written for four staves. It includes articulations such as *pizz.*, *sul pont.*, *arco*, *gliss.*, and *pp*. Dynamics range from *pp* to *fff*. The notation includes slurs and accents.

Musical score for measures 174-181. The score is written for four staves. It features complex articulations including *sul tasto*, *arco*, *gliss. freely*, *pizz.*, *mp*, *mf*, *p*, and *ppp*. The notation includes slurs, accents, and dynamic markings.







Musical score for measures 207-214. The score is written for two staves (treble and bass clef). It includes various performance instructions such as *pizz.*, *sul pont.*, *sul tasto*, *gliss.*, *arco*, and dynamic markings like *pp*, *p*, *mp*, *mf*, and *ff*. The notation features complex rhythmic patterns, including sixteenth and thirty-second notes, and rests.

Musical score for measures 215-222. The score continues from the previous page, maintaining the same notation and performance instructions. It includes *pizz.*, *sul pont.*, *sul tasto*, *gliss.*, and dynamic markings such as *pp*, *p*, *mp*, *f*, and *ppp*. The piece concludes with a *pp* dynamic marking.

Musical score for measures 222-228. The score is written for two staves (treble and bass clef). It includes various performance instructions such as *sul tasto*, *arco*, *pizz.*, *gliss.*, and dynamic markings like *pp*, *p*, *f*, *mp*, *mf*, and *ff*. The music features complex rhythmic patterns and articulation marks.

Musical score for measures 229-235. The score is written for two staves (treble and bass clef). It includes various performance instructions such as *arco*, *pizz.*, *gliss.*, *sul pont.*, and dynamic markings like *ff*, *mp*, *f*, *mf*, and *p*. A tempo marking  $\text{♩} = 100$  is present. The music features complex rhythmic patterns and articulation marks.

Musical score for measures 237-243. The score is written for a single melodic line on a grand staff. It features various dynamics including *p*, *mf*, *ff*, and *pp*. Performance techniques such as *pizz.* (pizzicato), *sul tasto* (fingerboard), *gliss.* (glissando), and *arco* (arco) are indicated. The piece concludes with a *pp* dynamic.

Musical score for measures 244-250. This section continues the melodic line with dynamics ranging from *mf* to *ppp*. It includes performance techniques like *sul tasto*, *sul pont.* (ponticello), *gliss.*, and *arco*. The score ends with a *p* dynamic.



♩ = 70

pizz. *ff*  
 sul pont. *gliss.* *p*  
 sul pont. *gliss.*  
 sul pont. arco *gliss.* *ppp* *f*  
 pizz. *ff*  
 pizz. *ff*

pizz. *p*  
 sul tasto *ppp*  
 pizz. *p*  
 sul tasto *ppp*  
 sul tasto *p*  
 sul tasto *ppp*  
 pizz. *p*  
 sul tasto *ppp*

sul pont. *gliss.* *mf*  
 arco *pp* *gliss.* *p*  
 sul pont. *gliss.* *pizz.* *f* *mf*  
 sul pont. *gliss.* *p* *f* *pp*

(increase bow pressure gradually until having harsh sound effect)

pizz. *f*  
 arco *pp* *f*  
 pizz. *mf*  
 sul pont. *gliss.* *p* *f* *pp*

Musical score for measures 284-296. The score is written for three staves: Treble Clef (top), Bass Clef (middle), and Bass Clef (bottom). The key signature is one sharp (F#). The music features complex rhythmic patterns and dynamic markings. Key markings include *pp*, *f*, *mp*, *ff*, *ppp*, *gliss.*, *sul pont.*, *sul tasto*, *arco*, and *pizz.*. The bottom staff includes a *tr* (trill) marking. The score concludes with a *mp* dynamic marking.

Musical score for measures 297-309. The score is written for three staves: Treble Clef (top), Bass Clef (middle), and Bass Clef (bottom). The key signature is one sharp (F#). The music continues with complex rhythmic patterns and dynamic markings. Key markings include *mp < f*, *gliss.*, *pp*, *ff*, *ppp*, *sul tasto*, *gliss.*, *arco*, *pizz.*, and *tr*. The score concludes with a *ff* dynamic marking.



String Quartet

THE FINE LINE BETWEEN CREATIVITY AND CHAOS

DEFINING  
CHAOS

KAI CHUNG FUNG



# *Defining Chaos*

the fine line between creativity and chaos

*for string quartet*

KAI CHUNG FUNG

## **DURATION**

Written material without improvisation on the images: around 9-12 minutes

## **INSTRUMENTATION**

For any combination of four string instruments

## **PERFORMANCE NOTE**

This composition has an emphasis on indefinite elements and includes a certain amount of improvisation. Performers are given a lot of space to contribute their own imaginations and musical ideas into the performance. Performers are required to interact with each other and react instantly and spontaneously. The images should be different in each performance and performers (except the leader of the group who chooses the images) will only see the chosen images at the actual performance and express their 'here and now' responses to the images. During rehearsals, performers do not necessarily use any image but should explore different possibilities.

## **PREPARATION BEFORE THE PERFORMANCE**

Choose a leader among the four performers. The leader will be responsible to make all decisions about the performance including the followings:

- a. Decide the scales to be used for each performer's improvisation. E.g. performer 1 uses whole-tone scale, performer 2 uses pentatonic scale, etc.
- b. Arrange two images to be used in the performance but avoid other performers from seeing the images before the actual performance. (For an ideal outcome, the leader can arrange a suitable person to choose and prepare the images for the performance so the leader would not see the images before the performance too.)
- c. Assign one aspect of 'improvising on the paintings' to each performer. E.g. one may play according to the colour, one to the contour, one to the texture, and one to the emotion. Everyone needs to have a different aspect.
- d. Decide whether each moment of the picture is musically 'attained' and signal to stay or move forward.

## The images

The image shows a musical score for a piece titled "The images". The score is written for four staves, each starting with a double bar line and a rehearsal mark "32". Each staff begins with the instruction "pizz." (pizzicato). The score includes various musical notations such as notes, rests, and dynamic markings. The instruction "let it ring" appears above the first and third staves. A dynamic range is indicated by a horizontal line with "p" (piano) at the left end and "f" (forte) at the right end. Two paintings are integrated into the score: "The Scream" by Edvard Munch is on the left, and "The Thinker" by Auguste Rodin is on the right. Curved lines connect the paintings to the corresponding staves in the score, suggesting that the visual elements of the paintings are to be interpreted by the performers during the performance.

The two paintings used in this score are one version suggested by the composer. They can be replaced by other images in each performance.

Each performer will be assigned one aspect to improvise about the pictures such as colour, contour, texture, meaning, emotion, etc. Performers should explore and generate different ideas during each image until the leader signals to stay on a specific idea. Then, the performers stay and develop those ideas until the leader signals to move forward.

Every time when the same image appears again, performers play the ideas agreed in the first time until the leader signals to change or move forward.

The duration of each image is flexible but should last for at least 15 seconds to allow performers to explore different ideas. The size of the images provides a reference of the duration.

Some images are in the form of a collage - the paintings are mixed together with different sizes, different direction. Some even have the score printed on them. Performers should treat these collages as one single image and play their impressions upon the collage instead of each item separately. Performers can decide how to interpret the notation on it.

## TECHNICAL INSTRUCTIONS

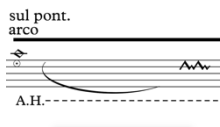
All curves do not directly address to specific aspect. Musicians can interpret them according to pitch, dynamics, movement, or other technical skills.



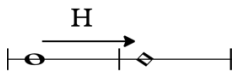
Finger slap on the body (percussive effect)



Bartok Pizzicato (Pizzicato with slapped string sound)



Touch four artificial harmonics, slide up and down freely to create a bird-like sound. The curved lines are open to interpretation, they can refer to the pitch, dynamics, range of the movement, etc..



Play the note with diamond note-head higher or lower from the note before.



Extremely wide vibrato



Wipe the instrument body with hand

# Defining Chaos

the fine line between creativity and chaos

Kai Chung Fung

One-line staff is used for the whole score. The line represents the mid-range of the instrument. Notes below or above the line roughly guide the contour of the melody.

All curves can be interpreted freely in performer's choice of pitch, dynamics, movement, or other technical skills.

## Grave

**A**

The arrow indicates the relationship between the notes. The arrow with an H means the next note(s) are higher than the previous note(s) and L means lower.

Musical score for measures 1-5. The score is written on a single staff with a central line. Dynamics include *ppp*, *p*, *mp*, and *pp*. Performance instructions include *sul pont.*, *gliss.*, *A.H.* (Artificial Harmonics), and *Touch 4 (artificial harmonics), slide up and down according to the curves*. A diagram labeled 'A' shows arrows indicating pitch relationships: 'H' for higher and 'L' for lower. The score features various textures, including tremolos, glissandos, and artificial harmonics.

Musical score for measures 6-8. Dynamics include *mf*, *pp*, *mp*, and *ppp*. Performance instructions include *pizz.* (pizzicato), *gliss.*, *sul pont.*, *A.H.*, and *Finger slap on the body*. The score continues with complex textures, including tremolos, glissandos, and artificial harmonics.

Musical score for measures 9-11. Dynamics include *mp*, *ppp*, and *mp*. Performance instructions include *pizz.*, *gliss.*, *sul pont.*, *A.H.*, and *Touch 4 (artificial harmonics), slide up and down according to the curves*. The score concludes with complex textures, including tremolos, glissandos, and artificial harmonics.









54

pizz. *f* *p < f* *mp* *p* *mp* *p* *mf* *p* *mf* *p*

sul pont.

pizz. *f* *p < f* *mp* *p* *mp*

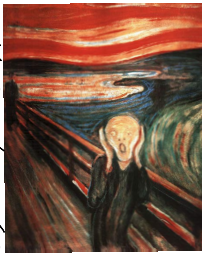
pizz. *f* *p < f* *mp* *p* *mp*

sul pont.

A.H. *pp* *mp*

sul pont.

A.H. *p* *mp* *p* *pp* *mp* *mf* *p* *mf* *p*



59

*f* *mp* *mf* *f* *f* *mp* *f*

sul pont.

A.H. *pp* *mp* *pp* *mp* *f* *p* *mp*

pizz. *f* *mp* *mf* *f* *mp*

pizz. *mp* *mf* *f* *gliss.* *gliss.* *f*

65

*f* *p* *mf* *f* *mf* *f* *p*

sul tasto *pp* *mp* *ppp* *pp* *mp* *ppp* *p* *mf*

pizz. *f* *mf* *p* *mf* *p* *gliss.* *p*

pizz. *mf* *p* *gliss.* *mf*

sul pont.

**E**

6

68

*p* *f* *mf* *p* *pp* *mp* *p*

*f* *mf* *p* *pp* *mp* *p*

*mf* *f* *p* *mf* *p* *mp*

73

*pizz.* *gliss.* *gliss.* *gliss.*

*f* *p* *mf*

*sul tasto gliss.* *pizz.* *tr*

*mp* *p* *mp* *p* *mf* *p* *mf* *p* *mf*

*f* *p* *mf*

78

*f* *p* *mf* *pp* *mp* *pp*

*sul tasto gliss.* *pizz.* *gliss.* *gliss.*

*f* *p*

*sul tasto gliss.* *pizz.* *sul pont.*

*pp* *mp* *p* *mp* *pp* *mp*



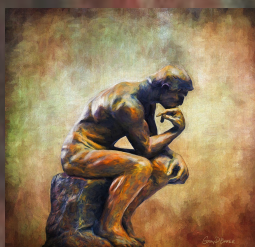
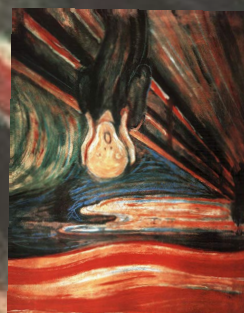
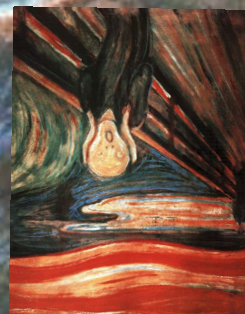
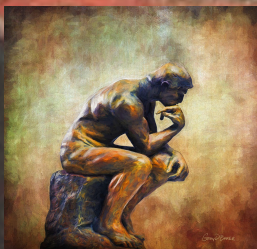
83 7

*f* *gliss.* *mf* *pizz.* *f* *gliss.* *gliss.* *f*

*pp* *p* *pp* *p* *f*

*pp* *pp* *p* *pp* *f*

*pp* *pp* *p* *pp* *f*







101

sul pont.  
Gliss freely... until finding a nice harmony

**G**

pizz. 9

105

sul pont.  
gliss.

tr

gliss.

pp mp pp mp pp mp

pizz.

sul pont.

A.H.-----4

H

L

gliss.

pizz.

sul pont.

gliss.

ppp p p ppp mp

Finger slap on the body

ppp mp ppp

108

pizz.

pizz.

gliss.

gliss.

gliss.

tr

pizz.

pizz.

sul pont.

A.H.-----4

gliss.

pizz.

pizz.

sul pont.

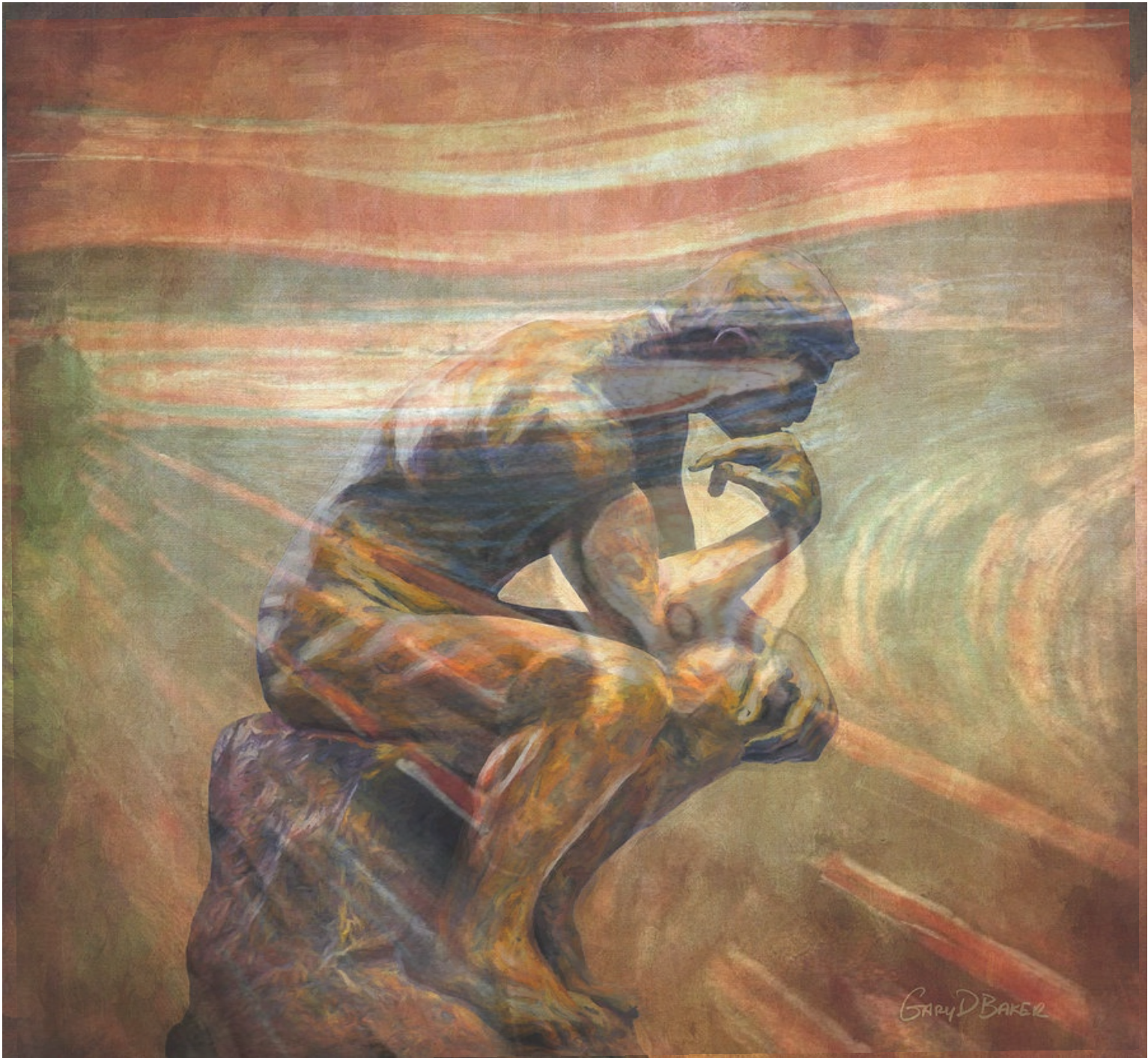
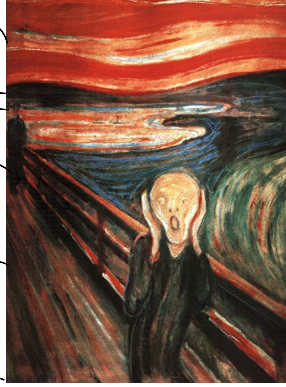
ppp ff



sul pont.

Gliss freely... until finding a nice harmony

The image shows a musical score for four staves. Each staff begins with a treble clef and a key signature of one flat. The first measure of each staff contains a series of eighth notes. A vertical line is drawn after the first measure on each staff. To the right of this line, the instruction 'sul pont.' is written above each staff. A large, wavy line starts from the first measure and extends across the staves, with the instruction 'Gliss freely... until finding a nice harmony' written above it. The line ends with a diamond-shaped symbol.





# DETOUR

JOURNEY TO THE SELF CONSCIOUSNESS



PIANO SOLO

KAI CHUNG FUNG

# *Detour*

*piano solo*

KAI CHUNG FUNG



## PERFORMANCE NOTE

There are four ways to perform *Detour*:

**1. Follow the dashed lines**

Choose intuitively which dashed line to follow and perform according to the text commands when reach one.

**2. Boxes only**

Treat all boxes including the text commands as musical fragment and perform each box freely with any sequence and any numbers of repeats. The pages can be rearranged in any order for this option.

**3. No box**

Ignore all the boxes and dashed lines and perform the musical passage linearly.

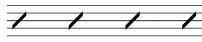
**4. Everything except text command**

Perform the music linearly like the standard way of reading notation, playing all the musical passages whether they are boxed or not.

## TECHNICAL INSTRUCTIONS



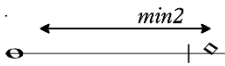
Certain parts are presented on single-line staff. Notes below or above the line roughly guide the contour of the melody



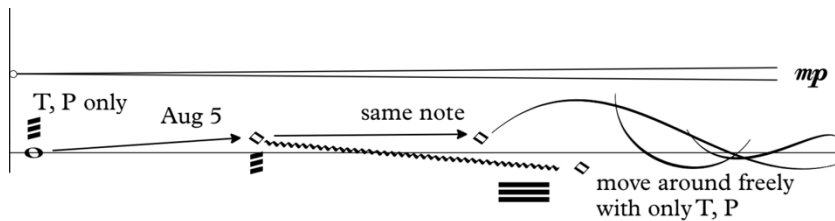
Slashes on five-line staff/ single-line staff - performers have the autonomy to play any pitched or non-pitched sound effect (or using the indicated scale)



Crescendo from silence



Play the note with diamond note-head up or down the indicated interval from the previous note. If the interval is indicated within one part, the pianist should follow the contour. If the interval is indicated between two parts (right hand and left hand), the pianist can decide whether the interval go upward or downward.



T = Thumb  
P = Pinky

In this excerpt and other similar excerpts, start with a tremolo on any note using the indicated fingers. Then move the tremolo augmented 5<sup>th</sup> upward. From the second note (with diamond-note head), continue the tremolo with one finger (possibly the thumb) staying on the same note and another (possibly the pinky) moving downward

Harmonic Major Scale: A major scale with the sixth degree lowered. E.g. C harmonic major



# Detour

Kai Chung Fung

Pick one of the boxes to begin the performance

Improvise with only 2 fingers (each hand) for around 20s  
*ppp* ————— *mp*

Improvise freely for around 30s

improvise freely with one hand for around 10s

Adagio

any note  
*ppp*  
*ppp*  
Ped.

*ppp*  
T, R T = thumb R = ring finger  
*ppp*  
Ped.

*pp*  
T, P  
*pp*  
Ped.

*mp*  
*pp*  
Ped.

*pp*  
*pp*  
Ped.

Develop this idea, play for around 20s, then improvise freely for around 10s

*pp*  
T, P only Aug 5 same note  
*pp*  
Ped.

*mp*  
*f*  
Ped.

*pp*  
rit. A tempo  
whole tone scale only  
maj 3 Aug 5  
*ppp* *mp*  
Ped.

*mf*  
rit. A tempo  
whole tone scale only  
Aug 4 same  
*ppp* *pp* *mp* *pp*  
Ped.

Go back to the beginning

*p* *pp*  
same note  
Aug 4 same note  
*ppp*  
Ped.

Develop this idea, play for around 20s, then improvise freely for around 30s then finish the performance

T, R min 6

Develop this idea, play for around 20s, then go back to the beginning

whole tone scale only

pp mp ppp

pp

same note

p

ppp

p

pp

Improvise freely for around 30s then go back to the beginning  
pp mp

pp

p

p

pp

maj 3

maj 6

T, P only

pp mp same note ppp p

mp

Improvise freely for around 30s then finish the performance

pp

mp

f

f

pp

pp

mf pp p

whole tone scale only

pp

pp

min 6

min 0

p ppp

pp

mp > pp

ppp

mp

ppp

mp

mf

pp

pp

mp

pp

mp

p

mp

harmonic major scale only

mp

pp < mp

p < mf

p

pp

p

ppp

pp

f

p

p

91 *mf* *ppp* *ppp* *pp* *mp* *ppp*

Measures 91-96: Treble and bass clefs. Measure 91 has a dynamic of *mf*. Measures 92-93 have *ppp*. Measure 94 has *ppp*. Measure 95 has *pp*. Measure 96 has *mp* and *ppp*. There are slurs and accents throughout. Fingerings 5 and 3 are indicated.

**A tempo**

97 *mp* *ppp* *mp* *pp* *ppp* *mp* *p*

Measures 97-101: Treble and bass clefs. Measure 97 has a dynamic of *mp*. Measures 98-99 have *ppp*. Measure 100 has *mp* and *pp*. Measure 101 has *ppp* and *p*. There are slurs and accents throughout. Fingerings 3 and 5 are indicated.

**A tempo**

Measures 102-103: Treble and bass clefs. Measure 102 has a dynamic of *ppp*. Measure 103 has a dynamic of *p*. There are slurs and accents throughout.

102 *mf* *pp* *mp* *p*

Measures 102-103: Treble and bass clefs. Measure 102 has a dynamic of *mf*. Measure 103 has a dynamic of *pp*. There are slurs and accents throughout. Fingerings 3 and 5 are indicated.

whole tone scale only

Measures 104-108: Treble and bass clefs. Measure 104 has a dynamic of *mp*. Measure 105 has a dynamic of *p*. There are slurs and accents throughout. A "maj 3" interval is marked.

Improvise freely for around 30s using whole tone scale *mp* *ppp*

109 *p* *mf* *pp* *ppp* *mp* *f*

Measures 109-114: Treble and bass clefs. Measure 109 has a dynamic of *p*. Measure 110 has *mf*. Measure 111 has *pp*. Measure 112 has *ppp*. Measure 113 has *mp*. Measure 114 has *f*. There are slurs and accents throughout. Fingerings 5 and 3 are indicated.

Measures 115-118: Treble and bass clefs. Measure 115 has a dynamic of *mf*. Measure 116 has a dynamic of *pp*. Measure 117 has a dynamic of *f*. Measure 118 has a dynamic of *f*. There are slurs and accents throughout. Fingerings 3 and 5 are indicated.

115 *pp* *f* *p* *mf* *pp* *mp*

Measures 115-118: Treble and bass clefs. Measure 115 has a dynamic of *pp*. Measure 116 has *f*. Measure 117 has *p*. Measure 118 has *mf*. There are slurs and accents throughout. Fingerings 3 and 5 are indicated.

Measures 119-121: Treble and bass clefs. Measure 119 has a dynamic of *mf*. Measure 120 has a dynamic of *ppp*. Measure 121 has a dynamic of *pp*. There are slurs and accents throughout. Fingerings 3 and 5 are indicated.

Measures 122-125: Treble and bass clefs. Measure 122 has a dynamic of *pp*. Measure 123 has a dynamic of *mf*. Measure 124 has a dynamic of *ppp*. Measure 125 has a dynamic of *f*. There are slurs and accents throughout. Fingerings 3 and 5 are indicated.

Measures 126-127: Treble and bass clefs. Measure 126 has a dynamic of *ff*. Measure 127 has a dynamic of *ff*. There are slurs and accents throughout.

122 *pp* *mp* *pp* *p* *pp* *mp*

Measures 122-125: Treble and bass clefs. Measure 122 has a dynamic of *pp*. Measure 123 has *mp*. Measure 124 has *pp*. Measure 125 has *p*. There are slurs and accents throughout. Fingerings 3 and 5 are indicated.

Measures 126-127: Treble and bass clefs. Measure 126 has a dynamic of *mp*. Measure 127 has a dynamic of *pp*. There are slurs and accents throughout.

128 *mf* *tr* *pp* *mp*

*ppp* *p*

*ppp* *mp* *p*

*rit.*

*A tempo* *p* *mp*

whole tone scale only

135 *ppp* *mp* *pp*

*mp*

*mf* *pp* *ppp* *mp*

*mf*

*mp*

improvise freely only with one hand for around 10s

142 *mp* *pp* *mf* *pp*

*pp* *mp* *pp*

*mf* *pp* *mf*

*ppp* *p*

149 *mp* *pp*

*f*<sup>3</sup>

*p* *mf*

*pp*

*pp*

Improvise for around 10s using whole tone scale only *mp* *pp*

155 *rit.* *tr* *ppp* *ff* *tr*

*pp* *mp* *ppp*

*A tempo* *ff*

*min 3* *maj 2* *aug 4*

Go back to the beginning

162 *ppp* *mp* *pp*

*mp* *ff*

*pp* *mp* *f*

*ppp* *mp*

*sfz*

rit. . . . . A tempo

Musical score for measures 168-172. The piece starts with a piano (pp) dynamic and moves through various dynamics including forte (f), piano (p), fortissimo (ff), and sforzando (sfz). It features several triplet patterns in both hands.

Musical score for measures 168-172, showing a dynamic range from ppp to f.

Improvise freely with only one hand for around 10s

Musical score for measures 173-176, showing a melodic line in the right hand.

stop for 3s

Musical score for measures 173-176, showing a more complex texture with dynamics f, p, mf, and sfz.

Musical score for measures 173-176, showing a dynamic range from f to ppp.

Develop this idea, play for around 30s

improvise freely then finish this composition

Musical score for measures 177-181, showing a melodic line in the right hand.

Musical score for measures 177-181, showing a complex texture with dynamics f, p, ff, and sfz.

Musical score for measures 177-181, showing a dynamic range from pp to sfz.

Develop this idea, play for around 20s, then improvise freely for around 10s

improvise freely with whole tone scale

Grave

Musical score for measures 182-188, marked 'Grave'. It features a slow, somber mood with dynamics p and pp.

Musical score for measures 182-188, showing a dynamic range from pp to mp.

Musical score for measures 182-188, showing a dynamic range from pp to mp.

Harmonic major scale only

Musical score for measures 189-196, showing a melodic line in the right hand.

Musical score for measures 189-196, showing a complex texture with dynamics mp, pp, p, and mf.

Improvise freely with only one hand for around 10s

improvise freely for around 10s using only whole tone scale

Go back to the beginning

rit. . . . . A tempo

Musical score for measures 197-200, showing a melodic line in the right hand.

Musical score for measures 197-200, showing a dynamic range from pp to mp.

Musical score for measures 197-200, showing a dynamic range from p to mf.

203 *pp mp p p mf f ppp*

208 *mf ppp mp p ppp ppp mf pp*

improvise for around 30s using harmonic major scale

214 *pp f mp pp f mf pp*

Improvise freely then finish the performance

Improvise freely with only one hand for around 10s

223 *pp mp pp ppp mp pp*

Improvise freely then finish this composition

Improvise freely only using one scale

Improvise freely for around 10s

Go back to the beginning

230 *pp mp pp mp pp*

230 *pp*

237 *mp f pp ff*

237 *pp*



Improvise freely with only one hand for around 10s

harmonic major scale only

whole tone scale only

Improvise freely for around 10s using one scale only

stop for 3s

Improvise freely for around 10s

Go back to the beginning

294

ppp  
pp  
ppp  
ppp  
ppp

stop for 3s

303

ppp  
ppp  
ppp  
ppp  
pp

any note

stop for 3s

mp  
mp

mf  
pp  
mf  
pp

Improvise freely for around 10s using one scale only

Develop this idea, play for around 20s, follow by improvising freely for around 30s, then finish the performance

ppp  
min 6  
min 2  
ppp

stop for 3s

Improvise freely for around 30s then go back to the beginning

Improvise with only 2 fingers (each hand) for around 20s

stop for 3s

Go back to the beginning

Improvise freely for around 30s using whole tone scale

ppp — P — ppp

sf  
sf

stop for 3s

Improvise with only 2 fingers (each hand) for around 20s

Improvise freely for around 10s using one scale only Then go back to the beginning

Improvise freely for around 30s then finish the performance

p  
mf  
p  
mf

stop for 3s

Develop this idea, play for around 30s

f  
ppp  
f  
ppp

stop for 3s

Go back to the beginning

stop for 3s

rit.  
5  
5

stop for 3s

Develop this idea, play for around 30s

Improvise freely then finish the performance

p  
p  
p  
p

stop for 2s

Develop this idea, play for around 30s

Go back to the beginning

ppp  
min 6  
min 2  
ppp

stop for 3s

play this with only thumb and ring finger for around 30s

309

ppp  
ppp  
ppp  
ppp