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The Discovery of Body

— A New Concept of Musical Notation in the Works of

Kurtág, Ferneyhough, and Harada —

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Introduction

The aim of this research is to discover composers' musical intentions in relation to a performer's body in new music¹. This discovery will be realised by examining the new concept of notating music with a focus on the inner situation of a performer's body during the act of performing.

Most of the previous research on notations has so far focused on factors such as what is directly observable, the history of notations, the meaning of symbols, or graphic notations². In this research, however, the focus is placed on what is not directly observable, i.e, the hidden meaning of notations.

In this thesis, the works of György Kurtág (1926-), Brian Ferneyhough (1943-), and Keiko Harada (1968-) are selected for this research because their compositional concepts are related to the performers' body during the act of performing. These works are shown below:

1. György Kurtág – *Játékok (Games)* for Piano, Volume I (1973)
2. Brian Ferneyhough – *Unity Capsule* for Flute Solo (1975-6)
3. Keiko Harada – *Four Hands for a Grand Piano (2010)*, First Movement

These selected works are representative works that focus on the inner situation of performers.

¹ New music “applies to all those tendencies which have departed from classical music and the tonal system.” (Ranković, 1979: 199)

² Including Alyssa Gretchen Smith's *An examination of notation in selected repertoire for multiple percussion* (United States, 2005), Gardner Read's *Pictographic score notation: A compendium* (United States, 1998), and Paul Greenstone's *Articulation guide for brass instruments based on common practices of contemporary composers and performers* (Gainesville, 1986).

Moreover, they are works that showed not only similarity in concept but also diversity in the method of notations. The notations of these works are unique in their outlooks and possession of hidden meanings. Thus performers attempt to decode the hidden meanings intuitively through their practices. Therefore, in this research, the following three resources are dealt with:

- i. Written documentations including programme notes, published interviews, articles, and books authorised by composers
- ii. Observations and interviews including observing rehearsals, interviewing composers and performers who are actively involved in the new music scene
- iii. Actual experiences (as a participant-observer) which include rehearsing with composers and performing the works in public

The reason for the third item above is that since the inner situation of the body is related to experience during the performance, written documents alone are insufficient to conduct in-depth research.

This thesis is divided into four chapters. In Chapter One, the theoretical framework of this research will be presented. This framework includes the outlook of notations, the hidden meaning of notations, *abstract physicality* and *physiological physicality*, and the non-theatrical intention of gestural indications in notations. When the framework has been clarified in the first chapter, a detailed observation of each selected work by the three composers will be discussed one by one in the subsequent chapters.

In Chapter Two, Kurtág's *Játékok (Games)* for Piano, Volume I (1973) will be examined by unfolding the hidden meaning of dotted curve notation. After the large collection of eight volumes is introduced, firstly, the general meanings of dotted curve notation in the pre-1980s (after the first volume of *Játékok's* score was published) will be discussed in relation to that of Kurtág's. Then, the relation between the dotted curve notation and the compositional concept of *Játékok* will be observed. Finally, we will focus on the following two points:

- i. The kind of phrasing implied through the dotted curve notation
- ii. The different functions of *pause*.

Following a similar outline as Chapter Two, Chapter Three shifts our focus to Brian Ferneyhough's complex notation in *Unity Capsule* (1975-6). Here we will focus on the following:

- i. The visual complexity in notation
- ii. The gestural indications in notation

In order to unfold their hidden meanings, the gap between the resulted sonority and the notation will be examined.

Chapter Four brings us to *Four Hands for a Grand Piano* (2010) by Keiko Harada. This work consists of three movements. Of these, only the first movement, whose concept is clearly described as "visualisation of the inner energy of performers" by the composer herself, will be discussed.

An introduction to Harada's core compositional concept will be made and then followed by the concept of the work. After that, we will focus on the following:

- i. Notations connecting "ordinary piano sonority" and the "others" (gesture with sound, gesture without sound, and voice)
- ii. Notations of the "others"

After Chapter Four, a final conclusion will be made based on a thorough comparison of the three works. In particular, some similarities and differences in terms of notations and intentions will be discussed.

It is hoped that this research will become a catalyst for performers, composers, and audience who have yet to show an interest in new music, which is often considered to be "difficult to understand". Also, the method and approach adopted in

this research will provide an entirely new perspective in the area of music creation and notation by encouraging further and deeper research into the current music scene.

Chapter 1

Theoretical Framework

1.1 The Outlook of the Notations

In order to discover composers' musical intentions in relation to the inner situation of performers' bodies in new music, the relations between musical notations and compositional concepts of respective works must be closely observed.

The outlook of notations will be examined first because it is the most obvious and the easiest to access. It often provides a hint to performers as to how to approach a new piece of music. The three selected works dealt with in this research may seem to have very different outlooks at first glance. In Kurtág's *Játékok*, the notation leaves an impression of indeterminacy. For example, instead of notating a precise rhythm, a space between two notes is used to express duration between them.

On the other hand, Ferneyhough's notation in *Unity Capsule* shows a different approach in the method of notating. It is visually complex and dense, with overloaded information written on the notation including instructions in sentence form. Lastly, Harada's notation shows a mixture of common five-stave notation and uncommon notation, where motion, voice, finger, and rhythm are notated on separate one-line staves.

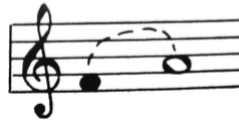
Moreover, these three works might seem to be unrelated to each other at first glance due to the differences in the outlook of notations. However, some new findings will be presented after the hidden meaning behind these notations is unfolded.

1.2 The Hidden Meaning of the Notations

The hidden meaning of the notations is examined through selected unique characteristics of the notations in each work. These unique characteristics featured in each piece provide hints to what composers had in their minds when they were

composing the selected works. This is because every composer has different expressions which lead to the formation of notation.

In Kurtág's *Játékok*, the existing notation symbol, i.e., dotted curve notation (see Example 1) with additional meaning is applied, as below:

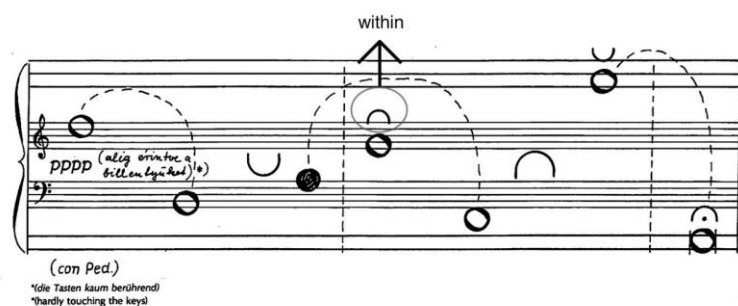


Example 1. Dotted Curve Notation from “Key to the Signs Used” (Kurtág, 1979a: 12) © Copyright 1979 by Editio Music Budapest

The dotted curve notation requires our attention because it is an uncommon notation sign in piano repertoires. Similar notation signs are found in strings and woodwinds repertoires. These notation signs are commonly associated with “phrasing”. The hidden meaning which Kurtág intended this notation to have will be discussed in Chapter Two.

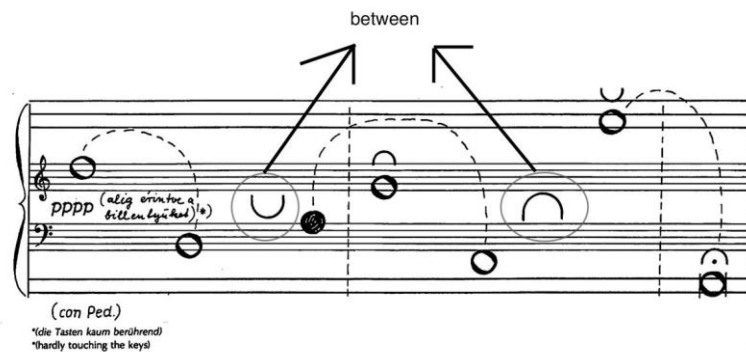
Furthermore, “*pause*” is applied in unique ways inside the notation of *Játékok*. The *pause* is applied “within” the dotted curve notation or “between” the dotted curve notations as follows:

- a. “within”: When *pause* is notated inside a dotted curve notation (see example 2)
- b. “between”: When *pause* is notated outside and in between two dotted curve notations (see example 3)



Example 2. “Virág az ember...(1a)”(Kurtág, 1979b: 3)

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Example 3. “Virág az ember...(1a)” (Kurtág, 1979b: 3)

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These ways of notating *pause* are unique because in general, a *pause* implies “temporary break” or “discontinuity”, whereas “phrasing” implies “continuity”. Here, two contradicting notation signs at the same time are applied. This suggests that a hidden intention exists. Through these unique ways of applying the *pause* we can uncover the hidden meaning of the dotted curve notation. Details will be discussed in Chapter Two.

In the case of *Unity Capsule* by Ferneyhough, the unique characteristics of its notation include visual complexity and the gestural indications. Here, “visual complexity” refers to the highly-dense notation (see Example 4) that requires a performer to multi-task at a limited time-frame. This overloaded information challenges the performer’s capacity. The musical intention behind this challenge will be examined later in the discussion.

On the other hand, “gestural indications” refers to indications of gesture such as “remove instrument from lip abruptly”, “return instrument abruptly to playing position” and more. In addition, it is worth noting that the gestural indications mentioned above do not affect directly the flute sonority. These two unique characteristics of Ferneyhough’s notation possess hidden meanings that can be revealed through the comparison of the resulted sonority of the work and its notation. Our discussion on this work will continue in Chapter Three.

For Pierre-Yves Arlaud

1) Before 15" pause: extend head-joint fully.

2) 15" of absolute silence and lack of movement (playing stop)

Flute

Voice

Presto
sans vibrato

molto secco!
senza

poco pesante
poco

return head-joint to normal position

return instrument abruptly to playing position

remove instrument from lip abruptly

N.B. The absence of information on the voice line indicates a normal mode of production, unless contrary instructions appear in the flute part.

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Example 4. Excerpt from *Unity Capsule* (Ferneyhough, 1975: 1)

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In Harada's *Four Hands for a Grand Piano (2010)*, First Movement, audible and/or observable sonority can be divided into two large categories: the "ordinary piano sound" and the "others" (the gesture without sound, the gesture with sound, and voice). Based on these two categories, the transition from the "ordinary piano sound" to the "others" and vice versa provide us with hints to a unique connection between gestures and sonority. This unique connection will be discussed in order to reveal the hidden meaning of the notation. In addition, the notation of the "others" will also elucidate the musical intention of the composer.

As mentioned before, this work was composed with the concept of "visualisation of the inner energy of performers". Thus, it is convincing to presume that the above-mentioned two unique characteristics of the notation have a close connection with "inner energy". Through an examination of this close connection, the hidden meaning of the notation will be clarified in Chapter Four.

1.3 Abstract Physicality and Physiological Physicality

In Kurtág's programme note, the term "movement" is mentioned as follows:

Pleasure in playing, the joy of movement-daring and if need to be fast movement over the entire keyboard right from the first lessons instead of clumsy groping for the keys and the counting of rhythms-all these rather vague ideas lay at the outset of the creation of this collection. (Kurtág, 1979a: 9)

This statement shows that the nature of body movement and its relation to the act of performing were considered and contemplated by the composer in *Játékok*.

On the other hand, in Ferneyhough's essay on *Unity Capsule*, the term "body-conscious" is mentioned as follows:

The simple fact of learning such a notation demands much of the serious interpreter by way of self-analysis on both conscious and ‘body-conscious’ levels. (Ferneyhough, 1995: 99-100)

Here, Ferneyhough suggested two ways of self-analysis: “conscious” and “body-conscious”. “Conscious” way of self-analysis is interpreted as analysing new experiences including learning new notation and new musical expression based on pre-acquired knowledge and related past experiences. Meanwhile, “body-conscious” is interpreted as being aware of body movement observable externally and also the inner situation of the performer’s body which he or she experiences during the act of performing.

On the other hand, in Harada’s *Four Hands for a Grand Piano (2010)*, First Movement, the term “motion” is observed on the score’s top stave as follows:

KEIRO HARADA (2010)

PIANO I

MOTION: ① TURN HEAD TO AUDIENCE, ② RETURN AND HEAD DOWN (close eyes), ③

VOICE: KA, Ho

FINGER: freeze

RHYTHM: ♩ = 48, p, ff

PIANO II

MOTION: ♩ = 48, TURN HEAD TO AUDIENCE

VOICE: KAKA

FINGER: freeze

RHYTHM: ♩ = 48, ff

**Example 5. Excerpt from *Four Hands for a Grand Piano (2010)*, First Movement
(Harada, 2010b: 1) JASRAC 出 1614594-601**

This stave notated the motion of performer’s head and eyes for the music. Another stave named as “finger” is also found on the score, where the movement of fingers is instructed. These staves show clear instructions on how the specific parts of the body (eye, head, and finger) are performed.

Collectively, the terms such as “movement”, “body-conscious”, and “motion”, taken from the resources of the three works, are related to “body”, a term that is associated with “physicality”.

According to Oxford Dictionary, “physicality” is defined as “the fact of relating the body as opposed to the mind; physical presence.” Nevertheless, in this research which focuses on the “inner situation”, the linguistic-based definition of “physicality” is insufficient. Thus, two new terms are introduced as below:

1. *Physiological Physicality*

2. *Abstract Physicality*

Here, *physiological physicality* refers to the gesture³ of a performer that is observable externally, while *abstract physicality* refers to the inner situation of the body that is not observable externally. It is important to bear in mind that these two terms are treated as a set. Thus, “abstract” and “physicality” are not in contrast to each other, while “physiological” and “abstract” are in contrast to each other. Although they are contrasting ideas, they are not necessarily against or separated from each other.

Furthermore, “physicality” in this research focuses on the act of performing based on the musical intentions of composers. During the act of performing, physiological physicality and abstract physicality happens simultaneously. This simultaneous happening is divided into the above-mentioned two terms because of the following reasons:

- i. For analytical purpose
- ii. To clarify the differences between physicality that is not observable externally and physicality that is directly observable externally

³ In this research, “gesture” includes “motion” (used in Harada’s notation) and “movement” (used in Kurtág’s programme note).

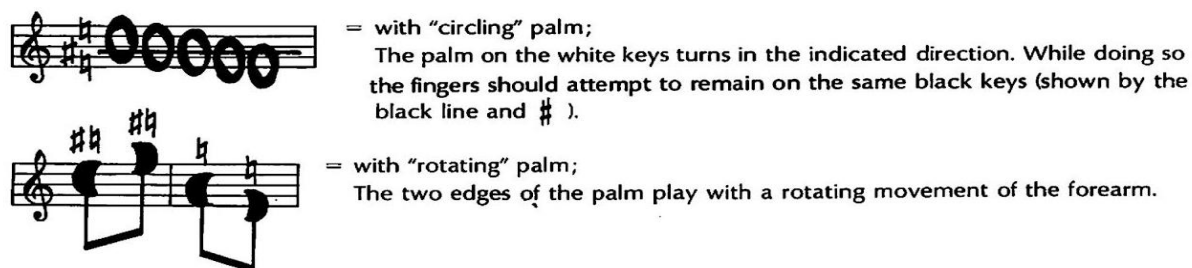
- iii. To differentiate directly observable physicality without a theatrical purpose from the one with a theatrical purpose

In regards to physiological physicality, it has been commonly discussed under the topics of physical tension such as muscle injuries, and psychological tension such as stage fright during performance⁴.

1.4 The Non-Theatrical Intention of the Gestural Indications in the Notations

It will be a misinterpretation of “physicality” if we consider that every gesture we see during a performance is intended for a theatrical effect. In this research, the gestures indicated by the composers in their works reveal important information on the connection between their compositional concept and the inner situation of performers’ body during the act of performing.

In Kurtág’s *Játékok*, gestures are notated with graphical symbols such as “circling” palm and “rotating” palm as follows:



Example 6. Examples of gestural indications (Kurtág, 1979a: 11)

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⁴ Some notable publications include Percy C. Buck’s *Psychology for Musicians* (1944), Carola Grindea’s *Tensions in the Performance of Music: A Symposium* (1978), Barry Green and WT. Gallwey’s *The Inner Game of Music* (1986), and Thomas Mark, Roberta Gary, Thom Miles, and Barbara Conable’s *What Every Pianist Needs to Know about their Body* (2003).

In these examples, Kurtág’s gestural indications are related to his intention of resulted sonority because the indication of pitch range is also clearly indicated along with them. These gestural indications do not produce a theatrical effect that guide an audience to interpret them as symbols of a certain event. Rather, they are gestural indications that provoke performers to search for the crucial link between their gestures and the sonority they intend to produce musically.

In Ferneyhough’s *Unity Capsule*, written words such as “remove instrument from lip abruptly”, “return instrument abruptly to playing position”, and “pause motionless for nine seconds, then proceed immediately to next page” are used as gestural indications. However, these gestures neither produce audible sounds nor represent specific messages as a theatrical effect to the audience. All these gestures do is to connect sonority before and after them. The details will be discussed in Chapter Three.

On the other hand, Harada’s *Four Hands for a Grand Piano (2010)*, First Movement uses two separate staves to notate gestures. They are “motion” and “finger” as below:

KEIRO HARADA (2010)
PIANO I

PIANO II

① TURN HEAD TO AUDIENCE

② RETURN AND HEAD DOWN (close eyes)

③ freeze

MOTION

VOICE

FINGER

RHYTHM

♩ = 48

TURN HEAD TO AUDIENCE

freeze

**Example 7. Excerpt from *Four Hands for a Grand Piano (2010)*, First Movement
(Harada, 2010b: 1) JASRAC 出 1614594-601**

In this case, performers can easily be misled into believing that these gestural indications are for theatrical effects which encourage the audience to see and expect a story from performers’ gestures. However, as mentioned before, the concept of the

work is “visualisation of the inner energy of performers”. Thus, it is clear that the intentions behind these gestures are not for theatrical effects but for visualising the inner energy of the performers. The relation between the visualisation of inner energy and notation will be further discussed in Chapter Four.

In summary, by examining the “outlook”, “hidden meaning”, “physicality”, and “non-theatrical gestural indications” found in the notations, we will be led to the discovery of composers’ musical intentions in relation to a performer’s body in these works.

Chapter 2

György Kurtág – Dotted Curve Notation in *Játékok*, Volume I (1973)

2.1 Introduction

György Kurtág (1926-) is a Hungarian composer who is also active as a pianist. One of his most representative and internationally performed works is called *Játékok*, an eight-volume collection featuring pieces for piano solo (Volume I, II, III, V, VI, VII) and four hands or two pianos (Volume IV and VIII). The first four volumes were published in 1979, and the subsequent ones were added between 1997 and 2010.

In order to examine the original meaning of Kurtág’s notation, it is necessary to study the dotted curve notation in *Játékok*, based on Kurtág’s statement, according to which the dotted curve notation “does not indicate touch⁵ but holds together units that belonging together (phrasing).” (Kurtág, 1979a: 9) Below is an excerpt from “*Hommage à Verdi*” in which the dotted curve notation is well-represented:

The image shows a musical score for the second piano of a duo, labeled "Secondo". The tempo is marked "Tempo II". The music is in a key with one flat (B-flat) and a common time signature. The notation includes dotted curves (dashed lines with a dot) that group notes together. The dynamics are marked "pppp". There are performance instructions: "8... (con Ped.)" and "ad lib: Fine". A "poco" marking is placed over a section of the music, and "rep. al fine" is written at the end of the excerpt.

Example 8. Excerpt from “*Hommage à Verdi*” (Kurtág, 1979b: 4)

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⁵ Here, “touch” is referred to, for example, as “legato”. The term “touch” is coined directly from Kurtág’s “Key to the Signs Used” (Kurtág, 1979a).

This dotted curve notation deserves special attention because of its hidden meaning. The above-mentioned Kurtág's statement suggests that the phrasing implied by the dotted curve notation is different from "touch". Therefore, it is important to determine what kind of phrasing is implied by the dotted curve notation. Prior to confirming this implication, one must first consider the meaning of dotted curve notation before *Játékok* whose first volume was published in 1979. This is because there is a possible connection between Kurtág's compositional concept and his usage of an existing notation sign (dotted curve notation) instead of creating an entirely new notation sign for his musical intentions.

2.2 The Meaning of Dotted Curve Notation in the pre-1980s and its Relation to Kurtág's Notation

It remains a difficult task for researchers to bring unity and standardisation to new music notations in the twentieth century and later, although a number of notable efforts were documented⁶.

Despite this difficulty, a unique book that collected opinions from a research group through a four-year project of the Index of New Musical Notation rather than individual opinions was published in 1980. It is known as the *Music Notation in the Twentieth Century: a practical guidebook* and was published under the name of Kurt Stone. Stone's book is also unique because he integrated new notations into the total notational vocabulary of all serious music written in the twentieth century. He treated new notations as a continuation from traditional notations, not as a separate phenomenon.

⁶ Including Erhard Karkoschka's *Notation in New Music: A Critical Guide to Interpretation and Realisation* (German, 1966/ English, 1972), Howard Risatti's *New Music Vocabulary: A Guide to Notational Signs for Contemporary Music* (1975), and Gardner Read's *20th Century Notation* (Unpublished).

The term “dotted curve” was not coined in Stone’s book. However, similar notation signs, i.e., “dotted phrasing slurs” and “broken ties”, were found in his book. According to Stone, “if it is found desirable to indicate phrasing in music for winds, bowed stings, or voice, an additional set of slurs must be superimposed upon those fulfilling other functions. This can lead to certain ambiguities. To avoid them, dotted slurs are often used for phrasing.” (Stone, 1980: 35-36) The author goes on to say that “dotted phrasing slurs may also be used in non-legato music which nevertheless requires some unambiguous phrasing indication.” (ibid: 36) Meanwhile, in the case of “broken ties”, Stone stated that “if a tremolo continues without break from note to note within a measure or across a barline, broken ties should be used.” (ibid: 149) From the above explanations quoted from Stone, we can identify two keywords that act as the fundamental meaning of notation signs in the form of “dotted curve”: “phrasing” and “continuity” (paraphrased from “continuous without break”). These two keywords are also the basis for Kurtág’s dotted curve notation.

However, it is important to note that the dotted curve in Kurtág’s notation implies neither “dotted phrasing slur” nor “broken ties”. Also, it is clear that Kurtág’s dotted curve notation does not imply the function of a “tie”. To further determine the implication behind Kurtág’s dotted curve notation in conjunction with “phrasing” and “continuity”, his compositional concept (including musical intentions) and its relation to the act of performing will be discussed in the following sections.

A similar perspective about Kurtág’s notation in *Játékok* can be found in Johnson’s article. Although Johnson did not specify the meaning of the dotted curve notation, he presented his general idea about the connection between Kurtág’s notation in *Játékok* and the conventional Western notation, as can be seen in the following quotation:

Clearly we must look beyond standard Western analytical techniques, which rely on systematising aspects of pitch and/or rhythm. None of them apply here, even though paradoxically the subject matter of the piece is deeply involved with the Western canon: it borrows its models, quotes from it and

deconstructs it to something which – although recognisably itself – contains none of the traditionally quantifiable elements of itself. (Johnson, 2002: 284)

Johnson also argues that Kurtág’s indeterminate notation is set apart from that of more experimental composers, “for Kurtág the notation is still a conduit for a very specific musical expression, just as conventional notation is.” (ibid: 283)

As an extension to Johnson’s argument, I would like to further propose that Kurtág’s dotted curve notation was derived from the existing notation sign, whose function he extended in order to adopt his original musical intentions.

2.3 Compositional Concept and its Relation to the Dotted Curve Notation

By examining the programme notes written by Kurtág, we can identify the following four points (A-D) in his compositional concept and intentions:

The idea of composing “*Games (Játékok)*” was suggested by children playing spontaneously, children for whom the piano still means a toy. They experiment with it, caress it, attack it and run their fingers over it. They pile up seemingly disconnected sounds, and if this happens to arouse their musical instinct they look consciously for some of the harmonies found by chance and keep repeating them. (Kurtág, 1979a: 9)

Point A: When the performer’s musical instinct is aroused, he or she will try to repeat what they found by chance.

Thus this series does not provide a tutor, nor does it simply stand as a collection of pieces. It is a possibility for experimenting and not for learning “to play the piano”. (ibid: 9)

Point B: This educational series is intended without an external tutor, with the intention of the performer to take the initiative to discover music (not piano playing technique) by experimenting and understanding their own physical movements.

Playing – is just playing. It requires a great deal of freedom and initiative from the performer. On no account should the written image be taken seriously but the written image must be taken extremely seriously as regards the musical process, the quality of sound and silence. We should trust the picture of the printed notes and let it exert its influence upon us. The graphic picture conveys an idea about the arrangement in time of even the most free pieces. (Kurtág, 1979a: 9)

Point C: The quality of sound and silence shown through notation (written image) are taken extremely seriously as a musical process. In other words, the notation (graphical symbols included) used here has very clear laid-out instructions.

Let us tackle bravely even the most difficult task without being afraid of making mistakes: we should try to create valid proportions, unity and continuity out of the long and short values – just for our own pleasure! (ibid: 9)

Point D: Creation of valid proportions, unity, and continuity are intended and shown in notation.

Furthermore, according to Johnson, “through examining the content of *Játékok* as a whole, it is clear the importance of Kurtág attaches to the communication of music as a physical experience.” (Johnson, 2002: 284) However, in his article, he did not describe further what kind of physical experience Kurtág intended to create. Agreeing to Johnson’s (2002) viewpoint, along with the four points listed above, I would further propose that the compositional concept and intentions of Kurtág in *Játékok* are

rooted in both physiological physicality and abstract physicality introduced in Section 1.3 of Chapter One.

During the act of performing, performers literally have to understand and figure out the physiological physicality including movement, posture, and muscles, in relation to the sonority they intend to produce.

In the Kurtág's case as described above, physiological physicality is related to points A and B below:

- A. When the performer's musical instinct is aroused, he or she will try to repeat what they found by chance.
- B. This educational series is intended without an external tutor, with intention for the performer to take the initiative to discover music (not piano playing technique) by experimenting and understanding their own physical movements.

Repeating what they found by their musical instinct, performers are required to pay more attention to their physiological physicality including their movements and posture. This is because the reproduction of the same sonority involves performers to observe themselves. These observations include listening to the ways in which the sonority produced by the performers, as well as their own body, movement, and physical breathing, relate to their musical instruments.

In addition to physiological physicality, abstract physicality is also required during the act of performing. Kurtág's intentions in points C and D pointed to the necessity of having the abstract physicality by emphasizing the musical process of creating the intended quality of sound and silence as well as the continuity between them (sound and silence). In order to realise this musical process, physiological physicality alone is insufficient.

- C. The quality of sound and silence shown through notation (written image) are taken extremely seriously as musical process. In other words, the notation (graphical symbols included) used here has a very clear laid-out instructions.

D. Creation of valid proportions, unity, and continuity are intended and shown in notation.

Abstract physicality, i.e., the inner situation of a performer's body during the act of performing is observed by the performer in addition to observing his or her physiological physicality. Furthermore, the performer is required to read the abstract physicality the composer intended to have from the notation. In the case of Kurtág's *Játékok*, the intended abstract physicality is uncovered through the hidden meaning of the dotted curve notation by the end of this chapter.

During the working process of *Játékok*, Kurtág collaborated with a renowned Hungarian piano educator named TEÖKE Mariane⁷. He had learnt that the first thing a child would do with piano is to play the entire range of keyboard within their physical (physiological) capacity. As a result, the first piece “*Örökmozgó (talált tárgy)*” featured in Volume I was composed for the entire range of keyboard:

1

A
Örökmozgó *
(talált tárgy)
Perpetuum mobile (objet trouvé)

Vivace, ma sempre tranquillo

The image shows a musical score excerpt for 'Örökmozgó'. It features a single staff with a dotted curve notation. The curve starts with a treble clef and a common time signature. The notation is a continuous, wavy line that oscillates above and below a dashed horizontal line. The curve is annotated with several performance instructions: 'm.s.' (mezzo-soprano) above the first two peaks, 'm.d.' (mezzo-dolce) below the first two troughs, 'simile' above the third peak and below the third trough, 'legatissimo possibile' below the fourth trough, and 'sempre con Ped.' below the fifth trough. The curve ends with a sharp sign (#) above the final peak. The tempo/mood is indicated as 'Vivace, ma sempre tranquillo'.

Example 9. Excerpt from “*Örökmozgó (talált tárgy)*” (Kurtág, 1979b: 1)

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⁷ Printed on English Version Score (Kurtág, 1979b): Pedagogical Collaborator, TEÖKE Mariane.

The idea of physicality in Kurtág’s music can also be identified by comparing the notation method of the first and last pieces in *Játékok*’s first volume.

The first piece and the last piece are the same piece of music notated in different manners. Both are given the title “*Örökmozgó (talált tárgy)*”. In the first piece (see Example 9), only the starting point of the glissando-wave at the very beginning was notated with c^1 , whereas the last piece (see Example 10) was indicated with starting and arriving points of each glissando-waves in details:

Örökmozgó (talált tárgy)
Perpetuum mobile (objet trouvé)

Vivace, ma sempre tranquillo

The image shows a musical score for a piece titled "Örökmozgó (talált tárgy)" by György Kurtág. The score is written on a grand staff with ten staves, labeled from top to bottom as c5, f4, h3, c3, c2, c1, c1, c, C, and KCl. The notation consists of a continuous, wavy line that moves up and down across the staves, representing a glissando. The tempo/mood is indicated as "Vivace, ma sempre tranquillo". At the bottom, there is a performance instruction: "sempre con Ped. (ad lib: una corda)".

Example 10. Excerpt from “*Örökmozgó (talált tárgy)*” (Kurtág, 1979b: 25)

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The first piece is for a young pianist who has yet to grow their arms to full length, while the last piece is for a pianist who already has a sufficient physicality in reaching the entire range of keyboard without needing to stand up and move about.

In summer 2014, I conducted some interviews as part of my field work. All the interviewees who had taken direct lessons from Kurtág stated that Kurtág had very clear ideas in mind regarding the precise rhythm and duration of each object (sound or silence) notated in *Játékok*⁸. Their feedback demonstrated that Kurtág was highly

⁸ One of the students even suggested notating the exact rhythm and duration, which Kurtág had in mind, to Kurtág. However, Kurtág disagreed with his suggestion. Another student who was about to play a chamber piece by Kurtág in a master class at

aware of “physicality” in music. Furthermore, he was aware of the fact that every individual possesses a unique form of the body, and he intended to provide performers with a platform to experiment and experience in musical process. Therefore, precise rhythm and timing are not notated in some pieces in *Játékok*.

Consequently, Kurtág’s notation in *Játékok* requires a performer to discover his or her physiological physicality by realising the abstract physicality created by the composer within a timeframe. This leads us to the following assumption: the implication behind the dotted curve notation used in *Játékok* is strongly connected to the realisation of physiological and abstract physicality.

2.4 Focal Point 1: The Kind of Phrasing Implied through the Dotted Curve

Notation

To determine what kind of phrasing is implied by Kurtág’s dotted curve notation in *Játékok*, the combination of notation signs “within” and “between” the dotted curve notations must be examined. The observation of the notation signs “within” and “between” dotted curve notations in *Játékok* leads to the finding of seven details as below:

- i. Type of units (cluster, notes, or single note)
- ii. Distance from one unit to another, clearly or approximately defined (for example, clear interval between two single notes; approximate interval between two clusters.)
- iii. Sound value and duration of a unit, by itself and in relation to the unit before and after (see Chart 1)

a summer festival, was told directly by Kurtág that she was playing it wrong even before she produced a sound on the piano. According to this student, Kurtág was able to recognise that the sound she was going to produce would be wrong based on her gesture.

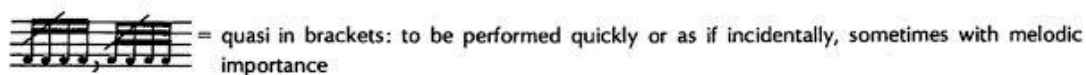
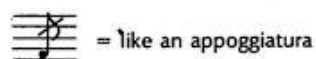
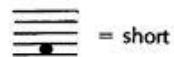
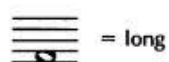
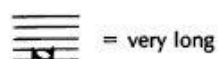
- iv. Touch and articulation
- v. The function of *pause* (prolongation or fracture)
- vi. Duration of *pause*
- vii. Dynamic

Key to the Signs Used

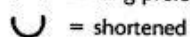
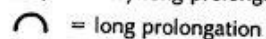
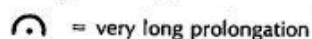
I. Signs indicating value

1. Sound values

White (○) signs indicate generally longer, black (●) signs shorter values. Each sign indicating value is relative in proportion to the chosen tempo of the individual piece.



1a) Signs affecting the duration (over notes or rests)



1b) The range of sound values, in decreasing order:



Chart 1. Excerpt from “Key to the Signs Used” (Kurtág, 1979a: 9)

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In this article, “object” is described as the combination of details that are notated at the same vertical time that moves simultaneously towards the same direction in horizontal time.

In Example 11, there are nine objects, labelled from I to IX:

B
Virág az ember... (1b)

Blumen die Menschen, nur Blumen... (1b) Flowers We Are, Frail Flowers... (1b)

The image shows a musical score for two staves. The upper staff is in treble clef and the lower staff is in bass clef. The music is divided into nine measures, each labeled with a Roman numeral from I to IX. The notes are: I (quarter), II (quarter), III (quarter), IV (quarter), V (quarter), VI (half), VII (quarter), VIII (quarter), IX (quarter). There are dotted curves above the notes in measures I, II, III, IV, V, VII, VIII, and IX. A 'con Ped.' marking is present at the beginning of the piece. The name 'B.Y. darabja' is written vertically on the right side of the score.

Example 11. “*Virág az ember... (1b)*” (Kurtág, 1979b: 3)

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Every object has a position. For example, object I is pitch g^2 ; object II is pitch a , which is lower in position than object I. The combined notation signs of object I is constituted by its position and duration (sound value “short” with “long prolongation”). It is important to note that eliminating any one of the notation signs of an object will make that object into a different one because every notation sign contributes “energy” to the object. Here, the “energy” refers to the individual quality of every single object (sound or silence) the composer intended to have based on abstract physicality shown through the notation, direct or hidden.

Furthermore, the transition of “energy” from one object to another (in the case of “within” dotted curve), also from the ending of one phrase to the beginning of another (in the case of “between” dotted curves), occurs in horizontal time. That connects objects into a phrase shown by dotted curve notation for example, thirty-five objects (labelled from 1 to 35) and four phrasings (the four dotted curve notations) are observed in Example 12:

Szomorú felhangok

Schwermütige Obertöne Melancholic Overtones

Example 12. “Szomorú felhangok” (Kurtág, 1979b: 14)

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The first phrase begins with object 2, transits to object 3, followed by object 4, and finally arriving at object 5, which is the ending of this phrase. “Energy” of an object is realised during performance by the following three-step cycle (PRR-cycle):

Step One: (P)reparation – before the object is produced

Step Two: (R)ealisation – when the object is produced

Step Three: (R)elease – after the object is produced

In Example 12, Step One “Preparation” includes hearing object 2 inside oneself, preparing the finger and body movements required to produce the “energy” of object 2 on piano. Step Two “Realisation” is the moment when object 2 sounds. Finally, Step Three “Release” includes controlling the timing to release object 2 by finger and body movements, also listening to the resonance. Object 3 begins after the release of object 2 by repeating the PRR-cycle. The PRR-cycle is thus realised through both abstract and physiological physicality.

The transition of “energy” from one object to the following one occurs between the release of the former and the preparation of the latter.

2.5 Focal Point 2: The Different Functions of *Pause*

In addition to defining *pause* in a detailed approach (see Chart 2), Kurtág went as far as to notate *pause* “within” and “between” dotted curve notation. This suggests that the quality of silence and its functions are very important in his music.

2. Signs indicating pauses

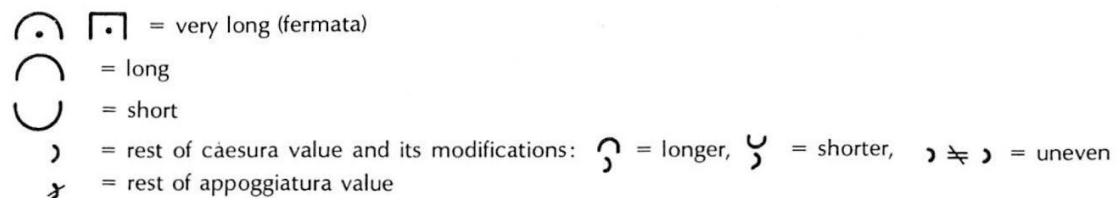


Chart 2. Excerpt from “Key to the Signs Used” (Kurtág, 1979a: 10)

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The different functions of *pause* in two different situations are described as below:

- i. *Pause* “within” a dotted curve: prolongation in transition
- ii. *Pause* “between” two dotted curves: fracture in transition

In Example 12, a *pause* labelled as object 3 is “within” a phrase. Here, it functions as an object prolonging the transition of “energy” from object 2 to object 4. The energy of object 3 is a variation of object 2. If the transition of “energy” does not exist, every object is independent without any relation, which is clearly against Kurtág who considered the dotted curve notation as “phrasing”.

Finally, two basic patterns are observed in the situation where the transition of “energy” happens between the two phrases, i.e., from the ending of one phrase to the beginning of another. In the first pattern, the later phrase begins directly after the

ending of previous phrase, like the first and second phrases of the “*Virág az ember...(Ib)*” (see Example 11). In the second pattern, a *pause* exists between two phrases, like the second and third phrases of the same example. In contrast to the prolongation of “energy” described above through Example 12 (where it occurs “within” a phrase), the transition of “energy” happens in the above-mentioned two basic patterns involves a fracture during the transition from one phrase to the next. That is, during the step of “Release” (PRR-cycle) of the last object “within” a phrase, the connection between “energies” is fractured in order to generate a new energy.

The different functions of *pause* observed in Kurtág’s *Játékok* suggest that the dotted curve notation implies phrasing that is constructed by the transition of “energy”. In order to realise these intended “energy” through performance, the fundamental concept is that performers are required to combine the following two aspects:

- a. To know their own physiological physicality (body and movement)
- b. To find the abstract physicality (energy) indicated through Kurtág’s notation.

2.6 Results

This research has so far demonstrated that the uniqueness of Kurtág’s notation in *Játékok* is attributed to his musical concept which is rooted firmly in physicality. He extended the function of dotted curve notation in order to adopt his original musical intentions. As suggested in Section 2.2, this leads to the assumption that his original musical intentions are derived from the act of performing (physicality).

The physicality in Kurtág’s is described here as abstract and physiological physicality. In Section 2.3, these two types of physicality are observed through comparison of the notations of first and last pieces featured in *Játékok*’s first volume. Consequently, it is suggested that the implication of dotted curve notation is connected to the realisation of abstract and physiological physicality.

In Section 2.4, the “energy” and its realisation are observed through PRR-cycle, while the different functions of *pause* when applied to “within” or “between” phrases are discussed in Section 2.5. As a result, the transition of “energy” among objects is discovered. This leads to the conclusion that the phrasing implied by dotted curve notation in Kurtág’s *Játékok* is constructed by the transition of “energy”.

Kurtág’s notation of *Játékok* is unique in the sense that he required performers to find and understand the physiological physicality individually to realise the abstract physicality based on existing notation signs, thus extending the meaning of the dotted curve notation. As a result, his notation functions not only as a map of a composer’s sound imagination to performers but also as a “puzzle”. This “puzzle” provides performers with much freedom (in the sense of physicality) to go beyond physical limitation (such as length of arms and thickness of finger flesh) and discover the nature of body movement and its relation to the act of performing. The notation of *Játékok* is designed so that pianists at all levels (beginner to advanced level) can configure their very own bodies as performers. As a result, this work guides performers to discover the essentiality of body-performance relationship.

Chapter 3

Brian Ferneyhough – Complex Notation in *Unity Capsule* (1975-6)

3.1 Introduction

Brian Ferneyhough (1943-) is an English composer whose music has been associated with “New Complexity”.⁹ His music is often perceived to be at its extreme difficulty. One of his frequently-performed and well-known pieces, *Unity Capsule* for solo flute, was composed between 1975 and 1976. The piece was premiered at the Royan Festival (March 1976) by Pierre-Yves Artaud, to whom it is dedicated.

Ferneyhough states the following:

Notation (particularly notation) shows us two faces: traceable and analysable in terms of historic development as it doubtless is, it is nevertheless hardly to be separated, even in principle, from the actual goals which a particular artist has set himself. It is far from accidental that so many works of the last three decades are perhaps more immediately categorisable in terms of their visual rather than their aural characteristic. (Ferneyhough, 1995: 2)

This quotation suggests that he is well aware of the visual aspect of notation and its relation to the development of notation. In addition, *New Grove Dictionary* (2001) states the following:

⁹ “A term that became current during the 1980s as a means of categorizing the music of Brian Ferneyhough, Michael Finnissy and a number of younger composers, the majority of them British, all of whose music was held to share certain aesthetic and formal characteristics.” (Fox, 2001: 802)

Since composers within the New Complexity usually chose to realise their music through acoustic instrumental resources, their scores necessarily pushed the prescriptive capacity of traditional staff notation to its limits, with a hitherto unprecedented detailing of articulation. (Fox, 2001: 802)

These statements suggest that the visual complexity of Ferneyhough's *Unity Capsule* is part of an important development of notation. This visual complexity pushed common five-stave notation (traditional staff notation) to its limits with the intention of investigating a performer's physical and mental capacities, as can be seen in the following quotation:

Unity Capsule calls for total corporeal involvement in realisation of tasks which lie on the boundaries of possibility, both physically and mentally. (Toop, 2001: 688)

The above-mentioned statement leads us to realise that the visual complexity of *Unity Capsule* and gestural indications found on the notation are related to the boundaries of possibility in both physical and mental of a performer. In order to discover the meaning of "body" in this piece, the concept of the piece is examined in detail.

3.2 Compositional Concept based on Instrument-Performer Relationship

Ferneyhough leaves us with his own programme note of *Unity Capsule*, written on the occasion of the premiere in 1976. Although his language is generally very difficult, we can draw some crucial points for our argument:

- i. The instrument as potential instead of mere tool
- ii. Inner instrument (abstract physicality)
- iii. The organisation and disposition of elements

- iv. The instrument-performer relationship is given focused during the creation of *Unity Capsule*

From these four points, we can argue that Ferneyhough intended to discover the potential of the instrument beyond the role of a tool by creating his personal method of organisation and disposition of elements in the piece. This method shows a new perspective on the instrument-performer relationship that can evoke the inner instrument, i.e., the inner energy of the performer.

Moreover, it is important to understand that despite its difficulties in performance technique, *Unity Capsule* is not a piece of work that aims to demonstrate the virtuosity of a performer as a soloist. However, the difficulties of this piece are fundamentally important for achieving the composer's intention, which connect closely to the body of performer in both physiological and abstract physicality.

Although my own music for flute may be extremely difficult as regards the exigencies imposed on performer, this sort of virtuosity lies far from my thought. In both *Unity Capsule* and *Cassandra's Dream Song*¹⁰, the accent is on the instrument's ability to offer a high density of information on a certain number of levels simultaneously, while filtering through the highest degree of unity imaginable – that of a single, monadic instrument. (Ferneyhough, 1995: 98-99)

As this statement suggests, the final aim of this work is to achieve the highest degree of unity imaginable. This is achieved through the discovery of performer's individual body and their personal relationship with their instruments. In order to achieve this, Ferneyhough created the notation (*Unity Capsule*) that provokes reaction of the

¹⁰ This is a work composed for flute solo between 1970 and 1971. It was premiered at the Royan Festival of 1974.

performer's body during the act of performing. Further discussion on this point will be made in the following sections of this chapter.

Performers are expected to function beyond optimally efficient reproducers of imagined sound in *Unity Capsule*. "They are also themselves 'resonators' in and through which the initial impetus provided by the score is amplified and modulated in the most varied ways imaginable." (Ferneyhough, 1995: 100) This suggests that the body of performers is put into a situation that is at the edge of limitation created by the composer, and that this situation allows the body to react without interference of the mind. This point is elucidated by Ferneyhough (1995) who points out: "the simple fact of learning such a notation demands much of the serious interpreter by way of self-analysis on both conscious and 'body-conscious' levels." (ibid: 100)

Here, we can see that the compositional concept of Ferneyhough in *Unity Capsule* is rooted in challenging the boundaries of possibilities of "physical (body)" and "mental (conscious)" of performers. This challenge is made by provoking the reaction of a performer's body during the act of performing. Also, the highly-dense details happening at the same time in this piece is the catalyst, while the highest form of unity is the goal. The relationship between these two will be discussed in the sections below.

3.3 Focal Point 1: The Hidden Meaning behind the Visual Complexity in Notation

The visual complexity of *Unity Capsule* (see example 13) is undeniable. Furthermore, the necessity of this complexity on the notation is often being questioned by some performers:

There have been several quite well-known flutists who have refused to take my *Unity Capsule* (1975) into their repertoire with the argument that it is not worth the amount of time and effort required, since 'similar' sounds can be improvised or else notated much more simply (perhaps graphically). There is no way that I can see to persuade such individuals that the approach to

learning the work is an essential polyphonic strand in the final results.
(Ferneyhough, 1995: 370)

This doubt on the necessity of the complexity in the notation of *Unity Capsule* arose because many flutists who misconceived the end results relied solely on sound. Furthermore, the lack of understanding that the role of a performer can be beyond producing what is directly observable on the notation caused this misconception. It is important to realise that this piece depends not only on the end results (what is heard) but also on the process of creating the music from inside the performer. As Ferneyhough (1995) points out, this is closely related to the body:

The simple fact of learning such a notation demands much of the serious interpreter by way of self-analysis on both conscious and ‘body-conscious’ levels. Performers are no longer expected to function solely as optionally efficient reproducers of imagined sounds; they are also themselves ‘resonators’ in and through which the initial impetus provided by the score is amplified and modulated in the most varied ways imaginable. Since so much demanded of the performer in each instant, this species of simultaneity can only be learned successively, layer by layer. (ibid, 1995: 100)

The complex and highly demanding score requires the performer’s self-analyse on both conscious and “body-conscious” levels. Furthermore, while the performer’s body and mind are busy with exerting all information on the score consciously, the body will discover and absorb the maximum possible. What is not absorbed by the body during the process will be filtered and this will lead to the highest form of unity in performance. As every individual has a different body, what is being absorbed is naturally different because what is happening inside the body of the performer reflects through what is heard or seen during the act of performing.

This musical score, Example 13, is divided into three systems, each featuring a Flute part and a Voice part. The notation is highly detailed, including various dynamics (e.g., *ppp*, *mf*, *ff*), articulation marks, and performance instructions.

System 1: The Flute part begins with a *ppp* dynamic and includes a *legato* marking. The Voice part has a *ban. marc.* (banned marking) and a *sub.* (sub-octave) instruction. A box notes: "(S) move tongue tip rapidly from side to side of mouth aperture."

System 2: The Flute part features a *molto secco!* marking and a *legato marc.* instruction. The Voice part includes a *molto flessibile* marking and a *vibr. ond.* (vibrato) instruction. A box notes: "Remove instrument from lips abruptly."

System 3: The Flute part includes a *di nuovo* (again) marking and a *sub. marc.* instruction. The Voice part has a *sub. marc.* instruction and a *regale poul?* (regal sound?) instruction. A box notes: "Remove instrument from lips (rapid)."

The score concludes with a *ppp* dynamic and a *sub. marc.* instruction. A circled number 2 is present at the end of the score.

Example 13. Excerpt from *Unity Capsule* (Ferneyhough, 1975: 2) © Copyright 1975 by Hinrichsen Edition,

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Furthermore, this research aims to discover the relation between the music notation and the performer's body during the act of performing, not the actual process experiences by the performer. Thus, details on how the body functions biologically are excluded in the discussion.

In addition, with this complexity, the composer intended to “prevent performers to ‘remember’ ahead very far, leaving him in a constant state of ‘performative surprise’, the horizon of memory closing in around him.” (Ferneyhough, 1995: 325) Ferneyhough also states that:

The only wrong sort of interpretation, in my view, would be one in which the player attempted to ‘rationalise’ this overload, to ‘translate’ these complex constellations into ‘poetic’ renderings of approximately the sound he thinks should come out in a generalised way. (ibid: 325)

The statement above suggests that the complexity of the score aims to awaken what is inside the body of performers, which is “body-conscious”, where the body will rationalise itself thorough practice. In addition, it also provokes the inner body to react by absorbing or filtering what is natural and personal for the performer during the act of performing.

Furthermore, the continuous beam which was interrupted only once in the course of some twenty-page score indicated the linear energy stream of this piece as follows:

As a results, the performer is moving ahead in a series of frames, each perhaps lasting a fraction of a second; there have been a lot of occasions when I have worked with these insectile freezings and sudden movement – it is one way of transmitting the effect of eyeball-to-eyeball contact with events, of defining their ‘absolute distance’ from the observer. (ibid: 325)

The statement above shows that the gestural indications play an important part of the piece too. This will be discussed in the following section.

In conclusion, the complexity of the score functions as a catalyst to provoke the process of absorption and filtration based on the performer's individual body. This also shows that the inner energy and body during the act of performing is being deeply and thoroughly contemplated by the composer.

3.4 Focal Point 2: The Hidden Meaning behind the Gestural Indications

Besides the visual aspect of the score, the gestural indications in the score provide an insight into the piece. Some examples of the gestural indications are as follow:

- i. Remove instrument from lip abruptly (Ferneyhough, 1975: 1, bar 6)
- ii. Return instrument abruptly to playing position (ibid: 1, bar 6)
- iii. Remove instrument from lips (rapid) (ibid: 2, bar 16)
- iv. Pause motionless for nine seconds, then proceed immediately to next page (ibid: 12, last bar)
- v. Stand absolutely motionless with indrawn breath (ibid: 20, last bar)

The above gestural indications do not have a direct effect on the resulted sonority, but they contributed to the important part of the piece, which is the abstract physicality (musical energy intended by the composer) of the piece:

It might be added that the equally curious and demonstrative removal of the flute from lip in m.6, followed by its sudden repositioning represents a further 'subversive' form as encountered at many points during this work. In fact, returning the instrument to playing position marks the (silent) commencement of the next subsection. A brief examination of the score will give an idea of how the diffuse and tentative gestures of the opening come to be expanded, event after event, by the inclusion of lip action (m.3), tremolo and subsidiary figuration (m.4), figuration accompanied by plosive lip action (m.5) and

complex recombination of all of the above techniques with the addition of (still slightly modified) ‘normal’ flute sound (m.7). (Ferneyhough, 1995: 105)

As the composer himself explains, the actions stated above implied that the possibility of music is beyond audible sound and observable gesture. The instruction to “remove instrument from lip abruptly” and “return instrument abruptly to playing position” at bar 6 of the piece suggests that the musical energy goes through transformation even though it is not presented through audible sound. Furthermore, this musical energy happens inside the body of the performer who is executing the gesture during the performance. Eventually, this happening will have an effect on the next sound heard.

3.5 Results

The compositional concept of this piece is to challenge the boundaries of “physical (body)” and “mental (conscious)” of performers. Furthermore, it is well-known that it is difficult to imagine the actual audible sound of *Unity Capsule* from solely reading the notation. Every performer sounds very different from each other. This is due to the fact that every performer has a different body as a performer.

The outlook of this work, which is known to be visually complex, places a performer in a situation that is constantly at the edge of limitation both physically and mentally during performance. On the other hand, the gestural indications in *Unity Capsule* do not have a direct effect on the resulted sonority, but they contribute to the important part of the work, which is the musical energy intended by the composer. The visually complex notation and gestural indications in this work triggered the inner situation of a performer’s body to react.

Furthermore, the extremity in techniques and multi-tasking required from the music triggered the body to discover and absorb and/or filter what is the best fit for each performer individually. This is not intended as a conscious process, where a performer decides consciously which is to absorb and which is to filter. However, it is

a process for the performer's body to discover and absorb and/or filter through repetition of practices. The absorption and/or filtration will lead to unity during performances. Thus, the variety of performances based on the individual body of performers will be produced.

As a result, the notation of *Unity Capsule* functions as a “provocateur” that triggers the body-performance relationship where the inner energy of a performer is evoked through the reaction to the situation that is constantly at the edge of limitation, both physically and mentally.

Chapter 4

Keiko Harada – Visualisation of the Inner Energy of Performers in *Four Hands for a Grand Piano (2010)*, First Movement

4.1 Introduction

Keiko Harada (1968-) is a Japanese composer who is active in the new music scene in both East Asia and Europe. She began making many composition trials based on the idea of inner body situation of performers during the act of performing since mid-90s. Before that, she had been interested in “sonority” and motivated to search further and deeper for the essence of composing after attending an inspiring lecture by Brian Ferneyhough at Darmstadt in 1994.

In this chapter, we will focus our discussion on the first movement of *Four Hands for a Grand Piano (2010)* for two pianists. This work contained three movements and was commissioned by Tessera Autumn Festival 2010. The world premiere was held in Tokyo on 6th November 2010 by pianists Yumiko Meguri and Thomas Hell.

In addition to that, the idea of “visualisation of the inner energy¹¹ of performers” is a new mile-stone of a long-term quest of Harada’s compositional concept that focuses on the “inner situation of performers”. Thus, in order to discover the meaning of “visualisation of the inner energy of performers”, various trials based on “inner situation of performers” in Harada’s earlier work, *Midstream (1996)*, are firstly observed.

Midstream (1996) for clarinet and accordion was the first work where Harada made various trials based on the inner situation of performers. At the opening of the piece, performers are asked to perform their own parts while listening to the part of the other performer in a different tempo. The purpose is to add a certain “task” onto

¹¹ “Inner energy” is the term quoted directly from the composer and it is associated with the idea of abstract physicality introduced in this thesis.

the performer's inner situation. As a result, it changes the performer's body and brain from inside.

Another example of the trials based on the inner situations of performers is observed at the ending of *Midstream (1996)*. One performer is asked to play any pitch randomly from selections, while the other performer has to listen in real time and play a major second as a response to the pitch heard. This can be the first composition in the world where performers are required to listen in real time and respond in a fixed rule. According to the lecture¹² Harada delivered at Taipei International New Music Festival on 3rd December 2016, changes of the inner situation of performer's body during the act of performing create a new musical sonority.

After *Midstream (1996)*, Harada continued to make many trials in her music based on the enormous possibilities of the inner situation of performers during the act of performing. In 2010, she developed her trials further by intentionally making the inner energy observable by the audience.

4.2 Compositional Concept based on Visualisation of the Inner Energy of Performers

After meeting many excellent performers, Harada began to discover the core value of music through physical and inner situation of performers during the performance rather than the sound itself. (Harada, 2014: 8) In addition, in a conversation I had with Harada in summer 2016, she mentioned that "the inner situation of performers during performance is completely different from the habit of performing". This statement suggested that the inner situation of performers is a conscious process created by the composer intentionally.

In *Four Hands for a Grand Piano (2010)*, she "aimed to create sound to resonate with abundant depth perception and avoid uncontrolled overflowing piano sound by four hands texture." (ibid: 8) Furthermore, trials in this piece (in all three

¹² I acted as an interpreter (from the Japanese language to Mandarin) for the lecture.

movements) are made through many possible variations on the extremely close physical distance between two pianists on one grand piano and their relationships with the sounds.

Let us now turn to the first movement of *Four Hands for a Grand Piano (2010)*. This movement is made up of sixty-seven bars where common five-stave notation is rarely observed. Out of sixty-seven bars, only twenty-two bars which were fully notated in common five-stave notation, and six bars were partly notated in common five-stave notation. Based on the world premiere performance, the first movement lasts for approximately three minutes. With a calculation based on the notation, approximately thirty-seconds is filled with ordinary piano sounds, which constitute less than twenty percent of the full duration of the first movement of the piece.

In addition to the common five-stave notation, this movement is notated with four one-line staves labelled as “motion”, “voice”, “finger”, and “rhythm”. From the notation, the following four types of outputs can be found:

- i. Ordinary piano sound (Common Five-Stave Notation)
- ii. Gesture without sound (Motion, Finger)
- iii. Gesture with sound (Finger)
- iv. Voice

Furthermore, the four types above can be simplified into two basic materials: “ordinary piano sound (i)” and “others (ii, iii, iv)”.

In order to discover the composers’ musical intentions in relation to performers’ body in this work, the hidden meanings shown below in relation to the above outputs are examined:

- a. The hidden meaning behind the connection between the “ordinary piano sound” and the “others”
- b. The hidden meaning behind the “others”

In addition, the notation of “gesture without sound” and “gesture with sound” indicated the physiological physicality that the performers have to perform to be seen by the audience. Nevertheless, the notated physiological physicality is with the clear intention of visualising the abstract physicality (inner energy) the composer intended to create. Thus, this leads us to the finding that the concept of this piece is to visualise abstract physicality of performers during the act of performing through the performance of the physiological physicality notated in the score.

4.3 Focal Point 1: The Hidden Meaning behind the Connection between the “Ordinary Piano Sound” and the “Others”

Although we have separated the materials into two basic categories with four types of outputs, it is important to note that all these materials are inter-related and cannot be similarly compared. As an example, let us examine the phrase from bar 9 to 11 in details:

The image shows a handwritten musical score for two pianists, labeled I and II, covering measures 9, 10, and 11. The tempo is marked as quarter note = 72. The score is divided into two systems. System I (top) shows notes for both pianists. Pianist I has notes in measures 9 and 10, with annotations 'ON THE BLACK KEYS' and 'WHITE KEYS'. Pianist II has notes in measures 9 and 10, with annotations 'ON THE BLACK KEYS' and 'WHITE KEYS'. System II (bottom) shows notes for both pianists. Pianist I has notes in measures 9 and 10, with annotations 'ON THE BLACK KEYS' and 'WHITE KEYS'. Pianist II has notes in measures 9 and 10, with annotations 'ON THE BLACK KEYS' and 'WHITE KEYS'. The score includes dynamic markings like mf, f, fff, and mp, and performance instructions like 'N.G.' (Nail Glissando) and 'fff' (fortissimo).

**Example 14. Excerpt from *Four Hands for a Grand Piano* (2010), First Movement
(Harada, 2010b: 1) JASRAC 出 1614594-601**

This phrase is divided into four parts. Part One begins with nail glissando (N.G), which produces only noise (without ordinary piano sound) by the Pianist II, and then

continues by the performance of Pianist I in bar 9. Part Two begins at the end of bar 9, where the Pianist II starts a shorter rhythm (semiquaver) nail glissando before the previous nail glissando of the Pianist I ends. Then, Part Two continues until the end of bar 10. Part Three is the first beat of bar 11 where “quick tongue rolling” (symbol r) and the noise produced by playing on the piano board (symbol B) is heard. Part Four is the dotted quaver of bar 11 (ending).

Concerning this phrase, Parts One and Two produce only noise from the surface of the piano’s keyboard. Furthermore, the growing of intensity can be felt through the increase of dynamics and changes of rhythm, Part One is *mezzo forte* in quaver beat, while Part Two begins with *forte* and *crescendo* into three *forte* in semiquaver beat. Here, the growth of intensity can be “visualised” through the gesture, where the gesture becomes faster as the rhythm changes from *quaver* (Part One) to semiquaver (Part Two). Moreover, the gesture will seem stronger automatically when the dynamic increases. Then, in Part Three, the noise of the “quick tongue rolling (symbol ‘r’)” and the “playing on board next to the highest/lowest keyboard (symbol ‘B’)” are heard. Although the dynamics are notated as “*fff*”, the actual audible volume is less than Part Four (*mezzo piano*) where ordinary piano sounds are heard.

The momentum of the phrase begins to build at Part One, growing into Part Two with increased intensity, then in Part Three, finally the intensity becomes more audible for the first time with the additional support from voice and the louder volume produced by “playing on board next to the highest/lowest keyboard (symbol ‘B’)”. The intensity of this phrase comes to a peak at the end of Part Three. In Part Four, a moment of “release” is felt when the ordinary piano sound is heard.

In this phrase, performers are required to figure out the relation between abstract physicality and physiological physicality without relying solely on sonority, which is the norm in piano performance. Due to the transition of “energy” within this phrase, without connection from Part One to Part Three, the “release” of Part Four will sound like a new individual short phrase. This is, the sonority of Part Four functions as a “checking point” for pianists to hear the flow of energy in a habitual way. Thus, the transition process happens inside the pianists, making them (the pianists) listen to the

inner energy of themselves and confirm the energy by listening to the actual sound produced.

These findings mentioned above indicate that the intended musical energy by the composer relies not only on the audible sound but also on the connection from the inner situation (abstract physicality) of the performer's body to the gestures performed (physiological physicality).

4.4 Focal Point 2: The Hidden Meaning behind the “Others”

Let us now turn to the notations that do not produce ordinary piano sound, as follows:

- i. Gesture without sound (Motion, Finger)
- ii. Gesture with sound (Finger)
- iii. Voice

In this piece, “motion” refers to the following gestures of heads and eyes of the performers:

- a. Turn head to audience (Harada, 2010: 1, bar 1, piano I)
- b. Return and head down (ibid: 1, bar 2, piano I)
- c. To open eyes widely (ibid: 1, bar 1, piano I – the symbol of eye, see Chart 3)
- d. Close eyes (ibid: 1, bar 2, piano I)
- e. Turn head to pianist II (ibid: 2, bar 18, piano I)
- f. Quickly head down (ibid: 4, bar 55, piano I and II)

On the other hand, “finger” refers to gestures involving nails, fingers, and/or palms. As for “voice”, it refers to the gestures with lips, mouths, throats, and/or tongues. Details are shown in Chart 3:

MOTION : 大きく目を開く (両目)
TO OPEN EYES WIDELY

ORD. POS. : 通帯, 47/E 強く位置に戻す
RETURN TO ORD. POS.

VOICE □ (Alphabet) : 四角は四角に平仄なくは音階の発音不可
Alphabet with square is for soundless voice

↑ □ ; 息を吐く (発音)
with inhaling


f r o s s ; 舌を速く (速い) で無音
quick tongue rolling. Soundless.

↓ No ; 発音しながら音階を低くする
Pitch must go lower while singing

PA ; 口を強く開く時に出る破音 (発音なし)
"PA" sound when opening lips strongly (without voice)

T ; 舌を打つ
click tongue

X (etc...) ; のどを強く締めて出す声
Alphabet with cross. VOICE by tightening throat.

FINGER  (bar 45) : Play by finger tip on the keyboards following fingers' no. (noise)

R/L ; R.H. / L.H.

R³ ; No. of finger

b ; Position of finger or with finger motion

N.G. or N.G. ; Nail Gliss. without sound on the keyboard

B ; Pf I : Play on board next to the highest keyboard.

Pf II ; Play on board next to the lowest keyboard.

↑ N.T. ; Nail Tapping


b — ; 指を置く. 置いておける
Put finger on and stay.

Cluster ; 最高音程 1音程の 5-7音 (5-7音)
Cluster, which consists of 5-7note with highest note on the top.


F.B. (bar 45 for Pf I & bar 48 for Pf II) ;
Play by finger tip on the front board of keyboards




NOTES P. 1/2
KEIKO HARADA

 ; gliss. on the keyboards by a plectrum for guitar (plastic, middle hard)
(e.g. bar 43 for Pf II)

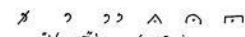
note by square : indefinite value of length

 ; clapping by R.H. of Pf I and L.H. of Pf II.
(bar 54)

 ; bar 52 ; Hand motion without touching keyboards, but move hand above keyboards from left-to-right direction.
(for Pf. I)

Length of Signs.

Shorter ← → longer "MA"

 (0.3-0.5 sec) (ca. 0.7 sec) (more than 1 sec)

 ; pause
(longer)

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KEIKO HARADA

Chart 3. Notes from *Four Hands for a Grand Piano (2010)*, First Movement

(Harada, 2010a: 1-2) JASRAC 出 1614594-601

All the above gestures represent various observable forms of the abstract physicality (inner energy) of performers conceived by the composer. In order to discover the meaning of these gestures, performers are required to accept the fact that these gestures contain no theatrical meaning. Instead of treating these gestures as external elements from ordinary piano performance, the performers are required to connect these gestures to the ordinary piano performance. In other words, performers are required to internalise these gestures as piano performance. As an example, let us take a look at bar 5:

KEIKO HARADA (2010)

	PIANO I	<p>① $\text{♩} = 48$ TURN HEAD TO AUDIENCE [KA] [Ho]</p> <p>② RETURN AND HEAD DOWN (close eyes)</p> <p>③ (3") freeze</p> <p>④ $\text{♩} = 48$ ORD. POS. [HA]</p> <p>⑤ $\text{♩} = 88$ ④ 3 2 1 N.G. [Senza >] ff <</p> <p>⑥</p>
	PIANO II	<p>① $\text{♩} = 48$</p> <p>② TURN HEAD TO AUDIENCE [KAKA]</p> <p>③ (3") freeze</p> <p>④ ORD. POS. (only motion)</p> <p>⑤ $\text{♩} = 88$ ④ Nail Tip [Senza >] ff <</p>
MOTION		
VOICE		
FINGER		
RHYTHM		

**Example 15. Excerpt from *Four Hands for a Grand Piano* (2010), First Movement
(Harada, 2010b: 1) JASRAC 出 1614594-601**

At bar 5, Pianist I is required to play seven groups of running notes. Running notes are commonly found in piano repertoires. However, in this example (bar 5), noise is produced instead of ordinary piano sounds. The kind of noise quality the composer intended to have relates closely to the kind of inner energy a pianist would have needed to produce this gesture (running notes) when producing the ordinary piano sounds. In order to unfold the hidden meaning of this gesture, the pianist can first

observe what happens inside himself or herself when playing this gesture as notated (fingering, dynamic, articulation, tempo, and rhythm).

After that, the pianist will discover that every finger-gesture represents different kinds of abstract physicality (inner energy). Thus, different numbers of fingering will naturally produce different kinds of noise in bar 5. Since the composer has removed the “ordinary piano sound” here, the inner situation of the performer is magnified. Instead of relying on hearing the “sonority”, the performer is challenged to look directly into the core of his or her own body where the departure point is located. In other words, “sonority” functions as the “arriving point” during the act of performing.

The above observation leads us to confirm that the inner situation of performers directly affects the “sonority” produced during the performance. Thus, even without actually hearing the “ordinary sound” of the musical instrument, we can visualise from the performers’ gestures the intended “sonority” by the composer.

4.5 Results

This chapter demonstrated that the uniqueness of Harada’s notation in the first movement of *Four Hands for a Grand Piano (2010)* is attributed to her concept of “visualisation of inner energy of performers”. She combined common five-stave notation with uncommon notation (where motion, voice, finger, and rhythm are notated on separate one-line staves) in order to adopt to her compositional concept.

As suggested in Section 4.3, as the core of musical energy in this work, the musical energy the composer intended to have relies not only on the audible sound but also on the connection from the inner situation (abstract physicality) of the performer’s body to the gestures performed (physiological physicality). This has been discovered through the examination on the hidden meaning behind the connection between the “ordinary piano sound” and the “others”.

In Section 4.4, we confirmed that the inner situation of performers directly affects the “sonority” produced during the performance. Thus, even without actually hearing the “ordinary sound” of the musical instrument, from the performers’ gestures,

we can visualise the intended “sonority” by the composer. The notation of this work visualised the body-performance relationship that would not be directly observable externally.

As a result, Harada’s notation functions as a “projector” that provides the performers with a platform on which to reflect on their own experience of piano performance in relation to their inner situation during performance without continuous dependence on the final sound production.

Conclusion

This research demonstrated a variety of the body-performance relationships in new music notation through the works of Kurtág, Ferneyhough, and Harada. Their works brought our attention to the enormous possibilities in body-performance relationship in music composition.

In Chapter One, the outlook of notations, the hidden meaning of notations, the abstract and physiological physicality during the act of performing, as well as the non-theatrical intention of gestural indications in notations of the selected three works, are introduced. The unique characteristics of the three works are as follow:

Table 1. The unique characteristics of the three works

	Impression of Outlook	Focal Points: Hidden Meaning	Term Related to Physicality used by the Composer	Notation Method of Gestural Indication observed on score
Kurtág	An indeterminate notation	Dotted curve notation; The function of <i>pause</i>	Movement	Indicated with graphical symbols
Ferneyhough	A visually complex and dense notation with overloaded information	Visual complexity; Gestural indications	Body-conscious	Indicated with instructions in sentence form
Harada	A notation that contains mixture of common five-stave notation and uncommon notation, where motion, voice, finger, and rhythm are notated on separate one-line staves	The connection between “ordinary piano sound” and the “others”; The “others”	Motion	Indicated with graphical symbols and/or instructions in sentence form

These details, either hidden or non-hidden, found on the notations provided us with many important hints to discovering composers' musical intentions in relation to the inner situation of performers.

In Chapter Two, the discussion focuses on Kurtág's *Játékok*. By unfolding the hidden meaning of dotted curve notation in this work, we discovered that the notation of Kurtág functions as a "puzzle" for pianists at all levels (from beginner to advanced level). This "puzzle" provides performers with much freedom (in the sense of physicality) to go beyond physical limitation (such as length of arms and thickness of finger flesh) and to discover the nature of body movement and its relation to the act of performing. The notation of *Játékok* is designed so that pianists at all levels can configure their very own bodies as performers. The outlook of this work, which leaves an impression of indeterminacy, provides much space for performers to make trials with gesture in relation to sonority. As a result, this work guides performers to discover the essentiality of body-performance relationship.

Meanwhile, in Chapter Three, the discussion brought our attention to the notation of Ferneyhough's *Unity Capsule*. Here, the discovery of the composer's musical intentions in relation to performer's body was made by unfolding the hidden meanings behind the visually complex notation and the gestural indications. The visually complex notation places the performer in a situation that is constantly at the edge of limitation both physically and mentally, whereas the gestural indications suggest the musical energy the composer intended to have. The musical energy connects the sonority before and after the gestures. Due to the constantly situation at the edge of limitation, the performer's body becomes a natural absorber and filter. Thus, the outcomes (i.e., performances) differ greatly from what is directly observable on the notation because every performer has a different and unique body that absorbs and filters information differently. Furthermore, the notation of this work shows a new perspective on the instrument-performer relationship that can evoke the inner instrument, i.e., the inner energy of the performer. As a result, the notation of *Unity Capsule* functions as a "provocateur" that triggers the body-performance relationship

where the inner energy of a performer is evoked through the reaction to the situation that is constantly at the edge of limitation, both physically and mentally.

In Chapter Four, our discussion focused on Harada's *Four Hands for a Grand Piano* (2010), First Movement, in which the compositional concept is to visualise the inner energy of the performers. First, the actual trials made in her earlier work, *Midstream* (1996), based on the concept of "inner situation" of performers were presented. Then, the hidden meaning behind the connection between "ordinary piano sound" and the "others" were examined. This led to the realisation that the core of the act of performing relies not only on an audible sound but also on the connection between the inner situation of a performer's body and the sonority.

After that, we took a closer look at the hidden meaning of the "others", which does not produce any "ordinary piano sound". Here, we confirmed that the inner situation of performers directly affects the "sonority" produced during performance, and performers can make it "visible" by connecting the gestural indications with their experiences in performance. The notation of this work visualised the body-performance relationship that would not be directly observable externally.

As a result, Harada's notation functions as a "projector" that provides the performers with a platform from which to reflect on their own experience of piano performance in relation to their inner situation during performance without continuous dependence on the final sound production.

The discussion so far can be summarised in the table below:

Table 2. Summary of the intentions behind the notations of Kurtág, Ferneyhough, and Harada

	Kurtág	Ferneyhough	Harada
Function	Puzzle	Provocateur	Projector
Keyword	Configuration	Reaction	Reflection
Composer’s Compositional Concept	To discover the nature of body movement and its relation to the act of performing	To challenge the boundaries of “physical (body)” and “mental (conscious)” of performers	To visualise the inner energy of performers
Meaning of Gestural Indication on the Notation	Kurtág’s gestural indication relates the body movements to sonority.	Ferneyhough’s gestural indications connect sonority before and after the gestures which suggested the musical energy intended by the composer.	Harada’s gestural indications reflect the inner situation of performers’ body.
Body-Performance Relationship	The notation of this work guides performers at all levels (from beginner to advanced level) to discover and configure the essentiality of body-performance relationship.	The notation of this work triggers the body-performance relationship where the inner energy of a performer is evoked through the reaction to the situation that is constantly at the edge of limitation both physically and mentally.	The notation of this work visualised the body-performance relationship that would not be directly observable externally. Moreover, the notation provides the performers with a platform on which to reflect on their own experience of piano performance in relation to their inner situation during performance without continuous dependence on the final sound production.

Although the methods of notation by all three composers are different, their works are essentially similar in terms of making trials in order to explore further possibilities of the human's body and its relation to music performance. This relationship between the human's body and performance is also essentially connected to the energy of music that is beyond pure sonority. In addition, all three notations show that there are still many possibilities of developing notation methods in order to express the abstract physicality (i.e., the inner energy of performer, the musical energy of composition, and more) the composers intended to have. One way to develop the notation methods is by extending the existing ones or/and inventing new ones.

This research has shed some light on the new horizon in the new concept of musical notation which is related to the inner situation of a performer's body during the act of performing. Although the methods of notations are different, the works of Kurtág, Ferneyhough, and Harada are similar in that they all emphasise the inner situation of a performer's during the act of performing rather than only the sound itself. In other words, the process of the act of performing is the core of the music, while the result (i.e., sonority, silence, etc.) is the arrival of the confirmation of what happened during the process.

In conclusion, this research brings our attention to the enormous possibilities inherent in the body-performance relationship and the notation of abstract physicality in music composition. These possibilities include creating and notating what is not audible or directly observable but existing as a necessary connecting factor in order to create a unique musical energy in music composition.

As a final note, it is hoped that the findings in this research will achieve the following: first, to inspire composers to explore the possibilities in music compositions based on body-performance relationship; second, to motivate performers to view the method of notations from a different perspective; and third, to encourage the audience to begin to "hear" beyond "sound" in music.

Bibliography

Andreasen, Nancy C.

2005 *The creating brain: the neuroscience of genius*. (New York: Dana Press)

Angeloni, Patrizia

2007 “Keiko Harada: Music Without Borders”. *Strumenti & Musica*, 24-31.

Bjerken, Xak

2002 *Poetic fragments: György Kurtág's Játékok for piano*. A dissertation submitted

in partial fulfilment of the requirements for the degree of Doctor of Musical Arts (Peabody Conservatory of Music)

Buck, Percy C.

1944 *Psychology for musicians*. (London: Oxford University Press)

Coelho, Gabriel Neves

2014 *Kurtág's Játékok : Playing Games with Tradition*. A dissertation submitted in partial fulfilment of the requirements for the degree of Doctor of Musical Arts (University of Oregon)

Earle, Brown

1986 “The Notation and Performance of New Music.” *The Musical Quarterly* 72/2, 180-201.

Ferneyhough, Brian

1975 *Unity Capsule for solo flute*. (London: Peters Edition)

1976 “Unity Capsule Programme Note” (24th October 2012)

http://www.editionpeters.com/resources/0001/stock/pdf/unity_capsule.pdf

1995 *Collected Writings*. (Amsterdam: Harwood Academic Publishers)

Fitch, Lois

2014 *Brian Ferneyhough*. (Bristol: Intellect)

Fox, Christopher

2001 "New Complexity." Sadie, Stanley a.o. eds. *The New Grove Dictionary of Music and Musicians*. (London: Macmillan) vol. 17, 802-803.

Green, Barry, and W. Timothy Gallwey

1986 *The inner game of music*. (Garden City, New York: Anchor Press/Doubleday)

Greenstone, Paul

1986 *Articulation guide for brass instruments based on common practices of contemporary composers and performers* A dissertation submitted in partial fulfilment of the requirements for the degree of Ph.D. (University of Florida, Gainesville)

Griffiths, Paul

2010 *Modern music and after*. (New York: Oxford University Press)

Grindea, Carola

1978 *Tensions in the performance of music: a symposium*. (London: Kahn and Averill)

Haas, Elisabeth

2011 *Einübung in ästhetische Räume: Zu Anton Weberns Kinderstück, György Kurtágs Játékok und Helmut Lachenmanns Kinderspiel*. (Wien: Böhlau)

Harada, Keiko

2010a *Four Hands for a Grand Piano (Explanation of Notation Symbols)*. (Tokyo:

Tokyo Concerts)

2014b *Four Hands for a Grand Piano*. (Tokyo: Tokyo Concerts)

2014 “Four Hands for a Grand Piano Programme Note”. *Asian Composers League 2014*, 7-8 (Seoul: Asian Composers League)

Huron, David Brian

2006 *Sweet anticipation music and the psychology of expectation*. (Cambridge, Mass: MIT Press)

Johnson, Tim

2002 “Communication and Experience: Some Observations on the Relationship between Composer and Performer in Játékok.” *Studia Musicologica Academiae Scientiarum Hungaricae* 43, 281-287.

Karkoschka, Erhard

1972 *Notation in new music; a critical guide to interpretation and realisation*. (New York: Praeger)

Kinderman, William

2012 *The creative process in music from Mozart to Kurtág*. (Urbana: University of Illinois Press)

Kurtág, György, and Bálint András Varga

2009 *Three interviews and Ligeti homages*. (Rochester, New York: University of Rochester press)

Kurtág, György

1979a *Játékok (Key to the Signs Use, booklet inserted in musical score) for piano Volume 1*. (Budapest: Editio Musica)

1979b *Játékok (Musical Score) for piano Volume 1*. (Budapest: Editio Musica)

Laeuchli, Rebekkah, and Brigitte Bernhard

2012 *Játékok: Discovering new worlds of piano playing: pedagogical aspects of the series by György Kurtág.* (Basel: Hochschule für Musik)

Leppert, Richard D.

1993 *The sight of sound: music, representation, and the history of the body.* (Berkeley: University of California Press)

Mark, Thomas Carson, Roberta Gary, Thom Miles, and Barbara Conable

2003 *What every pianist needs to know about the body: a manual for players of keyboard instruments: piano, organ, digital keyboard, harpsichord, clavichord.* (Chicago: GIA Publications)

Meyer, Leonard B.

1956 *Emotion and meaning in music.* (Chicago: University of Chicago Press)

Nathan, Eric

2012 *Homage in the music of György Kurtág.* A dissertation submitted in partial fulfilment of the requirements for the degree of Doctor of Musical Arts (Cornell University)

Oxford Dictionary

2016 “Physicality” (July 2016)
<https://en.oxforddictionaries.com/definition/physicality>

Pickett, Joseph P.

2011 “*The American Heritage dictionary of the English language.*” (Boston: Houghton Mifflin Harcourt)

Ranković, Milan

1979 "On the Popularity of New Music." *International Review of the Aesthetics and Sociology of Music* 10/2, 199-206.

Read, Gardner

1998 *Pictographic score notation: A compendium*. (United States: Westport, CT, US: Greenwood)

Riggins, Herbert Lee

1981 *Heinrich Schenker's graphic notation and contemporary variants*. A dissertation submitted in partial fulfilment of the requirements for the degree of Ph.D. (University of Texas at Austin)

Risatti, Howard

1975 *New music vocabulary: a guide to notational signs for contemporary music*. (Urbana: University of Illinois Press)

Roederer, Juan G.

1995 *The Physics and Psychophysics of Music: An Introduction*. (New York: Springer-Verlag)

Schwartz, Elliott

1998 *Contemporary Composers on Contemporary Music*. (New York: Da Capo Press)

Smith, Alyssa Gretchen

2005 *An examination of notation in selected repertoire for multiple*. A dissertation submitted in partial fulfilment of the requirements for the degree of Doctor of Musical Arts (Ohio State University, Columbus)

Stone, Kurt

1980 *Music notation in the twentieth century: a practical guidebook*. (New York: W.W. Norton)

Toop, Richard

2001 “Brian Ferneyhough.” Sadie, Stanley a.o. eds. *The New Grove Dictionary of Music and Musicians*. (London: Macmillan) vol. 8, 688-690.

Varga, Bálint András

2011 *Three questions for sixty-five composers*. (Rochester, New York: University of Rochester Press)

Weisser, Benedict Jacob

1998 *Notational practice in contemporary music: A critique of three compositional models (Luciano Berio, John Cage, and, Brian Ferneyhough)*. A dissertation submitted in partial fulfilment of the requirements for the degree of Ph.D. (City University of New York)

Willson, Rachel Beckles

2001 “György Kurtág.” Sadie, Stanley a.o. eds. *The New Grove Dictionary of Music and Musicians*. (London: Macmillan) vol. 14, 45-49.

2007 *Ligeti, Kurtág, and Hungarian music during the Cold War*. (Cambridge: Cambridge University Press)