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Defined or Undefined: The Gradual Process of Value Formation

Keywords: John Cage, theory of rationality, value formation, rationalisation, tripartite model

Introduction

When we learn music, whether through musical instruments, composition, singing, or some other way, the essential element we start with is notation. To be more specific, we begin with the value and meaning behind musical symbols – we learn what clefs, staffs, note values, and accidentals, etc., are. Our learning process shows the fact that musical symbols carry their own value and meaning; they are set. Putting this another way, our learning process also shows us that musical symbols can generally be applied to every conventional musical work, whether from the Baroque, Classical, or Romantic eras, etc. However, this may not be the case with avant-garde music. Unlike the musical symbols employed in conventional music, which are representative in a general way, avant-garde music makes use of randomness and indeterminacy as well as novelty and uniqueness which composers convey in their compositional materials, performing approach, scores, and arrangements. For example, *Projection 1* (1951) by Morton Feldman (1926–1987) consists of lines, dotted lines, squares, rectangles, and rhombuses (see Figure 1); at first sight, we barely notice any musical symbols that are similar to conventional ones. These unusual symbols offer performers a considerable degree of freedom in shaping the acoustic execution under Feldman's instructions. Most importantly, this piece presents a much more complex and intertwined interaction between the composer and the performers[1].

Another example is *December 1952* from Earle Brown's (1926–2002) *Folio and 4 Systems* (1952–1954). This work consists of thirty-one drawings, including twenty horizontal

[1] B. Boutwell, *Morton Feldman's Graphic Notation: Projections and Trajectories*, „Journal of the Society for American Music" 2012 no. 6 (4), p. 458, [see: https://doi.org/10.1017/S1752196312000363].

rectangles, ten vertical rectangles, and one square floating on a white field[2]. In the prefatory note, Brown comments:

> „to have elements exist in space [...] space as an infinitude of directions from an infinitude of points in space [...] to work (compositionally and in performance) to right, left, back, forward, up, down, and all points between [...] the score (being) a picture of this space at one instant, which must always be considered as unreal and/or transitory [...] a performer must set this all in motion (time), which is to say, realize that it is in motion and step into it [...] either sit and let it move or move through it at all speeds (co-efficient of) intensity and duration (is) space forward and back"[3].

The above remark indicates that the performer needs to concretise his/her performing realisations by transforming twenty horizontal rectangles, ten vertical rectangles, and one floating square into musical notes in any order, to put into practice Brown's concept of relativity – relative frequency, relative loudness, relative duration[4].

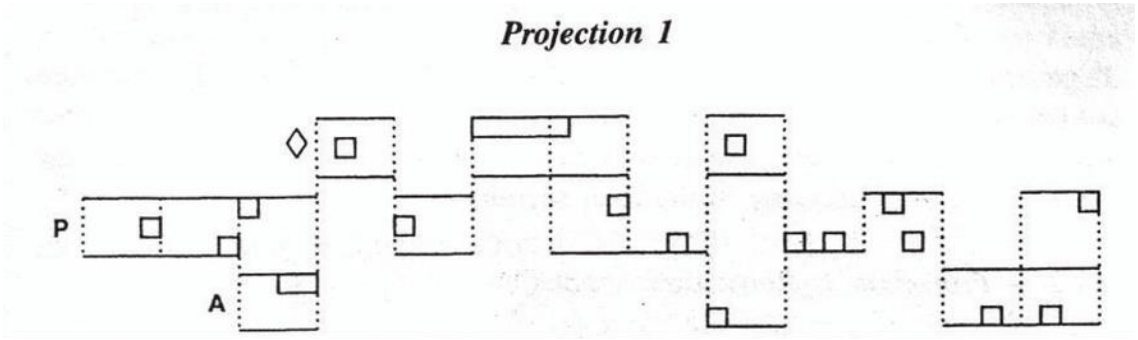

Figure 1. *Projection 1* by Morton Feldman, C.F. Peters, New York 1962.

These two musical works both demonstrate the variety and uniqueness of musical symbols in avant-garde music, and the importance of the process of transforming drawings into musical notes. Based on this demonstration, I notice an unusual formation of the meaning of musical symbols – these symbols seemingly emerge out of thin air. We cannot figure out the musical meaning at first sight, even if we are fully trained musicians and scholars[5]. However, when we refer to the composer's performance instructions and prefatory notes, every musical symbol seems to make sense. The instructions and notes appear to constitute the final piece of the confusing puzzle. The sense of oddness is understandable when we look at the origin of the

[2] D. Ryan, *Earle Brown, Open Form, and the Visual Arts*, in: *Beyond Notation: The Music of Earle Brown*, University of Michigan, Ann Arbor 2017, p. 84.
[3] E. Brown, *Folio and 4 systems*, Associated Music Publishers, New York 1961.
[4] D. Ryan, op. cit., 2017, p. 86.
[5] By saying this, I am not implying that these musical symbols are inferior or superior to conventional ones, or that these symbols are indeterminate, unorganised, or chaotic only. Instead, I attempt to draw a simple but clear distinction between two types of musical symbol based on how we understand them.

musical symbols. In an interview hosted by David Ryan, we learn that *December 1952* was produced by randomly sampling tables of numbers[6]; while Brown's statement highlights an essential factor in avant-garde music: randomness. How can we understand symbols that are based on randomness? In this article I propose that even if musical symbols are based on randomness, and even if they are seemingly fragmented and incomplete, these musical symbols are as organised, structural, and systematic as conventional musical symbols. The difference between the two types of symbols lies in the distinct processes of value formation involved – conventional ones are set, while avant-garde ones are gradational.

In the case of avant-garde music, especially when it comes to its experimental forms (e.g., chance music and indeterminate music) and graphic scores, John Cage (1912–1992) is one of composers whose name comes up most in conversation. His notorious creation *4'33"* (1952) is a composition made up of silence, or, perhaps we should say more precisely, silence composed of the sounds made by participants in the concert hall[7]. This is an example of how Cage used chance-derived materials to create music. Another important Cage piece is *Concert for Piano and Orchestra* (1957–1958), which consists of a series of fragmented notations that he composed through a chance-derived material, i.e., paper imperfections. As *Concert for Piano and Orchestra* includes paper imperfections and fragmented notations, it may serve as a good example for examining the process of value formation. For this reason, this paper aims to describe and discuss the gradational process of value formation in *Concert for Piano and Orchestra*, with a focus on its piano part, *Solo for Piano* (1958). To achieve this goal, in this article I have made use of the theory of rationality and a revised tripartite model.

The theory of rationality, the revised tripartite model, and the *Solo for Piano*

This section explains the theoretical framework of this article, including the theory of rationality and the revised tripartite model, and how these concepts apply to Cage's *Solo for Piano*. In the section on the theory of rationality, my explanations focus on the meaning of rationality, its features, how it applies to Western music, and how it applies to the *Solo for Piano*; the discussion regarding the revised tripartite model will focus on the origin of this model and how it is relevant to Cage's music. By means of this combination, the present article will highlight valid viewpoints showing that the compositional materials in the *Solo for Piano* share the same features as conventional music, while the work passes through three stages in

[6] D. Ryan, op. cit., 2017, p. 86.
[7] D. Campana, *Happy New Ears! In Celebration of 100 Years: The State of Research on John Cage*, „Notes 69" 2012 no. 1, p. 10, [see: https://doi.org/10.1353/not.2012.0118].

its value construction – randomly originating from paper sheets, intentionally arranged by Cage, and purposively interpreted by the performer.

The theory of rationality and the *Solo for Piano*

Max Weber (1864–1920) was a German sociologist who had a broad range of interests, including religion, politics, economics, and the arts. A central idea in much of his thinking was the complex concept of rationality. This was a constant theme throughout his life, and which heap lied as widely as possible. After the first edition of *Die protestantische Ethik und der Geist des Kapitalismus* (1904–1905); [English] *The Protestant Ethic and Spirit of Capitalism*, 1930) was published, Weber began his investigations into the sociology of art. Of all the artistic forms, he chose music as his first object of study, because he had acquired a musical education in his childhood[8], and was highly interested in music. Between 1910 and 1912, Weber applied this idea to music to determine the reasons why rationalisation is a unique phenomenon of Western culture. He observed the rational and sociological foundations of Western societies, investigating in various aspects of music, such as musical theories, notational systems, and social needs. He recorded his observations in an unfinished draft named *Die rationalen und soziologischen Grundlagen der Musik* (1921); [English] *The Rational and Social Foundations of Music* (1958), which was published by his wife, Marianne Weber (1870–1954), and a musicologist, Theodor Kroyer (1873–1945)[9].

In *Die rationalen und soziologischen Grundlagen der Musik*, Weber found that rationality in music involved the formation of musical elements and interactions shaping the relationships between music, societies, and citizens. Weber was the first thinker to identify the role of rationalisation in the development of music[10]; he listed various factors in support of his findings. For instance, he used Pythagoras's studies to show how mathematics constructs music, explained the functions of ancient music, illustrated religious relationships with musical instruments, and described how musical instruments developed in connection with the weather and social class[11]. Of interest here is that out of all his great examples, he did not draw any conclusions about what is rational and irrational in music, and nor did he draw any simple and direct conclusions in his thinking, since he had positioned himself more as an observer, who

[8] E. Baumgarten, *Max Weber: Werk und Person*, Mohr, Tùbingen 1964, p. 482; K. Blaukopf, *Musical Life in a Changing Society. Aspects of Music Sociology*, Amadeus Press, Portland 1992, p. 118.
[9] M. Weber, *The Rational and Social Foundations of Music*, Southern Illinois University Press, New York 1958.
[10] T. Adorno, *Sound Figures*, Standford University Press, Maridian – Stanford 1999; B. Konoval, *Max Weber and the Sociology of Music*, in*: The Oxford Handbook of Max Weber*, ed. by E. Hanke, L. Scaff, S. Whimster, Oxford University Press, London 2020, p. 468, [see: https://doi.org/10.1093/oxfordhb/9780190679545.013.40].
[11] M. Weber, op. cit.

saw music through his own eyes. His thinking offers us an opportunity to extend rationality further by extracting its main features: methodical, functional, and interactive[12].

The first feature, i.e., the methodical, refers to the content Weber noted in Pythagoras's studies of the mathematical formula, $\frac{n}{(n+1)}$, which is based upon a vibration ratio. Weber used this to demonstrate a subdivision of intervals and thus to demonstrate arithmetical factors within music. For example, based on the above formula, he explained the arithmetical construction of an octave, which can be harmonically divided into a fourth and a fifth $\frac{3}{4}\times\frac{2}{3}=\frac{1}{2}$, $(\frac{4}{5}\times\frac{5}{6}=\frac{2}{3})$[13]. In addition to the mathematical construction of intervals, this feature also refers to a methodical construction in musical works, meaning how the music is composed. The answer lies in the theory of harmony, or, rather, harmonic progressions based on the theory. As we are aware of the fact that the theory of harmony is the theoretical basis of conventional music, its relationship between itself and a piece of music is similar to the relationship between the mathematical formula $\frac{n}{(n+1)}$ and intervals. Taking J. S. Bach's *Prelude* BWV 846 as an example, from bar 1 to bar 11, the harmonic progression is I - ii_7 - V_5^6 - I - vi_6 - V_2^4 - I_6 - IV_2^4 - ii_7 - V_7 - I (see Figure 2), showing how this work methodically builds upon C major with its I, II, VI, and V chords and their inversions[14].

[12] Ch-L. Peng, *Indeterminate-Oriented to Rational-Oriented: John Cage, Paper Imperfections, and Graphic Notations*", „New Sound", 2022 no. 60 (II).
[13] M. Weber, op. cit., p. 4.
[14] The main argument here does not concern the analysis of harmonic progressions but shows how Weber observed the rational basis of music and how we can apply his findings (the first feature of rationality being methodical) to a musical work. In terms of this rational feature, Weber also elaborated on how the harmonic system resulted from the ways in which people addressed the irrational elements in music, which stem from the asymmetrical structure of mathematical structure. I. Darmon, *Weber on Music: Approaching Music as a Dynamic Domain of Action and Experience*, „Cultural Sociology" 2015 no. 9 (1), p. 24, [see: https://doi. org/10.1177/1749975513511789].

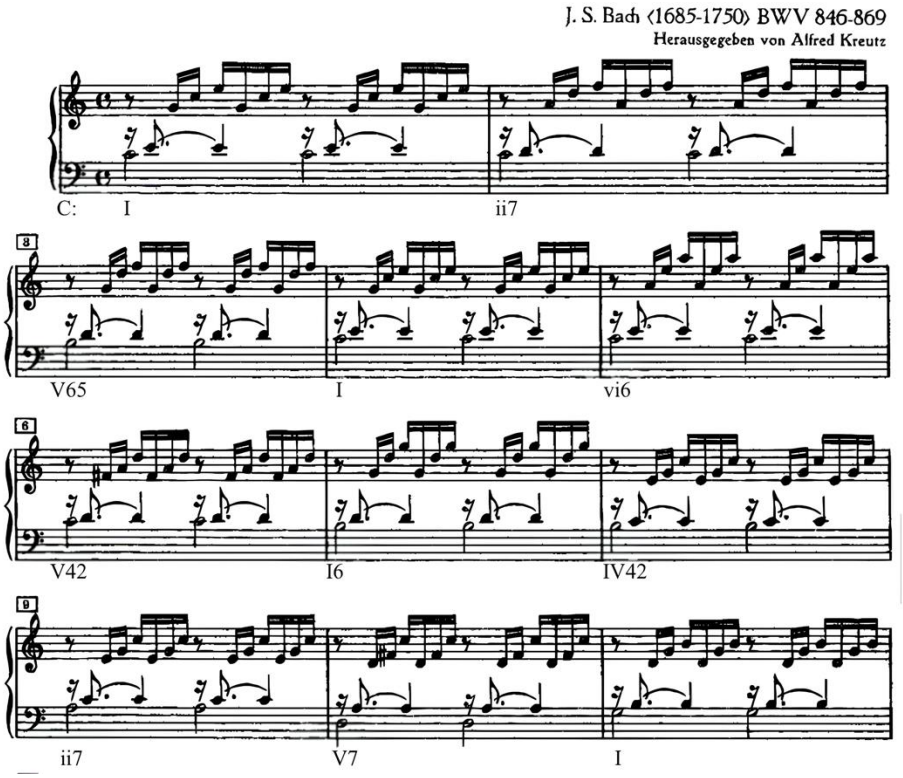

Figure 1 J. S. Bach's, *Prelude* BWV 846, Peters Edition, 2001, ISMN: 9790014031107 (M014031107), p.4, b. 1–11.

In terms of the *Solo for Piano*, this feature can be found in Cage's self-invented compositional approach, inspired by his interpretation of Zen Buddhism. In the late forties, Cage met a philosophy scholar, Daisetz T. Suzuki (1870–1966), who inspired him to take experience as musical elements. Suzuki was a philosophy scholar of Zen Buddhism who taught Eastern philosophy and religion from 1945 to 1957 at Columbia University, where Cage first met him[15]. From the lectures he attended and his reading of certain books (*I Ching*, *Chuang-tze*, and *Huang Po*), Cage realised that Zen Buddhism is about freedom[16], unimpededness, and interpenetration[17]. Referring his realisation back to the concept of Zen Buddhism – defies all attempts at conceptualisation and instead concerns itself with the search for the pure facts that are the foundation of our being[18] – Cage drew inspiration from this outlook and concluded that our goal is to affirm this life, not to bring order out of chaos nor to suggest how we can improve on creation[19]. From this realisation, Cage intended to reduce the composer's authority and provide performers with the opportunity to make choices, resulting in significantly varied

[15] D. Revill, *The Roaring Silence. John Cage: A Life*, 2nd ed., Arcade Publishing, New York 2014, p. 125.
[16] K. Silverman, *Begin Again: A Biography of John Cage*, 1st ed., A. Alfred. Knopf, New York 2010, p. 121.
[17] D. Revill, op. cit.
[18] D. T. Suzuki, *An Introduction to Zen Buddhism*, Grove Press, New York 1964, p. 42.
[19] J. Cage, *Silence: Lectures and Writings*, Wesleyan University Press, Middletown 2011, p. 95.

performances. Consequently, he utilised chance-derived materials, the paper imperfections, as compositional materials[20].

Although he used chance-derived materials, this musical work is surprisingly organised and systematic. This is because Cage invented a graphic compositional system to practise his realisations of Zen. This system is the major reason why this article suggests that Cage's *Solo for Piano* is methodically produced, even if it is based on chance-derived materials. The graphic compositional system consists of two steps: a drawing process and a means of translation[21], meaning that Cage firstly marked the uneven surface, then overlaid musical symbols (accidentals, staffs, and clefs) along with some drawings, shapes, or lines on those marks, to offer musical meaning. The compositional process of this piece is similar to works based on the theory of harmony – Cage invented a two-step system for composing, just as composers put their imagination into practice through harmony; the system is the foundation of the *Solo for Piano*, just as harmony is the foundation of conventional musical works. Based on the nature of the graphic compositional system, Cage successfully decreased the dominant position of the composer, allowed performers extensive freedom[22], and formed a new information structure in the relationship between composer, performer, and listeners[23]. This circumstance then leads us to the second and third features of Weber's rationality.

The second feature is functional. In this case, Weber asserted the influence exerted by religion on one specific musical instrument, namely the organ. To return once more to *Die protestantische Ethik und der Geist des Kapitalismus*, the first publication Weber wrote on the theory of rationality[24] – here, he suggested that religions can act as a catalyst to motivate believers to take actions accordingly, while their actions can serve as an essential foundation informing their society. When he applied rationality to the field of music, he looked in

[20] In the present article I intend to use paper imperfections to draw discussions about the compositional materials in the *Solo for Piano*, including numbers, lines, shapes, areas, dots, and arrows, etc., are based on these uneven surfaces of paper sheets. The more we know, the more differences between indeterminate music and conventional music we become aware of, and therefore I suggest differentiating the term to deliver more precise elaborations – „musical symbols" for discussions about conventional music; „compositional materials" for discussions about indeterminate music.

[21] J. Pritchett, *The Music of John Cage*, Cambridge University Press, New York 1993.

[22] M. Iddon, *John Cage and David Tudor: Correspondence on Interpretation and Performance*, Cambridge University Press, Cambridge 2013, [see: https://doi.org/10.1017/CBO9781139013727].

[23] M. Nyman, *Experimental Music: Cage and Beyond*, 2nd ed., Cambridge University Press, Cambridge–New York 1999.

[24] Since the focus of this article is on the process of value formation, I intend to focus on aspects of music in Weber's rationality to avoid distraction. In *Die protestantische Ethik und der Geist des Kapitalismus*, Weber revealed to his readers that the spirit of capitalism is closely connected with the ethic of Protestantism. One of his observations or arguments is that the principles of Protestantism indoctrinate believers, make them feel uncertain, anxious, and frustrated, but also give them hope in a better afterlife if they live assiduously, pursue their own calling, and make their fortune. In these circumstances, the doctrine of Protestantism acted as a catalyst, motivating believers and shaping society.

particular at the role played by religion. In line with this approach, he proposed the relationship between organs and monasteries as an example of how religion functioned as a catalyst. He emphasised that „only ecclesiastical use offered a solid basis for the development of this instrument"[25] and „the monastery organisation was the only possible base on which it could prosper"[26]. This is because of the affiliation between organ technicians and monasteries; organists and organ builders had to be either monks or have strong connections with monasteries at that time, which meant that they were affiliated to monasteries. In these circumstances, monasteries had advantages in that they were able to adjust the temperament of the organs. Consequently, they influenced the development of polyphony and thus also harmony. From this feature, we notice the importance of how people's actions influence the developments of a musical instrument and the theoretical part of music. In the context of religious influences, people's actions are the key factor in Weber's analysis. In Weber's view, Western society is rationalised because it underwent a process of disenchantment, including as a result of intellectualisation and rationalisation[27], such that humans were no longer believed to be ruled by mysterious, unpredictable powers[28]; instead, our world is shaped by our thinking. In other words, it is undeniably a fact that religion has performed a central function in society, but people's choices, preferences, value concepts, and actions are necessary elements as well.

Reflecting on this stance in the case of the *Solo for Piano*, the focus is evident, as this musical work is more concerned with individuals. When Cage used paper imperfections in his graphic compositional system, his intention was to highlight freedom, unimpededness, and interpenetration; as he described, „seeing that in all of space each thing and each human being is at the centre"[29]. In other words, everyone can be at the centre of beings, and everyone can be the decisive factor in a musical work. This statement shows that the *Solo for Piano* is about individuals; not only with regard to the need of individuals to play musical works, as a performer does in conventional music, but also the need of individuals to substantially structure their own performances. The uniqueness of the piece indirectly demonstrates the fact that compositional materials in the *Solo for Piano* are variable, or to put it in another way, the value of compositional materials in this musical work is semi-determinate, waiting for the performer to determine their value.

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[25] M. Weber, op. cit., p. 114.
[26] Ibidem.
[27] S. Grosby, *Max Weber, Religion, and the Disenchantment of the World*, „Society" 2013 no. 50 (3), p. 301, [see: https://doi.org/10.1007/s12115-013-9664-y].
[28] M. Weber, *Max Weber's „Science as a Vocation"*, ed. by P.Lassman, I. Velody, H. Martins, U. Hyman, London-Boston 1989.
[29] D. Revill, *The Roaring Silence*, op. cit., p. 113.

This semi-determinate status is related to the final feature of rationality – its interactive aspect. Weber demonstrated how the popularity of the piano was intimately bound up with the demands of the market, the rise of the middle class, and local weather conditions. He did so by detailing the advantages of the piano, such as the enhancement of the tone, the retention of the notes, and chords produced with accurate pitches[30]. To be specific, this type of inter-action drove both the internal conditions (such as musical literacy, the types of tonal materials derived from the tuning, and the composition of harmonically complex music, etc.) as well as the external conditions (bourgeois musical culture and industrial production technologies) of developments in music simultaneously[31]. By projecting this feature on to the semi-determinate status of the compositional materials, Cage's arrangements are similar to internal conditions in that they act as the framework of the musical work, while the choices made by the performers serve as the external conditions, i.e. societal or individual influences, acting on the work.

After examining the three features – methodical, functional, and interactive – we may notice that Weber formulated his arguments on the basis of people's actions, meaning that he considered people's preferences, choices, intentions, and values as fundamental factors in his theory of rationality[32]. When we apply these features to the *Solo for Piano*, they show the methodical construction of the graphic compositional system, the decisive existence of individuals, and the semi-determinate status of compositional materials. In short, when musical symbols carry musical meaning themselves, they do not require performers to decode and execute them to form their value. However, when the composer intended to reduce their own dominance by providing performers with a considerable degree of freedom and constructing the work on a variable centre, the process of value formation is compulsory.

The tripartite model and the *Solo for Piano*

To make the gradual process of value formation more understandable, this article endeavours to offer an explanation based on a revised tripartite model. The latter consists of three levels: the poietic, the neutral, and the aesthetic. Together they reveal how music is composed, perceived, and interpreted. They constitute a continuous process shaping the development of a musical work; a new layer can be formed by a single performance given by a single performer. For instance, at the poietic level, a composer produces a piece of music, which becomes a neutral object at the neutral level. This neutral object requires decoding by the performer, who

[30] M. Weber, *The Rational and Social Foundations...*, op. cit., p. 121.
[31] B. Konoval, op. cit., p. 479.
[32] J. Habermas, *The Theory of Communicative Action*, Beacon Press, Boston 1984.

then interprets the work at the aesthetic level, while the performer's performance will generate another poietic level[33].

The tripartite model is taken from the semiotic schemas of Nattiez and Molino; the schema describing how a message is delivered and how the information contained within such communication is interpreted, which they describe as follows: the classical schema of communication starts with the producers, who deliver a message in their own way and guided by their own intentions; this message will then be received by the receivers, who understand the message by means of their own interpretations. However, according to Molino et al., interpretation is not only about understanding messages; it also involves reconstructing the message from the angle of the receiver. Since receivers reconstruct the message, it should not have an intermediary existence within the process; rather, it ought to be a neutral object that cannot force the receiver to understand the message using the producers' logic. In other words, the receivers' understanding is independent of producers' action of delivering the message. Based on this reasoning, Molino et al. revised the schema of communication (See Figure 3), which takes into consideration the poietic process and the aesthetic process, and which identifies the message as a material reality and an immanent configuration of analyses[34]. With this correction, Nattiez developed a tripartite model that can apply to music.

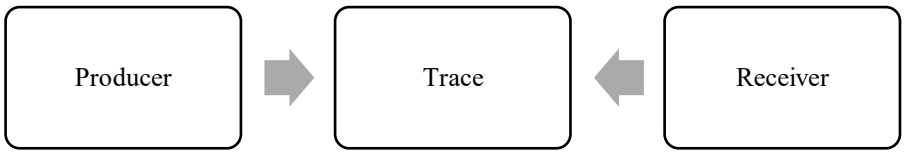

Figure 2. A revised schema of communication by Molino et al[35].

Applying the tripartite model – comprising the poietic level, the aesthetic level, and the neutral level – to music, the poietic level emphasises the connection between the composer's intentions and their creative methods. The aesthetic level pertains to how recipients perceive a musical work, the acoustic outcome, or the performance[36]; and the neutral level represents the object (the musical work to the performance) produced by the producer at the poietic level. In these levels we can recognise various conceptions of the work from paper to performance.

[33] D. Clarke, *Musical Indeterminacy and Its Implications for Music Analysis: The Case of Cage's Solo for Piano*, „Music Theory and Analysis (MTA)" 2016 no. 3 (2), [see: https://doi.org/10.11116/MTA.3.2.3].
[34] J. J. Nattiez, C. Abbate, *Music and Discourse: Toward a Semiology of Music*, Princeton University Press, Princeton - NJ 1990, p. 15.
[35] J. Molino, *Musical Fact and the Semiology of Music*, „Music Analysis" 1990 no. 9 (2), p. 105–106, [see: https://doi.org/10.2307/854225].
[36] J. J. Nattiez, C. Abbate, op. cit., p. 92.

David Clarke proposes a revised tripartite model for experimental music, based on Nattiez's model. In Clarke's revision, he considers the uniqueness of experimental music – every realisation is different. They cannot be reproduced, so each realisation starts a corresponding poietic level, and listeners likewise begin their own aesthetic level (see Figure 4).

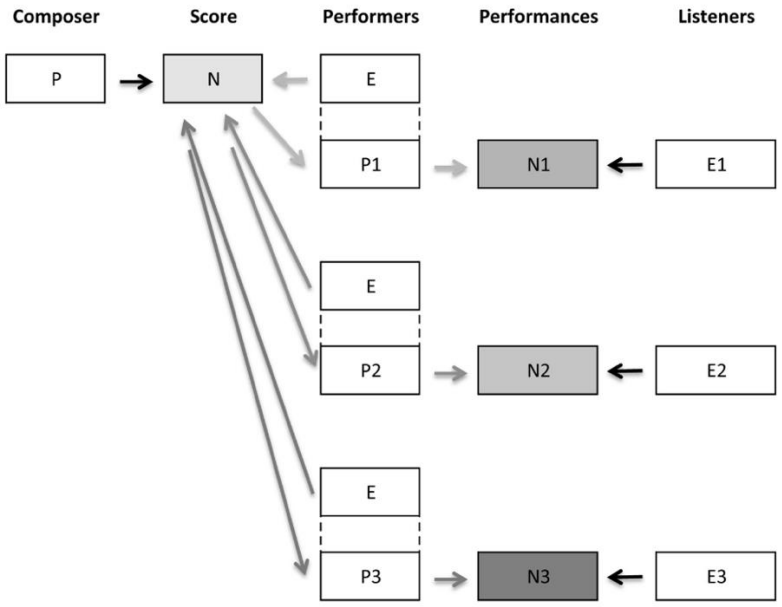

Figure 3. The revised tripartite model by Clarke[37].

Clarke revises the tripartite model based on the nature of experimental music; he reinforces the individuality of each interpretation of the performers and the understanding of the listeners. The essential difference behind the various interpretations of the performers lies in how the individual has been offered the freedom to decide the value of the compositional materials, to complete the semi-determinate status of those materials. As was previously mentioned, Cage invented his own graphic compositional system to compose the *Solo for Piano*, using paper imperfections as fundamental materials; he marked these paper imperfections in the first step of the process, and then prepared drawings, lines, or shapes and musical symbols to complete his framework. In the revised tripartite model, Cage's graphic compositional system shows first the paper imperfections, with no value involved; when the work is completed, the paper imperfections enter the neutral level, which also constitutes the semi-determinate status for the compositional materials; and then, at the aesthetic level, when the performer decodes the notation, he/she makes choices according to Cage's performing

[37] D. Clarke, op. cit., p. 179.

instructions. At this level, the status remains semi-determinate as the performer is still making decisions for the performance (see Figure 5). Once the new poietic level (the performer's realisation in the second layer) is achieved, the value of the compositional materials is determined, meaning that these materials are decided by the performer and will be performed in the performance (see Figure 5).

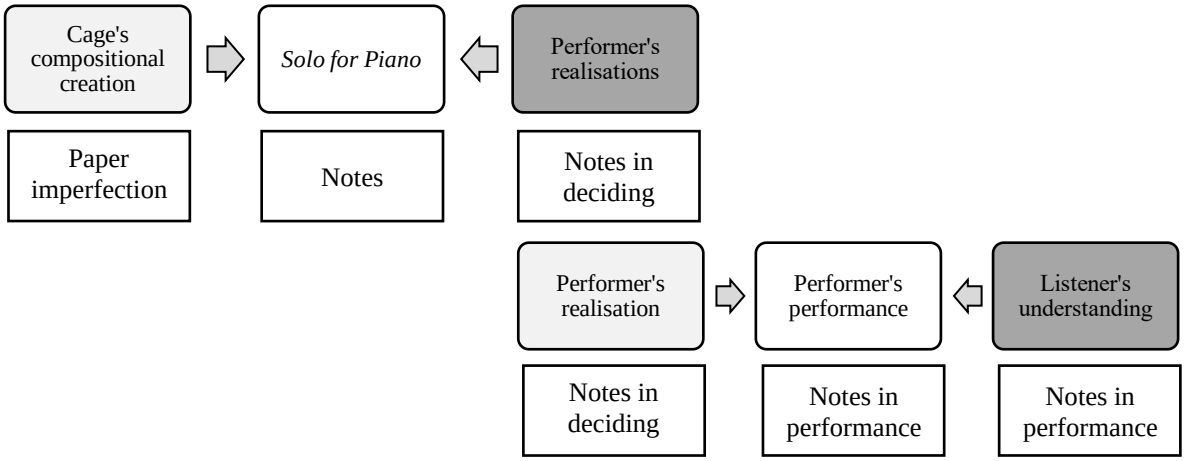

Figure 4. Two layers of the revised tripartite model, with the value formation of the compositional materials.

For example, in Notation A on page 1 of the *Solo for Piano* (see Figure 6), Cage provides the following instructions for the performers

> „Following the perimeter, from any note on it, play in opposite directions in the proportion given. Here and elsewhere, the absence of indications of any kind means freedom for the performer in that regard"[38].

From this instruction, the compositional materials that can be found are the perimeter, notes, directions, and the given proportions, numbers in ratio form, a G-clef, an F-clef, accidentals, groupings, paper imperfections, staffs, and notes. Cage provides two instructions for the performing approach, in the sense of: „following the perimeter", and playing „in opposite directions" in the assigned proportion; and there is freedom „from any note on it [the perimeter]", which can be played „in opposite directions" in the assigned proportion, while „the absence of indications of any kind means freedom for the performer in that regard" (see Table 1). This means that the performer needs to decide the order of the notes to be performed, the direction of the performance for both hands, and the quality of the sounds (e.g., duration, amplitude, dynamics, etc.). From the performing approach and freedom that Cage offered in Notation A, the action of making decisions for the realisation can be recognised. The performer

[38] J. Cage, *Concert for Piano and Orchestra: Solo for Piano*, Edition Peters, New York 1960, prefatory note.

needs to decide which note is the first note in the realisation and decide the performing direction for both hands. By following Cage's performing instruction, the performer determines the details, and gradationally shapes the value for the realisation.

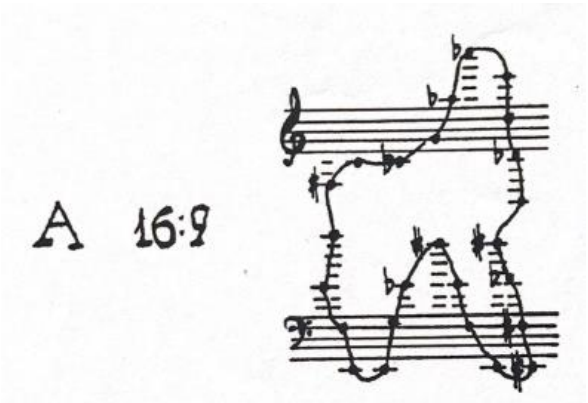

Figure 5. Cage, *Solo for Piano*, Edition Peters, New York, 1960, p. 1.

The compositional materials from the performing instruction	The perimeter, notes, direction, the given proportion.
The compositional materials from the notation	Numbers in ratio form, G-clef, F-clef, accidentals, groupings, paper imperfections, staffs, and notes.
The performing approach	Following the perimeter; playing in opposite directions in the assigned proportion.
Freedom	From any note on it [the perimeter]; playing in opposite directions in the assigned proportion; the absence of indications of any kind means freedom for the performer in that regard.

Table 1. This table lists all the compositional materials in the performing instructions and notations, performing approaches, and freedom in the performing instructions for all of Notation A.

Conclusion

In previous sections, I endeavoured to present the three features of the theory of rationality as they apply to Cage's *Solo for Piano* to show the fact that value in this case is decided by both the composer and the performer. The composer sets the fundamental framework and leaves compositional materials with semi-determinate status for the performer; the performer then needs to make decisions and create the final version of this musical work. This process illustrates how value is formed through the composer's framework and the performer's decisions; the cooperative value formation can be traced back to the inspiration Cage drew from Zen Buddhism. His interpretation of Zen Buddhism comes down to three interpretations: freedom, unimpededness, and interpenetration. From these interpretations, Cage developed a sense of control between freedom and discipline – the performer is free to decide on the

compositional materials, according to the disciplines, i.e., performing instructions, established by Cage. With the discipline, the compositional materials of semi-determinate status are varied. For instance, in Notation A, the compositional materials of semi-determinate status include the performing order of the notes, the performing direction for both hands, and the quality of the sounds. This means that the performer needs to choose notes for both hands, decide the performing direction, and decide the dynamics, duration, and tempo, etc. for the notes.

Comparing these with conventional music, in which the musical symbols are determinate – as this article described previously, the musical symbols carry their own value and meaning – we, whether as composers or performers, use these musical symbols as a set of tools. As a consequence, we know how to perform musical works, even without performing instructions. The combination with the revised tripartite model reveals the process of value formation. It starts with paper imperfections, which transform into notes of semi-determinate status. The notes then assume a determinate status once the performer makes the necessary decisions. From this process, we see that value formation involves the random paper imperfections, the arrangement of the composer, and the realisation and the selections of the performer. Together, they reveal the gradational formation of value in the *Solo for Piano*.

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