



TOTAL SERIALISM AND INDETERMINATE MUSIC

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บทคัดย่อ

นับตั้งแต่ศตวรรษที่ผ่านมา ได้มีความพยายามที่หลากหลายต่อแนวความคิดทางดนตรีอันมีวิวัฒนาการและการเปลี่ยนแปลงอย่างต่อเนื่อง ผู้ประพันธ์ได้ทดลองวิธีการใหม่ๆ คิดค้นทฤษฎีการประพันธ์ที่น่าทึ่ง และค้นพบหนทางแห่งการประพันธ์ที่ตนรู้สึกว่าจะสามารถตอบสนองเจตนากรรมของตนได้ดีที่สุด ทั้งในแง่อัตวิสัย และในแง่สติปัญญา

ดนตรีซีเรียลสมบูร์นและดนตรีเสียงทาย ต่างก็เป็นหนึ่งในกระแสนิยมหลักที่ปรากฏในช่วงหลังสงครามโลกทั้งสิ้น แม้ว่าดนตรีทั้งสองระบบนี้มักจะได้รับชมว่าเป็นคนละเรื่องกันและไม่เกี่ยวข้องกันเลยก็ตาม แต่หากพิจารณาถึงเนื้อแท้แล้วก็จะพบว่า อันที่จริง ทั้งสองระบบดังกล่าวก็มิได้มีความแตกต่างกันมากนัก นอกจากนี้ ผู้เขียนยังชี้คำถามเกี่ยวกับขอบเขตที่แท้จริงของวิธีการประพันธ์ดนตรีทั้งสองระบบ อีกทั้งเสนอความเชื่อมโยงบางประการที่แฝงอยู่ภายในโดยผ่านกระบวนการวิเคราะห์ทางปรัชญาด้วย

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Abstract

Over the past century, there have been various approaches to the somewhat ever-sprouting, if not ever-changing, concept of music. Composers tried new methodologies, invented astounding compositional theories, and discovered numerous ways that they felt were best responsive, personally and intellectually, to their intentions.

Total serialism and indeterminate music were also amongst the main streams in the so-called “Post World War” era. Often regarded as distinct and irrelevant towards one another, the two trends are, as to be demonstrated throughout this article, not dissimilar essentially. The author also raises questions concerning the true boundaries between these two methodologies of music composition and suggests, via various philosophical approaches, that some internal and intimate links could actually exist.

Keywords: Total Serialism / Indeterminate Music / Aleatory Music / Chance Music / 20th Century / Composition / Theory / Philosophical Approaches

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Superficially, total serialism* and indeterminate music** appear to be entirely different. Whilst the first seems to limit all possible means of creativity in music composition, the latter seems to accept whatever possibility the musical world has to offer. Nonetheless, the author believes that both types of music are, in fact, strangely affiliated.

Firstly, although total serialism is always determined initially by the composer, if we consider thoroughly, however, wouldn't we find that indeterminate music is just the same? In chance music, no matter how hard the composer tries to eliminate his own role from a specific piece, he still encounters the impossibility of truly achieving the goal. This is evident from the very first stage of composition. The desire to eliminate one's own self out of a single piece of music is ironically still a type of desire. Moreover, once the composer specifies certain elements of music into that piece, his own self and desire become even more prominent. Consider Earle Brown's *Available Forms I*, composed in 1961 for chamber orchestra, for example. Here, the instruments are specified clearly in the score; the feasible motifs are given for instrumentalists to choose to either perform or improvise; the tempos, timbres, techniques as well as sections, are all given deliberately by the composer. This, however, also covers other certain aleatory pieces such as Morton Feldman's *Projection II*, composed in 1951 for a combination of flute, trumpet, piano, violin and cello, or John Cage's *Music of Changes*, also composed in the same year for piano solo; both of which still require or contain ranges of the instruments, numbers of attacked pitches, and indications on the appropriate (sometimes rather exact) moment to perform certain indicated materials. In this aspect, aleatory music is not wholly different from other kinds of music.

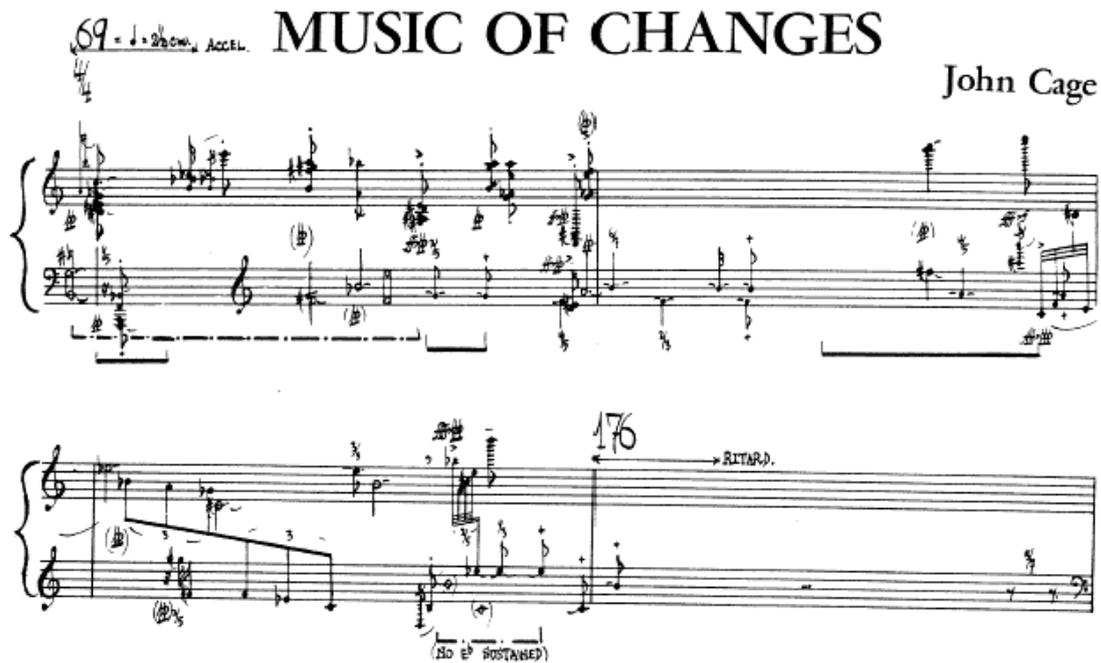
* Total serialism. Composition which treats all musical parameters serially, not only pitch but time values, volume, etc. (Kennedy 1996; 743)

** Aleatory music (from Latin *alea*, dice; hence the throw of the dice for chance). Music that cannot be predicted before performance or music which was composed through chance procedures (statistical or computerised). (Kennedy 1996; 13)

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Figure 1 Last page from Brown's Available Forms I.
 (Source: <http://www.earle-brown.org/works/view/25>)

Figure 2 The opening of Feldman's *Projection II*.
 (Source: <http://www.cnvill.net/mfgriff.htm>)



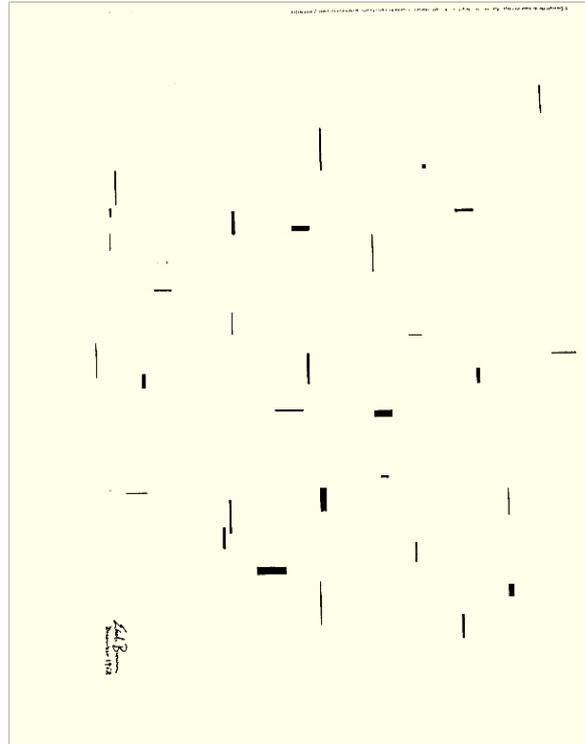


Figure 4 Brown's *December 1952*.

(Source: http://www.chelseaspace.org/images/december/december1952_1.gif)



Figure 5 Page 19 from Cage's *Imaginary Landscape No. 4*.

(Source: <http://www.mindatplay.co.uk/imaginarylandscape.html>)

Thus, if each indeterminate piece is considered this way continually, one might start thinking that Cage's *4' 33"*, composed in 1952, might be the only true aleatory music ever composed. Nevertheless, it is necessary to point out that even *4' 33"* bears a lot of Cage's personal experiences, comprising using the I-Ching to determine the length of the piece, dividing each movement by proposing specific time, choosing solo piano as the original preferred instrument*, and above all, the composer's intention and expectation that his audience acquire the message he wished to convey. In other words, even the purpose of *4' 33"* seems to be paradoxical in itself in that the composer wished his audience to believe that he had almost no roles in his own composition. This wish was then transmitted by using a book *chosen specifically* by the composer to determine the length of the piece. Additionally, the facts that Cage wanted the audience to hear environmental sounds and imparted the philosophical idiom behind the piece that anything around us could be regarded as music proved the existence of the composer's ego.

The first two most distinctive elements of all to prove such ego in chance music are the titles of the compositions themselves and the names of the composers on the scores stating their copyright ownerships. In fact, only these two reasons might be sufficient in obliterating the non-self concept in indeterminate music and reflecting that this type of music is essentially not dissimilar from total serialism or any other, for it still contains many empirical identities by each composer. On the contrary, however, the cadenzas in solo concertos from the Early Classical period indicate the nature of aleatory concept in their essences. This is because the composers had allowed the soloists to improvise freely according to their talents, experiences, and aesthetic preferences (although they were still expected to do so according to the movements' contexts). Thus, no one would be able to guess the outcomes of those specific performances.

*However, it was soon after adapted for any other instrument.

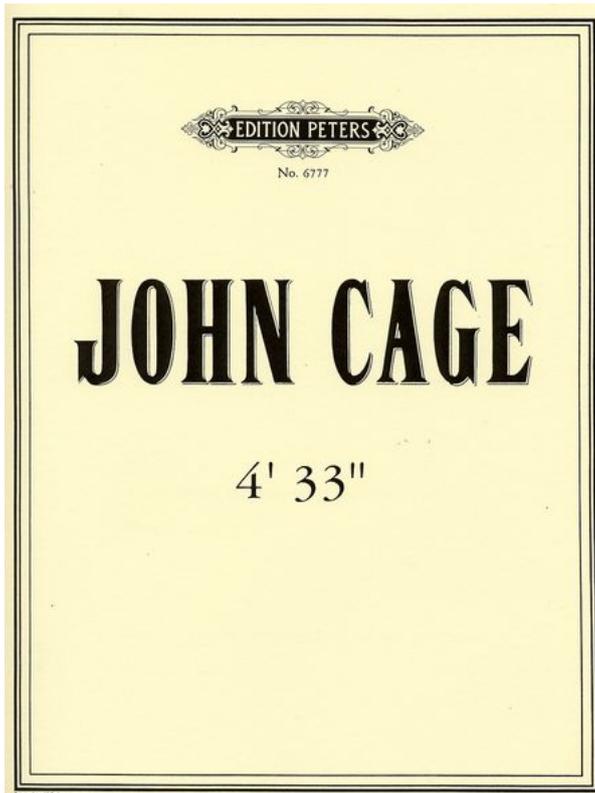


Figure 6 Title page of Cage's 4' 33".

(Source: http://25.media.tumblr.com/tumblr_ltnd6qVDKF1r4jpd8o1_500.jpg)

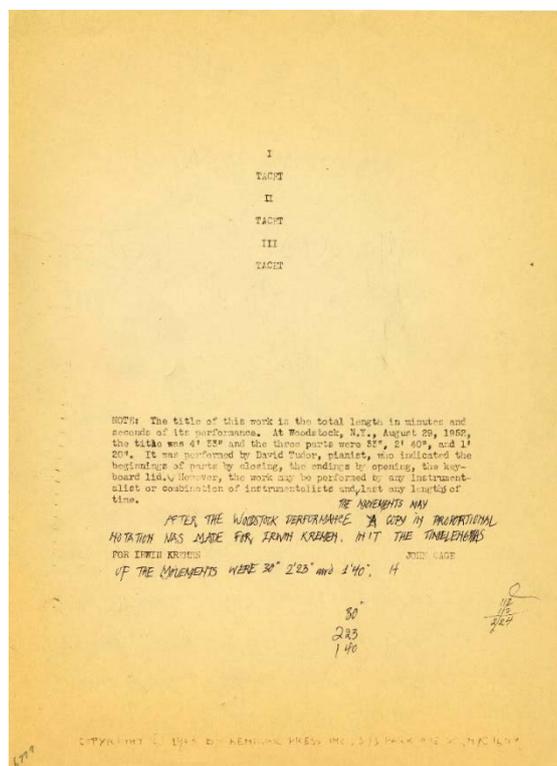


Figure 7 Manuscript excerpt of Cage's 4' 33".

(Source: <http://exhibitions.nypl.org/johncage/node/218>)

Secondly, if one believes in determinism and chooses to see things in this aspect, one might even be more convinced that there is no distinguishable boundaries between integral serialism and chance music (and even any other types of music). This is because determinism believes that everything has always been set or “determined”. Thus, every single music pitch or the characters of each piece would have been determined prior to the process of composition itself. The concept even includes whatever situations that will occur in every single performance; for instance, the kinds of sounds that are to take place in each circumstance during each performance of Cage's *4' 33"*, or the decisions concerning sections and forms made by individual conductor when conducting Brown's mobile piece *Available Forms I*. As long as music still requires time to convey its message, and such time is not twisted, “things” which are surely to happen according to determinism would make no difference whether they fall on total serialism or aleatory music. As for total serialism, the sequences of each component would also have been determined; the pitches would have to be arranged in a certain order, the dynamic role for a single composition would have to turn out in a particular way and therefore cannot be otherwise, and/or the articulations would have to be exact and definite, to name but a few examples.

In addition, it is noteworthy that composers, indeed, are not the ones to specify everything in, or have any control over, their own compositions. On the contrary, they are merely reporters of things that “are to happen” when it comes to the appropriate place and time. Perhaps all music compositions and performances may already have existed. Composers and performers, together with the audience, are simply “necessary intermediaries” that make these events feasible. So, is there really a type of music that is truly different from others in this respect?

The final methodology inquires into an almost opposite reasoning to determinism, yet it gives the same, and no less astonishing, outcome, which affirms that there is essentially no dissimilarity existing between total serialism and indeterminate music. This is achieved by using the principal of possibility to describe musical phenomena. Such principal may seem biased towards aleatory music rather than others superficially*, though in reality, this tenet can be used to describe the origins of integral serialism equally as effective as those of chance music.

The principal of possibility, or the principal of probability, explains that everything that happened, is happening, or even is about to happen, is entirely based on possibilities. If determinism believes that there is no such thing as indeterminacy because all things are destined to happen, this principal, on the contrary, will suggest that everything is aleatory from the beginning. Consider Milton Babbitt's *Three Compositions for Piano*, composed in 1947, for instance. Every detail in the piece concerns the possibility of all musical elements that the

* Just like determinism may seem biased towards integral serialism initially.

composer himself could choose from. These extremely varied choices that Babbitt had, and had to make when composing, included instrument selection, sequences of the rows, connexion and relativity that could be made in order to define the pieces' unity, the decision on how to use numeral figures in order to correspond with the contexts, the relations between dynamics and other materials, or even the interrelations between the rows, articulations, and timbres. Once regarding everything in this aspect, one finds that all musical elements sprout from the principal of possibility. The only issue that matters is what the composer, in this case, Babbitt, would choose to present from all the possible sets available.



Figure 8 First two bars of Babbitt's *Three Compositions for Piano*.

(Source: <http://michaelgood.info/publications/music/scot-a-score-translator-for-music-11/>)

All composers in history of music can, in fact, be claimed to have been under this principal, whether consciously or unconsciously. Of all the twelve pitch classes, which one(s) would be chosen to play an important part (in tonal music)? How should a motive be constructed, generated, and transformed? Which pitch, if any is needed, is to be played after the oboe has finished its role? Who should be the one to take over afterwards? These all await the selections by the composers, and by choosing something, the chances of transmitting other possibilities into their compositions are also necessarily lost. Likewise, as the author decides to transmit this specific concept, he has already lost the opportunities in conveying other feasible notions.

Certain questions, such as whether other types of music that do not use the same standard Western music notation should be considered, may arise. Take the famous 1960 quarter-tone composition for 52 string instruments *Threnody: To the Victims of Hiroshima* by Krzysztof Penderecki, for example. Albeit the more sophisticated notation, it is still trapped within the boundaries of its own possibility. In fact, every piece is trapped within such boundaries of possibility. Nonetheless, it must be understood that the set for each piece does not have to be essentially the same. (In fact, it is not likely for any two compositions to possess the same set.) In order to clarify this, one might consider why Penderecki had decided to use this specific texture amongst innumerable others. It is also to be noted, however, that

the composer does not always have to recognise all the possible choices he can make. Sometimes, he may be able to recognise merely partially and makes his choice from it. Occasionally, he may perceive only one possibility out of the whole set, and conveys his perception thus. Furthermore, each composer's perceptions are always limited by the boundaries of his own experiences. Hence, it is impossible for anyone composer to have a *perfect perception of all the possible choices* and choose the best solution afterwards.

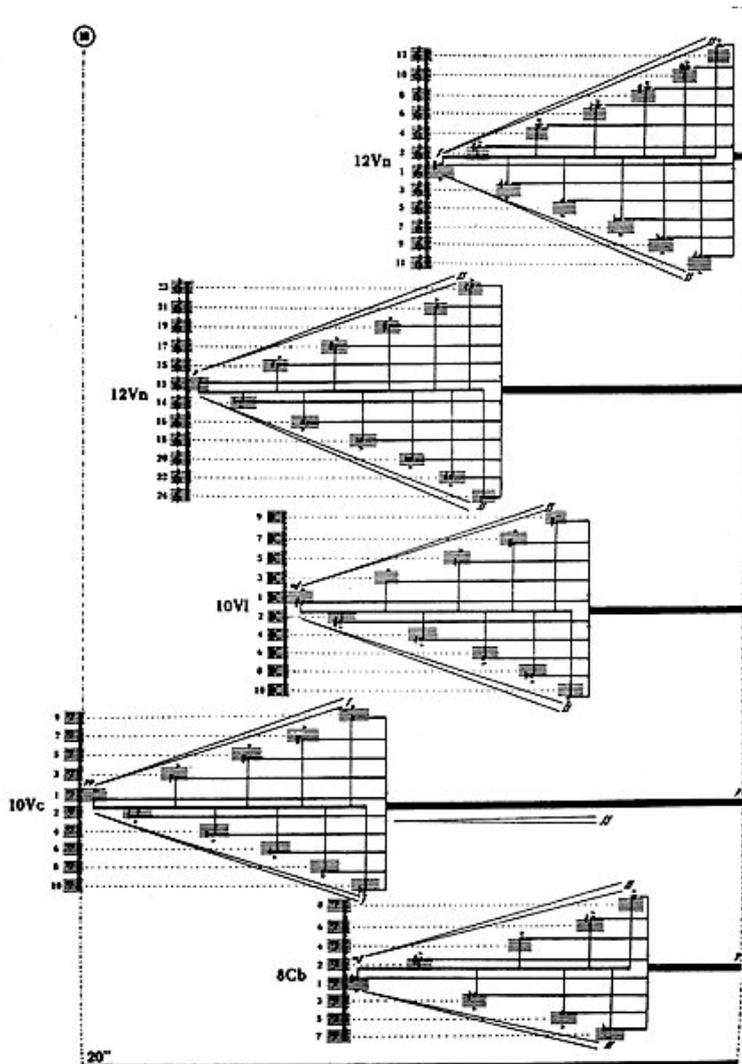


Figure 9 Excerpt from Penderecki's *Threnody: To the Victims of Hiroshima*.
 (Source: http://d29ci68ykuu27r.cloudfront.net/product/Look-Inside/large/1505134_02.jpg)

From the above reasons, it is evident that to try to determine the exact boundaries between total serialism and indeterminate music is to enter the realm of impossibility, for such boundaries merely exist superficially, but never essentially. Additionally, 20th century composers such as Pierre Boulez and Witold Lutoslawski have tried mending these two kinds of music together effectively. One of the most popular pieces composed in this style is Boulez's *Piano Sonata No. 3*, with its variable overall structure and the renowned movement

called “Trope”. In this movement, the pianist can choose to either perform or omit the details in the parentheses, which are equivalent to additional explanations of their preceding tone-row phrases. Thus, the line between these two types of music is finally eliminated both superficially and physically.

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