

1927

Two processes of creating form in music

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Abstract

It is intended to examine form in two pieces of music written/realised in 1927: Webern's Opus 20 (string trio) and Louis Armstrong's Wild Man Blues (Hot Seven) as a method of evaluating their significance and diametric social relationship. Reference is made to visual art movements and ideas from this period as well as a glance at scientific and mathematical theory which may be seen to have a coincidental relationship with some ideas in art in 1927.

Introduction. Throughout the classical musical cannon within the European tradition, structure can consist of many diverse forms (sonata, ritornello, fugue, canon, rondo etc) built using a particular process of music composition. Over centuries now, written musical notation has been the main system of planning and constructing a piece often before it has ever been heard beyond the composer's own imagination. However, it is considered harder to trace form in improvisation because of it being seen (or not seen!) as shapeless and amorphous due to a popular misconception that there are overriding visceral inclinations with spontaneous invention.

1. Composition

1.1. Background to Anton Webern's string trio - Opus 20. The advent of abstract expressionism through transformation from figurative to abstraction in visual art can be clearly seen to have similarities with musical developments in Germany.



Figure 1: Vasily Kandinsky: *All Saints Day II* 1911 (Munich, Städtische Galerie)

In Figure 1, similar developments can be found in the music of Schonberg (and Webern) from a later period of time.



Figure 2: Vasily Kandinsky: *Improvisation 26 (Oars)* 1912 (Munich, Städtische Galerie)

In Figure 2, Tonality (figurative) is replaced by a freer non-tonal aesthetic and runs a parallel timeline with early abstract expressionism – as heard in Schonberg’s works like Five Orchestral Pieces – Opus 16 and Erwartung - Opus 17, the latter taking only 26 days to compose which might suggest a more spontaneous or improvisatory process of composition.

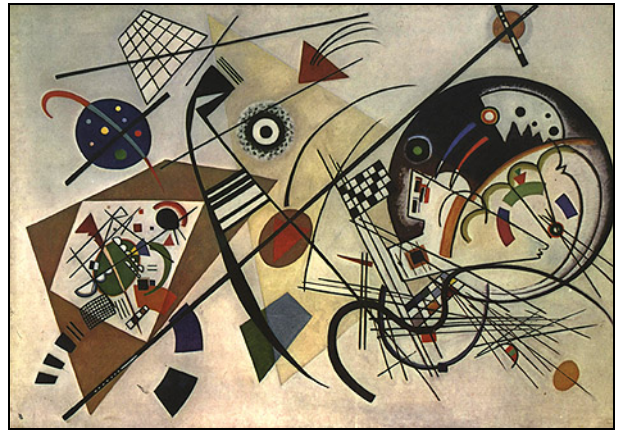


Figure 3: Vasily Kandinsky: *Transversal Line* 1923 (Kunstsammlung Westfalen, Dusseldorf)

In Figure 3, this is later ‘cleaned up’ once the rules of serialism are applied; expressionism makes way for neater geometric forms which can be seen almost as a more developed and refined form of abstraction, as heard in Webern’s Opus 20. Note however the same shapes and placements in all three of Kandinsky’s pictures remain related though becoming refined and sparser in the same way that Webern’s later compositions became.

1.2. Foreground to Opus 20. Similarly, Webern’s music towards the end becomes more transparent culminating in works like Opus 28. So with this refinement, each pitch acquires more importance and value and so is more tightly controlled, leaving no room for any other interpretation. Difference in each performance therefore becomes more negligible. Any character- or personality-trait from the musician’s performance of this piece is minimized. The example from the score of Opus 20 below clearly exemplifies the point that every note is more controlled by some form of technical or expressive instruction.

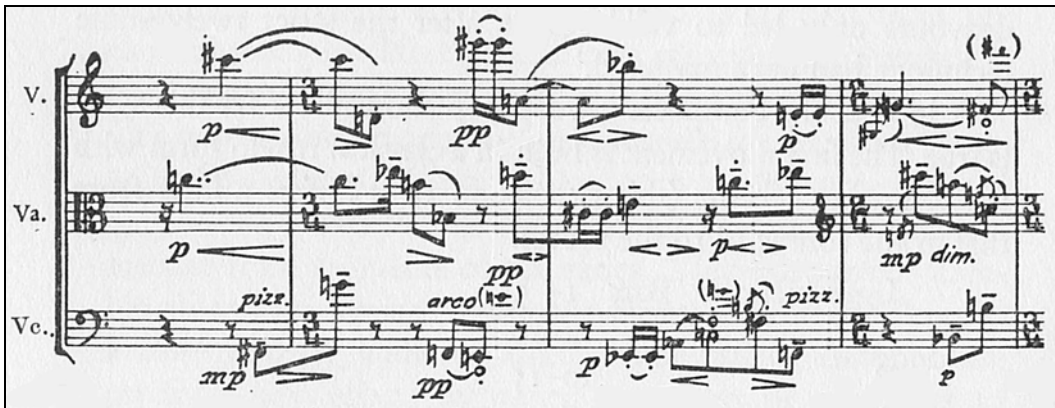


Figure 4: Anton Webern: *Opus 20* for string trio (1927) Bars 4-7

1.3. Dissolving tonal relationships in Opus 20. Also clearly evident from the above example (Figure 4), are very wide intervallic leaps within each instrumental part. This device is used by Webern as a means of disestablishing any trace of tonal gravity. These wide leaps help to dissipate any linear resemblance of scale in order to avoid any accidental tonal inference.

1.4. Relativity in music. Painted in 1910, Kandinsky's picture titled "First Abstract Watercolor", is often considered to be the first piece of non-figurative European art, which runs parallel with Schonberg's previously mentioned middle-period work, and which both coincide with Einstein's Theory of Relativity developed just before this time. The parallel with tonal gravity is obvious. Tonics and dominants are the ground onto which everything returns in the same way that gravitational attraction was recognised and understood for 200 years.

In 1927, Einstein writes a tribute to the bicentenary of Newton's death. In one part headed "Newton on its limitations", he writes:

".....Space and time were so divested, not of their reality, but of their causal absoluteness (absoluteness-influencing, that is, not -influenced), which Newton was compelled to attribute to them in order to be able to give expression to the laws then known...."

Gravity can be seen to be replaced by relativity – and likewise the listener has the ground taken away from under their feet when the causal absoluteness of tonal gravity is removed from a piece of music. Instead, tone, timbre, texture, and shape become more overriding features in musical and visual composition, the repercussions of which resonate throughout the modernist period over the second half of the 20th Century in the 'West' (as we call it) in general.

By 1927, theories such as serialism in music as founded by Schonberg and Hauer, and various visual methodologies can be found in theoretical work by visual artists like Kandinsky's "Point and Line to Plane" (1928), Klee's little "Pedagogical Sketchbook" (1923) and Malevich's "Nonobjective World" (1926). These are also reflected in scientific developments of that time. Similarly in theoretical science, Einstein's theories are further developed; one such example would be quantum mechanics.

1.5. The process of composition. In Opus 20, Webern uses for the first time Schonberg's serial system. With this system come Webern's later and far more refined style and its very specific notational instruction. Therefore, when the piece is performed it could be comprehended at best as an eternally endless reproduction of the same accurately played fixed piece which therefore becomes an ossified and empty uncreative process unless we gauge minute differences between each performance as significant.

1.6. Scientific parallels. In 1927 Heisenberg formulates the Uncertainty Principle which expresses the "uncertain relationship" between the position and the momentum (mass times velocity) of a subatomic particle. My research on the internet though would suggest that ".....its effect on measurements in the macroscopic world is negligible and can be usually ignored" [2]. But the philosophical relevance to broader issues might well be applied to the second piece of music. In the same way that the differences between a performance of opus 20 are similarly "negligible and can be usually ignored", the wider issue which is thrown up as a result of this theory is "...Heisenberg's result is not a statement about the inability to construct good measuring devices. It is a statement about an intrinsic property of nature... Nature has an essential indeterminacy" [3]

1.7. The principle of uncertainty in music. An alternative to this potential stagnation as a result of too many compositional constraints, might be to have a way of creative music making where the performer is integral in shaping a compositional situation, thus introducing a kind of healthy 'uncertainty principle' to the music. Making music using the spontaneous creation of musical form in improvisation can help both reveal and harness its natural wildness and indeterminacy. An example of this was made in 1927 as follows:

2. Improvisation

2.1. Background to Louis Armstrong’s “Hot Seven” version of Wild Man Blues. With the development of sound recording, it was possible to document what were up until the beginning of the 20th century, aural traditions based on their direct relationship with their environment and local community. In 1927, New Orleans reflected a very culturally cosmopolitan environment significantly different from Viennese life which, at that time, was where most of Webern’s Opus 20 was composed.

The Hot Seven recording of Wild Man Blues was made in 1927. It was co-written by Armstrong and Jelly Roll Morton. Its main feature is the continuous series of stop breaks throughout the piece which use the harmonic movement of a quasi-song structure, but the breaks feature instrumental solos by Armstrong and clarinetist Johnny Dodds towards the end.

2.2. Foreground to Wild Man Blues. Unlike Opus 20, very little information can really be gained from any form of notation for this piece however visually explicit, as the vital ingredient is the performance itself by the artists. Nuance and freedom in the form of, for example, rhythmic flexibility, become impossible and pointless to notate, apart from perhaps making as accurate a transcription as possible as a means of evaluating the true complexity of a musician’s performance.

The image displays a musical score for the opening of "Wild Man Blues" (1927) by Louis Armstrong and Jelly Roll Morton. The score is arranged for five instruments: Melody (BB), Drums (BB), Bass (BB), Guitar (BB), and Piano (BB). It shows the first three systems of music, each with five staves. The first system (measures 1-4) features a melodic line with eighth notes and rests, a drum pattern with snare and bass drum, a bass line with quarter notes, a guitar line with eighth notes, and a piano accompaniment with chords and eighth notes. The second system (measures 5-8) shows a more complex melodic line with triplets and sixteenth notes, a drum pattern with snare and bass drum, a bass line with quarter notes, a guitar line with eighth notes and triplets, and a piano accompaniment with chords and eighth notes. The third system (measures 9-12) continues the melodic line with triplets and sixteenth notes, a drum pattern with snare and bass drum, a bass line with quarter notes, a guitar line with eighth notes and triplets, and a piano accompaniment with chords and eighth notes.

Figure 5: Hot 7: Wild Man Blues (1927) Opening notation from midi file.

2.3. The symbiosis of composition and improvisation.

There are two creative processes involved in the making of Wild Man Blues, that are inter-dependent and which form the basis for the piece's realisation:

The first process is the composition which creates the foundation from which the second creative process – improvisation/s, can be structured.

“12”

Wild Man Blues, in the same way as Opus 20, has 12 as a key structural number. For Opus 20, Webern uses serialism consciously for the first time, though stretches the standard 12 – tone row to involve a far longer row. The title, Wild Man Blues, might lead us to believe that the harmonic cycle lasts 12 bars, as was/is the norm for blues. In this case though, the harmonic length is likewise stretched far longer.

Form, as in Kandinsky's 2nd example on page 1 is titled “*Improvisation 26 (oars)*”, and as the bracketed word suggests, is obviously derived from something previously figurative.

So the idea of some form of basic frame or structure can be comprehended as providing both a launching point for the process of improvisation as well as an ongoing reference on which to develop and explore ideas using improvisation. In this way, composition becomes only a basis or starting point for something potentially more profound or expressive in the process of improvisation.

It is intended to give a more thorough and in-depth comparative analysis for the conference which will highlight the numerical and formal significance of each of these pieces of work; attention will be drawn to their contrasting structural relationships which are nevertheless still determined by differences in content.

2.4. References in improvisation. At this point in time, and up until the mid 1960's, harmonic structure in jazz provided a form of restraining mechanism for the player to focus upon and react to. In this way Armstrong's breaks can be seen as a release for the rigidity of the break stops. An example of this might be the sixth break in bar 22 on a dominant chord (a chord that prepares the listener for a tonal resolution, which in this case does not come) where a barrage of sound in the form of scales and arpeggios dovetails beautifully into a sequence of chromatic flurries. So in this instance, tension can be seen as the fixed framework of the harmonic form, and release, the improvisation which is sometimes almost a cry of release from these chains. For this reason, the music has that 'raw edge' which still thankfully provides the listener with an element of exhilarating discomfort, not only offering a glimpse of the social, economic and cultural landscape of New Orleans at that time, but telling a life story of the artists as they perform the music.

2.5. The process of improvisation. Wild Man Blues provides a great example of many aspects of music improvisation. Three such aspects might include:

- **Preparation.** The methodology involved in playing something off the top of your head is ironically founded on substantial preparation. The preparation is based on learning and

assimilating useful shapes, ideas, and structures that are relevant to both the performer and their relationship with the community's musical aesthetic. Some of these may be personal discoveries; others are imitations of other admired musicians therefore creating very cohesive structural links between groups of players within environments.

- **Intuition.** The process of applying these above-mentioned ideas to a playing situation often requires a speed of response that relates immediately with sounds being made by other participating musicians. In this way, thought processes are often negligible as there is only time for connecting response to statement, which then is also statement replied to by others. Intuition therefore is a tangible form of defining the relationship with fellow musicians with the direct use of ear/brain/body/instrument/sound.
- **Structure.** Similar to the current statement of "What you eat is what you are", what a musician listens to, practices, preaches, explores at home or in a practice room, will enable the player to create spontaneously both micro and macro form. Often when improvising with others there is either some form of commentary, or even criticism, which does not always need to be sympathetic, e.g. antagonism can also be a useful form of moving and or changing the music's direction or mood. Each consequence therefore helps to define structure and shape in sound.

3. Differences

3.1. Image & Model. Essentially, it must be realised that each artwork here functions in two different ways, in that one is a final and complete recording of an event – similar to a completed picture or image (snapshot). The other is a very specifically notated idea for a performance, so functions as a model. Susanne Langer [1] states "...An image is different from a model, and serves a different purpose. Briefly stated, an image shows how something appears; a model shows how something works...." For this reason perhaps it is unfair to make any specific comparison or value judgment of these as works of art, except to assess the potential efficacy in the two processes of creative music performance.

3.2. Form & Content. Because of the nature of the Bridges Conference's main objective in the study of the relationship between art, mathematics and science, **form** is the principle criterion for observation and analysis. However, it is hoped that the content of a work of art can now be comprehended as directly affecting the form. In this way, the extreme social, economic and cultural differences in the backgrounds between Webern and Armstrong will have some effect on both the process of making as well as the structures discovered in the end product. For this reason, I make the assertion that with every work of art, there is a broader picture to evaluate which is both referential (content) as well as absolute (form).

Bibliography and suggested further readings

- [1] **S. Langer.** *Mind: an Essay on Human Feeling*, Vol. 1, 1967, pp. xix, 59
- [2] http://en.wikipedia.org/wiki/Uncertainty_principle
- [3] **Lightman,** *Great Ideas in Physics*, 210. McGraw-Hill Companies, 2000
- [4] **Christopher Small.** *Music Society Education* (John Calder) 1977
- [5] **Eddie Prévoist.** *No Sound is Innocent.* (Matchless Recordings and Publishing) 1995
- [6] **Eddie Prévoist.** *Minute Particulars* (Matchless Recordings and Publishing) 2004 – Attention is drawn to p17 where, by strange coincidence, a similar reference is made, but using content as the main focus for examination.
- [7] **Derek Bailey.** *Improvisation* (Moorland Publishing) 1980
- [8] **Walter Kolneder.** *Anton Webern an introduction to his works* (Faber & Faber) 1968