

SONATAS AND INTERLUDES I - III -JOHN CAGE

(a) Background information and performance circumstances

John Cage (1912-92) is now recognised as one of the most influential figures in twentieth-century music, although in his own time he was widely maligned and misunderstood - inevitable, probably, for one who questioned so many of the fundamentals of Western music.

His principal achievements were to:

- develop the use of percussion
- exploit elements of chance and indeterminacy in performance
- explore new sound sources (including the prepared piano)
- use new forms of graphic notation
- be open to the influence of eastern philosophy on Western art, both in his music and in his extensive writings.

During the late 1930s, Cage moved towards composing music for percussion instruments. Cage felt that duration was the most significant of the musical elements. Consequently, the system that Cage developed for giving rhythmic structure to music depended on using mathematical proportions to govern both the large-scale and small-scale dimensions of a work. Cage described his technique of rhythmic structure as 'micro-macrocosmic'; it was first used significantly in the *First Construction (in Metal)*, and then it dominated his compositions up to and beyond the *Sonatas and Interludes (1946-48)*.

Composition for percussion and for modern dance led to the invention of the prepared piano. From the late 1930s Cage was the musical director for a number of dance companies, eventually leading him to work for Merce Cunningham, who required him to write music to a predetermined number of counts, not necessarily organised or regular in terms of metrical schemes.

In 1940 he was asked to compose for a new dance, *Bacchanale*, evocative of African culture, by Syvilla Fort. Finding that there was no room for a percussion ensemble to perform, Cage turned to the piano as his sound source. He had encountered plucked and strummed sounds in the music of Henry Cowell, but here he extended the idea by placing bolts, screws and fibrous weather stripping between the strings. Cage subsequently wrote many works for the prepared piano, exploring the effects of different materials, different placements, the use of pedals, the changing of pitch and timbre and the combination of effects.

SONATAS AND INTERLUDES

The *Sonatas and Interludes* (1946-48) were the culmination of Cage's early work and brought together many aspects of music and philosophy that were pre-occupying him up to the end of the 1940s. The ordered conception and the variety of technique, mood and colour that it presents are reminiscent in some ways of Bach's *Well-Tempered Clavier* or Chopin's *24 Preludes*, and it is certainly as important to Cage's output as these other works are to their composers. As such, it seems to have a significant debt to tradition, but at the same time it is a masterpiece of the unconventional in the twentieth century.

Work was interrupted in 1947 by the composition of the ballet *The Seasons*, but finally completed early in 1948. Cage referred to the Sonatas and Interludes as *intentionally expressive compositions*, because they have an extra-musical inspiration, depicting the spiritual and emotional states described in Ananda Coomaraswamy's work *The Transformation of Nature in Art: the Dance of Shiva*. The content refers to the permanent emotions of Indian aesthetics: heroic, erotic, wonder, rejoicing, anxiety, fear, anger, loathing and the tendency of all of these emotions to resolve towards one other emotion, a state of tranquillity. Cage did not specify how he had represented these emotions, but it has been suggested that each movement represents a single emotion and that towards the end of the cycle the movements become increasingly calm and tranquil.

When Cage first developed the prepared piano he expected the sounds he was devising to be able to be repeated in successive performances. As time went by, he came to the realisation that not only pianists, but also pianos, are unique and that every performance would have its own characteristics; he appreciated that he would be unable to 'possess' the sounds he had created. This acceptance fell in line with his interest in Zen philosophy and his later view that life is not intended to consist of repetitive actions and experiences and that things are to be enjoyed as they happen, and led significantly to the adoption of indeterminacy in his compositions.

(b) Performing forces and their handling

With the development of the prepared piano, Cage had created a percussion ensemble capable of being performed by one player. It had the potential for sounding like an orchestra of highly original sounds, but with an extraordinarily subtle range of dynamic and timbral nuances. What was particularly fascinating was the potential for combining a new range of sounds with the old, and that the instrument was capable of a richly colourful spectrum of sounds with the potential for melodic as well as percussive effects.

In a 1949 interview, Cage outlined four ways in which preparing the piano affects the sound:

- It quietens it
- It changes its timbre
- It splits it into two or three sounds
- It shortens its duration

He also emphasized that the alteration to the sound must be complete, otherwise, *like a well-known person appearing in costume, there's something clownish about it*. Despite such detailed instructions, Cage also suggested that there is no absolutely strict plan to adhere to: *if you enjoy playing the Sonatas and Interludes then do it so that it seems right to you*.

(c) Texture

The prepared piano is an intimate instrument which demands music that is introspective and sensitive. In the Sonatas and Interludes Cage was exploring a subtly-coloured world in which space played a vital part in allowing the timbres of his instrument to tell. Musical textures relate to the number of musical lines sounding, but are affected by other elements of music including rhythm, tempo and timbre. Here, Cage carefully manages his lightweight textures in order that the delicate colours of his instrument are heard to their best. One of the most skilful features is his handling of silence. The result is a fragile world in which the spaces between gestures are just as important as the gestures themselves.

The textures in these sonatas are often sparse. Some types of texture are as follows:

- Chords (Sonata I, bar 1)
- Monophony (Sonata II, bar 1)
- two part homorhythm (Sonata II, bar 10)
- treble movement over static or ostinato accompaniment (Sonata II, bar 17; Sonata III, bar 1)
- Layered textures (Sonata II, bar 30)

(d) Structure

The 20 movements forming the Sonatas and Interludes cycle were not composed in sequence but were later organised symmetrically; every group of 4 sonatas is separated by an interlude, with the centre marked by two interludes. The term 'sonata' refers back to Baroque sonatas such as those composed by Scarlatti, which consist of a single movement in binary form. Most, but not all, of the Sonatas and Interludes are in binary form (including Sonatas I-III), some have ternary or four-part structures and some are through-composed.

The technique, which he referred to as micro-macrocosmic rhythmic structure, built relationships between numbers which then governed every aspect of the duration of his music. It produced a perfect symmetry which related the large-scale to the small and the small-scale to the large, in the same way as fractals do in mathematics, nature and art; fractals occur when a large shape can be broken down into fragments that have exactly the same shape (as in snow crystals and ferns). Cage found this a particularly satisfying way of structuring his music because in doing so his art was reflecting nature - a key feature of Coomaraswamy's teaching.

In practice this meant that for each movement Cage would select a different number as a basic unit and divide this into several varied proportions (for example in Sonata III the basic unit is $8\frac{1}{2}$ and this is divided into 1, 1, $3\frac{1}{4}$, $3\frac{1}{4}$). These figures would then govern the length of the whole movement, its sections and its phrases, and therefore each level of duration related to all the others. Such a system was first used in First Construction (in Metal) in 1939, and subsequently became an essential ingredient of many of Cage's compositions. In the Sonatas and Interludes he used fractions and irregular proportions for the first time, giving rise to some complex durations.

Other aspects of the structure are less easy to define as there is little thematic or motivic repetition, neither is there much contrast within each movement.

MICRO-MACROSTRUCTURE IN SONATAS I - III

Note that all three sonatas work on identical principles, but with different basic units and structural proportions.

SONATA I

- The length of each part relates to the number 7
- The basic unit of 7 is proportioned as follows: $1\frac{1}{4}$ $\frac{3}{4}$ $1\frac{1}{4}$ $\frac{3}{4}$ $1\frac{1}{2}$ $1\frac{1}{2}$
- These proportions are initially seen in crotchet beats: 4 1 3; 4 1 3; 4 2; 4 2. .
- The binary structure is composed of 2 sections of 56 and 42 beats
- Sections divide into subsections which correspond with the underlying structural proportions:
 - Bars 1-7 4 x 7 crotchets
 - Bar 8 1 x 7 crotchets
 - Bars 9-12 3 x 7 crotchets
 - Bars 13-18 4 x 7 crotchets
 - Bars 20-26 2 x 7 crotchets
- Note that there is a missing quaver because of the $\frac{9}{8}$ in bar 11. There is however a compensating ritardando.

SONATA II

- The length of each part relates to the number 31
- The basic unit of 31 is proportioned as follows: $1\frac{1}{2}$ $1\frac{1}{2}$ $2\frac{3}{8}$ $2\frac{3}{8}$
- Expressed in crotchets, this is 4,2; 4,2; $9\frac{1}{2}$; $9\frac{1}{2}$ (totalling 31).
- The binary structure is composed of two sections of $46\frac{1}{2}$ and $73\frac{1}{2}$ beats
- Sections divide into phases which correspond with the underlying structural proportions.
 - Bars 1-9 1 x 31 crotchets
 - Bars 10-14 $\frac{1}{2}$ x 31 crotchets
 - Bars 15-23 1 X 31 crotchets
 - Bars 24-32 1 x 31 crotchets
 - Bars 33-37 1 x $11\frac{1}{2}$ crotchets
- Note the frequent presence of $\frac{3}{8}$ bars, many of them silent, which punctuate the phrases, and the departure from the underlying pattern at the close..

SONATA III

- The length of each part relates to the number $8\frac{1}{2}$
- The basic unit of $8\frac{1}{2}$ is proportioned as follows: 1 1 $3\frac{1}{4}$ $3\frac{1}{4}$
- Expressed in crotchets this is 4; 4; 13; 13 (totalling 34)
- The binary structure is composed of two sections of 34 and $110\frac{1}{2}$ beats
- Sections divide into phases which correspond with the underlying structural proportions:
 - Bars 1-8 1 x 34 crotchets (repeated)
 - Bars 9-32 $3\frac{1}{4}$ x 34 crotchets (repeated)

(e) Tonality

A major result of preparation is that the tonal relationships of scale or key are absent, and any pre-conceived notions of tonality devised from the notation are destroyed by the actual sounds produced.

On a broad scale this means that because the prepared piano does not lend itself to conventional tonality the music cannot be expected to explore contrasts of key and modulation, nor necessarily to identify tonal centres. In practice, though, there are vestiges of tonality in evidence: passages repeat themselves, thereby giving emphasis to certain pitches, phrases approach cadence points with a sense of closure given by rhythm and stepwise movement, and the pitched notes that do exist often form pentatonic patterns that are exploited melodically and offer a suggested tonal centre. One feature of conventional tonality that is completely avoided, however, is the marking out of cadences by harmonic progression; in Sonatas I-III cadence points are definitely not articulated by chord progression.

(f) Harmony

In 1946 Cage dismissed harmony as a *tool of western commercialism*, observing that it had become a device used in Western music to make music impressive and grand, but noting that simple cultures avoided it, preferring to focus on the more natural elements of music: pitch, volume, timbre and duration.

The very nature of the Sonatas and Interludes negates the value of harmony as a functional resource in the traditional sense. The idea of a continuous flow of harmonic progression moving between hierarchical chords, leading modulation and creating tension and resolution is entirely foreign in an environment in which it is the colours of percussive sounds and their interaction that dominate the musical effect.

There are, however, some primarily “harmonic” moments in Sonata I:

- G 7 chords of opening
- Parallel chords at bar 20

(g) Melody

Melody is one of the strongest features of Cage’s style in the Sonatas and Interludes. General features of melody include:

- Some immediate repetition of patterns, but these are not usually referred back to later
- Short statements with defined shapes and phrases separated by rests
- Arch-shaped melodies are common. See Sonata I bars 15-16; Sonata II, bars 1-2
- Limited number of pitches, sometimes suggesting pentatonicism. See Sonata II, bars 1-8
- A tendency to use conjunct movement. See Sonata III
- Decorative use of grace notes and rhythmic embellishment
- In Sonata III in particular motifs are treated with familiar melodic devices: such as repetition, sequence, inversion, augmentation.

(h) Rhythm and metre

Durations have been discussed in the section on structure. This sections concerns more basic rhythmic features.

- Rhythmic ideas may repeat immediately but are not referred back to as the music progresses.
- Patterns are placed unpredictably against the metre.
- Irregular groupings of rhythm are common and sometimes obscure the natural pulse.
- In each sonata there is a variety of types of rhythm pattern, from sustained or static to fast-moving and decorative.
- Expected stresses are often displaced, causing strong beats to be unclear and the metre to be vague.
- Metre changes frequently, usually prompted by the demands of structural rhythm.
- Irregular metres are used freely, again in order to satisfy the requirements of structural rhythm.
- Significant periods of silence punctuate each sonata.

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