

6. LATE TWENTIETH CENTURY STYLE

Two trends in the late twentieth century were to have a major impact on the course of music writing. The first was a tendency to intellectualise music – to construct music on theoretical or mathematical principles. The second was a tendency to experiment, to try out new ideas. Both tendencies led to a certain alienation of people from music. Modern music became largely something that appealed to intellectuals, or to other composers, rather than something which attracted large audiences.

Messiaen had been experimenting with modal systems and various harmonic and rhythmic possibilities from the 1930s. Boulez studied with Messiaen, and also picked up the Schoenberg tradition from Leibowitz. He tried to synthesise the two influences in some rather violent early compositions. In the meantime, Messiaen picked up the serial influence from Boulez, and began producing atonal music. Messiaen's piano piece *Mode de Valeurs et d'Intensité* (1949) took serialism a stage further. The "series" was to include not just pitches, but also other music variables, such as duration, dynamics and attack (articulation). This technique was to become known as "total" or "long-range" serialism. Stockhausen, on hearing *Valeurs*, saw the possibilities of the technique, although he preferred to work with much larger groups of notes than the early serialists had done. Boulez took up the technique with enthusiasm, producing such works as *Structures I*.

No new instruments had been invented during the century. Composers looked for new ways of producing and manipulating sound. Synthesised sounds and amplification, along with the invention of the tape recorder, made it possible to do this. Messiaen used some music that was created electronically, beginning with the *Turangalila Symphony* featuring the *Ondes Martineau*, an early electric instrument, although this work has definite tonal elements. Working with Messiaen, Stockhausen made his first move into electronic music, developing what has been called 'tape recorder' music, music which reached its final form in the studio, not the concert hall. He influenced another Frenchman, Boulez., as well as Italian composer Berio. Also interested in "total serialism" and electronic music were American composer Milton Babbitt and another French composer, Varèse, who moved to the United States.

Another response to the search for new sounds was the tendency for composers to ask performers to play traditional instruments in new ways, using wind instruments to produce a variety of sounds resembling flutters or whines or squeaks, and stringed instruments to produce various slides and bangs. The American composer John Cage asked pianists to "prepare" the instrument before playing it, mainly by fixing pieces of metal (e.g. nuts and bolts) or plastic (e.g. spoons) or pieces of paper between the strings. Penderecki's *St Luke's Passion* asks singers were asked to shout, whisper and moan. Other composers (e.g. Ligeti) asked choirs or even orchestras to clap.

There were experiments in building up "blocks" of sound. Ligeti's orchestral work *Atmospheres* (1961) builds up huge blocks of sound, although internal parts keep changing within the block. Penderecki's *Threnody for the Victims of Hiroshima* also builds up large blocks of sound. At one stage performers play every note within a wide range. They also create different sounds by hitting their instruments in various ways or scraping the strings.

Much of this music was tightly controlled, in a variety of ways. Some composers felt that music should be more spontaneous, allowing a greater "input" from the performers. This "aleatory" music allowed the performers to control the music in varying ways. They might be given a choice of which page to play, or when to start, or how long to play. They might be told to play just "as high as you can" or simply to repeat any sound they like for a particular period of time.

As they reached for more types of sound, and gave more choice to the performers in how to perform it, composers found it difficult to express their intentions in traditional music notation. As a result, a variety of types of graphic notation were used. Fragments of traditional notation might specify pitches or chord clusters, but arrows and circles and diagrams would indicate how to perform them. Staves might even be drawn as circles or triangles, allowing the performer to begin and end where he chooses.

A final step was to dispense with traditional musical instruments entirely. John Cage's *Imaginary*