

ment. A literal translation, “leading motif,” is not to be confused with Wagner’s banal *leitmotiv*, an unrelated, fixed-note pattern which just repeats, as in a TV “tag” jingle. Thus, the singular quality of the opening of Beethoven’s Symphony No. 5 is not to be understood as later bowdlerized in TV commercials: “*Stron-ger than dirt!*”

Haydn’s *motivführung* is better understood from the standpoint of Georg Cantor’s transfinite numbers, by viewing the opening notes of a composition as a direct articulation of the *cardinality* of that work. Cantor (d. 1918), in founding modern mathematics, criticized previous theory’s inability to express a density of complex ideas, much as was said of the philosopher Spinoza (d. 1677) that “he died of consumption, of which he had suffered for some time—consonant with his system, in which all specificity and singularity is *consumed* by the One substance” (G.F.W. Hegel).

This describes a major limitation of the “seamless” quality of music before Haydn’s discovery.

Cantor created a series of ordinal transfinite numbers, which represent the *process of generation* of an entire set of lower numbers such as the counting numbers. He used a cardinal transfinite number to represent the generating “power,” as he called it, of an entire array of such ordinal transfinities.

In music, Haydn and Mozart sought to create compositions which generate an ever denser rate of such singularities, or individual musical thoughts, the analogue to Cantor’s transfinite ordinal numbers. To form the work into a unit-idea in one long musical line, that rate of generation of individual concepts had to itself be ordered, by a single *cardinal* transfinite idea.

Mozart’s transformation

Mozart’s stark, short opening statement of the words “Kyrie eleison,” may be understood as the Haydn *motivführung* “seed crystal” of the “Great” C Minor Mass. Set off clearly from the rest of the movement, it is a statement of the bare elements of C minor-major, the three notes needed for the C minor arpeggio: C, E-flat, and G.

This passage is a direct quote from the opening C minor arpeggio of Bach’s “Ricercar” from the “Musical Offering.” Bach’s work, which was the first study in the idea that C minor-major is a unified concept rather than two “keys,” begins with the rising pattern C, E-flat, G.

Mozart repeats Bach’s motif for unmistakable emphasis in all four voices of the chorus, in almost all possible human registers. The singers are virtually a cappella, save for brass and winds doubling the chorus, restricted to the same three notes (Figure 1).

Note that the four different singing voices here have a surprisingly similar pattern of voice registration when limited to these three notes. Bach’s “Ricercar” emphasized that *universal* quality of these intervals, and also the fact that such a passage creates an initial ambiguity, which the composer may later resolve with surprising new voices entering.

Mozart, more than quoting Bach, has transformed his material into a demonstration of Haydn’s *motivführung*. This passage, set off clearly from everything which precedes and follows it, contains the material necessary to generate the rest of the mass. For example, the opening treble string introduction to the Mass (not shown) is an inversion of this Haydn motif, falling from C to G.

The soprano voice in the next passage (Figure 2) is also an inversion of the opening “Kyrie eleison,” falling over the space from C to G. This section shows the new orchestra which Haydn and Mozart created to carry their new idea. It depended upon a developed difference in sound between orchestral *choirs*, strings versus winds versus brass, and the ability of each choir to execute a distinct singing line, with or against choral voices.

The development of these choirs necessary for the distinct voices to be heard here, as a triune concept, would have been impossible without Haydn’s work on the string quartet. The string section which became the core of that orchestra was developed in Haydn’s groundbreaking 1781 “Russian” string quartets Op. 33. Mozart, who had not written a string quartet in the nine years since 1773, suddenly, in December 1782, began the series of six quartets starting with K. 387 which he dedicated to Haydn, to show his concept of Haydn’s new principle.

In Figure 2, for example, the violins repeat their opening theme as one choir, which is an inversion of the original C to G motif in Figure 1. The choral sopranos are another choir, singing a different inversion from C to G. Yet a third choir is sung by the string basses and bassoons, which have an entirely new figure rising from C to G. The violin choir and the string bass choir “sing” rhythmical patterns clearly derived from the Greek words “Ky-r-i-e e-le-i-son.”

Books Received

Khrushchev and the First Russian Spring, The Era of Khrushchev through the Eyes of His Advisor, by Fedor Burlatsky, Charles Scribner’s Sons, New York, 1992, 286 pages, hardbound, \$24

The Virtuoso Flute-Player, by Johann George Tromlitz, translated by Ardal Powell, Cambridge University Press, New York, 1991, 338 pages, hardbound, \$59.50

The Bach Manuscripts of Johann Peter Kellner and His Circle, by Russell Stinson, Duke University Press, Durham, N.C., 1992, 184 pages, hardbound, \$37.50