The Sun Treader (Portrait of Carl Ruggles), *by Thomas Hart Benton (1934)*

MUSIC AGAINST GRAVITY

We all derive different, private meanings from the music that delights us, but the recurrence of certain musical patterns in the works of great composers hints at meanings of a more universal character.

BY ALAN NEIDLE AND MARGARET FREEMAN

"Madame X installed a piano in the Alps."—Rimbaud, 1886

An old man not far from death lies in his bed in a nursing home in New England. The conductor Michael Tilson Thomas enters the room with a tape recorder. He places earphones on the gaunt head and turns the machine on. "Great! DAMN FINE WORK!" the old man declares, coming alive as he sings along with the music. He is Carl Ruggles, American composer (1876–1971), in the last of his 95 years. He is hearing his own composition, *Sun-Treader,* whose title was inspired by the epithet that Robert Browning bestowed upon Percy Bysshe Shelley.

The work begins with jagged leaps across large dissonant intervals. In about 30 seconds, led by the brass, the music surges, to the accompaniment of pounding timpani, upward across nearly four octaves. Truly a giant is bestriding the planets. Ruggles, bedridden, is taking a journey across vast spaces. Thomas recalls what Ruggles said at the end of the visit: "I'm composing, you know, right now. But my body . . . it is totally diseased. But I'm composing. Every day. First there are horns . . . here flutes! And strings—molto rubato, rubato! . . . Now don't go feeling sorry. I don't hang around *this* place, you know. Hell, each day I go out and make the universe anew—all over!"

Each piece of music is a journey. The idea is not simply a metaphor. The essence of music is motion. As a piece begins, you are in one place. As it comes to an end, some time later, you are in another. You have been somewhere and you have had an experience along the way, perhaps illuminating or even glorious, like Sun-Treader bestriding the heavens, or perhaps routine and tedious—but an experience, nonetheless. A journey.

Sun-Treader is a journey of liberation, a surmounting of forces that pull human beings down. Our ability to respond to such forces is of absorbing interest to us from infancy to old age. The first unaided steps of a child from one loving set of arms to another is an event of unreasoning exhilaration. We are inspired by those who haul themselves up by rope to a pinnacle—and even more by those who remain upright when tyranny beats down. The dream of staying aloft despite everything that would pull us down remains with us until no more dreams are possible.

Composers over the centuries have repeatedly written music evoking the great theme of mankind's struggle against gravity. They have done so in a variety of ways, but perhaps no more strikingly than in their deployment of four distinctive patterns: climbing, descending, rise-to-fall, and floating. Of course, there are many possible ways of using rhythm and meter to move a composition forward, but these patterns illustrate most dramatically how music suggests possible responses to the forces of gravity. Looking at these four patterns, as employed by some of the greater Western composers, may help us draw closer to an understanding of how music communicates meaning.

***C*limbing.** In the music of Ludwig van Beethoven (1770–1827) there are themes that explode with volcanic energy. In the first movement of one of his early works, the Piano Sonata in D Major, op. 10, no. 3, a version of the main theme, after taking four steps down, surges rapidly upward in 16 steps across nearly three octaves. The steps are syncopated octaves until the last three, which are unison double-octave blows, fortissimo. That this sort of eruption is not solely the product of youthful exuberance is evident when we look at much later music, such as the opening of the "Ghost" Trio, op. 70, where piano, violin, and cello ascend rapidly and violently in a very similar fashion. Nor is the phenomenon of Beethoven's themes straining upward limited to rapid and furious movements. The slow opening of the familiar Piano Sonata, op. 13, ("Pathétique") begins with a brief motif, six notes that rise in an insistent dotted rhythm. After a pause the motif is repeated, but higher. Then twice more, each time higher.

The "Pathétique" epitomizes Beethoven's propensity for struggling upward. After each declamation of the opening motif there is a choice—where to go—and each time Beethoven hoists the music higher. Examples of this could be multiplied almost ad infinitum. Of the 30 mature sonatas, the opening lines of 21 have motifs that are immediately repeated. In 18 of these 21, the repeated motif is hauled upward. If we extend the tabulation to second and third themes, as well as development passages where upward steps are especially prevalent, and do the same with second, third, and fourth movements, we will find that in the piano sonatas alone Beethoven propels us upward hundreds of times. Adding in 16 quartets, 11 piano trios, five cello sonatas, 10 violin sonatas, five piano concertos, and nine symphonies, it is safe to say that the prodigious Beethoven can take us through literally thousands of experiences of pressing, unstoppably, upward.

Beethoven pushed beyond even the limits imposed by the normal pitch of instruments. An insight of the late German conductor Hermann Scherchen reveals how the composer, in the last movement of the Ninth Symphony, raised the piccolo's highest note by accompanying it with the pitchless ringing and shimmering of triangle and cymbals. He also "climbed" downward by deepening bassoon notes with the beat of the bass drum.

Beethoven's feats of climbing are not confined to small, though symbolically large, gestures such as expanding the range of the piccolo. He created entire mountains of his own to climb. An example is the late Quartet in A Minor, op. 132. Its first eight bars even resemble the shape of a mountain. They consist mostly of half notes piled on top of each other in an arch, but held to pianissimo—the white outline of a mountain in the distance. The overall architecture of five movements is like a massif. The central, or third, movement is itself a huge structure of contrasting blocks

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Traveller Gazing at a Sea of Fog, *by Caspar David Friedrich (c. 1815)*

of sound. It consists of a "Holy Song of Thanksgiving by a Convalescent to the Deity," heard in varied form three times, which alternates with vigorous interludes called "Feeling New Strength." This immense movement constitutes the core and dome of the mountain.

A great mountain brings together violent contrasts—fragile crystals of snow and blocks of granite, blinding light and impenetrable mystery. Those who attempt to conquer it often experience pain and struggle amid exaltation, life a step from death. Beethoven's ascent into this world in the quartet begins in the first movement.

It encompasses, in its 10-minute duration, some 17 thematic elements and about 60 more-or-less abrupt shifts between contrasting blocks of music. This abundance of contrasts includes a solemn introductory passage, rushing arpeggios, sinuous and lyrical melodies, and pounding dotted rhythms. The energy these contrasts generate will lift listeners upward through the large, scherzolike second movement, which begins with ascending steps, and on to the third, the dome of the mountain, where contrasts are greatest—solemn hymns remindful of the nearness of death, and vigorous interludes vibrant with life. In the glare of the mountain's summit this most fundamental of all contrasts—death next to life—is confronted and reconciled. Conquered.

How? What takes place on Beethoven's summit to bring this about? Surprisingly, it is the opposite of what one expects. Beethoven does not reconcile opposing elements by blending them, by sanding the edges. Instead, he makes them as extreme as possible. The opening hymn of thanksgiving consists solely of passages of quarter notes and half notes, which progress at one of the slowest possible paces in music, molto adagio, and which are mostly piano. The contrasting section, "Feeling New Strength," includes a dazzling spray of notes, eighths, sixteenths, thirty-seconds, trills, and even grace notes attached to thirty-seconds, which move at a sprightly andante, leap up and down across octaves, and frequently and abruptly shift from loud to soft. The contrasting sections, all five of them, are presented in the way most calculated to assert and impose their different character—as large blocks of music, each four or five minutes long.

Why do we call this a reconciliation rather than a complete fracturing? Because it is a coming to terms with the harshest dichotomy of our existence, death alongside life. How? By exposing it fully, by not shrinking from any aspect of it, by exploring all of its ramifications. When this has been accomplished through Beethoven's massive and teeming contrasts, we come down from the mountain more in awe than in terror. Having once stared unflinchingly into mankind's profoundest dilemma, we know that we can do so again. Is this not a reconciliation? Beethoven did not create and climb his mountain for the sake of evasion.

The phenomenon that we know of as "Beethoven" is the product of two large ingredients—a composer possessing gigantic creative powers and the intersection of his efforts with a special moment in history. He created his works at the turbulent confluence of two great cultural forces—the waning of Enlightenment thinking and the emergence of Romantic feeling. In this era of revolution and reaction, liberation and repression, of Napoleon, total warfare, Goethe, Schiller, Kant, there was much to challenge, huge intellectual and emotional mountains to scale. He began in the orbit of the Classical style, a student of Haydn, but his talents and his energies could not be contained by one movement or "school." Later he reached back to Bach and even Palestrina, while at the same time casting an enormous shadow forward. Unquestionably it is the Promethean character of his achievement, its boldness, its vast reach, its unlimited energy, its ceaseless exploration, that made Beethoven's music both an inspiration and a defining force for the Romantic

era that would dominate the cultural life of the 19th century. Beethoven hammered bolts in the sky and climbed up. His successors have been climbing up after him ever since.

D*escending.* At the end of the 16th century, the English lutanist and songwriter John Dowland (1563?–1626) set down a melody which by all accounts became the most popular tune in England and a good part of the Continent. Dowland himself wrote three versions of the piece—the first for solo lute, the second for voice and lute, the third for consort of viols. So well known did the piece become that it was referred to, as if familiar to everyone, in a dozen or so popular plays written, variously, by Ben Jonson, Thomas Middleton, Francis Beaumont, and others. More impressively, its opening four-note theme was quoted at the beginning of dozens of compositions by such composers as William Byrd, Thomas Morley, Orlando Gibbons, and Jan Sweelinck.

What type of theme could have such extraordinary impact—at a time of Shakespeare, Raleigh, and Galileo, of continental and oceanic warfare, of recurrent plagues, of religious dissension, of loyalty and betrayals? The opening is simple—just four notes, four adjacent descending notes. The name of the piece, "Lachrimae Antiquae Pavan," or "Pavan of the Ancient Tears," was commonly referred to simply as "Lachrimae." The words which Dowland fitted to the lute piece begin, "Flow my teares, fall from your springs. . ." The imagery could not be stronger—tears flowing downward, falling, accompanied by a musical motif that pulls toward the ground. May we not assume that in an age of high poetic utterance Dowland's theme could become a metaphor for misfortunes that must be endured, for human limitations that will in the end bring everyone down?

What is this somber four-note motif that resonated with such intensity with so many? The first note, G, holds level, steady, prolonged—the descent from F to E-flat and down to D is controlled, relatively swift, easy—and the landing, on D, is a genuine coming to rest. Why should this generate such power? Dowland himself has given us a clue. When in 1604 he published the consort version of "Lachrimae," along with six additional pieces about tears, all beginning with the same descending four-note motif, he included the following words in his dedication to Queen Anne: "yet no doubt pleasant are the teares that Musicke weeps." Is this perhaps a suggestion that art (Musicke) can bring solace to humans in the face of irreversible sadnesses? What we know from its wide popularity is that ordinary people, the nobility, musicians, all threatened with misfortunes, must have derived comfort and pleasure from this phrase. In its own way it is as memorable, as emblematic, as the famous first four notes of Beethoven's Fifth Symphony—three short, one long—which have meant so much to so many.

In the early decades of the 20th century, 300 years after Dowland's "Lachrimae," the work for solo piano most in demand was

the Prelude in C-sharp Minor by composer-pianist Sergei Rachmaninoff (1873–1943). After hundreds of his recitals audiences chanted "Prelude! Prelude!" The piece begins with a magnificent descent—three resounding octaves, A, G-sharp, and down to C-sharp. This theme is repeated some 18 times. Almost all surrounding passage work and a central interlude emphasize downward motion. Is it a coincidence that Rachmaninoff's Prelude and Dowland's "Lachrimae," both appealing to unusually wide audiences, were composed at times of enlarged human horizons, with attendant anxieties, and that both are about falling with control and dignity?

Rise-to-fall. Instinctively we look to works of panoramic scale for profundity—the Sistine ceiling, Beethoven's *Missa Solemnis*, *War and Peace*. But large insights can also come to us through art of intimate scale. A piano work by Wolfgang Amadeus Mozart (1756–91) in D Major, K. 355 (594a), composed about a year before his death, consists of 44 bars and takes less than two minutes to play. It is simply called "Minuet"—and is a life journey in music.

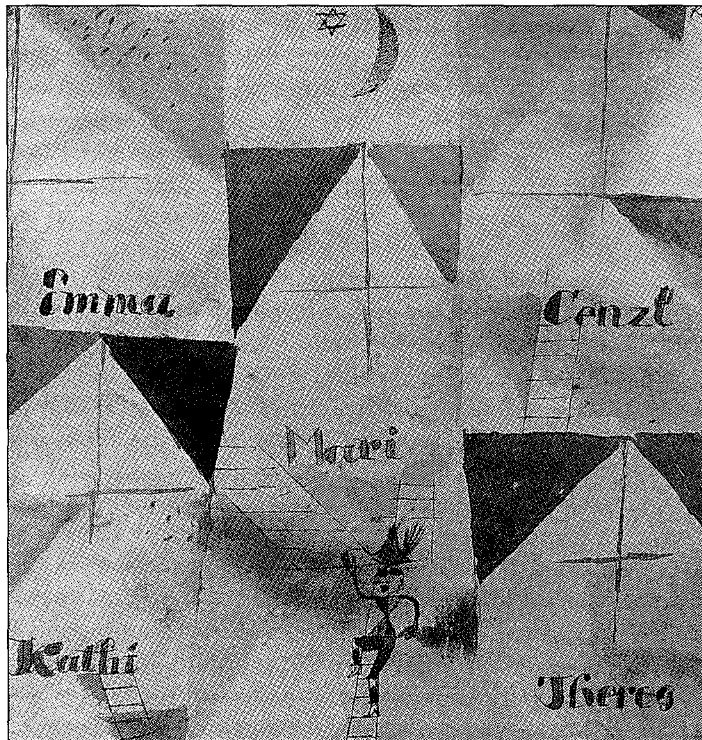
The work is based in its details and in its overall structure on what we call "rise-to-fall" patterns. Unlike "climbing" or "descending" patterns, "rise-to-fall" patterns are integrated shapes in which an ascent and a descent form a single arching unit. Mozart's Minuet opens with a short five-note theme that arches up and down with disarming simplicity. This motif is slightly expanded and intensified. The journey suddenly becomes suspenseful and even a bit foreboding with a chromatic rising in the bass completed by a sinewy descent in the treble. This idea is repeated twice more, rising higher. The first part of the Minuet ends with graceful steps that turn downward, a temporary respite in the mounting drama.

Abrupt dissonances and slashing figurations open the second part of the Minuet. These brief moments of intense friction generate the energy to propel the music upward. Now swirling contrapuntal passages take repeated steps higher and higher to the apogee of an arch—and then there is a long descent. A sense of precipitous falling and inevitability is created by the rush of rapid sixteenth notes. As the great descent approaches its lowest point, the scale shifts from major to minor, thereby painting the plunge earthwards in a darkening color. The Minuet returns to the rise-to-fall themes of the opening. Elegant Mozartean lines of notes glide lightly downward in the last measures, as if there has been a reconciliation, a calm acceptance of the final descent. And so in a span of 44 bars we have taken a journey beginning with a simple, almost childlike theme, rising gradually upward through chromatic tensions, lifting higher and higher, achieving the pinnacle of a great arc, tumbling downward, recovering in a world of calm, and ending in a last, peaceful descent.

Rise-to-fall patterns occur throughout Mozart's music in a wide variety of shapes. The opening theme from the familiar Symphony No. 40 in G Minor, with three pulses on either side of a sweeping ascent, is symmetrical but vibrant with energy. Some rise-to-fall themes are asymmetri-

cal, such as the opening of the E-flat String Quartet, K. 428, which boldly lifts up one octave at the very start and then twists down sinuously. Sometimes, as in the "Romanze" of *Eine Kleine Nachtmusik*, the melody will be an arch constructed of pulses, rests, slurs, and syncopations, combined to make the kind of elegant but nonetheless poignant creation which the world has come to recognize as uniquely "Mozartean."

Mozart was, of course, a protean creator. Amid his stupendous output there is much that has no direct connection with rise-to-fall. But there is much that does, a strikingly large amount, and in ways that reveal how fundamental this conception is in his music. Mozart left us almost no commentary on the aesthetic significance or meaning of his works, so we have no direct evidence whether or not specific experiences, such as the death of his mother in the summer of 1778, entered in any concrete way into the composition at that time of such a somber and passionate work as the A Minor Piano Sonata, K. 310, which contains many rise-to-fall elements. But in a letter to his father, in December 1777, Mozart gives us an intriguing clue about the way a specific emotional experience could affect his music.



The Bavarian Don Giovanni, *by Paul Klee (1919)*

Then 21, Mozart was giving piano lessons to a young lady, Rosa Cannabich, 13, whom he described as "very pretty and charming . . . intelligent and steady for her age. She is serious, does not say much, but when she does speak, she is pleasant and amiable." She gave him "indescribable pleasure" when playing his Sonata in C, K. 309. The Andante of the Sonata "she plays with the utmost expression." Mozart reported that when he was asked "how I thought of composing the Andante. . . . I said I would make it fit closely the character of Mlle. Rosa. . . . She is exactly like the Andante." The main theme of the Andante is a lilting, perky, and slightly earnest rise-to-fall theme.

This, of course, is indirect and fragmentary evidence that cannot be

carried too far. But it does tell us a few relevant things. A sonata such as K. 309 was not for Mozart an abstract construction of sounds. For him the Andante, based on a rise-to-fall theme, stood for a person, a specific individual, whose qualities and experiences were much on his mind. Although we cannot be certain whether rise-to-fall patterns were consciously metaphors in his mind for life experiences, we do not have to be. The important thing is the music itself—the notes. Mozart's rise-to-fall shapes, small and large, correspond to familiar patterns in human lives.

Viewed in a broader perspective, Mozart's creation of rise-to-fall patterns adds depth to our perception of him as one of the supreme exemplars of the classical style. These patterns are generally elegant and subtle and are, by definition, balanced, reflecting a poised acceptance that descents are inevitable—indeed, as inevitable and natural as ascents. But along the way there are some surprises, dark and unsettling passages, uncertainties and dislocations, flashes of the fantastic and incomprehensible. Mozart's music was "Classical"—but much, much more.

Floating. Music that takes us aloft, surmounting the pull of gravity, and carries us on a journey, ascending, floating, is an extraordinary phenomenon. It is humankind expanding its capabilities, its intellectual and spiritual horizons, through art. We have been experiencing this for more than a millennium. In the Middle Ages the unison lines of plainchants—stretching, shifting up and down without rhythmic stress or harmonic direction—carried worshipers into the vaulted heights of cathedrals and beyond to the sky and God. In the 20th century, starting in 1939 when he went into exile in France and continuing for three decades, the great Spanish cellist Pablo Casals (1876–1973) concluded concerts with the ancient Catalan folk song "El Cant del Ocells" ("The Song of the Birds"). The haunting melody, played alone on the cello, spirals round and round. Unnamed thousands, during those years of occupations and oppressions, journeyed into the sky and over the horizon to freedom with Casals, his cello, and the melody of the gliding bird.

One of the great creators of music that floats, many would say the greatest, was Frédéric-François Chopin (1810–49). While still a teenager he began a long series of enduring works with original and enthralling passages that float. The Adagio of his F Minor Piano Concerto, composed when he was 19, contains filigrees of notes high in the piano register which like tendrils in the air drift up and down with exquisite weightlessness. Chopin wrote to his closest friend that the music was inspired by thoughts of a young soprano, someone he had dreamed about for six months but to whom he had never communicated his feelings.

In Chopin's late bardic work, the Fourth Ballade in F Minor (1842), a profusion of passages float from bar 1 to bar 239, some 12 minutes later. The main theme is a quintessentially Chopinesque floating melody. It twists around itself, lingers on several notes to create tension, lifts up gracefully, hovers at a high point, and finally winds down-

Over the Town, *by Mark Chagall (1916)*

ward. After the music has journeyed into the strange and distant world of A major, Chopin weaves strands of this theme contrapuntally so that they twist their way back to the home key of F minor. Further on, the theme is transformed into arabesques that truly soar. In one passage, long lines of notes flow up from the depths of the keyboard at the same time that chords float down from above. Elsewhere figurations, after coiling tightly, rocket toward the top of the keyboard and then drift downward like pyrotechnic displays. And at several points the music, as if unable to contain itself, breaks into waves of sound of oceanic grandeur.

Like Chopin, other composers who have made music float—Bach, Haydn, Schubert, Schumann, Brahms, Fauré, Rachmaninoff, Debussy, Ravel—have not confined themselves to shaping melodies of a floating character. They have fashioned the environment, the entire musical world over which or through which the melody floats.

In his Requiem of 1887, Gabriel Fauré (1845–1924) brought into existence a remarkable world of floating. In the Sanctus ("Holy, holy, holy"), he weaves together many strands to lift the music and the listener. The principal melody is carried by unison lines of sopranos and tenors slowly gliding upward and downward. Harp arpeggios, undulating figures in the violas, and sustaining tones in the organ and low strings provide a cushion for the voices. Riding above the voices, an accompanying violin melody curls sensually. Toward the end of the movement a striding rhythm takes hold, trumpets and horns ring out, and the music rises to its climax with the stirring words "Hosanna in the highest." The music subsides and the unison voices return together

with the curving violin obbligato and the gently rocking accompaniment. In Fauré's Sanctus the soprano and tenor melody, and the listener, are surrounded from above and below, enveloped, and lifted above the woes of earth.

Of the four gravity-related patterns, floating has by far been the most frequently employed. Its use spans at least a millennium—from plainchants of the Middle Ages to music in our century. Its scope extends across a broad range of poetic sentiments and deeply held beliefs, from the profane to the sacred, from the passionate utterances of Chopin to the spiritual aspirations of plainchant and Fauré. The metaphors of floating transcend traditional musical classifications such as "Baroque," "Classical," and "Romantic." They impress upon us the enduring and unifying elements in music.

E*merging patterns.* What of the future? Music that has in the past so often probed humankind's anxieties and aspirations can surely be expected to continue to do so. But we must also expect, with the vastness of contemporary cultural change and the inexhaustibility of human creativity, that composers will find new ways to evoke gravity-related themes. The 1970 Cello Concerto of Witold Lutoslawski (1913–94), Poland's profound and humane innovator, takes us on a deeply moving journey into the realities of 20th-century political experience. The cello, carrying on an amiable and harmless dialogue with the society of the orchestra, is repeatedly interrupted by discordant and irascible trumpet salvos. The cello struggles to stay upright and then collapses, beaten down by ever more raucous, overbearing, and thuggish assaults. In the end the cello triumphs, doggedly ascending and repeating a single note. Throughout we hear patterns from the cello that only slightly resemble those we have encountered in earlier music. Instead, after being assaulted, the cello scurries in all directions, whimpers and sobs as if collapsing. The forces attempting to bring down the cello, the blaring trumpets, execute their mission with completely new musical metaphors—passages in which they rapidly perform their notes independently of each other, thereby making a uniquely modern and thrilling cacophonous din.

In their vividness and intensity, these transformed gravity metaphors reflect a degree of anguish about political conditions that composers of earlier times seldom, if ever, attempted to portray through music. The dedicatee and first performer was Mstislav Rostropovich, who knew much about the brutality of the state in crushing individuals and also about the human spirit in resisting conformity. Just before the concerto's premiere in 1970, the cellist reportedly told Lutoslawski that he wept when he played the passage where the cello seems to be beaten down.

We find in the work of the avant-garde Finnish composer Kaija Saariaho (b. 1952) even more radical departures from traditional patterns. In her "Du cristal . . . à la fumée" ("From crystal . . . into smoke") for large orchestra, including electronically amplified instruments, the

musical ingredients are soundscapes crackling with gongs and percussion, threads that stretch into microtones, massive clusters that shatter and disintegrate, timbres that alter imperceptibly and hypnotically, and electrifying eruptions of timpani. The listener experiences a sensation of floating, free from any pull of gravity. Yet there are no melodies at all, much less ones that float like Chopin's or Schubert's. Saariaho has created a mysterious and enthralling world for the 21st century. She communicates to us, through musical metaphors that do not yet have labels, the excitement of living in a world of cosmic grandeur and vast adventure.

What do we add to our understanding of music when we think of it in terms of various gravity-defying journeys? First, the reader should note, this approach in no way denies that individual listeners derive their own personal meanings from various works of music; it does, however, supplement and enrich individual interpretations by suggesting how, through history, certain patterns of sound have been taken repeatedly by composers and listeners to correspond to widely shared, perhaps even universal, human experiences.

Everyone can tell when music rises. Everyone can feel the distinctly different sensations of lifting upward and sinking downward. Everyone who listens will know when a weighty and precipitous descent is taking place, as in the opening of the Rachmaninoff Prelude. There is nothing arcane or esoteric about the exhilaration we experience when Fauré takes us soaring aloft.

For some, the experience of surmounting gravity in a musical journey may have a religious character. Being taken beyond the pull of gravity to a vision of the eternal will deepen the spiritual dimension of their lives. For many, the journey can be a celebration of being alive and a renewal of buoyancy, zest, and good cheer.

All of us, composers and listeners, may at one time or another harbor anxieties about our limitations, our infirmities, the terrors real or imaginary that occasionally grip everyone, the fear that we will not be able to remain upright if misfortune comes. When we take a journey with a composer in which we experience through the metaphors of sound the victory of spirit over frailty, we cannot help but be strengthened. If destructive forces loom in our own lives, we can come to feel that we also are capable of prevailing over them. And so we may enjoy new confidence, new determination, new reason for carrying on. If that is what a journey with Bach or Beethoven, with Ruggles or Lutoslawski, accomplishes for us, it is no small thing. Indeed, are we not justified in saying that one of the fundamental features of great musical journeys is that they are life sustaining?