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seemingly eternal formula, despite superficial variations; the ‘good’ song, the harmonically marketable song, is one that contains fewer different chords than a 14th century ballad. Its expressive potential exists solely within the limited confines of consumer choice, wherein, according to Horkheimer and Adorno, “Something is provided for everyone so that none shall escape.” As a one-dimensional code of consumer society, it is a training course in passivity.

Music, reduced to background noise which no longer takes itself seriously, is at the same time a central, omnipresent element of environment, more so than ever before. The immersion in tonality is at once distraction and pervasive control, as the silence of isolation and boredom must be filled in. It comforts us, denying that the world is as reified as it is, reduced to making believe that — as Beckett put it in *Endgame* — anything is happening, that anything changes. Pop music also provides a pleasure of identification, the immediate experience of collective identity that only massified culture, unconscious of the authoritarian ideology which is tonality, can provide.

Rock music was a ‘revolution’ compared with earlier pop music only in the sense of lyrics and tempo (and volume) — no tonal revolution had even been dimly conceived. Studies have shown that all types of (tonal) music calm the unruly. Consider how punk has standardized and clichéd the musical sneer. It is not only the music of overt pacification, like New Age composition, which denies the negative as dangerous and evil in the same way that Socialist Realism did, and likewise aids and abets the daily oppression. Just as surely it will take more than rockers smashing their guitars on stage, even though the limits of tonality may be behind such acts, to signal a new age.

Like language, tonality is historically characterized by its unfreedom. We are made tonal by society: only in the elimination of that society will occur the superseding of all grammars of domination.

The defining of sentiments has always been a preoccupation of religions and governments. But for quite some time music, with its apparent indifference to external reality, has been developing an ideological power of expression hitherto unknown. Originally music was a utility to establish the rhythms of work, the rhythms of dances which were ritual observances. And we know that it was treated as a vital symbolic reinforcement of the “harmony” of ancient Chinese hierarchical society, just as to Plato and Aristotle it embodied key moral functions in the social order. The pythagorean belief that “the whole cosmos is a harmony and a number” leapt from the fact of natural sonic phenomena to an all-encompassing philosophical idealism, and was echoed about a thousand years later by the seventh century encyclopedist Isadore of Seville, who asserted that the universe “is held together by a certain harmony of sounds, and the heavens themselves are made to revolve” by its modulations. As Sancho Panza said to the duchess (another thousand years down the road), who was distressed at hearing the distant sound of an orchestra in the forest, “Where there is music, Madam, there could be no mischief.”

Indeed, many things have been said to characterize the elusive element we know as music. Stravinsky, for example, was quite serious in denying its expressive, emotional aspect: “The phenomenon of music is given to us for the sole purpose of establishing order in things, and chiefly between *man* and *time*.” It does seem clear that music calms the sense of time’s oppressiveness, by offering, in its patterns of tensions and resolutions, a temporal counterworld. As Lévi-Strauss put it, “Because of the internal organization of the musical work, the act of listening to it immobilizes passing time; it catches and enfolds it as one catches and enfolds a cloth flapping in the wind.”

But, *contra* Stravinsky, there is clearly more to music, more to its compelling appeal, of which Homer said, “We only hear, we know nothing.” Part of its mysterious resonance, if you will, is its simultaneous universality and immediacy. Herein lies also its ambiguity, a cardinal feature of all art. An Eisenstadt photograph of 1934, entitled “The Room in which Beethoven was Born,” testifies to the latter point; just as he was

about to take the picture, a party of Nazis arrived and placed a commemorative wreath — shown in the foreground — before the room's bust of Beethoven.

So the great genre of inwardness that is music has been appropriated to many purposes and philosophies. To the Marxist Bloch, it is a realm where the utopian horizon already "begins at our feet." It lets us hear what we do not have, as in Marcuse's poetic formulation that music is "a remembrance of what could be." Although representation is already reconciliation with society, there is always a moment of longing in music. "Something is lacking, and sound at least states this lack clearly. Sound has itself something dark and thirsty about it and blows about instead of stopping in one place, like paint," to quote Bloch once more. Adorno insisted that the truth of music is "guaranteed more by its denial of any meaning in organized society," consonant with a retreat into aesthetics as his choice for the last repository of negation in an administered world.

Music, however, like all art, owes its existence to the division of labor in society. Although it is still generally seen in isolation, as personal creation and autonomous sphere, social meaning and values are always encoded in music. This truth coexists with the fact that music refers to nothing other than itself as is often said, and that what it signifies is, at base, always determined solely by its inner relationships. It is valid to point out, after Adorno, that music can be understood as "a kind of analogue to that of social theory." If it keeps open "the irrational doorways" through which we glimpse "the wildness and the pang of life," according to Aaron Copland, its ideological component must also be recognized, especially when it claims to transcend social reality and its antagonisms.

In "The Rational and Social Foundations of Music" Weber (as elsewhere) concerned himself with the disenchantment of the world, in this case searching out the irrational musical elements (e.g. the 7th chord) which seemed to him to have escaped the rationalistic equalization that characterizes the development of modern bureaucratic society. But if non-rationalized nature is a rebuke to equivalence, a reminder and remainder of non-identity, music, with its obsessive rules, is not such a reminder.

posed, defiantly and unrealistically, the "complete elimination of the public and social aspects of musical composition" and penned an article entitled "Who Cares If You Listen?"

The lack of a public for 'difficult' music is obvious and noteworthy. If Bloch was correct to judge "All we hear is ourselves," it may also be correct to conclude that the listener does not want that element in music that is a confrontation with our age. Adorno referred to Schoenberg's music as the reflection of a broken and empty world, evoking a reply from Milan Rankovic that "Such a reflection cannot be loved because it reproduces the same emptiness in the spirit of the listener." A further question, relating to the limits of art itself, is whether estrangement in music could ever prove effective in the struggle against the estrangement of society.

Modern music, however splintered and removed from the old tonal paradigm, has obviously not effaced the popularity of the Baroque, Classical and Romantic masters. And in the area of music education tonality continues to prevail at all levels; undergraduates in composition classes are instructed that the dominant 'demands' resolution, that it "must resolve" to the tonic, etc., and the students' musical sense itself is appraised in terms of the once-unchallenged harmonic categories and rules. Tonality, as should be clear by now, is an ideology in purely musical terms, and one that perseveres.

One wonders, in fact, why art music, where traditions are revered, should have made the break that it has, while all of pop music (and almost all jazz, which inherited its harmonic system from classic European tonality), where traditions are often despised, has held back. There is no form of popular music in the industrial world that exists outside the province of mass tonal consciousness. As Richard Norton said so well: "It is the tonality of the church, school, office, parade, convention, cafeteria, workplace, airport, airplane, automobile, truck, tractor, lounge, lobby, bar, gym, brothel, bank, and elevator. Afraid of being without it on foot, humans are presently strapping it to their bodies in order to walk to it, run to it, work to it, and relax to it. It is everywhere. It is music and it writes the songs."

It is also as totally integrated into commercialized mass production as any product of the assembly line. The music never changes from the

music and technology” based on his research into “logico-mathematical invariants.”

Art music is today bewildered by a scattering influence, the absence of any unifying, common-practice language. And yet the main thrust of all of it — if one can use the word thrust in such an enervated context — is a cold expressionlessness wholly befitting the enormous increase in alienation, objectification and reification of worldwide late capitalism. A divided society must finally make do with a divided art: the landscape does not ‘harmonize’. It is an era that perhaps cannot even be given a musical ending any more; it has certainly become both too unruly and too bleak to be composed and brought to any tonal, cadenced close. When art and even symbolization itself seem false to many, the question occurs, where do the forces lie by which music can be kept alive, where is the enchantment?

“All art is mortal, not merely the individual artifacts but the arts themselves,” wrote Spengler. Art — with music in the forefront — may, as Hegel speculated it would, be already well within the age of its demise. Samuel Lipman’s *Music after Modernism* (1979) pronounced music’s terminal illness, its status as “living on the capital of the explosion of creativity which lasted from before Bach to World War I.” The failure of tonality’s ‘creativity’ is of course part of an overall entropy in which capital, in Lipman’s accidental accuracy of words, turns toxic and unmistakably self-destructive. Adorno saw that “There are fewer and fewer works from the past that continue to be any good. It is as if the entire supply of culture is dwindling.” Some would merely hold on to the museum pieces of tonality at all costs and deplore the lack of their resupply. This is the meaning of virtually all the standard laments on the subject, such as Constant Lambert’s *Music Ho! A Study of Music in Decline* (1934) or *The Agony of Modern Music* (1955) in which Henry Pleasants told us that “The vein which for three hundred years offered a seemingly inexhaustible yield of beautiful music has run out,” or Roland Stromberg in *After Everything* (1975): “It is hard . . . not to think that serious music has reached the state of total decay.” But the same death verdict also comes from non-antiquarians: a 1983 lecture by noted serialist composer Milton Babbitt was called “The Unlikely Survival of Serious Music.” Earlier, Babbitt, in the face of the unpopularity of contemporary art music

Research carried out at the University of Chicago demonstrated that there are more than thirteen hundred discernible pitches available to melodic consciousness, yet only a very small fraction of them are allowed. Not even the eighty-eight tones of the piano really come into play, considering the repetition of the octave structure — another aspect of the absence of free or natural music.

Not reducible to words, at once intelligible and untranslatable, music continues to refuse us complete access. Lévi-Strauss, introducing *The Raw and the Cooked*, even went so far as to isolate it as “the supreme mystery of the science of man (sic), a mystery that all the various disciplines come up against and which holds the key to their progress.” This essay locates the fundamentals rather more simply, namely in the question of music’s perennial combination of free expression with social regulation; more precisely in this case, with an historical treatment of that which is our sense of music, Western tonality. Put in context, its standardized grammar to a large extent answers the question of what it is that music says. And the depth of its authority may be understood as applicable to Nietzsche’s fear that “We shall never be rid of God so long as we still believe in grammar.”

But before situating tonality historically, a few words are in order toward defining this basic musical syntax, a cultural practice which has been termed one of the greatest intellectual achievements of Western civilization. First, it must be stressed that, contrary to the assertion of major theorists of tonal harmonics from Rameau to Schenker, tonality was not destined by the physical order of sounds. Tone, almost never found fixed at the same pitch in nature, is divested of any natural quality and shaped according to arbitrary laws; this standardization and strict distancing are elementary to harmonic progress, and tend toward an instrumental or mechanical expression and away from the human voice. As a result of the selection made in the sound continuum by an arbitrarily imposed scale, hierarchical relations are established among the notes.

Since the Renaissance (and until Schoenberg), Western music has been conceived on the basis of the diatonic scale, whose central element is the tonic triad, or defined key, which subordinates the other notes to it. Tonality actually means the state of having a pitch — the tonic, as it is most simply called — that has authority over all the other tones; the

systematics of this leading-note quality has been the preoccupation of our music. Schenker wrote of the tonic's "desire to dominate its fellow tones": in his choice of words we can already begin to see a connection between tonality and modern class society. The leading theorist of tonal authority, he referred to it in 1906 as "a sort of higher collective order, similar to a state, based on its own social contracts by which the individual tones are bound to abide."

There are many who still hold that the emergence of a tonal center in a work is an inevitable product of natural harmonic function and cannot be suppressed. Here we have an exact parallel to ideology, where the hegemony of the frame of reference that is tonality is treated as merely self-evident. The ideological miasma which helps make other social constructs seem natural and objective also hides the ruling prejudices that are embedded in the essence of tonality. It is, nonetheless, as Arnold Schoenberg suggested, a 'device' to produce unity. In fact, tonal music is full of illusion, such as that of false community, in which the whole is portrayed as being made up of autonomous voices; this impression transcends music to provide a legitimizing reflection of the general division of labor in divided society.

Dynamically speaking, tonality creates a sense of tension and release, of motion and repose, through the use of chordal dissonance and consonance. Movement away from the tonic is experienced as tension, returning as a homecoming, a resolution. All tonal music moves toward resolution in the cadence or close, with the tonic chord ruling all other harmonic combinations, drawing them to itself, and embodying authority, stability, repose. Supramusically, a nostalgically painful attitude of wandering and returning runs through the whole course of bourgeois culture, and is ably expressed by the very movement basic to tonality.

This periodic convergence toward a point of repose enabled increasingly extended musical structures, and the areas of tonal expectation and fulfillment came to be placed further apart. It is not surprising that as the dominant society must strive for agreement, assent — harmony — from its subjects through greater distances of alienation, tonality develops more distant departures from the certainty and repose of the tonic and thus lengthier delays in gratification. The forced march of progress finds

many pauses as notes, while the second of Webern's early Three Pieces for Cello and Piano, for example, lasts only thirteen seconds.

The old harmonic system and its major/minor key points of reference provided easily understood places of departure and destination. Serialism accords equal use to each note, making any chord feasible: this conveys a somewhat homeless, fragmentary sense, suitable to an age of more diffuse, traditionless domination.

As of World War 1, art music in general began to fragment. Stravinsky led the neoclassicist tendency, which reaffirmed a tonal center despite the prevailing winds of change. Grounded firmly in the 18th century, it seemed to increasing numbers of composers, especially after World War II, to be no solution to music's theoretical problems. Serialist figure Pierre Boulez termed its rather flagrantly anachronistic character and refusal of development a 'mockery'. Neoclassical music seemed to share at least something with the new serialist movement, however, an often stark, austere character, in line with the general trend toward contraction and pessimism. Benjamin Britten seemed preoccupied with the problem of suffering, while many of Aaron Copland's works evoke the loneliness of industrial cities, whose very energy is bereft of real vitality. Another major traditionalist, Vaughan Williams, ended his masterful Sixth Symphony with what can only be described as an objective statement of utter nihilism.

Meanwhile, by the 1950s, serialism came to be regarded as overdetermined, its discipline too severe, so much so that it occasioned 'chance' music (also called aleatory music or indeterminacy). Closely identified popularly with John Cage, chance seemed another part of the larger swing away from the subject — which electronic or computer-generated composition would take even further — whereby the human voice disappears and even the performer is often eliminated. Paradoxically, the aesthetic effects produced by random methods are the same as those realized by totally ordered music. The minimalism of Reich, Glass and others seems a mass-marketed neoconservatism in its pleasant, repetitious poverty of ideas. Iannis Xenakis, imitating the brutalism of his teacher Le Corbusier, may be said to stand for the height of the cybernetizing, computer-worshipping approach: he has sought an "alloy of

emanating point . . . Tonality does not serve: on the contrary it demands to be served.”

Some defenders of tonality, on the other hand, have adopted a frankly socially authoritarian point of view, feeling that more than just changes in music were at stake. Levarie and Levy's *Musical Morphology* (1983), for example, proceeded from the philosophical thesis that “Chaos is nonbeing” to the political stance that “The revolt against tonality . . . is an egalitarian revolution.” They further pronounced atonality to be “a general contemporary phenomenon,” noting with displeasure how “Obsessive fear of tonality reveals a deep aversion to the concept of hierarchy and rank.” This stance is reminiscent of Hindemith's conclusion that it is impossible to deny the validity of hierarchical tone relationships and that there is therefore “no such thing as atonal music.” Such comments obviously seek to defend more than the dominant musical form: they would preserve authority, standardization, hierarchy and whatever cultural grammar guarantees a world defined by such values.

Schoenberg's atonal experiment suffered as part of the defeat that World War I and its aftermath meted out for social dissonance. By the early 1920s he had given up the systemless radicalism of atonality. not a single ‘free’ note survived. In the absence of a tonal center he inserted the totally rule-governed 32-tone set, which, as Adorno judged, “virtually extinguishes the subject.” Dodecaphony, or serialism as it is also called, constituted a new compliance in the place of tonality, corresponding to a new phase of increasingly systematized industrialism introduced with World War I. Schoenberg forged new laws to control what was liberated by the destruction of the old tonal rules of resolution, new laws that guarantee a more complete circulation among all twelve pitches and may be said to speak to capital's growing need for improved recirculation. Serial technique is a kind of total integration in which movement is strictly controlled, as in a bureaucratically enforced mode. Its conceptual drawback for the dominant order is that while greater circulation is achieved via its new standardized demands (none of the tones is to be repeated before the other eleven have been heard), the concentrated control actually allows for very little production. This is seen most clearly in the extreme understatement and brevity in much of the work of Webern, Schoenberg's most successful disciple; at times there are as

its correspondence in the rationalized direction-compulsion of tonic-dominant harmony, complete with a persistent patriarchal character.

Three centuries of tonality also tend to bury awareness of its suppression of earlier rhythmic possibilities, its narrowing of the great inner variety of the rhythm to a schematic alternation of ‘stressed’ and ‘unstressed’. The rise of tonality similarly coincided with the coming to power of symmetrical thinking and the recapitulating musical structure, the possibility of attaining a certain closure by means of a certain uniformity. Chenevière, in discussing tonality's newly simplified and intellectualized system of notation, discerned “a most radical impoverishment of occidental music,” referring mainly to the symmetrical balancing of clause against clause and the emphasis on chordal repetition.

In the early nineteenth century, William Chappell published a collection of “national English airs” (popular songs) in which academic harmonic patterns were imposed on surviving folk melodies, older melodies suppressed and “irregular tunes squared off.” The binarism of the basic major key-minor key had come to prevail and, as Busoni concluded, “The harmonic symbols have fenced in the expression of music.” The emergence of tonality corresponded to that of nationalized and centralized hierarchy which came to pervade economic, political and cultural life. Ready-made structures of expressivity monopolize musical subjectivity and patterns of desire. Clifford Geertz makes this pertinent judgment: “One of the most significant facts about us may finally be that we all begin with the natural equipment to live a thousand lives but end in the end having lived only one.”

Tonality in music may be likened to realism in literature and perspective in painting, but it is more deeply ingrained than either. This facilitates a would-be transcendence of class distinctions and social differences under the sign of a ‘universal’ key-centered music, triumphant since tonality defined the realm of mass musical appreciation and consumption. There is no spoken language on the planet which even begins to compete with the accessibility tonality has provided as a means of human expression.

Any historical study that omits music risks a diminished understanding of society. Consider, for example, the ninth-century efforts of Charlemagne to establish uniformity in liturgical music throughout his empire

for political reasons, or the tenth-century organ in Winchester Cathedral with its four hundred pipes: the height of Western technology to that time. It is at least arguable that music, in fact, provides a better key' than any other to the understanding of the changing spirit of this civilization. To refocus on tonality, one can, using conventional periodization, locate perhaps its earliest roots in the transition between the Middle Ages and the Renaissance era.

If the eminent medievalist Bloch is correct in characterizing medieval society as unequal rather than hierarchical, there is a definite cogency to John Shepherd's interpretation of the faint beginnings of the tonal system as the encoding of a new hierarchical musical ideology out of a more mutual one which idealized its own, earlier society. The medieval outlook, based on its decentralized and localized character, was relatively tolerant of varying world views and musical forms, and did not consider them as basically destructive of its feudal ideological foundation. The emerging modern world, however, was typified by greater division of labor, abstraction, and an intolerant, totalizing character. Uniform printing, and a print literacy corrosive of oral, face-to-face traditions, explains some of the shift, as movable type provided a model for the proto-industrial use of individuals as mechanically interacting parts of a machine. Indeed the invention of printing at about 1500 gave musical notation great scope, which made possible the role of composer, by the separation of creator and performer and the downgrading of the latter. Western culture thus soon produced the completely notated musical work, facilitating a formal theory of composition at the expense of an earlier predominance of improvisation along certain guidelines. In this way print literacy and its dynamic uniformity led to a growing harmonic explicitness.

Some musicologists have even located a recurrent urge to curb the "recalcitrant independence" of the individual parts of polyphonic multi-voiced music in the interests of harmony and order, dating back to the late thirteenth century. *Ars nova*, the principal musical form of the fourteenth century, illustrates some of the tendencies at work in this long transitional period of pre-harmonic polyphony. Early on, and especially in France, *Ars nova* reached a stunning degree of rhythmic complexity that European music would not achieve again until Stravinsky's *Rite of*

Adorno saw the radical openness of atonal music as an "expression of unmitigated suffering, bound by no convention whatsoever" and as such "often hostile to culture" and "containing elements of barbarism." The rejection of tonality indeed enabled expression of the most intense subjectivity, the loneliness of the subject under technological domination. Nonetheless, the equivalences by which human emotion is universalized and objectified are still present, if released from the centralized control of the "laws of harmony". Schoenberg's "emancipation of the dissonance" allowed for the presentation of human passions with unprecedented immediacy via dissonant harmonies that have little or no tendency to resolve. The avoidance of tonal suggestion and resolution provides the listener with precious little support or security: Schoenberg's atonal work often seems almost hysterically emotional due to the absence of points of real repose. "It is driven frantically toward the unattainable," noted Leonard Meyer.

In this sense, atonality proved to be the most extreme manifestation of the general anti-authoritarian upheaval in society of the five or so years preceding World War I. Schoenberg's abandonment of tonality coincides with the abandonment of perspective in painting by Picasso and Kandinsky (in 1908). But with these "two great negative gestures" in culture, as they have been termed, it was the composer who found himself propelled into a public void. In his steadfast affirmation of alienation, his unwillingness to present any scene of human realization that was not feral, difficult, wild, Schoenberg's atonality was too much of a threat and challenge to find much acceptance. The expressionist painter August Macke wrote to his colleague Franz Marc following an evening of Schoenberg's chamber music in 1911: "Can you imagine music in which tonality has been completely abandoned? I was reminded constantly of Kandinsky's large compositions which are written, as it were, in no single key . . . this music which lets every tone stand by itself." Unfortunately, their feeling for such a radically libertarian approach was not shared by many, not exposed to many.

As Macke's letter implies, before the atonal breakout, music had achieved meaning through the defined relations of chords to a tonal center. Schoenberg's *Theory of Harmony* summed up the old system well: "It has always been the referring of all results to a center, to an

that the rise of Wagner coincides with the rise of empire.” An operatic portrait of Kaiser Wilhelm I beside a swan and wearing a Lohengrin helmet suggests the debt owed him for celebrating and reconsecrating the social order of the second German Reich. If Tristan was the prelude to the political development of Bismarckian Germany, the latter found its authoritarian and mystical justification in Parsifal’s pseudo-erotic religiosity.

Wagner intended a merger of all the arts into a higher form of opera and in this project it seemed to him that he had superseded dogmatic religion. Such an aim projected the complete domination of the spectator by means of the grandeur and pomposity of his musical productions, their perfumed sultriness and bombardment of the senses. His boast was no less than that, owing to his neopagan, neonationalist achievement, “Church and state will be abolished,” having outlived their usefulness. Thus his aims for art were more grandiose than those of industrial capitalism itself and spoke its language of power.

And yet Wagner also, and more importantly, represents the full decay of the classic harmonic system. Despite all the bombast and striving for a maximum of authority, his is the music of doubt. His music remained faithful to at least a latent foundation of tonality but, especially with Tristan, the enduring validity of tonal harmony was already disproved. Wagner had extended it to its ultimate limits and exhausted its last resources.

Part of Mahler’s Song of the Earth is marked “without expression.” It seems that romanticism after Wagner was turning to ashes, though at the same time something new was being foreshadowed. Harmony continued to show signs of collapse from within and increasing liberties were taken with the previously unlimited sovereignty of the major/minor tonal system (e.g. Debussy). Meanwhile, as capital required more “Third World” resources for its stability, music too turned imperialist in the sense of much needed folk transfusions (e.g. Bartok).

In 1908 Arnold Schoenberg’s Second Quartet in F Sharp Minor attained the decisive break with harmonic development: it was the first atonal composition. Fittingly, the movement in question is begun by the soprano with the words: “Ich fühle Luft von anderen Planeten” (“I feel air from other planets”).

Spring five centuries later. But this very complexity, increasingly based on an abstract conception of time, led to an extraordinary refinement of notation, and hence pointed away from a music based on the singing voice and away from melodic subtlety and rhythmic flexibility. Formalization seems always to imply reduction, and in turn a nascent feeling for tonic-dominant relationships was manifest by the mid fifteenth century.

The considerable loss of a spontaneous rhythmic sense after the Middle Ages is evidence of increased domestication, just as two basic Renaissance characteristics, specialization of and within the orchestra and the formation of a class of narrowly focused *virtuosi*, also bespoke a greater division of labor at large. Similarly, new emphasis had been placed on the spectator, and by the late 1500s, music involving no spectacle other than that of men at work, not intended for provoking movement or for singing but made only for being passively consumed, first appeared.

Renaissance music remained for the most part and most importantly vocal, but during this period instrumental music became independent and first developed a number of autonomous forms known collectively as “absolute music.” More and more secularized as well, European music under the unquestioned leadership of the Netherlands between 1400 and 1600 took on a mathematicized aspect quite compatible with the Dutch ascendancy within the rise of early mercantile capitalism. The power of sound achieved an intoxication born of the choral mass effects that are made possible when the many, formerly independent voices of a composition join into one body of harmony.

But a tonal harmonics present in some places was not yet a tonality present throughout. The modal scales, sufficient from the early Middle Ages to the latter part of the sixteenth century, expanded from eight to twelve modes and then began to break down and yield to two less fluid modes, major/minor scale binarism. “The restlessness and disenchantment of the late Renaissance,” in Edward Lowinsky’s words, called forth the coherence and unity of tonic-dominant structure as music’s contribution to class society’s cultural hegemony. Our modern harmonic sense, the conception of tone as the sum of many vertically grouped tones, is an idealization of hierarchized social harmony.

Peter Clark’s *The European Crisis of the 1590s* quotes a Spanish writer of 1592: “England without God, Germany in schism, Flanders in rebellion,

France with all these together.” As the century drew to a close, surveyed Henry Karmen, “Probably never before in European history had so many popular uprisings coincided in time.” Tonality was not yet victorious but would, fairly soon, come to reign among the dominant ideas of society, playing its part to channel and thereby pacify desire.

As polyphony faded, the modern key system began to emerge more distinctly in a new form in the opening years of the 1600s; namely, opera, first brought forth in Italy by Monteverdi. The conscious rhetorical presentation of emotion, it was the first secular musical structure in the West conceived on a scale sufficiently grand to rival that of religious music. With opera and elsewhere, the early phases of “the developing feeling for tonality,” according to H.C. Colles, “already gave the new works an appearance of orderliness and stability which marked the inauguration of a new era in art.”

The growing concern for a central tonality in the seventeenth century thrived on Descartes. With his mathematized, mechanistic rationalism and his specific attention to musical structure, Descartes advanced the new tonal system in the same spirit as he consciously put his scientific philosophy in the service of strong central government. To Adorno, polyphonic music contained nonreified, autonomous elements which made it perhaps best suited to express the ‘otherness’ Cartesian consciousness was designed to eliminate.

The background to this development was a marked renewal of the social strife of the very late 1500s. Hobsbawm found in the 1600s the crisis par excellence; Parker and Smith (*The General Crisis of the Seventeenth Century*) saw this “explosion of political instability” in Europe as “directed overwhelmingly against the State, particularly during the period 1625–1675.” The previous century had been largely the golden age of counterpoint, reaching its apogee with Palestrina and Lassus, its ideal a static social harmony to be imitated in music. The Baroque aesthetic corresponded to the crises beginning in the 1590s, and resuming in earnest with the general economic breakdown of 1620; it’s nothing if not a rejection of classical calm and its polyphonic refinements. The essence of Baroque is to move with the turbulence so as to control it; hence it combines restless movement with formalism. Here the concerto comes of age, linked by more than etymology to consent, consensus.

also in this latter sense, as appreciation of tonality, that Schopenhauer celebrated music in a way unrivaled in philosophical writing, as more powerful than words and the direct expression of inner consciousness. Adorno spoke of the “bursting longing of Romanticism” and Marothly discussed its frequented themes of loneliness and nostalgia, the effort to capture the sense of something that is irretrievably lost. Along these lines, the drama of rescue was not only the literary fashion of the day but is often found in music, such as Beethoven’s *Fidelio*. Schubert could ask whether there was such a thing as joyous music, as if in response to an industrializing Europe, and was answered by the elegiac, resigned Brahms and the pessimist Mahler in the later Romantic era.

Harmony was the special realm of the period; orchestral groupings favored the massed and unified deployment of each instrumental family to stretch and intensify the central concern with pitch relationships to convey meaning, over the other aspects of music. It was the age of great orchestral forces designed to exploit the compulsive powers of tone, proceeding via the coordination of diverse specialist function. In this manner, and with an increasingly systematic conception of musical structure, Romantic music paralleled the perfection of industrial method. As the nineteenth century progressed, a growing number of composers felt that musical language was becoming trapped under the syntactical and formal constraints of tonality, an overly standardized harmonic vocabulary bound to empty symmetrical regularities. Flattening out under the weight of its own habits, music seemed to be losing its former expressive power.

Like capital, then at the height of its initial expansiveness, the modern orchestra pursued the illusion of indefinite growth. But Romantic overstatement and gigantism (i.e. Mahler’s *Symphony of a Thousand*) were used, more often than not, to create a limited range of homogenized sounds, a uniformity of timbre.

To speak of expansion calls to mind Wagner’s attempt at a simple, economical repertoire opera — the resultant work was the five-hour, gorgeous agony of *Tristan and Isolde*. Or Wagner’s *Ring* series, based on the *Nibelungen* myth, that epic of perpetual lust and death by which he desired to outdo all conceivable spectacles, and which most likely prompted Nietzsche to judge, “There is a deep significance in the fact

misgivings in terms of the artificiality and reification of fully developed tonality, but they were less clearly stated than Rousseau's.

By about 1800, tonal instrumental music reached the full command of its powers, a point that painting had arrived at almost three hundred years earlier. The greatest change in eighteenth century tonality in part influenced by the establishment of equal temperament (the division of the octave into twelve precisely equal semitones) was an even more emphatic polarity between tonic and dominant and an enlargement of the range over which the key modulation obtains. At the beginning of the century the key relationship could already hold up over periods of eight or more bars without being sounded again, whereas Mozart, Haydn and Beethoven had, by the end of the century, extended the authority of harmonic relations to five or even ten minutes.

The widening of the tonal orbit, however, meant a consequent weakening in the gravitational pull of the tonic; with Beethoven, in the early Romantic era, some undermining of structural tonality can already be seen. What is new thematically in Beethoven is a climax of emotional expression as well as a greater range of emotions expressed, plus the centrality of the motif of the struggle for individual freedom, precisely as the defeat of the Luddites in England presaged the suppression of emotional expressivity and individual freedom in society at large. Much unlike say, Bach, he began from the fact of alienation and ultimately refused to reconcile in his music that which is unreconciled in society; this can be seen most clearly in his last quartets, which recall the incompleteness and anguish of the late music of Mozart.

The Romantic art par excellence, music came to be thought of as a uniquely privileged medium. Indeed, it was in the Beethovenian period, or shortly thereafter, that the composer was ceded the status of philosopher, contrasting sharply with the role of virtual servant that Haydn and Mozart had occupied. Perhaps the so-called "redemptive force" of music, to cross over to the social terrain, was nowhere more in evidence than with a performance of Auber's opera, *La Muette de Portici*, which provoked the outbreak of revolution in Brussels in 1830. Later in the century, Walter Pater's assessment that "All art constantly aspires towards the condition of music" bespoke not only music as the culmination of the arts but reflected its forcefulness at the height of tonality. It is

Derived from the Latin *concertare*, agreement reached with dissonant elements, it reflected, as a well-harmonized ensemble, the great demand of the system for authority equal to the social struggles.

Harmony is homophony not polyphony; polyphony and harmony are in themselves irreconcilable. Instead of a form in which many voices are combined so that each retains its own character, with harmony we really hear only one tone. In the Baroque age of conflict homophony overtakes and supplants polyphony, with obvious ideological 'overtones'. Independent sounds merge to form a united block, whose function is background for the melody and also to register the tune in motion in its place within the tonal system. At this time harmony first established itself as essential to music, even changing the nature of melody in the process. Rhythm too was affected by harmony; indeed the division of music into bars was dictated by the new, ever-present harmonic rhythm.

Spengler judged that music overtook painting as the chief European art at about 1670. It prevailed at the very time when tonality was definitively realized; music was henceforth to be written in the idiom of fully established tonality, without challenge, for about two and a half centuries. The externalization of immediate subjective interests according to tonality's generalizing code corresponds, from this time as well, to the legal conception of the "reasonable man," Dunwell informs us, though one is tempted to rephrase it as "modern, domesticated," rather than "reasonable."

There are other striking temporal coincidences. John Wolf's *The Emergence of the Great Powers, 1685–1715*, among other historical studies, sets the moment of ascendant state power as paralleling that of central tonality. And as Bukhofzer wrote, "Both tonality and gravitation were discoveries of the baroque period made at exactly the same time." The significance of Newtonian physics is that universal gravitation offered a model emphasizing immutable law and resistance to change; its universally prevailing, ordered motions provided a unified cosmological exemplar for political and economic order — as did tonality. In the new harmonic system the principal tone, the one strongest and most dominant, gravitates downward and through, and becomes the bass, the fundamental tone of the chord; the laws of tonality can be read almost interchangeably, incredible as it may sound, with those of gravitation.

Mid to late seventeenth century England exemplified more general social trends in music. The critics North and Mace wrote of the decline of the amateur viol player, and the tendency in composition wherein “Part writing gave way to fireworks and pattern making,” to cite Peter Warlock. Family chamber music decreased; the habit of passive listening increased, against the breakup of village communalism with its songs and dances. Victorious tonality was a very important part of a major social and symbolic restructuring, and certainly not just in England.

Beginning in the Baroque era, the main vehicle of tonality was the sonata (i.e. ‘played’ as opposed to the earlier, single movement canzona or ‘sung’), which came to cover virtually any instrumental, multimovement composition that proceeds according to a formal plan. The sonata form was an organic outgrowth of harmonic tonality in that its symmetries were basically related to the internal symmetrical organization of the grammar of tonality; its fundamental structure requires that music which appears first as a move away from the tonic toward a newly polarized key be reinterpreted finally with the original tonic area in order to restore the balance. Even the challenging finales of Mozart’s operas, Rosen reminds us, have the symmetrical tonal structure of a sonata. By the end of the Baroque in the late eighteenth century, symmetry withheld and then finally granted had become one of music’s cardinal satisfactions.

With its conflict of two themes, its keynote, development and reprise, the sonata form presupposes a capitalist dynamics; the equilibrium-oriented and totally undramatic fugue, high water mark of an earlier counterpoint, reflected a more static hierarchical society. Fugal style was fulfilled just as tonality came to complete predominance and its movement is largely one of sequence. A classical sonata, on the other hand, is self-generating, moving forward as a revelation of its initially unseen inner potential. The fugue goes on obeying its initial law, like a calculation, as befits rationalist Enlightenment, whereas sonata themes exhibit a dynamic condition announcing the qualitative leap in domination of nature inaugurated by industrial capitalism.

In the early 17th century Rubens’ studio became a factory; his output of over 1200 paintings was unprecedented in the history of art. One hundred fifty years later’ utilizing the preordained sonata form, Haydn and Mozart could turn out 150 symphonies between them. Perhaps it is

not suggesting too much, or denying the genius of some creators, to see in this mechanism a cultural prefiguring of mass production. A further characteristic is that sonata music, unlike the complicated late fugal style, had to be predictable, pleasing. Reminding one of tonality itself, “The sonata cycle affirms the happy ending, lends itself to reconciliation, to salvation from first and second movement strivings, torments, inner doubts” before it concludes, in the words of Robert Solomon.

The sonata-form principle also involves the idea of gradually increasing activity, a cumulative dynamism that reaches out to exclude specificity, to dominate via generalization. It is for this effect that it embodies the crowning achievement of the emergence of generalizing forms in bourgeois evolution and so well expresses the drive toward ‘universal’ values and world hegemony of European culture and capital.

In the eighteenth century the modern notion of music’s autonomy began to form, with the claim (persisting today) to transcendental truth that attaches to Bach and Mozart especially. The proud solemnity of Handel’s oratorios speaks of the rise of imperialist England and a desire to legitimize that rise, but Bach in particular most effectively articulated the social values of the emerging bourgeoisie as universal rationality, objectivity, truth.

The precursors of Bach had made evident a structuration proper to tonality, but it was he who brought that structuration to a precise perfection, combining the drama and goal orientation of the late Baroque with aspects of the earlier, soberer contrapuntal ideal. It is worth noting that the older, more statically mathematized forms survive in the eighteenth century, though they do not reign; this survival accounts for those sequential developments which Constant Lambert disrespectfully speaks of as the Bach “sewing machine,” just as Wagner referred to Mozart as possessed of “sometimes an almost trivial regularity”

But if Bach represents the virtual apotheosis of harmonically based tonality there were some doubts expressed regarding this whole thrust. Rousseau for example, saw harmony as only another symptom of Europe’s cultural decay indeed as the death of music. He based this extreme view on harmony’s depreciation of melody its delimitation of the perception of musical sounds to the internal structuring of its elements and hence its truncation of the listener’s experience. Goethe too had