THE LEADING TONE IN DIRECT CHROMATICISM: FROM RENAISSANCE TO BAROQUE

by

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In tracing the employment of chromaticism through the renaissance and the baroque, one discovers a historical parallelism: during the first two-thirds of each era, relatively little use is made of chromaticism, while during the final third of each, its employment rises to a pronounced high point. These two periods of chromatic ascendancy, the late renaissance and the late baroque, bear a curious interrelationship, in that the latter ignores most of the resources developed in the former. For example, the chromaticism of J. S. Bach largely avoids the innovations of de Rore and Gesualdo.

It is not difficult to account for this selectivity. In the baroque the growing sense of tonality led composers to limit their use of chromaticism to those of its varieties which offered the strongest support for a tonal center. Music in a key was a new experience for the baroque listener, and if he was to understand it in its own terms, the fact of tonality had to be driven home to him forcefully and unequivocally. The earliest composers of tonal music could not cloud their works with even an occasional chromaticism contradictory to the tonal center, without risking a complete breakdown in tonal orientation in the listener's mind. Nowadays we are so habituated to tonal music that composers are able to introduce harmonic facts quite distantly related to the tonal center, with some expectation that the listener will cling to even the thinnest strands of connection before allowing his orientation to become nontonal or polytonal. The baroque composer, on the other hand, was forced by his historical position to throw every possible safeguard around his tonality, employing only those practices which supported, or at least did not endanger, the tonality.

Renaissance chromaticism is therefore properly called pretonal or modal, while its baroque successor may be referred to as tonal chromaticism. In the present article it is my intention to probe beyond this external, though fully valid, comparison, to examine the technical principle which governs chromatic selectivity in the late baroque, and which distinguishes a certain family of chromatic usages as compatible with the clearly tonal harmonic style of that period. As will be shown, this principle is to be found in the occurrence and behavior of the leading tone. Not only does the principle furnish a rigorous definition of baroque direct chromaticism in terms of the leading tone; it also provides a valuable yardstick for the historical evaluation of renaissance chromaticism. Both these facets of the principle will be examined following some necessary preliminary steps and a systematic comparison of renaissance and baroque chromatic usages.

There are three preliminary steps: (1) definition of the term

chromaticism, (2) discussion of the limitations imposed in the present study, and (3) establishment of a differentiating factor in harmonic progression which will permit objective comparison of renaissance and baroque examples of chromaticism.

Chromaticism being essentially the antonymn of the more restrictive term diatonicism, its precise definition rests on a series of definitions beginning with the concept diatonic system:

diatonic system - a succession of whole steps and half steps, of indefinite compass, in which the half steps are separated alternately by two whole steps and three whole steps
diatonic - comprised entirely of tones from a single diatonic system
diatonicism - the use of diatonic collections of tones
chromatic - not comprised entirely of tones from a single diatonic system
chromaticism - the use of chromatic collections of tones

Deserving of comment is the definition of diatonic system, since it is obvious that the remaining definitions hinge directly upon it. The reader will perceive that what is here represented by the term diatonic system is merely the common denominator of such familiar tonal systems as the several ecclesiastical modes and the major scale. There is every reason to believe that this common denominator, or succession of whole and half steps, was employed almost exclusively for more than a thousand years of Western music, beginning with early Christian times. Proof of its supremacy lies in the manner in which the tones were named: The modern series of letter-symbols, a, b, c, d, etc., and its medieval forerunner, represent a diatonic system, as defined above. Consequently, the system is reflected in the meaning of the staff and the design of the modern keyboard. The stigma musica ficta, attached to early deviations from the system, shows the reverence with which it was regarded in medieval and renaissance times. And during the past two hundred and fifty years, when extensive deviation from it and abandonment of it have become the norm of practice, the system has persisted as an important framework of tonal organization. Without doubt, this simple succession of whole and half steps is among the most deeply rooted facts of our musical culture.

In view of its historical pre-eminence alone, the system deserves to be represented in its pure form by such a basic theoretical concept as diatonic. Modern abstractions such as the harmonic minor and so called "ascending melodic" minor scales, which are sometimes referred to as diatonic, cannot be reconciled with the above definitions without the term diatonic becoming an unwieldy and theoretically useless catch-all. [1]

1. In this connection much confusion derives from the accepted meaning of the expression chromatic scale. (Clearly, the harmonic minor scale is not the chromatic scale; it is therefore diatonic, or so the reasoning goes.) If the presently accepted meaning of chromatic

Two limitations are imposed in the present study, the first being concerned with the chord types to be considered, the second with the distinction between direct and indirect chromaticism. In the light of the above definitions certain traditional chords are seen to be inherently chromatic, namely, the augmented triad, the diminished seventh chord, and the dominant minor ninth, none of these being comprised entirely of tones from a single diatonic system. Only one of the three, the augmented triad, occurs in renaissance music as an essential structure, and this only with great rarity. It is therefore necessary to turn to those chords which are inherently diatonic, for a basis for comparison of renaissance and baroque usages. Of these inherently diatonic chords, the major and minor triads easily outweigh all others in their frequency as essential structures in the renaissance and baroque, and it is only on the basis of chromatic progressions involving these two chords that a meaningful comparison of the two eras is possible.

In dealing with harmonic progressions involving only diatonic essential structures, in this case the major and minor triads, it is necessary to distinguish between direct and indirect chromaticism. In the direct variety the two chords involved in the chromaticism are adjacent; in indirect chromaticism they are separated by one or more essential structures:

Direct Indirect

It is the direct form which will be considered in the present article, since it is in this type of chromatic progression that the leading tone principle applies most rigorously. However, the problem of indirect chromaticism, which will be considered in a later article, also depends largely on the leading tone principle for its solution.

The comparison of renaissance and baroque chromatic practice awaits a final preliminary step: an objective means of comparison must be found. By what criteria shall we recognize as similar or different, two given chromatic progressions from, say, Gesualdo and Bach?

scale is to be retained, we must content ourselves with the paradox that the harmonic minor and "ascending melodic" minor scales, while inherently chromatic, are not "chromatic scales".

Here it might be stated also that, while I am entirely convinced of the soundness of the above definitions, the reader must realize that any doubts he may entertain regarding them can be in no way damaging to the principle to be derived by their use. So long as the concept of chromaticism, as defined above, is clearly understood, I have no essential objection to the reader's substituting his own term for it throughout the article. Universally accepted nomenclature is a desirable objective, but, unfortunately, it sometimes lags behind theoretical thought.

The traditional Roman-numeral symbols will not do. Since most renaissance music has no clear tonal center, the traditionally necessary concept of a hierarchy of chords around such a center is meaningless, and its accompanying symbols are hopelessly cumbersome when applied to late-renaissance chromaticism.

Clearly, another means of comparison is needed, one which makes use of a differentiating factor in harmonic progression, that is common to both eras. In progressions involving only major and minor triads there is one such factor that is common to all eras. It is that quality constituted by (1) the interval of root movement and (2) the succession of triad types, major and minor. Progressions in which these constituents are identical have a similarity in harmonic effect irrespective of their historical context. They bear an identity to one another which is independent of other considerations, such as spacing, doubling, voice leading, and the presence or absence of tonality. Thus the harmonic progression G-c[2] in a renaissance piece, will have a similar basic effect to the progression E-flat — a-flat in a baroque piece, since the interval of root movement is the same in both cases (up a 4th), as is the succession of triad types (major-minor).

TABLE I

Diatonic-chromatic Characteristics of Two-Chord Progressions Involving Major and Minor Triads Only

Root movement	Type-succession of triads			
	M - M	m - m	M - m	m - M
up m2	C	C	C	
up M2				C
up m3	C	C	C	
up M3	C	C		C
up 4			C	
tritone	C	C	C	C
down 4				C
down M3	C	C	C	
down m3	C	C		C
down M2			C	
down m2	C	C		C

Legend

M - major
m - minor
C - chromatic (unmarked progressions are diatonic)

In two-chord progressions involving only major and/or minor triads there are 4 possible successions of triad types and 11 possible

2. Capital letters used as chord symbols denote major triads; small letters, minor triads.

TABLE III

(Recapitulation of TABLE II)
(See page 21)

Renaissance		Baroque
up m3(M-M)		
down M3(M-M)		
up m3(m-m)		
up M3(m-m)		
down M3(m-m)		(Dotted lines indicate
down m3(m-m)		progressions common
up m3(M-m)		to both eras.)
tritone(M-m)		
down M3(M-m)		
up M3(m-M)		
tritone(m-M)		
up m2(M-M)	. . . . .	up m2(M-M)
up M3(M-M)	. . . . .	up M3(M-M)
down m3(M-M)	. . . . .	down m3(M-M)
down m2(M-M)	. . . . .	down m2(M-M)
up 4(M-m)	. . . . .	up 4(M-m)
down M2(M-m)	. . . . .	down M2(M-m)
up M2(m-M)	. . . . .	up M2(m-M)
down 4(m-M)	. . . . .	down 4(m-M)
down m3(m-M)	. . . . .	down m3(m-M)
		tritone(M-M)

intervals of root movement, yielding a total of 44 different progressions. As shown in TABLE I, 26 of these are chromatic.

A convenient shorthand system for denoting the characteristics of these progressions is made available by enclosing the type-succession in parentheses and preceding it with the interval of root movement. Thus the progression a-F sharp would be expressed as "down m3(m-M)".

The groundwork is now laid for an objective comparison of renaissance and baroque chromaticism, the first step of this task being an inquiry as to which chromatic progressions occur in each of the two eras. The musical examples given on pages 15-20 are a condensation of the author's research on this subject. Included is one example of each chromatic progression found in the renaissance and one of each found in the baroque. (The examples are arranged according to their position in TABLE I, beginning with up m2(M-M) in the upper left-hand corner). From the information furnished by this body of material, the leading tone principle will be derived.

TABLE III shows the selectivity of the baroque, which perpetuated less than half the chromatic progressions of the renaissance, adding only one of its own. The renaissance usages, then, fall into two historical groups: those which are peculiarly renaissance, and those which became a part of baroque practice. By reference to the table it is possible to classify given renaissance examples according to these two groups. Suppose, for instance, that the progression up M3(M-M) is encountered in a renaissance piece; TABLE III indicates its close relationship to the practice of the later era.

But does such a discovery not seem, somehow, to be lacking in meaning? It does, for the reason that "baroque practice" is as yet undefined, having merely the status of a group of progressions, the family relationship among which is far from self-evident. The seemingly isolated cases in the group must be subsumed under some definitive principle if the notion of baroque practice is to take on significance.

As previously stated, this principle is concerned with the occurrence and behavior of the leading tone. More specifically, it is the lower leading tone (LLT) which is involved. For this purpose the LLT shall be defined as the third of a major triad, which third progresses (or resolves) upward by a semitone to any tone of the following chord.[3]

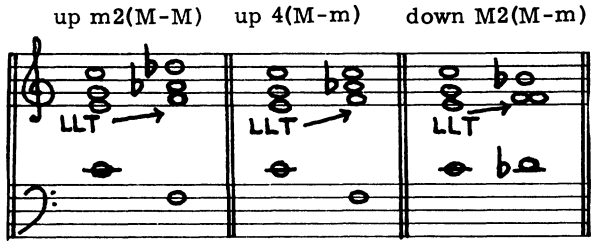
The principle is as follows:

Baroque direct chromaticisms function in one of two ways:

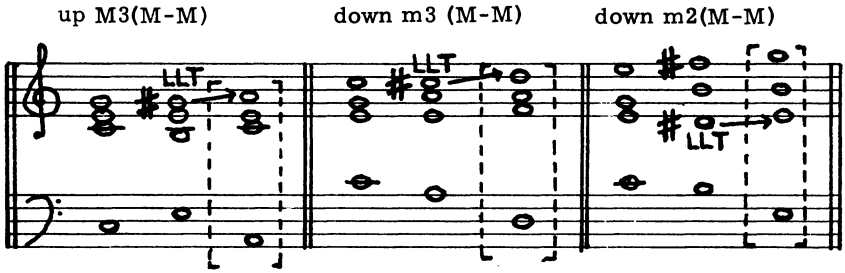
3. No prior justification is claimed for this definition, since the LLT is to serve here as a descriptive device only. Should the reader object to this as arbitrary, the term "factor x", or any other neutral symbol, might be substituted for LLT with no damage to the validity of the principle to be derived.

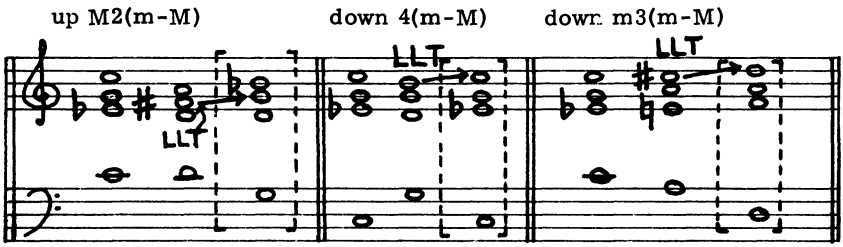
The Ten Direct Chromatic Progressions
of the Baroque and their Explanation

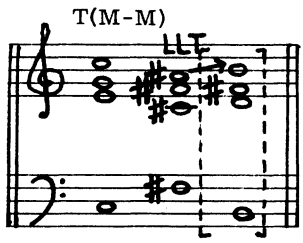
CONDITION 1 (LLT Resolved)



CONDITION 2 (Potential LLT and diatonic relationship)







(1) by resolving an LLT in the first chord, or
(2) by providing in the second chord a potential LLT whose tone of resolution could serve as the root of a hypothetical third chord mutually diatonic with the first chord. The potential LLT of the second chord need not resolve, though it almost always does, nor must the tone of resolution actually serve as described above. It is only the possibility of these two events which is required. By "mutually diatonic" is meant comprised of tones from the same diatonic system.

On page 8 are illustrated the ten direct chromaticisms of the baroque and the manner in which each fulfills one of the two above conditions.

The ten direct chromatic progressions of the baroque are the only such progressions that fulfill one of the conditions of the definition. This leads to the conclusion that within a limited area, the boundaries of which are very clear, the baroque made full use of the possibilities of chromaticism. The conditions of the definition delimit a family of chromatic usages having common characteristics. The practice of the baroque includes all the members of this family and excludes all others.[4]

Heretofore, baroque chromatic usages have been explained as individuals, as in the following list:

in major	in minor
I - N6	I - V of V[1]
I - V of II	IV - V of V
I - V of VI	IV - V
II - V of III	VI - V
II - V of VI	VI - V of V
IV - V of II	VI - V of IV
IV - V of VI	V - I
V - V of III	V - IV
V - V of VI	V - VI
V of VI - IV	N6 - V

Such a list gives no indication of the interrelationship among its various items. The leading tone principle defines this interrelationship and proves the integral nature of baroque chromatic practice.

The foregoing is in no way intended to invalidate traditional theory, which, at least for the present, must continue to serve as the foundation for the practical pedagogy of late baroque style. For a definition such as the one developed herein to serve as a basis for the

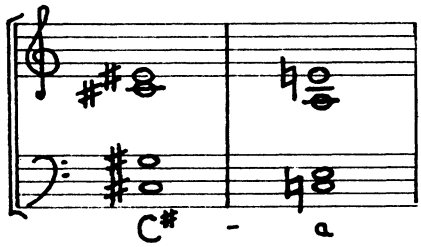
4. To date the following exceptions have been found:
down M3(M-M), which occurs in the chorale prelude "O Mensch, bewein' dein' Sünde gros" from the Orgelbüchlein of J. S. Bach; and
down M3(m-m), which occurs in a setting of the chorale "Warum sollt' ich mich denn grämen" by the same composer.

treatment of chromaticism in the style of Bach, it would have to specify the typical contexts in which each chromatic usage occurs. In its limitation to direct chromaticism, the above definition does not treat of these typical contexts. In its present form the definition must be regarded as a supplement to traditional theory, not a replacement for it.

It is in the historical evaluation of renaissance examples that the definition attains its full stature. It enables one to tell immediately whether or not a given example of late renaissance chromaticism bears any relationship to the baroque, and, in so doing, to give a solid reason rather than a set of vague adjectives.

Consider the following example from Gesualdo:

Gesualdo: "Moro lasso al mio duolo"

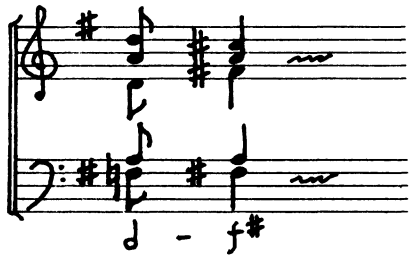


A trained musician would say unhesitatingly that the above progression is foreign to the style of Bach. Asked for proof, he would point to the fact that traditional symbols cannot be used to describe the progression, except in a very far-fetched way, such as A:VofVI -I(3 flat). It is true that the cumbersomeness of the symbol offers a clue to the progression's peculiarly late-renaissance quality. But is there any specific reason why this symbol might not occur in the analysis of baroque music? No, traditional theory offers only a statistical basis for ruling that such a progression is foreign to baroque style: there is no known occurrence of it in the style; it is, therefore, foreign. The usual way of strengthening one's assertions in these matters has been to apply to the progression as many adjectives seemingly contrary to baroque aesthetics as can be found: it is "wild," "unrestrained," "uncontrolled," and "extreme," hence unfit for baroque usage.

In contrast to the above analysis, our definition applies to this problem as follows: there is no LLT in the first chord (the E sharp is not resolved), nor is there a potential LLT in the second chord (since it is a minor triad). As neither of these two conditions is present, the progression is foreign to baroque practice.

Let us turn to another example from the same composer:

Gesualdo: "Invan dunque, o crudele"



Placing this progression historically, by traditional methods, involves a still more dubious judgment. Its smooth contrapuntal features prevent its being characterized as "wild" or "extreme," and, no doubt, many experienced listeners would hesitate to say that it is foreign to the style of Bach. It may be symbolized traditionally in at least two ways: (1) F sharp minor: VI(3 flat)-I, and (2) D: I(3 flat)-III, neither of which is more formidable in appearance than, say, IV(3 sharp)-V, which would be a very common late baroque progression in a minor key. Since the external appearance of the symbol offers no clue in this case, the only traditional rationale requires knowledge of the possibility of occurrence of a particular set of symbols. The fact is that the set of symbols for the above progression does not occur in the analysis of baroque music, marking the progression as peculiarly renaissance. But again, our definition offers a more reliable method of analysis: both triads are minor; hence there can be no LLT, actual or potential.

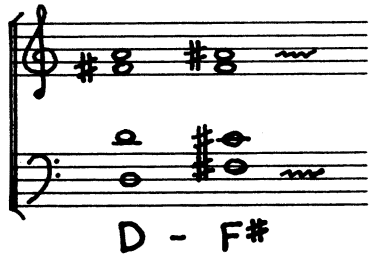
To ascertain a given progression's relationship to the baroque, by traditional methods, one must first set down all its possible symbolizations. Each of these must then be examined as to the possibility of its occurrence in baroque music, a procedure requiring knowledge of a vast body of independent facts. If specific knowledge of this sort is held in sufficient quantity, as it is by the average theorist, admittedly the traditional method is as faultless as the leading tone principle. And for the expert in these matters the traditional thought process is not so prosaic as it might seem, probably taking a form closer to intuition than step-by-step calculation. But in any case the traditional proof rests ultimately on the possibility of occurrence of a particular set of symbols.

This would seem to be a less than adequate basis for understanding an historical trend, or for evaluating harmonic facts historically. It requires knowledge of countless independent facts, and fails to answer the question of why certain chromaticisms were considered particularly suitable for tonal music, while others were rejected with rigorously consistent selectivity. Since the answer to this question lies in the LLT and its behavior, there is no need to resort to artificial symbolizations of harmonic progressions in solving the present kind of

historical problem. A chromatic progression's suitability to baroque style depends on its LLT characteristics; so why not deal directly with these characteristics?

In the following example the definition's second condition applies:

Lassus: "Alma nemes"



The potential LLT A-sharp could resolve to the root of a B minor triad, a chord mutually diatonic with the D major triad. The progression is, therefore, one of those employed in the renaissance which was not discarded in the baroque. By such analysis it is possible to judge quickly and accurately whether a given late renaissance chromaticism is forward looking and directed toward the coming era of tonal music, or is destined to lie discarded as being incompatible with the strong tonality of the baroque.

Late renaissance chromaticism stands between two great objects of theoretical thought — the pre-tonal, diatonic practice of the renaissance, and the tonal, partially chromatic practice of the middle and late baroque. Strangely, it appears to play no part in the transition between these two practices. Having thrown off the old shackles of diatonicism, late renaissance chromaticism developed a harmonic vocabulary which precluded any progress in the direction of tonality. Faced with such an apparently isolated phenomenon, music theory must try to associate it with facts and events outside itself. In allowing it to be viewed in terms of the baroque, the leading tone principle overcomes the isolation of late renaissance chromaticism.

SOURCES FOR MUSICAL EXAMPLES

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3-part invention in E minor, v. 3, p. 29

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Giovanni Palestrina

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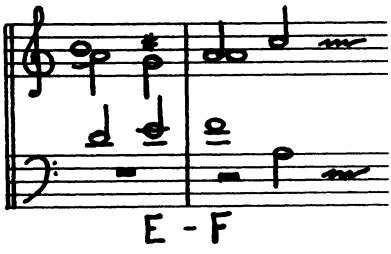
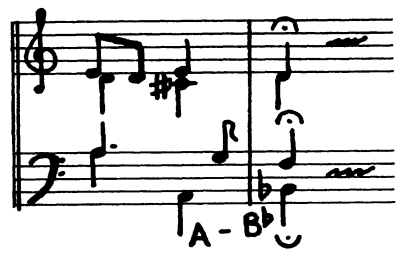
up m2(M-M)

Renaissance
Palestrina: Kyrie

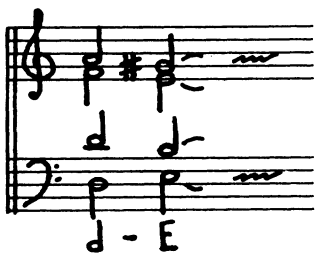


Baroque
Bach: "Christ ist erstanden"

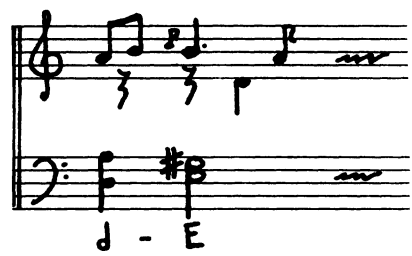


up M2(m-M)

Renaissance
de Rore: "Datemi pace"

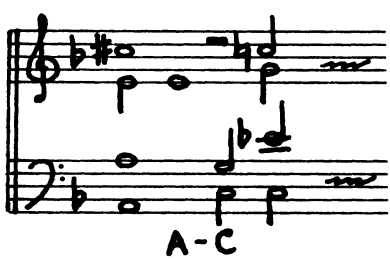


Baroque
Rameau: Courante



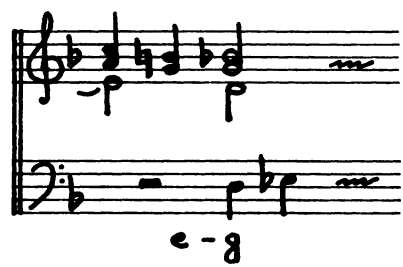
up m3(M-M)

Renaissance
Lassus: 4-part cantiones



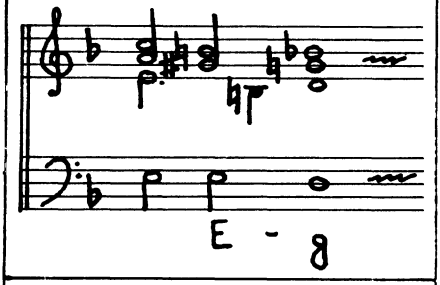
up m3(m-m)

Renaissance
Gesualdo: "Dolcissima mia vita"



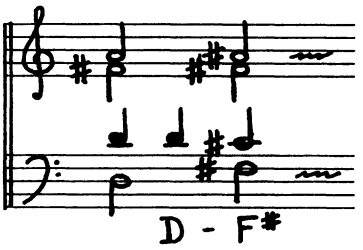
up m3(M-m)

Renaissance
Gesualdo: "O vos omnes"



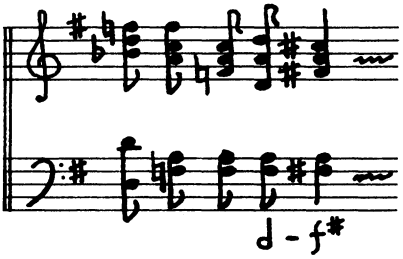
up M3(M-M)

Renaissance
Lassus: "Alma nemes"

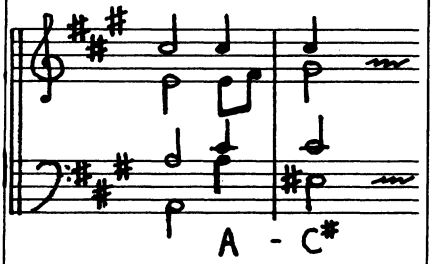


up M3(m-m)

Renaissance
Gesualdo: "Invan dunque,
o crudele"

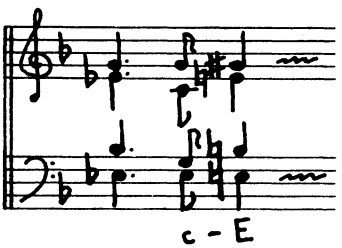


Baroque
Bach: "Nun lob' mein Seel',
den Herren"



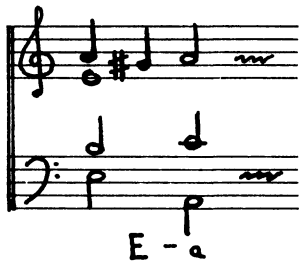
up M3(m-M)

Renaissance
Gesualdo: "Itene o miei
sospiri"

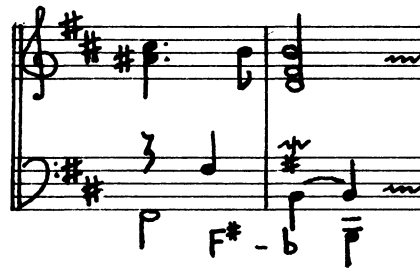


up 4(M-m)

Renaissance
Palestrina: Magnificat

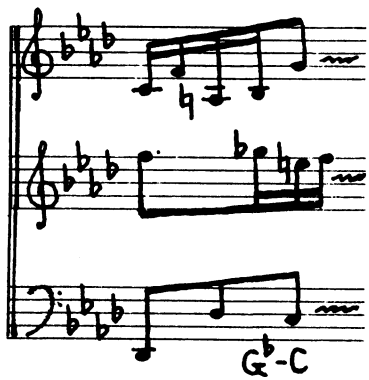


Baroque
Couperin: Gavotte



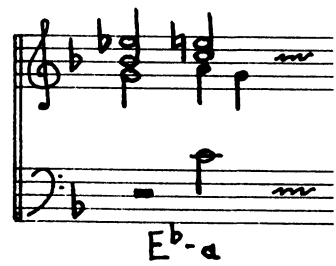
T(M-M)

Baroque
Bach: "Sonata for Clavier and violine"



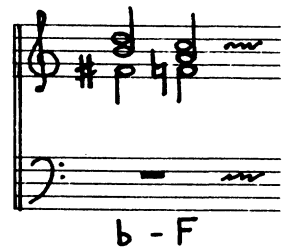
T(M-m)

Renaissance
Gesualdo: "Moro lasso mio duolo"



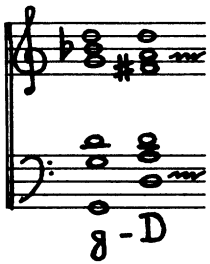
T(m-M)

Renaissance
Gesualdo: "Hai, gia mia discoloro"

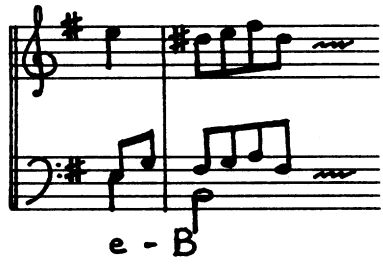


down 4(m-M)

Renaissance
Lassus: "Salve regina"

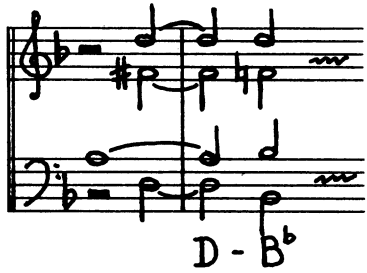


Baroque
Rameau: "La villageoise"



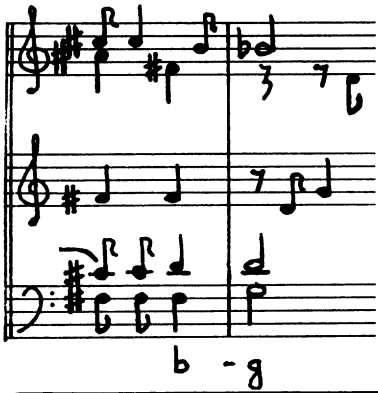
down M3(M-M)

Renaissance
Lassus: "Christe dei"



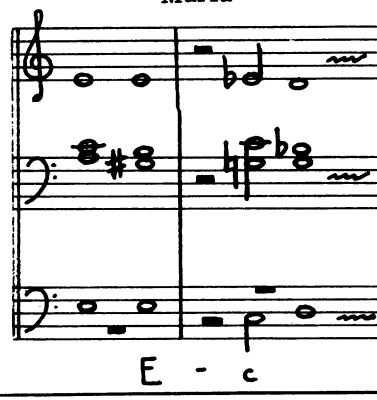
down M3(m-m)

Renaissance
Gesualdo: "Merce! grido piangendo"



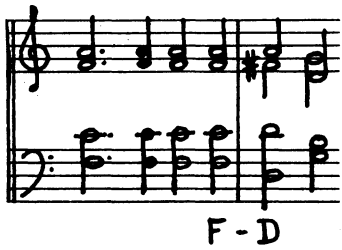
down M3(M-m)

Renaissance
Gesualdo: "Ave dulcissima Maria"

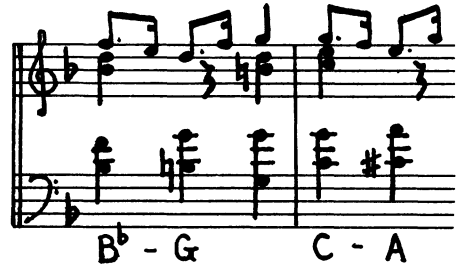


down m3(M-M)

Renaissance
Lassus: "Timor et tremor"

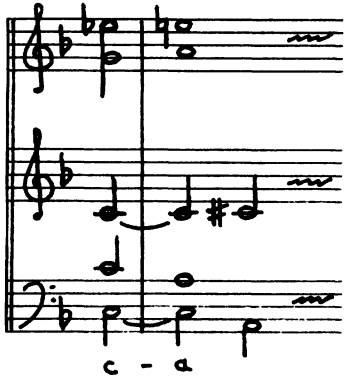


Baroque:
Handel: "Acis & Galatea"



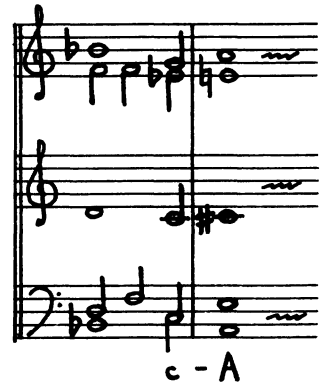
down m3(m-m)

Renaissance
Gesualdo: "Itene o miei sospiri"

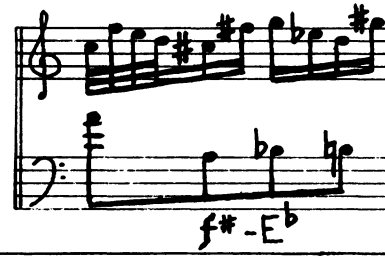


down m3(m-M)

Renaissance
Marenzio: "O voi che sospirate"

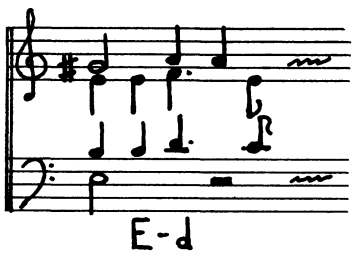


Baroque
Bach: Prelude in a minor, WTC II

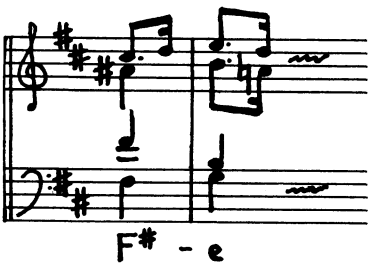


down M2(M-m)

Renaissance
Palestrina: Magnificat

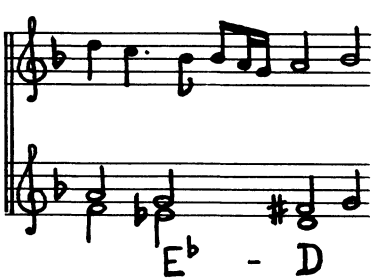


Baroque
Purcell: Anthem

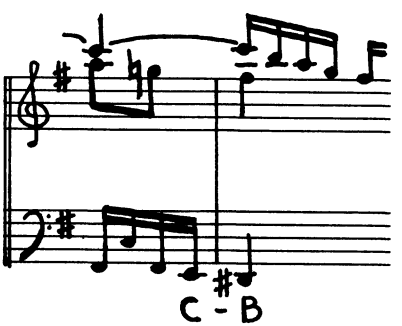


down m2(M-M)

Renaissance
Lassus: "Verba mea auribus"



Baroque
Bach: 3-part invention
in e minor



The form of TABLE I may be employed in summarizing the above chromatic material:

TABLE II

Occurrence of Direct Chromaticisms
in Renaissance and Baroque Music

Root movement*	Type-succession of triads			
	M - M	m - m	M - m	m - M
up m2	R B	x	x	
up M2				R B
up m3	R	R	R	
up M3	R B	R		R
up 4			R B	
tritone	B	x	R	R
down 4				R B
down M3	R	R	R	
down m3	R B	R		R B
down M2			R B	
down m2	R B	x		x

Legend

R - occurs in the renaissance
B - occurs in the baroque
x - occurs in neither period

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* The cases, prime(M-m) and prime(m-M) are special, as they involve no harmonic progression. Each occurs in both eras.