MUSECA MUSICAL TEXTBOOK SERIES

A Comprehensive Study of Chord Progressions, Volume I

Theory, Harmonic Families, Functional Design, and Tonal Architecture

Museca

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A Comprehensive Study of Chord Progressions, Volume I

Theory, Harmonic Families, Functional Design, and Tonal Architecture

Museca Monograph Series

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Preface

This textbook is written for musicians, students, and teachers who seek a clear, comprehensive, and practical understanding of chord progressions. Whether you compose, arrange, perform, teach, or analyze music, the ability to hear progression families and understand harmonic motion is fundamental.

Volume I establishes the theoretical and structural grammar of chord progressions. We begin with the most basic principle: that harmony is not merely a collection of sonorities, but a language with syntax and meaning. A progression creates expectation, directs the ear, and shapes the form of music across all styles.

What This Volume Covers

Part I, Foundations of Harmonic Motion, introduces the core concepts: what chord progressions are, how they create expectation and release, the role of keys and scales, harmonic function, cadences, voice leading, and harmonic rhythm.

Part II, Diatonic Progression Families, explores the most common progressions found in Western music. You will study major and minor progressions, root motion patterns including the circle of fifths, stepwise bass lines, cadential schemas, and the great families: ii-V-I, I-V-vi-IV loops, blues progressions, descending lines, and sequences.

Part III, Chromatic Enrichment and Expansion, moves beyond diatonic harmony to show how secondary dominants, modal interchange, chromatic predominants, and chromatic mediant relationships enlarge the harmonic palette while maintaining connection to functional grammar.

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Part IV, Modulation and Tonal Change, investigates how composers change keys—not merely by emphasis, but through genuine modulation. Pivot-chord, direct, sequential, and common-tone modulations each offer a different persuasive strategy.

Part V, Formal and Large-Scale Harmonic Design, zooms outward to show how harmonic behavior distributes across larger sections and entire compositions. A single piece is itself a harmonic arc: establishing a tonic, departing into contrasting spaces, and returning home transformed.

A Note on Terminology

Throughout this book, we use three complementary languages to describe progressions:

- Roman numerals (I, IV, V, vi) indicate scale-degree relationships within a key
- Absolute chord symbols (C major, D minor, G7) name chords in isolation
- Functional labels (tonic, predominant, dominant) describe the role a chord plays in a progression

No single language is complete. Roman numerals show key relationships but obscure absolute pitch. Chord symbols fix pitch but ignore harmonic context. Functional labels capture meaning but require listener experience. Together, they form a complete picture.

How to Use This Book

This is a learning textbook, not reference material. Read sequentially. Each chapter builds on earlier concepts. Work through the diagrams slowly. Listen to progressions at the piano or with recordings. The goal

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is not to memorize patterns, but to develop your ear—to hear progression families as naturally as you hear words in your native language.

By the end of Volume I, you will understand the deep structures that underlie harmonic motion. Volume II will extend this knowledge into style, emotional character, reharmonization, and the vast atlas of progression variants used across genres.

Welcome to the study of harmonic motion. This journey will transform how you hear, create, and understand music.

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PART I: FOUNDATIONS OF HARMONIC MOTION

Chapter 1: What a Chord Progression Is

A chord progression is a sequence of harmonies whose ordering creates perceived motion, expectation, and form. It is the foundation of harmonic meaning in music. A single chord is merely a sonority—a color or vertical slice of sound. But when chords follow one another in time, the listener's ear interprets their relationship. This interpretation depends not only on what chords appear, but on their order.

We must distinguish between chord succession and harmonic syntax. A chord succession is the fact that one harmony simply follows another—a technical observation. Harmonic syntax is the meaningful relationship between them. A progression like I-IV-V-I happens to move from tonic to subdominant to dominant and back. But this is not arbitrary. The listener senses a departure from home, a buildup of tension, and a return. The order matters deeply.

Progressions shape expectation through several mechanisms: establishing center (the opening chord anchors the ear on a tonal center), departing (moving away from that center creates tension and forward motion), intensifying (successive harmonic changes can accelerate or increase energy), deferring resolution (delaying return to the home chord prolongs tension), and confirming arrival (a strong return to tonic resolves the arc and completes the idea).

These principles apply across all musical styles and traditions. Classical composers use them in cadences and sonata form. Jazz musicians use them in turnarounds and ii-V-I cadences. Pop songwriters loop them in four-chord patterns. Blues musicians

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organize them across 12-bar forms. Rock bands base entire songs on repeated progressions. Electronic music layers them as drones and vamps. Film composers use them to shape narrative moments.

The study of chord progressions, then, is the study of how order creates meaning in harmony. It is a grammar of harmonic motion—a system of rules and possibilities that composers, improvisers, and arrangers use to shape emotional and structural experience.

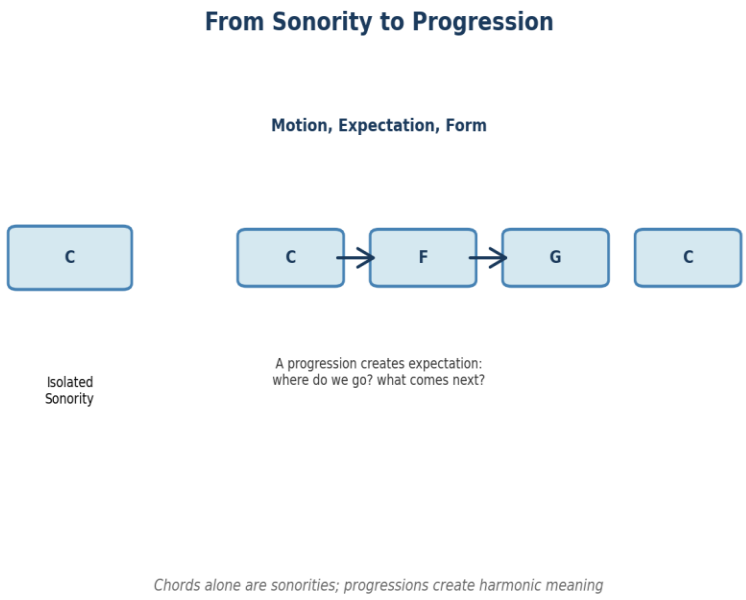


Figure 1.1: From sonority to progression. A progression emerges when succession creates perceived motion, expectation, and formal meaning.

Key Takeaways

- A chord progression is a sequence of harmonies whose ordering creates perceived motion and meaning
- Chord succession is a technical fact; harmonic syntax is the meaningful relationship between chords
- Progressions shape expectation by establishing center, departing, intensifying, deferring, and confirming arrival

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- The principles of progression apply across all musical styles: classical, jazz, pop, blues, rock, electronic, and more
- Understanding progressions requires developing the ear to hear harmonic motion as a language

Listening Examples

"Let It Be" — The Beatles
@TheBeatles Official Music Video · Search: Beatles Let It Be official video
youtube.com/@TheBeatles

Links go to official artist and label YouTube channels for longevity.

Chapter 2: How Progressions Create Expectation and Release

The fundamental engine of harmonic motion is the cycle of tension and release. This is not a stylistic preference or an arbitrary convention—it is rooted in how our ears and minds perceive order in sound. A progression that creates expectation, defers its resolution, and then provides release engages the listener's attention and emotions.

Tension in harmony arises from instability. A chord that is far from the tonal center, that contains notes outside the key, that moves away from a resting point, or that has not yet resolved its suspended notes all create a sense that something must happen next. The listener is not conscious of rules, but conscious of a pull: the music is heading somewhere.

Release occurs when tension resolves. This might happen by returning to the home chord (tonic). It might happen by a chord that sounds conclusive through its inherent stability. It might happen by the arrival at a new tonic after a modulation. The sense of release is not arbitrary—it is learned through exposure, but once learned, it is universal.

Expectation can also arise from repetition. A progression that repeats—a loop or vamp—creates its own kind of expectation. The listener settles into the pattern and anticipates its continuation. Breaking the pattern or shifting it creates a new kind of tension. Thus, pop songs and electronic music that repeat the same four or eight chords still engage harmonic expectation through repetition rather than functional movement.

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The role of harmonic rhythm—the rate at which chords change—is crucial to managing expectation. A slow harmonic rhythm creates space and allows tension to build gradually. A fast harmonic rhythm creates excitement and forward momentum. Accelerating harmonic rhythm toward a cadence is a fundamental technique: the sense of arrival is heightened by the quickening of change.

Listening Examples

Canon in D — Johann Pachelbel
Classical music channels · Search: Pachelbel Canon in D official recording
youtube.com/results?search_query=Pachelbel+Canon+in+D+official

Links go to official artist and label YouTube channels for longevity.

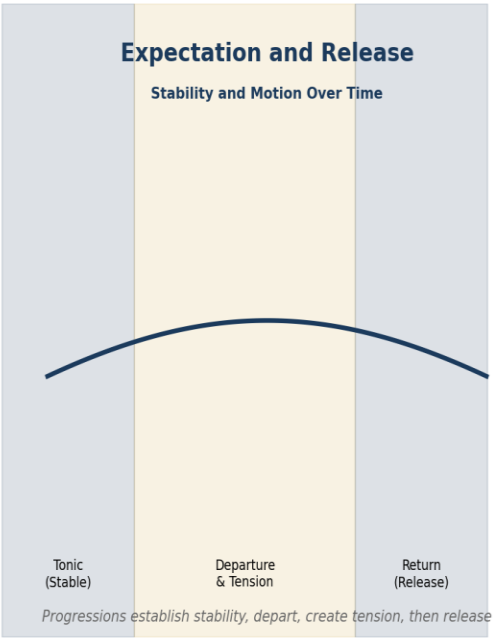


Figure 2.1: Expectation and release form the fundamental engine of harmonic motion. Tension builds through departure from stability and resolves through return.

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Key Takeaways

- Tension and release are the fundamental engine of harmonic motion
- Instability creates expectation; chords far from the tonal center pull the ear forward
- Release occurs through resolution to stable chords, usually the tonic
- Repetition creates expectation through pattern recognition and anticipation
- Harmonic rhythm shapes expectation: slow rhythm allows tension to build; fast rhythm creates momentum

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Chapter 3: Keys, Scales, and Tonal Centers

A key is an organized collection of pitches centered on a single note—the tonic. The key of C major is built on the note C and uses all the white notes of the piano (C-D-E-F-G-A-B). The key of A minor is also built on A but uses the same seven pitches. Keys are not invented; they emerge naturally from the structure of scales.

A scale is an ordered sequence of pitches ascending from a starting note. The major scale follows the pattern of whole steps (W) and half steps (H): W-W-H-W-W-W-H. Starting from C, this gives us C-D-E-F-G-A-B-C. The minor scale is more complex: natural minor shares the same seven pitches as its relative major, beginning instead from the sixth scale degree; harmonic minor raises the seventh degree; melodic minor raises both sixth and seventh when ascending. Each scale has a unique character and set of intervals.

A tonal center is established when the ear recognizes one note as home. This happens through repetition, emphasis, and position. In Western music, the tonic (the first scale degree) is the tonal center. Listeners trained in Western music recognize the tonic through the pull of the leading tone (the seventh scale degree, a half step below), through the dominance of the tonic in position, and through familiarity.

From a scale, we can derive diatonic chords—harmonies built from the notes of that scale. In C major, the diatonic triads are: I (C major, C-E-G), ii (D minor, D-F-A), iii (E minor, E-G-B), IV (F major, F-A-C), V (G major, G-B-D), vi (A minor, A-C-E), and vii° (B diminished, B-D-F).

Each diatonic chord has a specific quality (major, minor, or diminished) and a specific tendency or function. The Roman

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numeral indicates the scale degree on which the chord is built. The key signature and the major/minor quality tell us instantly which diatonic chords are available in a given key. Once a listener has accepted a tonic, all other harmonies are defined relative to it. A chord close in pitch or scale-degree distance feels familiar. A chord far away feels foreign.

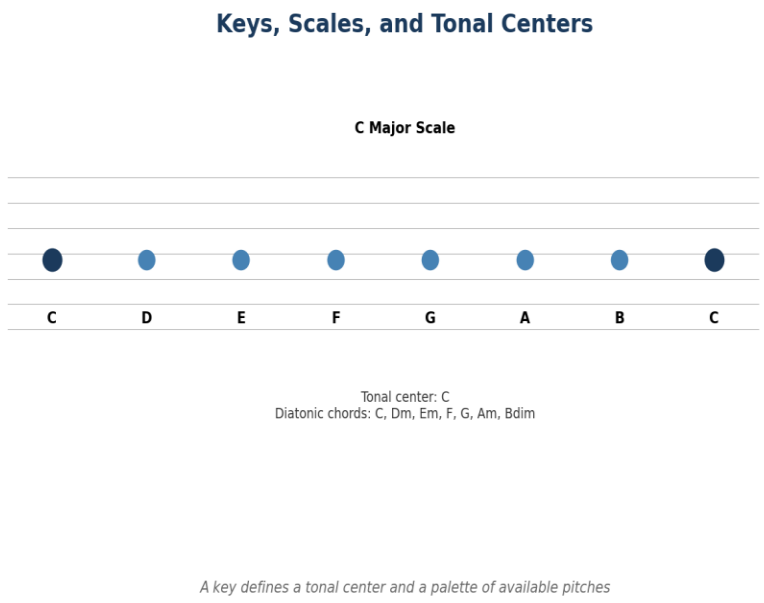


Figure 3.1: Keys and scales provide the raw material from which diatonic chords and progressions are built. Each scale degree generates a chord with a specific quality and tendency.

Key Takeaways

- A key is an organized collection of pitches centered on a tonic
- Scales provide the intervallic blueprint for keys; major and minor variants each have distinct character
- A tonal center is established through repetition, emphasis, and the pull of the leading tone
- Diatonic chords arise naturally from the notes of a scale

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- Understanding keys, scales, and diatonic chords is foundational to analyzing progressions

Listening Examples

"Ode to Joy" — Beethoven, Symphony No. 9, 4th Movement
Berlin Philharmonic or Vienna Philharmonic · Search: Beethoven Symphony 9 Ode to Joy official
youtube.com/results?search_query=Beethoven+Symphony+9+Ode+to+Joy+official

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Chapter 4: Harmonic Function: Tonic, Predominant, Dominant

The three fundamental harmonic functions are tonic (T), predominant (also called subdominant, PD), and dominant (D). Every diatonic chord in a key can be classified by its function. These are not labels for individual chords, but descriptions of the role chords play in a progression.

Tonic is stability. The I chord, and often vi, represent a state of rest or home. When a progression arrives on tonic, tension is released. Tonic sounds like a conclusion or a resting point. In functional terms, a tonic chord confirms and establishes the tonal center.

Predominant is departure and preparation. The IV chord, ii chord, and sometimes vi moving away from I are predominant. These chords create a sense that the tonic is being left behind. They set up harmonic motion toward dominant. In functional terms, a predominant chord prepares the listener for the next stage of progression.

Dominant is tension and pull. The V chord, and sometimes vii°, strongly pull back toward tonic. The V chord contains the leading tone (seventh degree), which is a half step away from tonic and has tremendous pull to resolve downward. In functional terms, a dominant chord creates expectation and demands resolution.

These three functions can be labeled in three complementary ways: Roman numerals (I, IV, V for scale-degree relationships), absolute chord symbols (C, F, G for fixed pitches), and functional labels (Tonic, Predominant, Dominant for roles in the progression). All three descriptions are correct and complementary. Context determines

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function—the same chord can play different roles depending on harmonic context.

Listening Examples

Prelude in C Major, BWV 846 — J.S. Bach
Classical piano channels · Search: Bach Prelude C Major Well Tempered Clavier
youtube.com/results?search_query=Bach+Prelude+C+Major+Well+Tempered+Clavier

Links go to official artist and label YouTube channels for longevity.

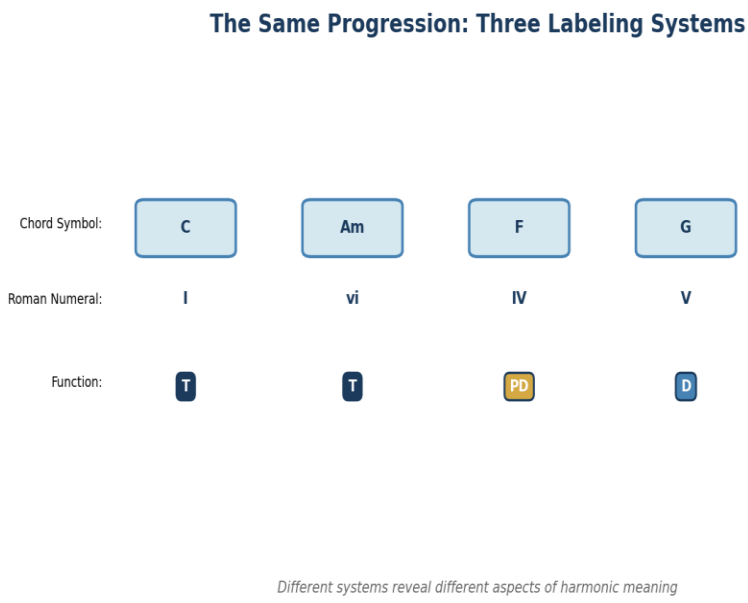


Figure 4.1: The same progression can be labeled in three complementary ways: by Roman numeral, by absolute chord symbol, and by broad harmonic function.

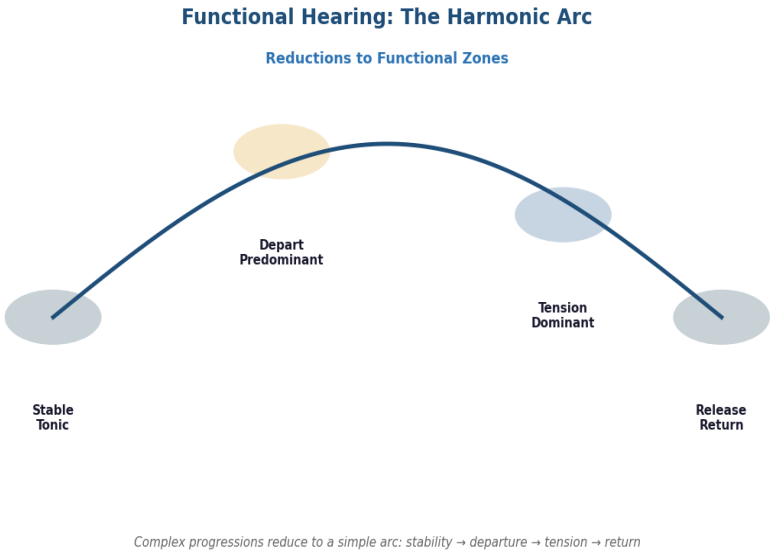


Figure 5.1: Functional hearing reduces a progression to a broad arc of stability, departure, tension, and return.

Key Takeaways

- The three fundamental functions are tonic (stability), predominant (departure and preparation), and dominant (tension and pull)
- Every diatonic chord can be classified by its function, not by its Roman numeral alone
- Progressions follow the broad arc: T-PD-D-T, though this can be expanded, varied, or repeated
- Three complementary languages describe progressions: Roman numerals, chord symbols, and functional labels
- Context determines function—the same chord can play different roles in different contexts

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Chapter 5: Cadence and Closure

A cadence is a harmonic punctuation—a progression that provides a sense of ending or closure. Cadences are the harmonic equivalent of punctuation marks in language: periods, commas, semicolons, question marks. They shape the listener's sense of phrase structure and form.

The authentic cadence (also called perfect authentic cadence or PAC) is V-I. This is the strongest possible closure. The V chord contains the leading tone that pulls upward toward the tonic. When V is followed immediately by I, the listener senses complete arrival. In a strong authentic cadence, both chords are in root position, and the tonic is in the soprano (highest voice).

The imperfect authentic cadence is V-I without the ideal voicing — for example, when V or I is not in root position, or the tonic does not appear in the soprano. A half cadence, by contrast, ends on V rather than resolving to I. This leaves the progression open. The listener senses that the music is not finished; V pulls forward, demanding continuation. A half cadence sounds like a comma or question mark — it pauses but does not conclude.

The plagal cadence is IV-I. Also called the Amen cadence because of its use in hymn endings, the plagal cadence provides softer, more conclusive arrival than the authentic cadence. It lacks the leading-tone pull of V-I, but still provides closure. It is common in folk music and hymns.

The deceptive cadence is V-vi. When we expect I to follow V, but instead hear vi (a minor chord on the sixth scale degree), the progression surprises us. The deceptive cadence withholds expected

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resolution and prolongs tension. It sounds like a semicolon—a pause that suggests continuation.

Cadence strength determines phrase structure. A strong authentic cadence marks major boundaries—the end of a phrase, section, or piece. A half cadence creates minor boundaries—listeners recognize it as a pause within larger structure. A deceptive cadence creates ambiguity, maintaining forward motion.

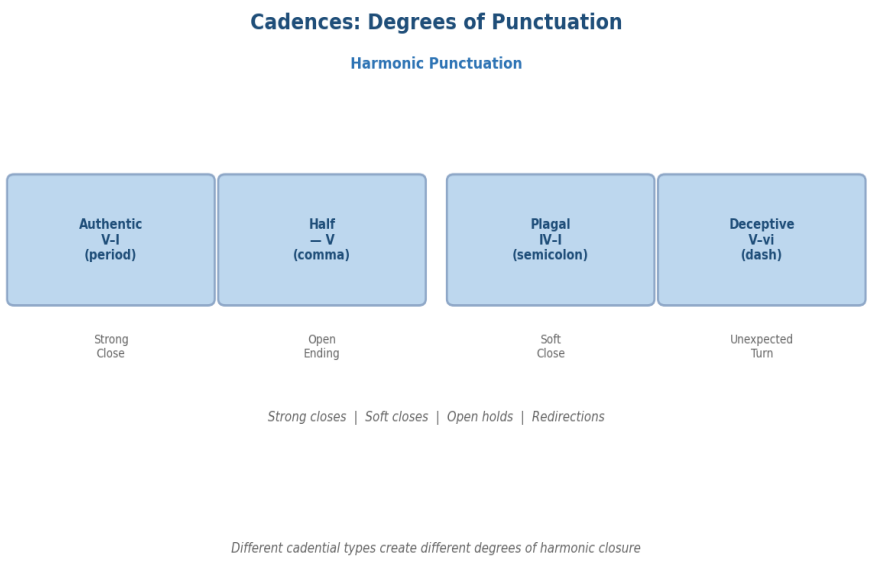


Figure 6.1: Cadences act like degrees of punctuation: some close firmly, some soften closure, some hold the sentence open, and some redirect the expected ending.

Key Takeaways

- Cadences are harmonic punctuation marks that provide closure or pause in phrases
- The authentic cadence (V-I) is the strongest closure; the half cadence (on V) leaves progression open
- The plagal cadence (IV-I) provides softer closure; the deceptive cadence (V-vi) withholds expected resolution

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- Cadence strength shapes phrase structure: strong cadences mark major boundaries, weak cadences mark pauses
- Composers use cadences strategically to control form and guide listener expectation

Listening Examples

Piano Sonata in A Major, K. 331 — W.A. Mozart
Classical piano channels · Search: Mozart Piano Sonata K 331 Theme official
youtube.com/results?search_query=Mozart+Piano+Sonata+K+331+Theme+official

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Chapter 6: Voice Leading and Smooth Connection

Voice leading is the art of connecting chords so that individual notes move smoothly from one chord to the next. Even the most functional and well-chosen progression can sound awkward if voices leap unnecessarily. Conversely, the same progression can sound effortless and natural if voices are led smoothly.

The principle of common tones is fundamental. When two consecutive chords share one or more notes, those shared notes should stay in the same voice. Consider C major (C-E-G) moving to F major (F-A-C). Both chords contain C. If the soprano C stays on C while the bass moves and the middle voice supplies A, the connection feels natural.

When chords share no common tones, stepwise motion is ideal. Moving individual voices by step (by interval of a second) rather than by leap creates smoothness. A soprano line that ascends by step—C-D-E-F-G—while underneath the harmony changes sounds far more fluid than a line with many leaps.

Contrary motion between voices also aids smoothness. If the bass descends while the soprano ascends, the motion feels less cramped than if both moved downward together. This principle is especially important in four-part writing.

Practical guidelines include: preserve common tones, move voices by step when possible, avoid parallel fifths and octaves, use contrary motion between bass and upper voices, and limit individual voice jumps. These principles reflect deeper intuitive truths about how the ear processes consecutive pitches. A melody that moves smoothly is

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easier to sing, remember, and follow. A progression where all voices move smoothly sounds coherent and intentional.

Listening Examples

"Jesu, Joy of Man's Desiring" — J.S. Bach
Classical choral or orchestral channels · Search: Bach Jesu Joy Mans Desiring official
youtube.com/results?search_query=Bach+Jesu+Joy+of+Mans+Desiring+official

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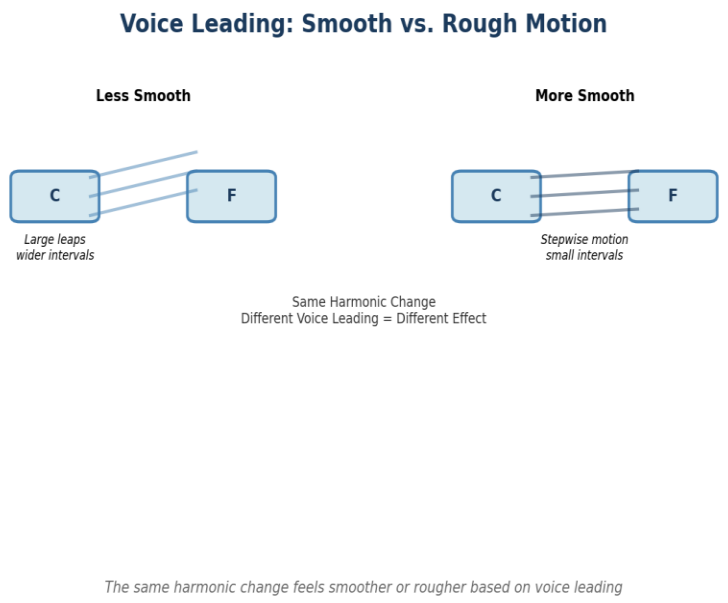


Figure 7.1: The same harmonic change can sound less smooth or more smooth depending on whether the voices leap unnecessarily or preserve common tones and small intervals.

Key Takeaways

- Voice leading is the art of connecting chords so individual notes move smoothly

- Common tones that appear in consecutive chords should remain in the same voice
- When chords share no common tones, stepwise motion between voices creates smoothness
- Contrary motion between bass and upper voices aids smoothness and balance
- Avoiding unnecessary leaps makes progressions sound natural and intentional

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Chapter 7: Harmonic Rhythm and Phrase Shape

Harmonic rhythm is the rate at which chords change. It is as fundamental to progression shape as melodic rhythm is to melody. A progression with slow harmonic rhythm creates space and allows tension to develop gradually. A progression with fast harmonic rhythm creates excitement and momentum.

Consider a simple example. A progression I-IV-V-I with one chord per measure unfolds slowly. The ear has time to absorb each chord before the next arrives. The same progression with two chords per measure feels faster and more urgent. The harmonic content is identical, but the timing changes the emotional effect.

Acceleration of harmonic rhythm is one of the most powerful compositional techniques. A progression that begins with slow harmonic rhythm, gradually speeds up as it approaches a cadence, and then slows down again after resolution shapes the listener's attention. The acceleration creates anticipation and energy. The slowdown provides release and rest.

Harmonic rhythm also shapes phrase boundaries. A phrase typically begins with a clear chord, maintains a consistent harmonic rhythm, and ends with a cadence at a distinctive rhythmic moment. The listener recognizes phrase boundaries partly through melody and partly through harmonic rhythm: if the harmonic rhythm suddenly slows or quickens, those mark important structural moments.

Different styles emphasize harmonic rhythm differently. Baroque music uses relatively fast harmonic rhythm. Romantic-era music uses slower harmonic rhythm. Pop and rock lock harmonic rhythm to drum patterns. Electronic and ambient music sometimes sustains

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single sonorities for long periods. Understanding harmonic rhythm means developing sensitivity to temporal pacing.

Listening Examples

"Moonlight Sonata" Op. 27 No. 2, Mvt. 1 — Beethoven
Classical piano channels · Search: Beethoven Moonlight Sonata official
youtube.com/results?search_query=Beethoven+Moonlight+Sonata+official

"Invention No. 1 in C Major" BWV 772 — J.S. Bach
Classical piano channels · Search: Bach Invention No 1 C Major official
youtube.com/results?search_query=Bach+Invention+No+1+C+Major+official

Links go to official artist and label YouTube channels for longevity.

Key Takeaways

- Harmonic rhythm is the rate at which chords change; it shapes temporal pacing of a progression
- Slow harmonic rhythm creates space and stability; fast harmonic rhythm creates momentum and excitement
- Acceleration toward a cadence is a fundamental compositional technique that heightens anticipation
- Phrase boundaries are often marked by changes in harmonic rhythm or distinctive cadential progressions
- Different styles use harmonic rhythm differently: baroque uses fast rates; romantic uses slow; pop locks to pulse

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PART II: DIATONIC PROGRESSION FAMILIES

Chapter 8: Diatonic Progressions in Major

The Diatonic Palette in Major

The major key gives you seven chords to work with. Built from the notes of the major scale, these diatonic triads are: I (major), ii (minor), iii (minor), IV (major), V (major), vi (minor), and vii° (diminished). Each has a fixed quality and a fixed tendency. The composer's task is to choose how to move among them.

These seven chords are not equal in function. Part I introduced three categories — tonic, predominant, and dominant — that describe what each chord does rather than what it is. In major keys, I and vi are tonic chords, ii and IV are predominant chords, and V and vii° are dominant chords. The iii chord is functionally ambiguous: it shares notes with both I and V, and can serve either role depending on context. Understanding diatonic progressions means understanding how these functional zones connect.

Root Motion and Direction

The way chords move from one to the next — root motion — is a primary driver of harmonic energy. Three types of root motion each produce a different effect.

Motion by descending fifth (or ascending fourth) is the strongest root motion in tonal music. The progression V-I is the clearest example: the root falls a fifth and the harmony resolves with maximum force. The progression ii-V and IV-I also use this motion. A chain of descending fifths — vi-ii-V-I, or even vi-ii-V-I preceded by iii-vi — creates an accumulation of energy called a circle-of-fifths progression, which feels inevitable and deeply satisfying.

Motion by step — ascending or descending by a second — creates smooth, linear harmonic motion. I-ii, IV-V, and V-vi are stepwise root motions. They feel less conclusive than fifth-motion but contribute to directional flow.

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Motion by third — ascending or descending by a third — creates a more coloristic or ambiguous effect. I-vi and I-iii share two common tones, making the transition very smooth but harmonically static. These third-relations are more common as internal substitutions than as the primary motion in a progression.

Common Major-Key Progressions

With seven chords and three types of root motion, the range of major-key progressions is vast. But certain patterns recur across centuries and styles because they satisfy the ear's demand for departure, tension, and return.

The progression I-IV-V-I is the archetypal major-key statement. It moves from stability (I) to departure (IV) to tension (V) and back to stability (I). Every function appears once. The motion is clear, the resolution is complete. This progression underlies countless folk songs, hymns, and popular works from Bach to country music.

The progression I-vi-IV-V extends the tonic zone by substituting vi for I after the opening. The vi chord softens the opening tonic, lending a more reflective quality before the predominant and dominant arrive. This variant is ubiquitous in popular music.

The progression I-IV-I-V-I, often found in baroque and classical styles, oscillates between tonic and its neighbors before arriving at the dominant and resolving. The double appearance of I gives the progression a sense of settled confidence interrupted by departure.

The progression ii-V-I compresses the T-PD-D-T arc into its most essential form: a single predominant chord moving to dominant, then resolving to tonic. This three-chord sequence is the engine of jazz harmony and appears constantly in classical transitional passages.

Voice Leading Within Major-Key Progressions

Clean voice leading transforms a functional progression from merely correct to genuinely musical. In major keys, certain voice-leading priorities apply consistently.

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The leading tone — the seventh scale degree, a half step below tonic — must resolve upward to the tonic when it appears in an outer voice. In the progression V-I, the leading tone in the soprano or alto typically rises by half step to the tonic note. Failing to resolve it creates a jarring effect.

Common tones between adjacent chords should be held in the same voice. I and IV share no common tones in root position, so all voices move — but I and vi share two common tones (the first and third scale degrees), making I-vi a naturally smooth connection.

Contrary motion between bass and upper voices prevents parallel movement and creates independence between parts. When the bass descends, at least one upper voice should ascend. This principle is especially important in progressions with root motion by step.

Style Applications

Diatonic major-key progressions appear in every musical tradition, but their character changes dramatically depending on style and context.

In classical music, diatonic progressions unfold slowly, with each chord carefully voiced in four parts. Bach's chorales are the standard reference: almost every chord change follows strict voice-leading principles, and the progressions move with purposeful inevitability.

In folk and country music, diatonic major progressions are the harmonic foundation. The three-chord song — I, IV, V — is the bedrock of this tradition. Guitarists learn it in their first week of playing. Its simplicity is not a limitation but a feature: it leaves room for melody, rhythm, and expression.

In pop and rock, diatonic progressions are looped rather than directed. The progression I-V-vi-IV repeats four, eight, or sixteen times, establishing a hypnotic groove. The absence of a strong cadence is intentional — the music lives in perpetual harmonic circulation.

In jazz, diatonic progressions rarely appear in their simple form. The ii-V-I replaces the simpler IV-V-I, and every chord is enriched with

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added sevenths and extensions. But the underlying functional logic — predominant, dominant, tonic — remains identical to what Bach used three centuries earlier.

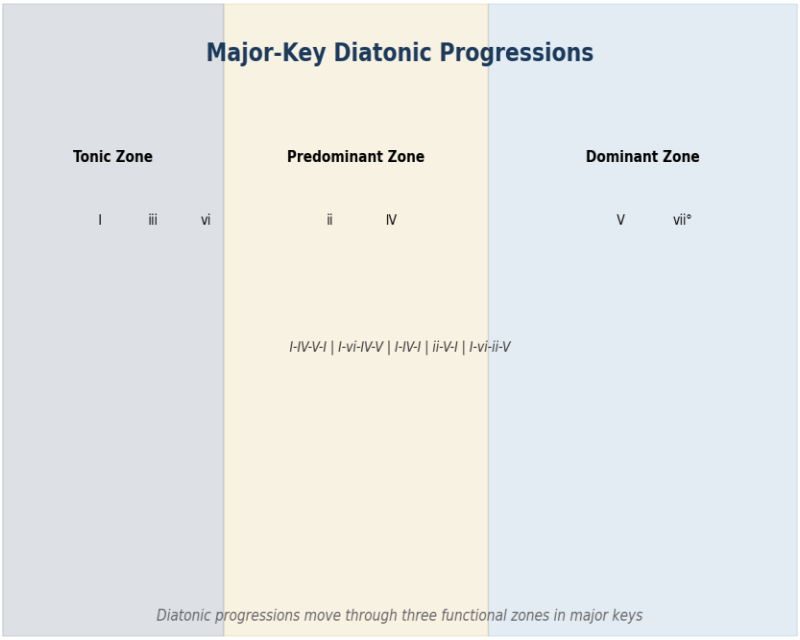


Figure 8.1: Diatonic progressions in major move through three functional zones — Tonic, Predominant, and Dominant — and can traverse them in countless combinations.

Key Takeaways

- Major keys provide seven diatonic chords organized into tonic, predominant, and dominant function zones
- Root motion by descending fifth is the strongest; stepwise motion creates direction; third motion creates smoothness
- The foundational progressions I-IV-V-I, I-vi-IV-V, and ii-V-I express the T-PD-D-T arc in different ways
- Leading-tone resolution, common-tone retention, and contrary motion are the primary voice-leading priorities in major
- The same diatonic chords serve radically different expressive purposes depending on style and harmonic rhythm

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🎧 Listening Examples

"Autumn Leaves" — Bill Evans Trio
Jazz label channels · Search: Bill Evans Autumn Leaves official
youtube.com/results?search_query=Bill+Evans+Autumn+Leaves+official

"So What" — Miles Davis (Kind of Blue)
Sony Music / Legacy Recordings · Search: Miles Davis So What Kind of Blue official
youtube.com/results?search_query=Miles+Davis+So+What+Kind+of+Blue+official

Links go to official artist and label YouTube channels for longevity.

Chapter 9: Diatonic Progressions in Minor

The Complexity of Minor Keys

Minor keys are more harmonically complex than major keys. Where the major scale is a single, fixed pattern, minor offers three variants: natural minor, harmonic minor, and melodic minor. Each variant produces different diatonic chords on the same scale degrees. In practice, composers draw on all three sources simultaneously, mixing chords from different forms of the minor scale within a single progression.

Understanding minor-key progressions means learning which chords come from which scale form, why composers prefer certain combinations, and how to hear the characteristic tension between the lowered seventh and the raised leading tone that gives minor harmony its distinctive emotional charge.

Three Minor Scale Forms and Their Chords

Natural minor — also called Aeolian — uses the unaltered minor scale. In A minor, the notes are A-B-C-D-E-F-G. The diatonic chords are: i (A minor), ii° (B diminished), III (C major), iv (D minor), v (E minor), VI (F major), and VII (G major). Notice that the dominant chord is a minor triad (v) rather than major (V). This weakens the cadential pull toward tonic.

Harmonic minor raises the seventh scale degree by a half step. In A minor, this means G becomes G#. The diatonic chords shift: i (A minor), ii° (B diminished), III+ (C augmented), iv (D minor), V (E major), VI (F major), and vii° (G# diminished). Crucially, the dominant chord is now major (V) and the leading-tone chord is fully diminished (vii°). These two chords create strong pull toward the tonic, restoring the same cadential force that the major key possesses naturally.

Melodic minor raises both the sixth and seventh scale degrees when ascending. In A minor ascending, the scale is A-B-C-D-E-F#-G#. This eliminates the augmented second between the sixth and seventh degrees of the harmonic minor scale. Composers use melodic minor chords most often in ascending melodic passages, reverting to natural minor when descending.

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The Core Minor-Key Progressions

The most fundamental minor-key progression is i-iv-V-i. The minor tonic is followed by the minor subdominant (iv), then the major dominant borrowed from harmonic minor (V), and back to the minor tonic. This progression balances the dark quality of the minor chords (i and iv) with the strong pull of the major dominant (V).

The progression i-VII-VI-VII-i uses chords from natural minor and creates a circular, modal effect. The subtonic chord (VII, the major chord a whole step below the tonic) lacks the leading-tone pull of V. This gives the progression a floating, unresolved quality that composers use for introspective or brooding effects. It is common in rock and film music when a darker color is needed without strong functional resolution.

The progression i-iv-VII-III-VI-ii°-V-i traces a descending circle of fifths through the minor key. This extended progression was a favorite of baroque composers: it creates a long, inevitable harmonic journey that accumulates tension before the final V-i resolution.

The progression i-VI-III-VII appears in Andalusian and flamenco music as well as in countless rock songs. It descends through the natural minor key by third motion, giving each chord change a smooth, coloristic quality.

Picardy Third and Mixture

One of the most striking features of minor-key writing is the Picardy third — the use of a major I chord (I rather than i) at the final cadence. Rather than resolving to a minor tonic, the progression ends on a major chord. This was standard practice in the Baroque era, where pieces in minor keys almost always ended with a major tonic. The effect is one of sudden brightness after sustained darkness — a release of tension that transforms rather than simply resolves.

The opposite motion — borrowing chords from minor into a major-key context — is modal interchange, which will be treated in Chapter 22. Even in minor-key passages, composers frequently use the major VI chord from natural minor alongside the diminished ii°

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from harmonic minor, freely mixing resources from both scale forms to control the degree of darkness and tension.

Style Applications

In classical music, minor-key progressions carry specific expressive associations: tragedy, intensity, introspection, struggle. The slow movements of Baroque instrumental works often use a descending minor bass line as the foundation for continuous variation — the passacaglia or chaconne form. The key of D minor was associated with solemnity (Bach's Chaconne), while C minor carried associations of heroism and struggle (Beethoven's Fifth Symphony).

In jazz, minor-key progressions are treated with the same harmonic richness as major-key ones. The ii°-V-i in minor (half-diminished ii, altered dominant V, minor i) is the jazz equivalent of the major ii-V-I and appears in ballads, bossa nova, and Latin jazz. The chord qualities differ — the ii chord is half-diminished (m7b5), and the V chord often carries altered extensions — but the functional logic is the same.

In rock and metal, the power of natural minor — particularly the i-VII-VI-V progression — underpins much of the genre's harmonic language. The lack of a true leading tone (V instead of v) gives rock minor progressions their heavy, modal quality, distinct from the directed tension of classical minor.

In folk and world music, the Dorian mode — a minor scale with a raised sixth — produces a distinctive i-IV-i sound. The major IV chord in an otherwise minor context creates warmth without resolving to tonic. This sound is characteristic of Celtic folk music, Appalachian balladry, and much traditional European music.

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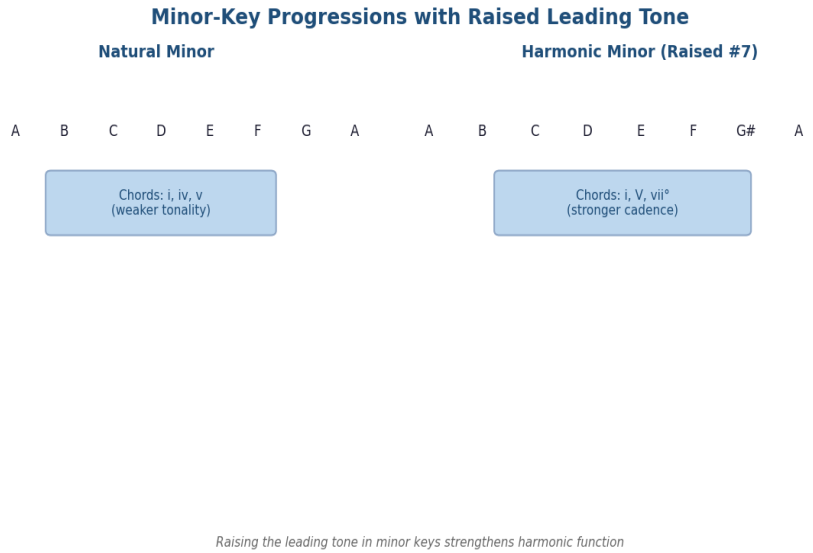


Figure 9.1: Minor keys offer three scale variants — natural, harmonic, and melodic — producing different chord qualities on the same scale degrees and creating the characteristic mixture of darkness and tension that defines the minor mode.

Key Takeaways

- Minor keys draw on three scale forms — natural, harmonic, and melodic — and freely mix their chords
- Harmonic minor's raised seventh degree creates the major V chord, restoring strong cadential pull toward tonic
- The core minor progressions i-iv-V-i and i-VII-VI-VII-i represent directed and modal approaches respectively
- The Picardy third — ending a minor piece on a major I chord — was standard in the Baroque era and remains expressive today
- Minor-key progressions carry strong stylistic associations: modal rock, jazz altered dominants, Baroque passacaglia, and folk Dorian color each draw on different aspects of the minor harmonic system

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Chapter 10: The Circle of Fifths and Root Motion

Why the Fifth Is the Strongest Root Motion

Root motion by descending fifth — or equivalently, ascending fourth — is the engine of tonal harmony. When a chord's root moves down a perfect fifth to the next chord's root, the ear perceives maximum harmonic direction. The progression V-I is the clearest example: G moves to C, a descending fifth, and the harmonic tension resolves completely.

This effect is not arbitrary. The overtone series — the natural acoustic resonance of a vibrating string or column of air — places the perfect fifth as the first new pitch class above the fundamental. When a G major chord moves to C, the G has been functioning as the dominant of C's acoustic spectrum. The resolution feels inevitable because it follows an acoustic logic that predates tonal music theory by millennia.

The same logic applies to any descending-fifth root motion: ii-V, IV-I (a descending fifth from F to C), vi-ii, iii-vi. Each of these progressions has the quality of settling into a new point of rest, however temporary.

The Circle of Fifths as a Harmonic Map

Arrange all twelve pitch classes in a circle, each adjacent pair a perfect fifth apart: C, G, D, A, E, B, F#/Gb, Db, Ab, Eb, Bb, F, and back to C. This is the circle of fifths. Moving clockwise adds one sharp or removes one flat; moving counterclockwise adds one flat or removes one sharp.

The circle of fifths serves two purposes in harmonic analysis. First, it maps the distance between keys: C major and G major are adjacent on the circle and share six of seven diatonic pitches, making modulation between them smooth and effortless. C major and F# major are diametrically opposite — maximally distant — sharing almost no common diatonic material.

Second, it maps the strength of root motion within a progression. Motion clockwise (ascending fifth) is weak and feels like a departure.

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Motion counterclockwise (descending fifth) is strong and feels like resolution. A chain of counterclockwise motion — a circle-of-fifths progression — accumulates harmonic momentum until it resolves to tonic.

Circle-of-Fifths Progressions

A circle-of-fifths progression moves through a series of descending-fifth root motions, typically within a single key. The most complete diatonic circle of fifths in major is: I-IV-vii°-iii-vi-ii-V-I. Every root moves down a fifth to the next. The entire progression traces the diatonic chords in reverse circle-of-fifths order, arriving back at I after visiting every other diatonic chord.

In practice, composers rarely use the full sequence. More common are shorter segments: vi-ii-V-I (four chords), or ii-V-I (three chords), or simply V-I (two chords). The longer the chain, the greater the sense of harmonic inevitability. Bach used extended circle-of-fifths progressions as the structural backbone of many of his sequences, and jazz musicians use the same logic in turnarounds and through-composed progressions.

The circle of fifths also operates in non-functional contexts. When a progression moves through a series of major or minor chords each a fifth apart — without strict diatonic adherence — the ear still perceives the strong root motion even if the chords stray outside the home key. This chromatic circle-of-fifths movement appears frequently in jazz, where a series of dominant seventh chords each a fifth apart (G7-C7-F7-Bb7) is a common progression through the cycle.

Interrupted and Deceptive Circle Motion

The circle of fifths creates expectation through its momentum. Composers exploit this by interrupting the expected resolution at key moments. The deceptive cadence — V moving to vi instead of I — is the most common interruption: the ear expects the final step of the circle (V to I) but instead receives vi, a chord that sounds like a continuation rather than an arrival.

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Extended interruptions are also common. A composer may begin a circle-of-fifths progression but divert it to a secondary key area before completing the journey home. The listener, having internalized the circle's momentum, experiences the diversion as a surprise and the eventual return as a resolution of accumulated expectation.

Style Applications

In baroque music, the circle of fifths is an architectural principle. Sequences based on descending fifths underpin countless instrumental movements — the circle provides both harmonic direction and a template for melodic sequences above it.

In jazz, the circle of fifths is a navigational tool. Rhythm changes — the progression derived from Gershwin's I Got Rhythm — moves through a rapid circle-of-fifths sequence in the B section: III7-VI7-II7-V7. Jazz musicians call this kind of movement "going around the cycle." Chord substitutions, reharmonizations, and improvised lines all orient themselves relative to the circle.

In pop music, circle-of-fifths movement creates a sense of inevitability and satisfaction. The bridge sections of many pop songs use a circle-of-fifths sequence to add harmonic interest before returning to the verse's simpler loop.

In classical music theory, the circle of fifths determines key relationships: the closely related keys of any tonic (its dominant, subdominant, relative major or minor, and parallel major or minor) are its nearest neighbors on the circle. Understanding these relationships is fundamental to analyzing modulation, which will be addressed in Part IV.

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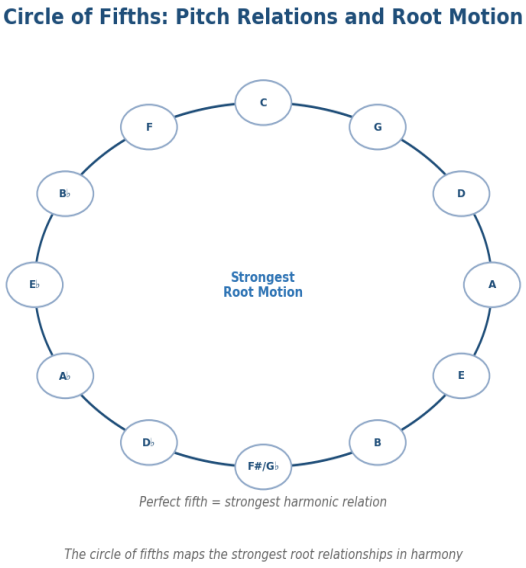


Figure 10.1: The circle of fifths maps all twelve pitch classes at equal intervals of a perfect fifth, showing both the strongest root motion in tonal music and the key relationships that govern modulation and harmonic distance.

Key Takeaways

- Root motion by descending fifth is the strongest harmonic motion in tonal music, rooted in acoustic properties of the overtone series
- The circle of fifths maps all twelve pitch classes at equal fifth intervals, showing both key relationships and root motion strength
- Circle-of-fifths progressions — chains of descending-fifth root motion — accumulate harmonic momentum and resolve with great force
- Composers exploit the circle's momentum by interrupting expected resolutions at cadential points (deceptive cadence, diversion to secondary keys)
- The circle of fifths operates in baroque sequences, jazz cycle progressions, pop bridges, and classical modulation planning

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Chapter 11: Stepwise Bass and Linear Progression

When the Bass Line Governs

Most progressions are built top-down: the composer selects chords for their harmonic function, then arranges the voices. Linear progressions reverse this logic. The bass line — a stepwise melodic descent or ascent — is chosen first, and the chords are selected to harmonize it. The result is a progression whose identity comes from the bass rather than the root motion.

The distinction matters because it changes how you hear and analyze the music. In a functional progression, vi-ii-V-I, the ear tracks the root motion and functional trajectory. In a linear progression, the bass moves C-B-A-G and the chords above it — I-V6-vi-III — serve primarily to give the bass notes harmonic support. The bass is the melody; the harmony is accompaniment.

The Descending Bass Line

The descending bass line is one of the oldest and most powerful devices in Western music. Moving stepwise from the tonic down to the dominant — or continuing further to a lower octave — the descending bass creates a sense of inevitable motion and gathering weight.

In C major, a typical descending linear progression might run: C-B-A-G in the bass, harmonized as I-V6-vi-III or I-V6-vi-IV. The bass descent gives the progression its identity. The chords change with each step, but what the ear follows is the smooth, stepwise voice in the lowest register.

The same bass line can be harmonized in multiple ways. C-B-A-G might support I-vii6-vi-V, or I-V6-vi-III+, or I-I7-I6-V. Each harmonization produces a different harmonic flavor above the same bass melody. This flexibility is one of the great creative resources of linear progressions: the bass constrains without fully determining the harmony above.

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The Ascending Bass Line

Ascending bass lines are less common than descending ones but equally powerful. Moving stepwise from tonic upward — C-D-E-F in the bass — produces a sense of rising tension and forward momentum. Harmonized as I-II6-III-IV, or I-v6/ii-iii-IV, the ascending bass creates a striving quality, as if the music is climbing toward a goal.

The ascending bass line often prepares a climactic moment. A long stepwise ascent in the bass, covering a fifth or an octave, heightens anticipation through its sheer directional energy. The resolution at the top of the ascent — typically a strong dominant or a cadential arrival — feels earned by the journey upward.

Invertible Counterpoint and Bass Motion

A fundamental resource in linear progressions is chord inversion. When a chord appears in first inversion (the third in the bass) or second inversion (the fifth in the bass), the bass note is no longer the root. This allows the bass to move stepwise even while the harmony above it changes by root motion.

Consider the harmonization of a descending bass line C-B-A-G: if B is harmonized as V in first inversion (G major with B in the bass, written V6), the root of that chord is G — but the bass note is B, one step below C. The chord is a dominant chord by function, but its bass placement makes it part of a stepwise bass melody. First-inversion chords are the primary tool for creating smooth bass lines in functional progressions.

Second-inversion chords — the 6/4 chord — require more care. The bass note is the fifth of the chord, which creates an unstable sonority that typically demands resolution. The cadential 6/4 (I 6/4 resolving to V) is the most common second-inversion usage, appearing just before a cadence to intensify the dominant arrival.

Style Applications

In Baroque music, the descending bass line is the foundation of the passacaglia, chaconne, and ground bass forms. A recurring

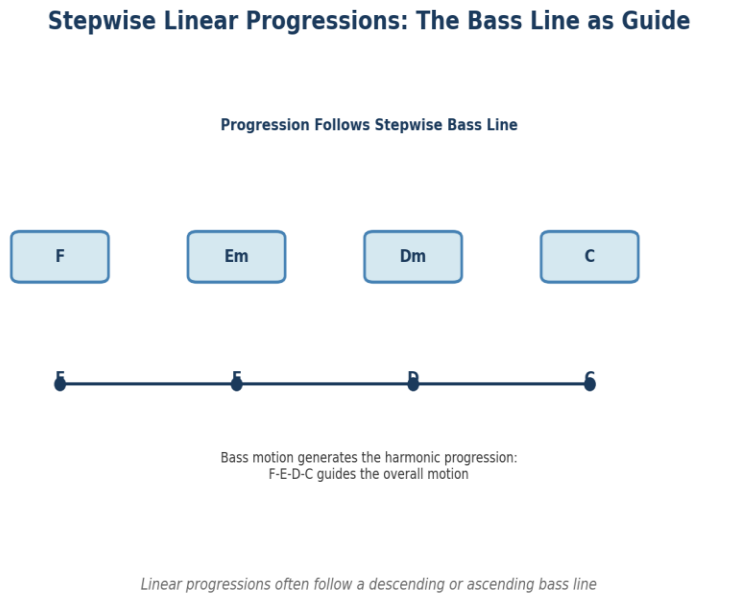
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descending tetrachord in the bass — typically four notes descending by step from tonic to dominant — repeats continuously while the harmonies and melodies above it vary. Purcell's "Dido's Lament" and Bach's Passacaglia in C minor are archetypal examples.

In classical and romantic music, linear progressions serve as transitional passages between more harmonically active sections. A descending bass line might carry the music from a climax back to a resting point, or an ascending bass line might propel a development section toward its climax.

In jazz, walking bass lines create continuous stepwise motion in the bass voice while the chords change above. A jazz bass player typically walks quarter notes — one note per beat — creating a smooth melodic underpinning for the harmonic progression. The bass line is improvised to fit the chords, but stepwise motion is always preferred over leaps.

In pop and rock, the descending bass line beneath a static or slowly changing harmony creates a characteristic sound used in countless songs. The bass descends while the upper chord remains the same, producing a series of slash chords (C/B, C/A, C/G) that enrich a simple tonic harmony with linear motion.



Linear progressions often follow a descending or ascending bass line

Figure 11.1: In stepwise linear progressions, the bass line becomes the governing thread — each chord is chosen not primarily for its harmonic function but for the note it places in the bass, creating a melodic foundation beneath the harmony.

Key Takeaways

- Linear progressions are built bass-first: the stepwise bass melody governs, and chords are chosen to harmonize it
- Descending bass lines create inevitability and weight; ascending bass lines create tension and forward drive
- Chord inversions — particularly first-inversion chords — are the primary tool for creating smooth stepwise bass motion within functional harmony
- The same descending bass line can be harmonized in multiple ways, each producing a different harmonic character above a shared bass melody
- Linear bass thinking appears in Baroque ground bass forms, jazz walking bass, classical transition passages, and pop slash-chord textures

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Chapter 12: Cadential Schemas and Standard Endings

What a Schema Is

A cadential schema is a short, conventional harmonic pattern used to end a phrase or section. The word schema comes from the Greek for form or plan — a schema is a recognized template, a pattern the listener has internalized through exposure. When a composer deploys a cadential schema, the experienced listener recognizes it and anticipates its completion.

Schemas are not arbitrary conventions. Each one has evolved because it serves a harmonic purpose effectively. The authentic cadence resolves tension because V contains the leading tone that pulls to I. The plagal cadence provides softer closure because IV lacks the leading tone. The half cadence withholds resolution because it ends on the dominant. Understanding schemas means understanding why each works, not merely memorizing its formula.

The Authentic Cadence Family

The authentic cadence — V moving to I — is the primary cadential formula in tonal music. Within this family, strength varies by voicing.

The perfect authentic cadence (PAC) is the strongest possible ending. Both V and I appear in root position, and the tonic note appears in the soprano at the moment of resolution. The combination of root-position chords and tonic in the melody creates maximum closure. A PAC says: we are done.

The imperfect authentic cadence (IAC) is V-I without ideal voicing. One or both chords may be inverted, or the soprano may resolve to the third or fifth of the tonic chord rather than the root. The IAC provides closure but with less finality than the PAC. It sounds like the end of a sub-phrase within a larger period rather than the end of the period itself.

The leading-tone cadence — vii°-I — substitutes the diminished seventh chord for V. The leading tone and the chord's two other notes all resolve by step into I. This cadence appears more often in strict contrapuntal writing than in chordal homophony, but it

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produces a clean resolution. Since vii° shares three notes with V7 (the leading tone, the supertonic, and the subdominant), it functions as an incomplete dominant.

The Half Cadence

The half cadence ends on V rather than resolving to I. It functions as a comma in harmonic syntax — a pause that implies continuation. A phrase ending on a half cadence is incomplete; the listener expects another phrase to follow.

Any chord may precede the V in a half cadence, though the most common approaches are I-V, ii-V, and IV-V. The Phrygian half cadence — approaching V from the chord built on the flattened second scale degree, or from iv in first inversion — is a particularly expressive variant used often in minor keys, where the half-step descent in the bass to the dominant creates a sighing, unresolved quality.

The half cadence is a structural tool. In a two-phrase period, the first phrase typically ends with a half cadence, creating an open question that the second phrase — ending with an authentic cadence — answers. This question-and-answer structure is one of the most fundamental formal units in tonal music.

The Plagal and Deceptive Cadences

The plagal cadence — IV moving to I — provides closure without the strong leading-tone pull of V-I. Its softness made it the standard ending formula for hymns and liturgical music, where "Amen" is traditionally sung to a plagal cadence. In secular music, the plagal cadence often follows an authentic cadence as a kind of confirmatory echo — the main cadence has already closed, and the IV-I adds a gentle afterthought.

The deceptive cadence — V moving to vi instead of I — withholds expected resolution and redirects the harmonic flow. When the ear anticipates I after V, but instead receives vi, the effect is one of pleasant surprise or expressive delay. Composers use deceptive cadences to extend a phrase beyond its expected ending, to

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create emotional depth, or to begin a new harmonic journey from the vi chord. The deceptive cadence does not close — it opens.

Extended Cadential Patterns

Beyond these four basic types, composers employ extended cadential patterns — schemas involving more than two chords. The cadential 6/4 is the most important: the I chord appears in second inversion (I 6/4) before the V, creating a momentary suspension of the dominant note in the bass. The sequence I 6/4-V-I intensifies the dominant arrival by approaching it with an unstable chord that demands resolution to V before V resolves to I.

The retrogressive cadence — I moving to IV — is not a true cadential ending but a plagal-style opening of a new phrase. It is the harmonic equivalent of taking a breath. The IV-I-IV-V-I pattern, using retrogression before moving to the cadence, gives a phrase an additional sense of spaciousness.

The imperfect plagal cadence — ii-I — occasionally appears as a variant of the plagal. The supertonic chord shares two notes with the subdominant and can substitute for it in soft cadential contexts.

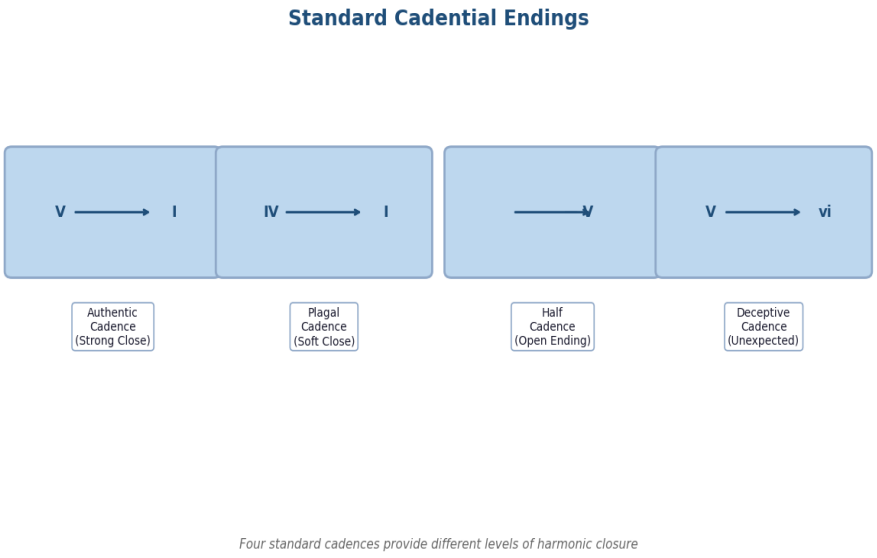


Figure 12.1: Standard cadential schemas differ by the chords involved, the degree of closure they provide, and whether they resolve to tonic — together they form a vocabulary of harmonic punctuation used across all styles and eras.

Key Takeaways

- Cadential schemas are conventional short patterns used to end phrases; each works because of specific harmonic properties, not arbitrary convention
- The authentic cadence family (PAC, IAC, leading-tone) provides resolution to I at different degrees of strength
- The half cadence ends on V and implies continuation; it is the question that demands an answering authentic cadence
- The plagal cadence provides soft closure; the deceptive cadence redirects expected resolution to vi and extends the phrase
- Extended patterns like the cadential 6/4 (I 6/4 – V – I) intensify the dominant arrival and are among the most common cadential formulas in classical music

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Chapter 13: Harmonic Rhythm and the Timing of Change

Rhythm Within the Harmony

Harmonic rhythm is the rhythm of chord change. It is independent of melodic rhythm, independent of the time signature, and independent of the surface rhythmic activity in any individual part. A melody may move in rapid sixteenth notes above a harmony that changes only once per measure. Or a simple melody in half notes may float above rapidly changing chords. These combinations produce radically different effects even when the underlying harmonic content is identical.

Learning to hear and control harmonic rhythm is as important as learning to choose which chords to use. A perfectly voiced progression that changes too frequently will feel restless and cluttered. The same progression that changes too rarely will feel static and inert. Harmonic rhythm is the rate at which the music breathes.

Fast and Slow Harmonic Rhythm

Fast harmonic rhythm — one chord per beat or even per half beat — creates urgency, momentum, and excitement. It conveys activity and forward drive. In Baroque music, keyboard pieces often have two or four chord changes per measure, giving the music an energetic, purposeful quality. In jazz, bebop tunes may change chords every two beats, creating a rapid harmonic landscape through which the improviser must navigate.

Slow harmonic rhythm — one chord per measure, or even one chord per several measures — creates spaciousness, calm, or grandeur. It allows the listener to settle into each harmony and experience it fully before moving on. In Romantic music, a single chord may sustain for many measures, its internal voice leading providing subtle motion while the harmonic center remains fixed. In ambient and drone music, harmonic rhythm approaches zero: the chord barely changes at all, and the music's interest comes entirely from timbre and texture.

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Harmonic Rhythm as a Structural Tool

Changes in harmonic rhythm are one of the most powerful structural signals in music. When the harmonic rhythm accelerates — chords begin changing more frequently — the ear perceives a building of energy, an approach toward a climax or cadence. When the harmonic rhythm slows after a period of activity — a single sustained chord following rapid changes — the ear registers arrival and resolution.

Composers use this deliberately. In a typical classical sonata form, the exposition may have moderate harmonic rhythm, the development section may accelerate (suggesting instability and harmonic exploration), and the recapitulation may settle back to moderate or slower harmonic rhythm (suggesting the restoration of stability). The harmonic rhythm itself narrates the form.

At the phrase level, harmonic rhythm typically accelerates toward a cadence. A phrase that begins with one chord per measure may move to two chords per measure in its final bar, signaling that the cadence is imminent. This acceleration is one of the most reliable harmonic cues the listener uses to predict phrase endings.

Metric Placement of Chord Changes

Not all harmonic changes carry the same weight. A chord that arrives on the downbeat of a measure is more emphatic than one that arrives on a weak beat. A chord that is sustained across a barline has a quality of forward momentum that a chord limited to one beat does not. These nuances of metric placement give harmonic rhythm much of its expressive precision.

The hemiola — a rhythmic effect where two measures of three beats are felt as three measures of two beats — creates a special kind of harmonic ambiguity. In a hemiola passage, the normal metric placement of chord changes is suspended, creating a floating sensation that Baroque and Renaissance composers used to prepare important cadences. The listener loses momentary track of the meter, and the cadential resolution restores it.

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Syncopated chord arrivals — chords that begin on a weak beat before the strong beat — create a sense of anticipation or eagerness. Jazz pianists routinely anticipate chord changes by an eighth note, landing on the new chord just before the beat rather than on it. This creates a rhythmic energy that pure on-the-beat chord changes lack.

Style Applications

In classical music, harmonic rhythm is carefully managed to serve formal structure. Haydn, Mozart, and Beethoven all varied harmonic rhythm within movements to signal structural boundaries, control tension, and shape the emotional arc.

In jazz, harmonic rhythm is both composed and improvised. The written chord changes specify where each chord falls in the measure, but the pianist, guitarist, and bass player collectively decide exactly when to play each change and with what rhythmic emphasis. The rhythm section's harmonic rhythm is a real-time negotiation.

In pop and electronic music, harmonic rhythm is often locked to the kick drum and snare pattern. One chord per measure, or one chord per two measures, creates a predictable, groove-oriented rhythm that supports repeated listening. Electronic dance music may hold a single chord for eight or sixteen bars, with the groove and texture providing all the forward motion.

In blues, harmonic rhythm follows the standard form: four measures of I, two measures of IV, two measures of I, one measure of V, one measure of IV, two measures of I (with optional turnaround). This fixed pattern is the canvas, and the performer's expressive power lives in how they play within it, not in changing the harmonic rhythm itself.

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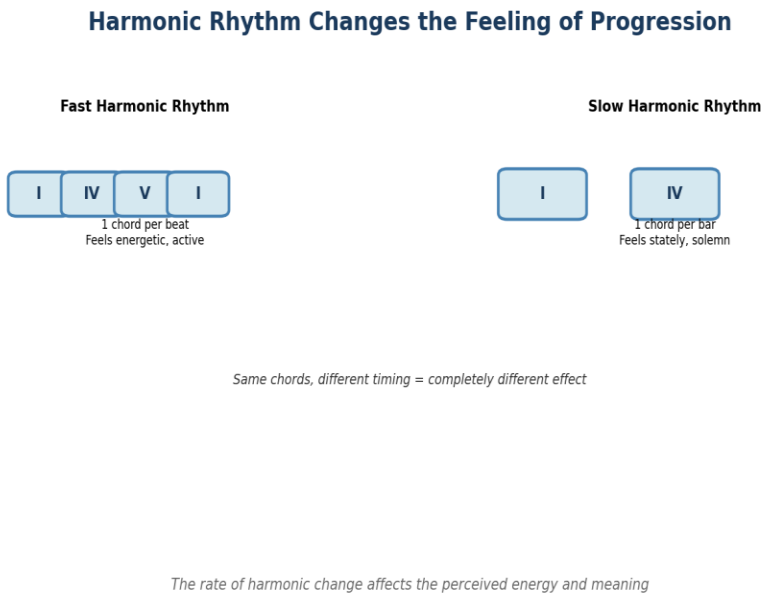


Figure 13.1: Harmonic rhythm — the rate at which chords change — shapes the emotional character of a progression independently of the chords themselves; the same progression sounds urgent, stately, or suspended depending on when and how often it changes.

Key Takeaways

- Harmonic rhythm — the rate of chord change — shapes emotional character independently of which chords are used
- Fast harmonic rhythm creates urgency and momentum; slow harmonic rhythm creates spaciousness and calm
- Changes in harmonic rhythm signal structural boundaries: acceleration toward a cadence, deceleration after arrival
- Metric placement matters: downbeat arrivals are emphatic, syncopated arrivals create anticipation, sustained chords across barlines create momentum
- Harmonic rhythm is managed compositionally in classical music, negotiated collectively in jazz, and often locked to the drum grid in pop and electronic styles

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Chapter 14: Tonic-Predominant-Dominant-Tonic Patterns

The Universal Arc

The T-PD-D-T pattern is not a single progression — it is the underlying logic of all functional tonal progressions. Every piece of tonal music, from the simplest folk song to the most complex symphony, can be understood as a series of T-PD-D-T arcs operating at multiple structural levels simultaneously.

At the surface level, a single phrase may traverse the arc once: beginning on tonic, moving to a predominant chord, arriving at dominant, and resolving back to tonic. At a deeper level, an entire section may perform the same arc: the opening period establishes tonic (T), the middle section explores subdominant-region harmonies (PD), the climax sustains dominant (D), and the recapitulation confirms tonic (T). At the deepest level, an entire composition performs the arc once across all its movements.

Understanding this fractal quality — the same pattern operating at every structural level — is the key to understanding how tonal music coheres across its full span.

Expanding and Contracting the Arc

The simplest possible T-PD-D-T traversal is three chords: I-IV-V-I (or I-ii-V-I). The entire arc completes in one phrase. Each function appears once and for a short duration. The result is clear but brief.

The arc can be expanded at any point. Tonic can be prolonged by moving between I and vi, or by moving from I through iii to vi and back. Prolonging tonic does not weaken the arc — it deepens the sense of stability before departure. Predominant can be prolonged by alternating between IV and ii, or by using the iv from the parallel minor alongside the diatonic ii. Dominant can be prolonged by sustaining V for many measures, or by inserting vii° between multiple statements of V, or by approaching V through the cadential 6/4.

The arc can also be contracted. In jazz, the ii-V-I compresses the entire arc into three chords, moving from predominant directly to dominant to tonic. Pop music further compresses it: the I-V-vi-IV loop

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begins on tonic, leaps directly to dominant, touches the relative minor as a pseudo-tonic, then lands on predominant before looping back. The functional logic is intact even when individual elements are compressed or reordered.

The Dominant Prolongation

Of all the functional zones, dominant receives the most intensive treatment in tonal music. The dominant is the point of maximum tension — the moment when the ear most urgently wants resolution. Composers exploit this by prolonging dominant, stretching the moment of tension before releasing it.

Common techniques for dominant prolongation include: sustaining V for an extended number of measures (a dominant pedal), alternating between V and vii°, using the cadential 6/4 immediately before V to intensify its arrival, and inserting chromatic passing chords that approach V from the side. In sonata form, the retransition — the passage that prepares the return of the recapitulation — is typically a long, sustained dominant prolongation. The listener waits for the tonic to return while the dominant insists, creating enormous tension that the recapitulation releases.

Functional Substitution

Within the T-PD-D-T framework, each function can be represented by multiple chords. Tonic function: I and vi (and sometimes iii in certain contexts). Predominant function: IV, ii, and the chromatic predominants to be discussed in Part III. Dominant function: V and vii°.

Substituting one chord for another within the same functional zone changes the color of the progression without changing its functional logic. Replacing IV with ii in a I-IV-V-I gives I-ii-V-I — a more sophisticated sound, more common in jazz and later classical music, without any change in the underlying T-PD-D-T arc. Replacing I with vi after an authentic cadence — the deceptive cadence — keeps the music in the tonic zone (vi shares two notes with I) while avoiding a full stop.

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These substitutions are the primary source of harmonic variety in tonal music. The functional arc remains; only the chords change.

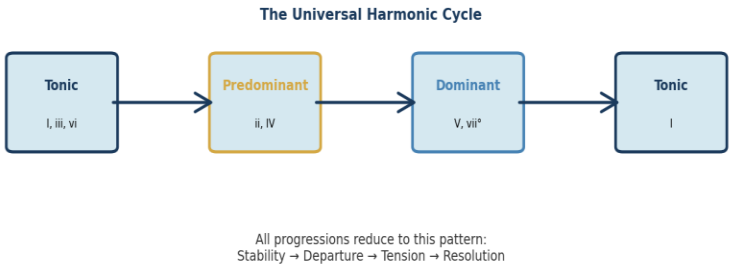
Nested Arcs and Large Form

The T-PD-D-T arc operates simultaneously at multiple structural levels. A single phrase traverses it once. A period traverses it twice — the first phrase ending on a half cadence (incomplete arc, stopping at D), the second phrase completing the arc to its tonic. A large binary form traverses it once across both sections. A sonata form traverses it once across the entire movement.

At each level, the same principle operates: stability is established, departure occurs, tension accumulates at the dominant, and resolution returns to stability. The nested quality of these arcs is what gives tonal music its sense of coherent structure at every scale, from the individual chord change to the shape of an entire composition.

Hearing music in terms of T-PD-D-T arcs at multiple levels simultaneously is the goal of advanced harmonic analysis. It transforms a progression from a sequence of chord labels into a narrative of functional motion — a story of departure and return that operates at every time scale the music spans.

T-PD-D-T: The Fundamental Functional Arc



T-PD-D-T is the fundamental structure underlying all functional harmony

Figure 14.1: The T-PD-D-T arc is the universal grammar of tonal harmony — every functional progression, regardless of its length or complexity, can be understood as a traversal of these four zones, which may be expanded, contracted, repeated, or ornamented but never fundamentally escaped.

Key Takeaways

- The T-PD-D-T arc is the universal grammar of functional tonal harmony, operating at every structural level from the phrase to the entire composition
- The arc can be expanded (by prolonging any functional zone) or contracted (as in the jazz ii-V-I or the pop I-V-vi-IV loop)
- Dominant prolongation — sustaining or elaborating the V function — is the primary technique for building tension before resolution
- Functional substitution (vi for I, ii for IV, vii° for V) changes harmonic color without altering the underlying T-PD-D-T logic
- Hearing nested T-PD-D-T arcs operating simultaneously at phrase, section, and movement levels is the goal of structural harmonic analysis

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Chapter 15: The ii-V-I Family

The Essential Grammar

The ii-V-I progression is the most important three-chord sequence in tonal music. It appears in classical music as a cadential formula, but it is in jazz that it reaches its fullest development — extended, altered, substituted, and chain-linked into the harmonic architecture of nearly every standard, ballad, and bebop head.

In major keys, the ii-V-I consists of the supertonic minor seventh chord (ii7), the dominant seventh chord (V7), and the major seventh chord (Imaj7). In C major: Dm7-G7-Cmaj7. The ii7 is a predominant chord — it departs from tonic and prepares the dominant. The V7 is a dominant chord — it creates tension and demands resolution. The Imaj7 is a tonic chord — it releases the tension and confirms the key center.

This three-chord sequence encapsulates the entire T-PD-D-T arc in its most compressed form. Every note moves by step or resolves by tritone. The seventh of the ii chord (C over D minor) resolves to the third of the V chord (B over G). The seventh of the V chord (F) resolves down by step to the third of the I chord (E). The tritone between the third and seventh of the V7 chord — the two most unstable notes in the harmony — both resolve, one upward and one downward, into the stable tones of the tonic chord.

The ii-V-I in Minor

The minor ii-V-i follows the same functional logic but with different chord qualities. In A minor: Bm7b5-E7-Am7 (or Am with any appropriate tonic quality). The ii chord in minor is half-diminished — also written as m7b5 — because the interval from the root to the fifth is a diminished fifth rather than a perfect fifth. The V chord is typically a dominant seventh with an altered fifth or ninth, drawing on the harmonic minor scale that gives the key its strong leading tone.

The half-diminished ii chord (also called the minor seventh flat five) has a darker, more ambiguous quality than the major-key ii7. It functions identically as a predominant, but its sound signals the minor context immediately. Jazz musicians call the entire minor ii-V-i by its

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formula: "two-five-one in minor," and it appears in every standard that ventures into the minor mode.

ii-V-I Chains and Tonicization

The ii-V-I can be linked into chains. Each ii-V-I in the chain tonicizes a different key area before moving to the next. A typical chain might be: Am7-D7 | Dm7-G7 | Cmaj7 — the Am7-D7 is a ii-V of G major (or G minor), the Dm7-G7 is a ii-V of C major, and the Cmaj7 is the final resolution. The listener experiences a series of temporary arrivals, each seeming like a resolution until the next ii-V draws the ear onward.

This technique is the backbone of jazz harmony. A 32-bar jazz standard might contain six or eight ii-V-I sequences, each targeting a different key center. The overall progression visits multiple harmonic regions before returning to the home key at the top of the form. Bird changes — the bebop progression based on Cherokee — contain a particularly dense series of ii-V-I chains moving through distantly related key areas at rapid tempo.

In classical music, these tonicizing ii-V sequences appear as secondary dominants prepared by their own predominants — a technique that enriches the harmonic palette without leaving the structural logic of functional harmony.

Voice Leading in ii-V-I

The voice leading within a ii-V-I is a model of smooth, step-wise resolution. Each chord change involves minimal voice movement. From Dm7 to G7: the D (root of ii7) may move to B (third of V7) by step; the F (third of ii7) stays as F (seventh of V7) — a common tone. From G7 to Cmaj7: the F (seventh of V7) resolves down by step to E (third of Imaj7); the B (third of V7) resolves up by half step to C (root of Imaj7). This crossing resolution of the tritone — the two unstable notes resolving in contrary motion — is the acoustic signature of the V7-I resolution.

Jazz pianists and guitarists voice ii-V-I progressions in ways that emphasize this smooth voice leading while adding color through extensions (9ths, 11ths, 13ths). The guide tones — the third and

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seventh of each chord — receive the most attention because they define the chord's quality and carry the strongest voice-leading obligation.

Variants and Extensions

The ii-V-I family includes many important variants. The IV-V-I substitutes the subdominant major chord for the supertonic minor — simpler and more common in folk and pop music, but carrying the same functional logic. The iv-V-I uses a minor subdominant chord, borrowing from the parallel minor for a darker color before resolving to the major tonic.

The tritone substitution replaces the V chord with the dominant seventh chord whose root is a tritone away. In C major, G7 can be replaced by Db7. This substitution works because both chords share the same tritone (B/F = Cb/F), and the resolving voice leading remains intact. The tritone substitution creates a chromatic bass line descent — Db moves by half step to C — that gives the resolution a striking smoothness.

The ii-V-I-vi turnaround extends the sequence by adding the vi chord after the tonic: Dm7-G7-Cmaj7-Am7. The Am7 then becomes the temporary tonic of a new ii-V sequence, allowing the progression to loop continuously — a standard device in jazz for keeping the harmony moving through a repeated chord cycle.

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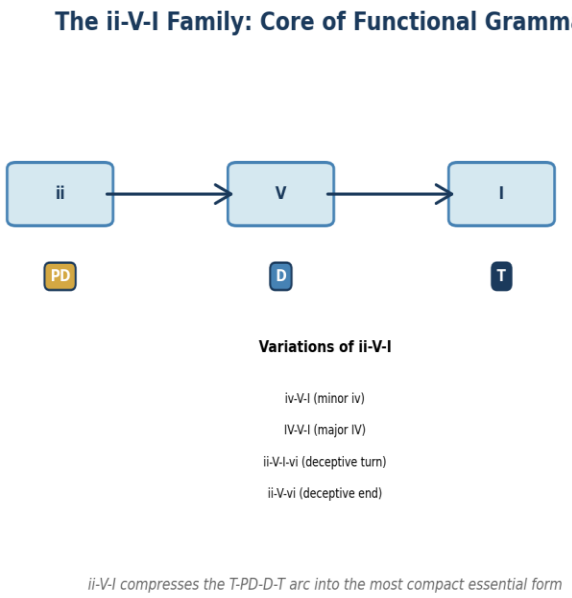


Figure 15.1: The ii-V-I family compresses the T-PD-D-T arc into its most essential three-chord form — a predominant moving to dominant moving to tonic — and serves as the fundamental harmonic building block of jazz, appearing in virtually every standard and bebop composition.

Key Takeaways

- The ii-V-I compresses the T-PD-D-T arc into three chords — ii7 (predominant), V7 (dominant), Imaj7 (tonic) — with voice leading that resolves the tritone of V7 by contrary motion
- The minor ii-V-i uses the half-diminished chord (m7b5) on the supertonic and an altered dominant V7 with raised leading tone from harmonic minor
- ii-V-I chains tonicize multiple key areas in succession, allowing a progression to visit distant harmonic regions while maintaining functional direction
- The tritone substitution replaces V7 with the dominant seventh a tritone away, preserving the tritone resolution while creating a chromatic bass descent
- Variants include IV-V-I (simpler, folk and pop), iv-V-I (borrowed minor subdominant), and the ii-V-I-vi turnaround for continuous circular motion

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Chapter 16: The I-V-vi-IV and Related Pop Loops

The Loop as a Harmonic Form

The I-V-vi-IV progression represents a fundamentally different approach to harmonic organization than the directional progressions of classical or jazz music. It does not aim for resolution. It does not build toward a cadence. It loops — repeating the same four chords in the same order, potentially for the entire duration of a song.

This circular approach to harmony is one of the defining features of pop and rock music. Rather than the T-PD-D-T arc, which moves from stability through tension toward resolution, the loop creates a different kind of expectation: the expectation of continuation. The listener hears the four chords, internalizes their pattern, and anticipates the loop returning. Breaking the loop becomes the dramatic gesture — the moment of surprise — rather than completing it.

The I-V-vi-IV loop emerged prominently in the 1950s and has never left popular music. It underlies thousands of songs across rock, pop, R&B, country, and folk, in every key and tempo, with every conceivable instrumental arrangement.

Why These Four Chords?

The I-V-vi-IV loop works because of the specific relationships among its four chords. The I chord (major tonic) and the vi chord (relative minor) share two common tones, making the transition between them smooth and emotionally rich — the shift from major to its relative minor creates a momentary darkening without fully leaving the key. The V chord (dominant) provides energy and forward momentum. The IV chord (subdominant) provides a sense of breadth and openness.

Together, the four chords touch all three functional zones: I is tonic, vi is a tonic substitute, V is dominant, and IV is predominant. The progression visits every function, but without the directed arc that classical harmony would impose. Instead, the functions cycle: tonic-dominant-tonic_substitute-predominant, then loop back to tonic.

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The ear hears function, but the function never resolves — it simply recurs.

Rotations of the Loop

Because the I-V-vi-IV is a loop, it has no fixed starting point. Any of the four chords can begin the rotation, producing a related but distinct emotional effect.

Starting on vi — vi-IV-I-V — shifts the emotional center toward the relative minor. The opening minor chord gives the progression a more introspective or melancholy quality. Many songs that feel minor actually use this rotation of the same four chords. The ear anchors on the vi chord as a temporary tonic, and the progression takes on a different emotional character even though the underlying harmonic material is identical.

Starting on IV — IV-I-V-vi — opens with the subdominant, which creates a sense of immediate harmonic motion rather than the settled stability of beginning on I. This rotation is common in folk-influenced pop.

Starting on V — V-vi-IV-I — opens with maximum tension and resolves quickly to the relative minor. This creates an immediate sense of drama or urgency, and the resolution to I at the end of the loop provides a moment of satisfaction before the V returns.

Extensions and Variations

The basic four-chord loop can be extended and varied in multiple ways without losing its essential character.

Adding the ii chord — I-V-vi-iii-IV — creates a five-chord rotation that visits the mediant minor chord (iii), which is less common in standard pop harmony but adds a touch of sophistication. The iii chord shares notes with both I and V, functioning as a gentle bridge between the tonic and dominant zones.

Substituting a major IV for a minor iv — I-V-vi-iv — borrows the subdominant from the parallel minor, darkening the predominant chord and giving the loop a more bittersweet quality. This substitution is a simple form of modal interchange.

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Adding a seventh to each chord — Imaj7-V7-vi7-IV7 — increases the harmonic richness without changing the functional identity of any chord. This is standard practice in R&B and soul, where the added color of seventh chords gives the groove a smoother, warmer quality.

Style Applications

In pop music, the I-V-vi-IV loop is the closest thing to a universal harmonic language. It requires only three fingers on a guitar and covers an enormous emotional range depending on tempo, instrumentation, and melodic content. The same chord loop can be a triumphant anthem, a melancholy ballad, or a driving rock song.

In country music, the loop often appears in its simplest form — I, IV, V — without the vi chord, using only three chords and emphasizing the directional motion from tonic through subdominant to dominant and back. The Nashville number system, used by session musicians to communicate chord progressions in any key, is designed for exactly this kind of diatonic loop harmony.

In indie and alternative rock, the loop appears with more varied harmonic rhythms, unconventional instrumental timbres, and deliberate imperfections that give the polished formula a rough, personal quality.

In electronic dance music, the loop is the fundamental unit of construction. Four bars of I-V-vi-IV repeat at 120 beats per minute, with layers of sound added and removed to create structure over what is, harmonically, a completely static four-chord loop.

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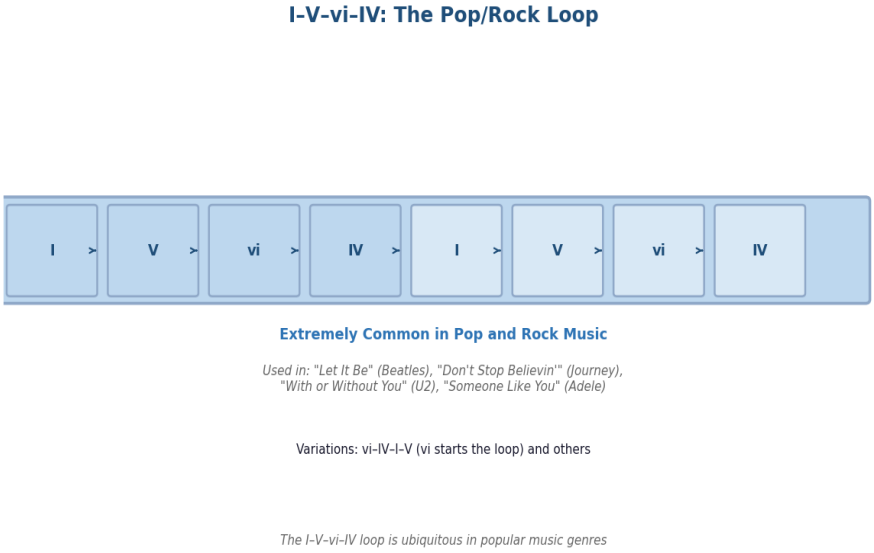


Figure 16.1: The I-V-vi-IV loop and its rotations are heard as continuous cycles rather than directed progressions — the ear settles into the pattern and experiences its repetition as a groove rather than a journey toward resolution.

Key Takeaways

- The I-V-vi-IV loop is circular rather than directed — it creates the expectation of continuation rather than the expectation of resolution
- The four chords touch all three functional zones (tonic, dominant, tonic-substitute, predominant) but cycle through them without cadential closure
- Rotating the loop to start on vi, IV, or V creates emotionally distinct progressions from the same harmonic material
- Extensions include adding iii, borrowing iv from the parallel minor, or enriching every chord with seventh extensions
- The loop is the dominant harmonic language of pop, country, rock, and electronic dance music — the same formula serves every style depending on tempo, texture, and melody

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Listening Examples

"With or Without You" — U2
@U2 Official · Search: U2 With or Without You official video
youtube.com/@U2

"Let It Be" — The Beatles
@TheBeatles Official · Search: Beatles Let It Be official
youtube.com/@TheBeatles

Links go to official artist and label YouTube channels for longevity.

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Chapter 17: The Blues Family

The Blues as a Harmonic System

The blues is not merely a style or a mood — it is a complete harmonic system with its own logic, its own scale, and its own formal structures. Blues harmony does not follow the T-PD-D-T arc of classical music, nor the loop-without-resolution of pop. It operates on a different principle: the recycling of tension. In the blues, the dominant seventh sound is everywhere and constant. The I chord, the IV chord, and the V chord are all dominant seventh chords. Tension is not something that builds toward resolution — it is the permanent state, and the music lives inside that tension rather than resolving it.

Understanding blues harmony means abandoning the classical assumption that dominant seventh chords are unstable and must resolve. In the blues, I7 is not unstable — it is home. The flatted seventh in the I chord is not a tendency tone demanding resolution; it is a defining characteristic of the tonal center. This is why the blues sounds so different from classical tonal music even when using the same notes.

The 12-Bar Blues Form

The 12-bar blues is the foundational form of the blues family. It divides into three four-measure phrases, following a poetic ABA structure derived from the call-and-response of field hollers and work songs.

The standard 12-bar blues in C: measures 1-4 are I7 (C dominant seventh); measures 5-6 are IV7 (F dominant seventh); measures 7-8 are I7; measure 9 is V7 (G dominant seventh); measure 10 is IV7; measures 11-12 are I7 with an optional turnaround. The turnaround — typically I7-V7 or I7-IV7-I7-V7 in the last two measures — sets up the return to the beginning of the form.

The form is fixed. This fixity is not a limitation but a canvas. Every performer — from Robert Johnson playing solo guitar in the 1930s to a modern jazz quartet — knows the form implicitly. Communication happens without notation or rehearsal because everyone shares the

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same formal template. Improvisation, intensity, and expression fill the fixed container.

Variations on the 12-Bar Form

The standard 12-bar form has many common variants. The quick change — moving to IV7 in measure 2 before returning to I7 in measures 3-4 — adds harmonic motion at the beginning of the form and is standard in many blues styles.

The 8-bar blues compresses the form: measures 1-2 are I7, measures 3-4 are IV7, measures 5-6 are I7, measures 7-8 are V7-I7. This tighter form is common in country blues and some early jazz. The 16-bar blues expands the form by doubling each phrase, giving the melody more room to develop before the harmonic cycle turns.

The jazz blues — the 12-bar form harmonically enriched for jazz performance — adds ii-V-I sequences in places where the standard form has a simple I chord. Measures 9-10 in a jazz blues might be ii7-V7 rather than V7-IV7, and the turnaround might be I7-VI7-II7-V7, a circle-of-fifths descent through the last two measures. The form remains 12 bars, but the harmonic density increases dramatically.

The Blues Scale and Its Harmony

The blues scale — the minor pentatonic scale with an added flatted fifth — generates melodies that deliberately clash with the underlying dominant seventh chords. In C: C-Eb-F-Gb-G-Bb. The Eb and Bb are the flatted third and seventh; the Gb is the blue note, the flatted fifth that gives the scale its characteristic dissonance.

These pitches exist in tension with the harmony beneath them. When a blues guitarist plays Eb over a C7 chord, the Eb clashes with the E natural in the chord. This clash is not a mistake — it is the essential expressive gesture of blues melody. The tension between the flatted third in the melody and the major third in the chord is the defining sound of the idiom.

This simultaneous major and minor quality — the I7 chord suggesting major while the melodic blue notes suggest minor — is called blue

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note harmony, and it is the acoustic signature of all blues-derived music: jazz, rhythm and blues, soul, rock, and funk.

Style Applications

The blues family extends far beyond the blues. Every popular music style of the twentieth century grew partly from blues harmony.

In jazz, the blues form is one of the three essential formal templates alongside rhythm changes and the 32-bar AABA song form. Jazz blues is played at every tempo, from the slowest ballad to the fastest bebop. Charlie Parker's "Billie's Bounce," Miles Davis's "Freddie Freeloader," and John Coltrane's "Mr. P.C." are all jazz blues compositions using the same 12-bar framework.

In rock and roll, the 12-bar blues became the structural foundation of the genre. Chuck Berry, Little Richard, and Fats Domino built an entire genre from it. The guitar riff, the backbeat, and the 12-bar form arrived together as a package.

In rhythm and blues and soul music, the blues form is extended and ornamented with gospel-influenced harmonies and call-and-response vocal arrangements. James Brown's music often extends the blues form almost beyond recognition through rhythmic complexity while maintaining its fundamental harmonic spirit.

In contemporary pop and hip-hop, blues chord qualities — dominant seventh chords, the blues scale, blue notes in the melody — appear constantly as a connection to the roots of African American musical tradition.

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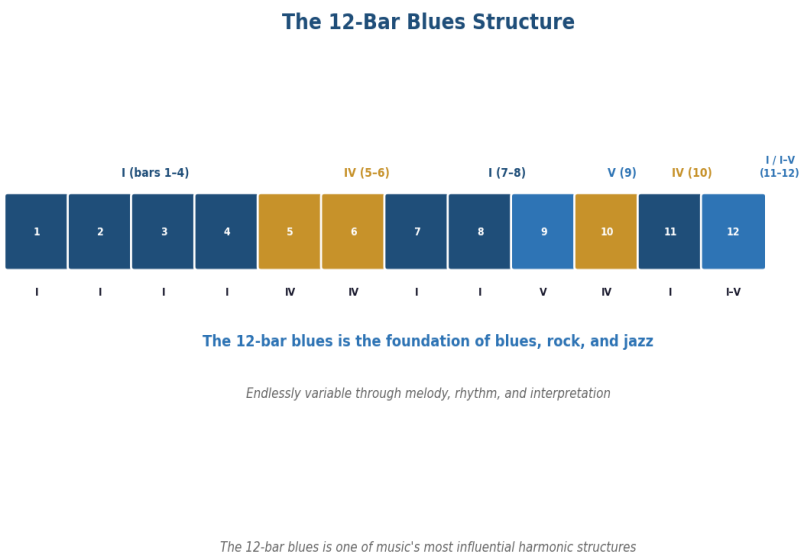


Figure 17.1: The 12-bar blues form organizes harmony into three four-measure phrases — a statement, a repetition, and a response — creating one of music's most durable and flexible formal frameworks.

Key Takeaways

- Blues harmony treats all chords as dominant sevenths, making tension the permanent harmonic state rather than something to be resolved
- The 12-bar blues divides into three four-measure phrases (I7, IV7, I7 / V7, IV7, I7) with optional variations including the quick change and the jazz blues enrichment
- Variants include the 8-bar and 16-bar blues forms; jazz blues adds ii-V-I sequences and circle-of-fifths turnarounds while keeping the 12-bar structure
- The blues scale's flatted third and seventh clash deliberately with the major-third harmony beneath them — this tension is the defining sound of the idiom
- The blues form is the direct ancestor of jazz, rock and roll, rhythm and blues, soul, funk, and contemporary pop — arguably the most influential harmonic template in American music

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Listening Examples

"Johnny B. Goode" — Chuck Berry
Official label channels · Search: Chuck Berry Johnny B Goode official
youtube.com/results?search_query=Chuck+Berry+Johnny+B+Goode+official

"The Thrill Is Gone" — B.B. King
Official B.B. King channel · Search: BB King The Thrill Is Gone official
youtube.com/results?search_query=BB+King+Thrill+Is+Gone+official

Links go to official artist and label YouTube channels for longevity.

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Chapter 18: Descending-Line and Lament Progressions

The Descending Bass as Identity

The descending-line and lament progressions are named not for their chords but for their bass. Unlike the progressions studied in earlier chapters — where root motion and functional logic define the progression — lament progressions are defined by a melodic bass line that descends, usually by step, through a specific span of pitches. The chords above the bass line can change with each repetition; the bass line itself is the constant.

This bass-first approach to harmonic structure has deep historical roots. The ground bass technique of the Baroque era — in which a short bass pattern repeats while the harmony and melody above it vary — gave composers a structural scaffold for continuous variation. The descending bass line was the most common ground bass pattern, and it became associated through centuries of use with specific emotional territories: grief, lament, longing, and inevitability.

The Descending Tetrachord

The most fundamental descending-line progression uses the minor descending tetrachord — a four-note descent from tonic to dominant: in A minor, A-G-F-E. This four-note span, spanning a perfect fourth, is the core of the lament bass.

The tetrachord is harmonized differently in different eras and styles, but the bass line remains constant. One traditional harmonization: i-VII-VI-V (in A minor: Am-G-F-E major). Another: i-v6-iv6-V (Am-Em/B-Dm/F-E). A third: i-VII-iv6-V. Each harmonization places different chords above the same bass notes, creating different harmonic colors while preserving the characteristic descending motion.

The descent can be extended beyond the tetrachord. A descending octave bass line — from tonic to tonic an octave lower — covers eight steps and allows for more elaborate harmonization. Baroque composers like Bach and Handel used extended descending bass lines as the foundations for long variation sets.

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The Chaconne and Passacaglia Forms

The chaconne and passacaglia are two Baroque variation forms built on repeating bass lines. The distinction between them was not always consistent historically, but the common use treats the passacaglia as a variation on a repeating bass melody and the chaconne as a variation on a repeating harmonic progression (which may or may not include a fixed bass line).

In both forms, the bass line (or harmonic pattern) repeats continuously while the upper voices develop through a series of variations. The variations may increase in rhythmic complexity, shift between major and minor modes, slow to lyrical melodies, or accelerate through virtuosic passage-work — but the bass (or harmonic foundation) remains constant throughout.

Purcell's "Dido's Lament" uses a repeating minor descending tetrachord as the ground bass, harmonized as i-VII-VI-V-IV-V-i. Above this repeating pattern, Dido's vocal melody unfolds, its emotional intensification heightened by the inexorable repetition of the bass. The formal constraint becomes expressive: the lament cannot escape the descending bass any more than Dido can escape her fate.

The Descending Major Line

Descending-line progressions are not limited to minor. A descending major bass line — C-B-A-G in C major — harmonized as I-V6-vi-V or I-V6-vi-III creates a gentle, nostalgic quality quite different from the dark intensity of the minor lament.

Pop music uses descending major bass lines constantly. The technique of holding the same upper chord while the bass descends — creating slash chords like C/B, C/A, C/G — is a simplified version of the classical descending bass technique. The chord symbol shows the same chord throughout; the slash notation indicates the bass note beneath it. The effect is a smooth, emotional intensification through bass motion alone, without any change in the upper chord structure.

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Style Applications

The descending-line bass has never gone out of fashion. From the Baroque ground bass to the twenty-first century pop ballad, the device appears across five centuries of Western music because its expressive power is fundamental and immediately perceptible.

In classical music, the descending bass line reached its greatest elaboration in the passacaglia and chaconne. Bach's Passacaglia and Fugue in C minor (BWV 582) uses a 21-measure descending bass line as the foundation for 20 variations and a concluding fugue — one of the most sophisticated uses of the ground bass technique in the repertoire.

In Romantic music, the descending bass line appears in song and opera as a signal of longing or sorrow. Schubert's songs frequently use descending bass motion beneath static or slowly changing harmonies to create a sense of inevitable, weighted emotional descent.

In jazz, the descending bass line appears in minor-key ballads and bossa nova. The standard "Autumn Leaves" contains a descending bass line through the B section that gives the piece much of its melancholy weight.

In rock and pop, the descending bass line is so common as to be nearly invisible. "Stairway to Heaven," "While My Guitar Gently Weeps," and countless ballads use it as the foundation of their emotional climaxes.

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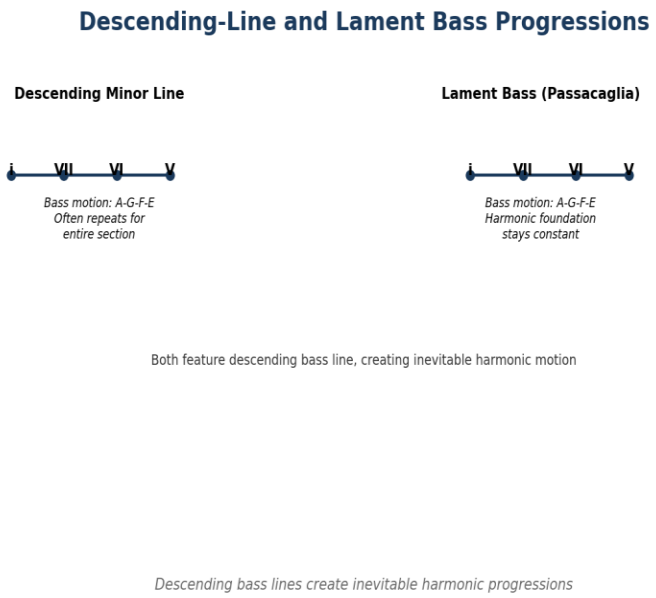


Figure 18.1: Descending-line and lament progressions derive their identity from the bass, which descends by step through a fixed interval span — typically a fourth or an octave — providing a stable, predictable foundation for harmonic and melodic variation above.

Key Takeaways

- Descending-line and lament progressions are defined by their bass, which descends stepwise through a fixed span — typically a fourth — while harmonies above vary
- The minor descending tetrachord (in A minor: A-G-F-E) is the most fundamental lament bass, associated historically with grief, inevitability, and loss
- The chaconne and passacaglia forms use repeating bass lines (or harmonic progressions) as continuous variation foundations in Baroque music
- Descending major bass lines produce a gentler, more nostalgic quality; pop slash chords (C/B, C/A, C/G) are a simplified contemporary version of the same technique
- The descending bass line has appeared in every style from Baroque variation forms to contemporary pop ballads, driven by its fundamental expressive power

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Listening Examples

"Dido's Lament" — Henry Purcell
Classical label channels · Search: Purcell Didos Lament official recording
youtube.com/results?search_query=Purcell+Didos+Lament+official+recording

Links go to official artist and label YouTube channels for longevity.

Chapter 19: Sequential Progressions

What Makes a Sequence

A harmonic sequence is a progression in which the same pattern of root motion repeats at successive pitch levels. If two chords move by descending fifth, and the same descent by fifth repeats starting a step lower, the result is a harmonic sequence. The pattern — the intervallic relationship — is the constant; the pitches shift.

Sequences are among the most powerful devices in harmonic composition. They create a sense of inevitability — a feeling that the music is unspooling in a predetermined direction — while simultaneously maintaining forward motion. Each repetition of the pattern confirms the listener's expectation, and the accumulation of these confirmations generates momentum that carries the progression toward its goal.

Diatonic Sequences

A diatonic sequence stays within the notes of a single key. The pattern repeats, but the chord qualities shift with each repetition because the diatonic scale is not perfectly regular — some steps are whole steps and some are half steps, so the intervals between chord members change slightly from one position in the scale to the next.

The descending-fifth sequence is the most common diatonic sequence: vi-ii-V-I, or in extended form vii°-iii-vi-ii-V-I. Each chord's root is a fifth above the next, and the entire sequence traces the circle of fifths backward through the diatonic scale. The first chord of each pair is major or minor depending on its scale degree, but the root motion — descending fifth — remains constant. This sequence has immense functional power: it accumulates the directional energy of multiple V-I relationships, each one temporarily tonicizing a scale degree before the next fifth-motion overrides it.

The descending-thirds sequence moves root to root by descending third: I-vi-IV-ii-VII°-V. Each chord falls a third below the previous one. The result is a smooth, coloristic sequence with less functional drive than the circle-of-fifths sequence but a distinctive elegance.

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The ascending-step sequence moves root to root by ascending second: I-ii-iii-IV-V. Each chord rises a step, and the sequence accumulates energy as it ascends toward the dominant. Ascending step sequences are less common than descending ones because ascending root motion is weaker than descending root motion, but in short segments they create useful intensifications.

Chromatic and Real Sequences

A chromatic (or real) sequence maintains exact intervals at each repetition, which means some chord qualities will differ from any single key's diatonic material. If the pattern I-V repeats with exactly the same interval between chords — both relationships a descending perfect fifth — and the sequence begins at different pitch levels, the second and third chords may require accidentals to preserve the exact quality.

Chromatic sequences were common in the Baroque era as a way of moving through multiple key areas rapidly. A sequence of dominant seventh chords each a step lower — G7-F7-Eb7-Db7 — contains a real, chromatically exact pattern (each chord is a dominant seventh) but visits four key areas in succession. This kind of chromatic sequence is common in jazz, where it is called a "cycle of dominants" or a "backdoor progression."

The advantage of the chromatic sequence is precision and consistency: each repetition sounds exactly like the previous one transposed, with no diatonic variance. The disadvantage is that it may temporarily leave the home key, which creates modulation-like effects even when the overall trajectory returns to the original tonic.

Sequences as Formal Structures

Sequences are not merely chord progressions — they are formal devices. In Baroque music, the sequence is the primary technique for traversing harmonic space in development sections. A fugue subject in the exposition may be harmonically stable; when the subject appears in sequence during the development, it is harmonically dynamic, pulling through multiple key areas before arriving at the recapitulation.

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In classical sonata form, the development section makes extensive use of sequential harmonic progressions to create harmonic instability and drive toward the dominant that prepares the recapitulation. The sequence becomes a vehicle for harmonic exploration, temporarily abandoning the home key while maintaining the sense of directed motion that will eventually lead back.

In jazz, sequential progressions appear as improvisational devices. Bebop soloists routinely play motivic sequences — the same melodic pattern repeated at successive pitch levels, harmonized against the underlying chord changes. The tension between the sequence's pitch level and the chord beneath it is part of the expressive vocabulary of bebop.

Style Applications

In Baroque music, the sequence is fundamental to composition. Handel's concertos, Bach's inventions and preludes, and Vivaldi's concertos all use sequences as structural devices for extending themes, traversing keys, and building toward climactic cadences.

In classical and romantic music, sequences appear in development sections and transitional passages. A Beethoven sonata development section may sequence a rhythmic motive through a circle of fifths, visiting three or four keys in rapid succession before the retransition brings back the dominant of the home key.

In jazz, the sequence appears in both composed heads and improvised solos. John Coltrane's "Giant Steps" uses a harmonic sequence based on major thirds, cycling through three key centers (B major, G major, Eb major) in a pattern that repeats at each transposition level. This extreme use of chromatic sequencing stretched the boundaries of jazz harmony in 1960.

In pop and rock, sequential progressions appear less explicitly but are present whenever a melodic or harmonic pattern shifts to a new pitch level — a verse in C that briefly sequences its main riff in D minor or G before returning home.

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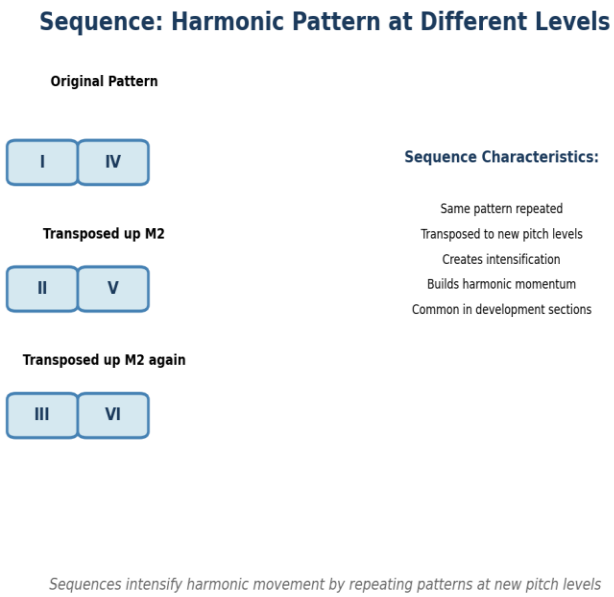


Figure 19.1: A harmonic sequence repeats the same intervallic relationship between chords — the same pattern of root motion — at successively higher or lower pitch levels, creating a sense of directed motion through harmonic space that transcends any individual chord change.

Key Takeaways

- A harmonic sequence repeats the same root-motion pattern at successive pitch levels, creating directed motion through harmonic space
- Diatonic sequences stay within a single key (the descending-fifth sequence vi-ii-V-I is the most powerful); chromatic sequences maintain exact intervals at the cost of introducing accidentals
- The descending-fifth sequence accumulates the energy of multiple V-I relationships; descending-thirds sequences create coloristic smoothness; ascending-step sequences build intensity
- Sequences function as formal devices in Baroque fugues and classical development sections, generating harmonic instability and momentum during periods of key exploration
- Jazz uses both composed sequences (Coltrane's Giant Steps major-third cycle) and improvised motivic sequences as primary structural and expressive tools

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Chapter 20: Static, Modal, and Non-Functional Progressions

Beyond Functional Harmony

Every progression studied so far in Part II has operated within the grammar of functional harmony: tonic establishes home, predominant departs, dominant creates tension, tonic resolves. The T-PD-D-T arc has been the assumed framework. But a large and important body of music operates outside this grammar.

Non-functional progressions do not move from instability toward resolution. They are not going anywhere — or more precisely, they are organized by principles other than harmonic direction. Color, mode, pattern, and texture replace function as the organizing logic. The result is music that feels different from tonal functional music: more static, more ambiguous, more concerned with the immediate sound of harmony than with its direction.

Static Harmony

Static harmony holds a single chord — or a very small set of chords — for an extended duration. The interest comes not from harmonic change but from what happens within the sustained sonority: rhythmic variation, melodic embellishment, timbral change, dynamic shaping.

A drone — a sustained note or chord beneath a changing melody — is the simplest form of static harmony. Indian classical music, bagpipe music, and much folk music from around the world is built on sustained tonic drones. The melody moves; the harmony stays fixed. Tension arises not from harmonic motion but from the melodic distance between the drone and the melody above it.

The vamp is a related technique: a short pattern of one or two chords repeated indefinitely. A jazz vamp on Dm7 — repeating the same minor seventh chord while the soloist improvises — is static harmony in a modern context. The interest comes from rhythmic groove, melodic invention, and dynamic shaping, not from harmonic direction.

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In minimalist music — composers like Steve Reich, Philip Glass, and Arvo Pärt — static harmony is the primary compositional technique. A single chord may sustain for minutes, or a tiny alternation between two chords may repeat for the entire duration of a work. The gradual introduction of new elements — additional voices, rhythmic patterns, melodic fragments — creates the music's arc from within the harmonic stasis.

Modal Progressions

Modal progressions use chords drawn from a specific mode rather than from the major or minor scale. The modes — Dorian, Phrygian, Lydian, Mixolydian, Aeolian, Locrian — each have a characteristic set of diatonic chords and a characteristic sound. Modal progressions exploit these sounds without submitting to functional harmonic direction.

The most common modal progressions in popular music use the Dorian, Mixolydian, and Aeolian modes. Dorian — a minor mode with a raised sixth — produces the characteristic i-IV progression: a minor tonic chord followed by a major subdominant chord. In D Dorian: Dm-G. This minor-to-major subdominant move is the signature of Dorian harmony, giving it a brightness absent from natural minor.

Mixolydian — a major mode with a flattened seventh — produces the characteristic I-VII progression: a major tonic chord followed by a major chord a whole step below. In G Mixolydian: G-F. This tonic-to-subtonic move is the signature of rock music. The V chord (D major in G Mixolydian) is rarely used; the VII chord (F major) substitutes, giving rock harmony its particular lack of leading-tone pull.

Phrygian — a minor mode with a flattened second — produces the characteristic i-bII progression, the Phrygian cadence. In E Phrygian: Em-F. The half-step descent from bII to I (from F to E) is the defining gesture of flamenco harmony and much Mediterranean folk music.

Non-Functional Chord Successions

A chord succession becomes non-functional when it cannot be analyzed using T-PD-D-T logic. The chords follow one another, but

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without the directional pull of leading tones, without the accumulation of tension toward a dominant, without any sense that tonic is being approached.

Chromatic mediant relationships — chords whose roots are a third apart and which share no common diatonic scale — are inherently non-functional. Moving from C major to E major is not a functional progression; no functional logic connects them. The motion is purely coloristic: two harmonically similar chords (both major triads) at a surprising harmonic distance.

Parallel chord motion — moving the same chord type up or down by step or by half step — creates a non-functional progression by definition. Parallel major triads descending by step (C major, Bb major, Ab major, G major) have no functional relationship. Each chord is the same quality; the only change is pitch level. This parallelism, common in impressionist music, creates a sliding, coloristic effect rather than functional direction.

Planing — moving all voices of a chord in parallel motion, preserving the chord's internal interval structure — is the systematic version of parallel chord motion. Debussy used planing consistently to create progressions that feel harmonic but are not functionally directed.

Style Applications

In jazz, modal playing emerged in the late 1950s as a deliberate departure from the dense ii-V-I harmonic language of bebop. Miles Davis's Kind of Blue (1959) is the landmark recording: the musicians improvise over sustained modal vamps rather than through rapid chord changes. The freedom from functional harmonic direction allowed for a new kind of melodic invention, less connected to the specific notes of each chord change and more concerned with the color of the mode as a whole.

In rock music, modal progressions are the dominant harmonic language. The i-VII-VI-VII loop in Aeolian, the I-VII alternation in Mixolydian, and the i-bII move in Phrygian appear constantly. Rock harmony is not classical functional harmony in a different style — it is

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a genuinely different harmonic system built on modal rather than functional principles.

In minimalist and ambient music, static harmony is the primary compositional principle. Steve Reich's Music for 18 Musicians sustains harmonies for minutes at a time while rhythmic phasing creates the music's motion. Brian Eno's ambient recordings hold single chords almost indefinitely, using timbre and texture as substitutes for harmonic development.

In contemporary film and video game music, non-functional progressions are common for establishing atmosphere. A progression of unrelated major triads, or a sustained drone with slowly shifting modal melodies, creates sonic environments without the narrative direction of functional harmony — appropriate for exploratory or contemplative dramatic contexts.

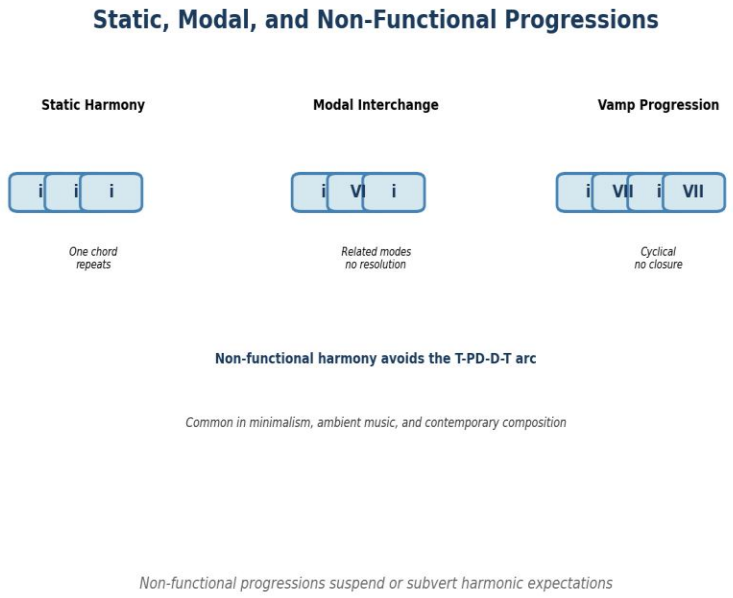


Figure 20.1: Static, modal, and non-functional progressions suspend or subvert the T-PD-D-T arc — organizing harmony through color, pattern, or texture rather than through directed functional motion toward tonic.

Key Takeaways

- Non-functional progressions organize harmony through color, mode, pattern, or texture rather than through the directed T-PD-D-T arc
- Static harmony — sustained drones and vamps — locates musical interest in rhythm, melody, and timbre rather than harmonic change
- Modal progressions use the characteristic chord relationships of specific modes: Dorian's i-IV, Mixolydian's I-VII, and Phrygian's i-bII each produce a distinctive non-functional sound
- Non-functional chord successions — chromatic mediants, parallel chord motion, planing — move by coloristic logic rather than functional direction
- Modal jazz (Miles Davis, Kind of Blue), rock harmony, minimalism (Steve Reich), and ambient music all operate primarily through non-functional harmonic principles

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PART III: CHROMATIC ENRICHMENT AND EXPANSION

Chapter 21: Secondary Dominants and Applied Chords

Extending the Dominant Principle

The dominant seventh chord creates the strongest possible pull toward tonic. This pull works because V7 contains two unstable elements — the leading tone and the chordal seventh — that both resolve by step into the tonic chord. But there is nothing unique about the home tonic that earns this treatment. The same mechanism can be applied to any chord in the key: build a dominant seventh chord above any scale degree, and it will pull with equal force toward that degree as its local tonic.

This is the principle of secondary dominants. A secondary dominant — also called an applied chord — is a dominant seventh chord built on a note outside the key, specifically tailored to resolve to a particular diatonic chord. It does not belong to the home key, but it functions logically within it, because its function (dominant) and its target (a diatonic chord treated temporarily as a tonic) are both clearly audible.

How Secondary Dominants Work

Every secondary dominant is named after its target. V/V (read: five of five) is the dominant seventh chord that resolves to V. In C major, V/V is D7 — a dominant seventh chord on D, which resolves to G (the V chord of C major). The D7 chord contains F# — a note outside C major — which acts as the leading tone pulling toward G.

V/ii is the dominant seventh chord that resolves to ii. In C major, V/ii is A7, resolving to Dm. The A7 contains C# (leading tone toward D) and G (the chordal seventh that resolves down to F#, the third of Dm). V/iii is B7 resolving to Em. V/IV is C7 resolving to F — the only secondary dominant whose root is already in the home key, though its chord quality (dominant seventh) is not diatonic. V/vi is E7 resolving to Am.

Notice that secondary dominants cannot be built on the seventh scale degree (vii°) because the diminished chord is not a viable

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local tonic — it has no stable identity to tonicize. Every other diatonic chord can serve as a secondary target.

The Sound and Syntax of Tonicization

When a secondary dominant appears, the ear briefly shifts its tonal center. The moment D7 appears in C major, the ear begins to hear G as an imminent tonic. When G arrives, it sounds not just like the V chord of C major but also like the I chord of a briefly visited G major. This momentary reorientation of tonal center is called tonicization — not a full modulation (which requires sustained commitment to a new key) but a brief, passing nod to a secondary key area.

The secondary dominant is typically short — one beat or one measure — and the tonicization it creates is fleeting. The home key is never truly abandoned. But even this brief secondary dominant enriches the harmonic color considerably: the chromatic note it introduces creates a momentary intensification, a sharpening of harmonic attention, that the purely diatonic chords around it cannot achieve.

The approach to a secondary dominant matters as much as the chord itself. A secondary dominant can be approached from tonic (I-V/V-V), from another diatonic chord (IV-V/V-V), or even from another secondary dominant (V/ii-V/V-V-I), creating chains of applied chords that move through the key with extraordinary energy.

Secondary Leading-Tone Chords

Secondary dominants include not just the dominant seventh chord (V7/x) but also the leading-tone diminished chord (vii°/x). The diminished seventh chord built on the leading tone of any local tonic functions as an applied chord in exactly the same way as the dominant seventh. In C major, vii°/V is F#° (or F#°7 as a fully diminished seventh), which resolves to G with even more chromatic intensity than D7 because the fully diminished seventh chord contains four unstable tones, all resolving by half step into the target chord.

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The leading-tone diminished chord is particularly common in inner voices and passing situations, where its compactness (no fifth to double) makes it easier to voice than a full dominant seventh. Its intensely chromatic sound makes it a powerful expressive tool when the composer needs maximum urgency.

Sequences of Secondary Dominants

Secondary dominants can chain together to create sequences of remarkable harmonic momentum. The most common pattern is a circle-of-fifths chain of secondary dominants: V/vi-V/ii-V/V-V-I (or in jazz nomenclature: E7-A7-D7-G7-C). Each chord is the secondary dominant of the next, and the whole chain descends through the circle of fifths before arriving at the home tonic.

This sequence saturates every step with leading-tone energy. Rather than diatonic ii-V-I, each chord is a dominant seventh, and each step produces a local resolution — vi to ii, ii to V, V to I. The effect is one of relentless forward drive, each resolution immediately spawning a new tension. Sequences of secondary dominants appear in the Bach chorales, in Mozart's development sections, in Brahms's harmonic transitions, and throughout jazz harmony, where they are called "chain of dominants" or "going around the cycle."

Style Applications

In classical music, secondary dominants are the primary means of adding chromatic color within a key without modulating. A Bach chorale may use V/ii and V/IV within a phrase, briefly illuminating those scale degrees before the phrase cadences in the home key. Beethoven uses chains of secondary dominants in his development sections to create urgent harmonic motion between structural pillars.

In jazz, secondary dominants are ubiquitous. Every diatonic chord in a jazz standard may be approached by its secondary dominant. When a lead sheet shows only diatonic chords, an experienced jazz musician automatically inserts secondary dominants on the beat before each chord — this is called "adding the two-five" or "substituting secondary dominants." The sound is so natural to jazz

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ears that the absence of secondary dominants in a jazz performance sounds barren.

In pop and rock, secondary dominants appear less systematically but with powerful effect. The moment a song in a major key introduces a chord with a sharpened note — a major IV chord suddenly preceded by its dominant — the listener experiences the slight intensification as emotional brightening or emphasis. Many of the most memorable chord changes in pop music are secondary dominant moments: the sudden appearance of an A7 in the key of C, pointing strongly toward Dm, creates a brief harmonic spotlight.

In film music, secondary dominants serve narrative functions. A scene that has been harmonically settled in one key may introduce a secondary dominant to signal approaching drama, transition, or revelation. The chromatic note in the secondary dominant acts as a harmonic signal — something is about to change.

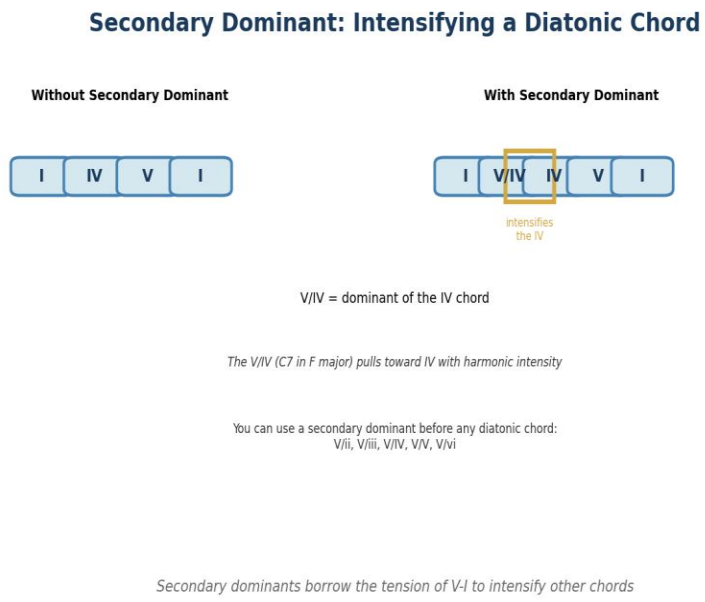


Figure 21.1: A secondary dominant intensifies a non-tonic diatonic chord by temporarily treating it as a local tonic — the secondary dominant creates the same leading-tone pull toward its target that V creates toward I, but directed at any chord in the key.

Key Takeaways

- A secondary dominant (V/x) applies dominant seventh chord function to any diatonic chord, temporarily treating it as a local tonic through the introduction of a chromatic leading tone
- Common secondary dominants in major keys: V/ii, V/iii, V/IV, V/V, V/vi — each contains a chromatic note not in the home key, resolving by half step into the target chord
- Tonicization is the fleeting impression of a new tonic created by a secondary dominant — briefer and less committed than a full modulation
- Secondary leading-tone chords (vii°/x) function identically to secondary dominants but with greater chromatic intensity, all four tones resolving by half step
- Chains of secondary dominants — V/vi-V/ii-V/V-V-I — create sequences of relentless forward drive through the circle of fifths, used in Bach chorales, classical developments, and jazz harmony alike

- Secondary Dominants and Applied Chords expands harmonic vocabulary beyond diatonic resources
- These techniques maintain coherence through functional logic or common-tone connections
- Careful voice leading prevents chromatic enrichment from sounding chaotic
- Understanding when and how to use these techniques is essential to advanced composition
- Context and style determine the appropriateness and effect of alterations

Listening Examples

"Sweet Home Chicago" — Robert Johnson / various artists
Blues label channels · Search: Sweet Home Chicago blues official
youtube.com/results?search_query=Sweet+Home+Chicago+blues+original+official

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Listening Examples

"I've Got Rhythm" — George Gershwin (jazz standard)

Jazz label channels · Search: Gershwin I Got Rhythm jazz official

youtube.com/results?search_query=Gershwin+I+Got+Rhythm+jazz+official

Links go to official artist and label YouTube channels for longevity.

Listening Examples

"Bohemian Rhapsody" — Queen

@QueenOfficial · Official Remastered Video · Search: Queen Bohemian Rhapsody official video

youtube.com/@QueenOfficial

Links go to official artist and label YouTube channels for longevity.

Chapter 22: Modal Interchange and Borrowed Chords

The Parallel Relationship

Every major key has a parallel minor — a minor key on the same root. C major and C minor share the same tonic (C) but differ in the quality of their scale degrees and, consequently, in their diatonic chords. Where C major has E natural and A natural in its scale, C natural minor has Eb and Ab. These alterations produce different chords on the same scale degrees: C major has a major iii chord (Em) and a major vi chord (Am), while C minor has a diminished III chord (Eb major) and a major VI chord (Ab major).

Modal interchange — also called borrowed chords or mixture — imports chords from the parallel mode into the home key. A piece in C major may borrow the bVII chord from C natural minor (Bb major), or the bVI chord (Ab major), or the iv chord (Fm), or the bIII chord (Eb major). These borrowed chords introduce scale degrees foreign to C major — Bb, Ab, and Eb — creating chromatic color while the tonic remains firmly C.

The Most Common Borrowed Chords

In major keys, the most frequently borrowed chords come from the parallel natural minor. Each borrowed chord introduces one or more lowered scale degrees that give the harmony a darker, more complex color.

The iv chord (minor subdominant) is the most common borrowed chord. In C major, iv is Fm — containing Ab, the lowered sixth scale degree. The progression I-iv-I, or IV-iv-I, or I-V-iv-I, is ubiquitous across classical, pop, and rock music. The sudden shift from the bright major IV (F major) to the dark minor iv (F minor) is one of the most emotionally rich moves in tonal harmony. The Beatles used it constantly; so did Brahms and Chopin.

The bVII chord (subtonic major) borrows from natural minor. In C major, bVII is Bb major, containing Bb, the lowered seventh. This chord lacks the leading-tone pull of V, giving it a modal, floating quality. The progression I-bVII-IV-I or I-bVII-I is the backbone of classic

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rock harmony. The bVII creates motion away from tonic without the functional tension of V.

The bVI chord (flat-six major) introduces both Ab and Eb. In C major, bVI is Ab major. This chord creates a particularly striking color — distant from the home key, but resolving smoothly because Ab can move to G (the fifth of C) by half step. The progression bVI-bVII-I (Ab-Bb-C in C major) is a powerful climactic gesture, common in rock anthems and film music.

The bIII chord (flat-three major) contains Eb and Bb. In C major, bIII is Eb major. This chord creates a third relationship with the tonic (C to Eb is a minor third), producing a chromatic mediant effect. It often appears in the progression I-bIII-bVII-I, creating a descending major chord sequence in the bass.

Minor Keys Borrowing from Major

Modal interchange operates in both directions. Just as major keys borrow from minor, minor keys frequently borrow from the parallel major. The most important example is the Picardy third — ending a minor-key phrase or piece on a major I chord (I instead of i). This brightening of the final tonic was standard in Baroque music and remains a powerful expressive gesture.

The IV chord (major subdominant) borrowed into a minor key is the other common exchange. In A minor, the diatonic subdominant is Dm (iv). Borrowing IV major (D major) brightens the predominantly minor sound without abandoning the minor tonal center. This chord appears in minor-key progressions that want a moment of warmth before returning to darkness.

Mixture in Context

Modal interchange is most expressive when it appears against a background that has firmly established the home mode. A piece that begins in pure C major, establishing the brightness of the major sound through repeated tonic-dominant motion, will produce maximum effect when iv suddenly appears — the Eb in the bass clashes with the memory of E natural, creating a rich, bittersweet dissonance.

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The borrowed chord does not replace the home key — it enriches it. After the borrowed chord, the music typically returns to diatonic chords, the home key unshaken. The borrowed chord is a visitor, not a resident. This is what distinguishes modal interchange from modulation: modulation commits to a new key, establishes a new tonic, and requires effort to leave. Modal interchange touches a foreign color and returns home without effort.

Style Applications

In classical music, modal interchange appears most often in the Romantic era, where the expressive range of harmony was pushed to its limits. Schubert, Brahms, and Chopin all used borrowed chords as primary expressive tools. Schubert's song cycles move fluidly between major and parallel minor, the borrowed chords carrying emotional weight — the iv chord often signals grief or longing that the major context cannot fully express.

In jazz, modal interchange is standard vocabulary. The iv chord (minor subdominant) appears in countless jazz progressions as a natural darkening before a cadence. The progression I-IV-iv-I is a jazz cliché in the best sense: a reliable, beautiful formula that professional musicians deploy with full awareness of its expressive power.

In pop and rock, the borrowed chords from minor — particularly bVII, bVI, and iv — are some of the most emotionally potent moves in the harmonic vocabulary. When a bright major-key pop song suddenly darkens with a minor iv chord, the effect is immediate and powerful. Many of the most emotionally resonant moments in popular music are modal interchange moments: the iv chord in the chorus, the bVII in the bridge, the bVI leading to a triumphant I.

In film music, modal interchange is a primary tool for emotional nuance. A scene that is mostly bright (major key) can be tinged with shadow or complexity through a single borrowed bVI or iv chord without fully darkening the emotional register. This subtle mixture — major with a touch of minor — is the harmonic equivalent of light and shadow in cinematography.

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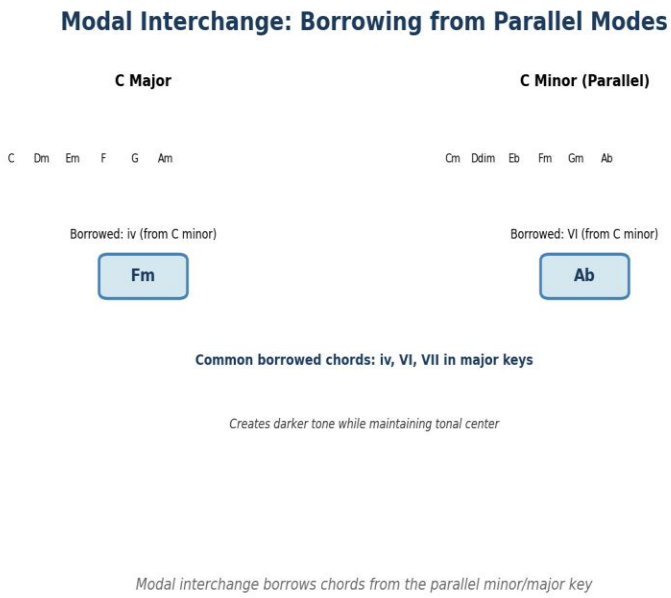


Figure 22.1: Modal interchange borrows chords from the parallel mode — typically from the parallel minor into a major key context — keeping the tonic constant while darkening the harmonic color through the introduction of scale degrees foreign to the home mode.

Key Takeaways

- Modal interchange borrows chords from the parallel mode (parallel minor into major, or vice versa), introducing foreign scale degrees while keeping the tonic constant
- The most common borrowed chords in major keys are iv (minor subdominant, introduces b6), bVII (subtonic major, introduces b7), bVI (flat-six major, introduces b6 and b3), and bIII (flat-three major)
- The iv chord is the most emotionally immediate borrowed chord — the sudden darkening from IV major to iv minor is one of tonal music's most powerful expressive gestures
- Borrowed chords are visitors, not residents: they introduce chromatic color and return to the home key without the commitment of modulation
- Modal interchange appears in Romantic art song (Schubert, Brahms), jazz standards (iv before cadences), classic rock harmony (bVII, bVI), and film music (shadow within a bright context)

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- Modal Interchange and Borrowed Chords expands harmonic vocabulary beyond diatonic resources
- These techniques maintain coherence through functional logic or common-tone connections
- Careful voice leading prevents chromatic enrichment from sounding chaotic
- Understanding when and how to use these techniques is essential to advanced composition
- Context and style determine the appropriateness and effect of alterations

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Chapter 23: Chromatic Predominants

Beyond the Diatonic Predominant

In functional harmony, the predominant zone is occupied by the IV and ii chords — diatonic chords that depart from tonic and prepare the dominant. These diatonic predominants are functional and effective, but they are harmonically stable. The chromatic predominants — the Neapolitan sixth and the three augmented sixth chords — replace this stability with chromatic tension. Each chromatic predominant chord creates an intensified approach to the dominant by introducing chromatic voice leading that pulls more urgently toward V than any diatonic chord can.

These chords are not exotic curiosities. They appear throughout the common practice period — in Bach, Haydn, Mozart, Beethoven, Schubert, and Brahms — and they carry specific expressive associations. The Neapolitan sixth is associated with pathos, sudden softness, and harmonic surprise. The augmented sixth chords are associated with intensification and urgency. Understanding them unlocks a deeper hearing of the classical and Romantic repertoire.

The Neapolitan Sixth

The Neapolitan chord — abbreviated N or N6 — is a major triad built on the lowered second scale degree of the key. In C major (or C minor), the Neapolitan is Db major (Db-F-Ab). It is called the Neapolitan sixth because it almost always appears in first inversion (with F in the bass, a sixth above Db), which gives it a smooth voice-leading connection to the dominant chord.

The Neapolitan introduces two chromatic notes not in the home key: Db (the lowered second) and Ab (the lowered sixth, though this is diatonic in minor). Together these notes create a harmonic color of remarkable softness and distance — the Neapolitan sounds remote from the home key, as if the music has stepped momentarily into another world. Its resolution to V — in which Db moves down by half step to C (or to B in the case of V in major, making the Db-to-C move a chromatic half step) — has a sighing, falling quality that gives it emotional weight far beyond its functional simplicity.

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The Neapolitan appears most often in minor keys, where the Ab is already present in the key signature, and the Db is the only new note. In major keys, both Db and Ab are foreign. In both cases, the chord is used as a predominant leading to the dominant, most commonly in the cadential pattern N6-V-i (or N6-V-I).

The Augmented Sixth Chords

The augmented sixth chords are a family of chromatic predominants named for the augmented sixth interval — an interval of ten half steps — that they contain between their lowest and highest characteristic tones. This interval resolves by contrary motion: the lower note (b6 in the key) moves down by half step to the dominant root, while the upper note (#4, the raised fourth) moves up by half step to the dominant root from below. Both chromatic tones resolve into the same note — the fifth scale degree — from opposite sides.

There are three standard augmented sixth chords, distinguished by their middle voices.

The Italian augmented sixth (It+6) contains only the two characteristic tones and a doubling of the tonic note: in C major or minor, it consists of Ab, C, and F# (spelled as an augmented sixth from Ab to F#). This three-note chord is the simplest augmented sixth sonority.

The French augmented sixth (Fr+6) adds the second scale degree (D in C major/minor) between the two characteristic tones: Ab, C, D, F#. The added note creates a whole-tone quality that gives the French augmented sixth its distinctive, floating, ambiguous sound. Debussy and Ravel were particularly fond of it.

The German augmented sixth (Ger+6) adds the perfect fifth above the bass (Eb in C major/minor, which is the lowered third): Ab, C, Eb, F#. This chord sounds remarkably like a dominant seventh chord — specifically, it is enharmonically equivalent to the dominant seventh of the flat supertonic. The German augmented sixth resolves directly to the cadential 6/4 or to V, with the Eb resolving down to D (the second scale degree) before the arrival of the dominant.

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Resolution and Voice Leading

All chromatic predominants resolve to the dominant through intensified voice leading. The Neapolitan's Db falls a half step to C (the root of V). The augmented sixth's Ab and F# resolve outward by half step to G (the fifth scale degree, which becomes the root or the bass of V). This contrary half-step resolution of the augmented sixth interval — the defining feature of the chord family — creates a moment of maximum chromatic tension immediately before the dominant arrives.

The German augmented sixth requires special treatment: it resolves best to the cadential 6/4 rather than directly to V in root position, because direct resolution creates parallel fifths between the Eb-to-D motion and the Ab-to-G motion. Interposing the cadential 6/4 (I 6/4) allows the Eb to resolve to E natural (the third of I 6/4) before the full dominant arrives — eliminating the parallel fifths and smoothing the voice leading.

Style Applications

In Classical music, chromatic predominants are associated with moments of particular emotional weight — typically at the approach to a final cadence or at a climactic structural point. Beethoven's use of the Neapolitan sixth is memorable and frequent: the opening of the "Moonlight" Sonata (Op. 27 No. 2) is saturated with the Neapolitan harmony. Schubert used the Neapolitan as one of his signature harmonic gestures, particularly in his songs, where the chord's distant, softened quality matches the emotional world of his poetry.

The augmented sixth chords appear throughout the classical and Romantic repertoire wherever maximum urgency before a dominant is desired. A cadential approach using Ger+6-I 6/4-V-I is one of the most powerful cadential formulas in classical music. Beethoven's late quartets and piano sonatas use all three augmented sixth types with great frequency and expressive sophistication.

In jazz, the Neapolitan appears as the bII7 chord — the flat-two dominant seventh. This is the tritone substitution for the dominant: in

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C major, Db7 substitutes for G7, and its resolution to I (C major) is identical in voice-leading terms to the Neapolitan's resolution. Jazz musicians use the bII7 constantly, not as a historical borrowing from classical harmony but as a naturally evolved voice-leading resource.

In film music, chromatic predominants — particularly the Neapolitan — create moments of emotional depth and harmonic richness that purely diatonic harmony cannot match. A score that has been harmonically simple for a long stretch will achieve maximum effect by introducing a Neapolitan sixth at a moment of high dramatic import.

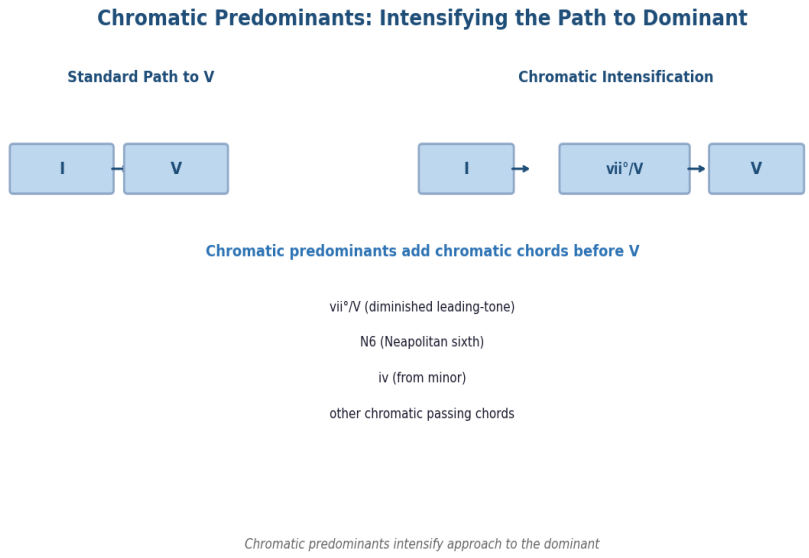


Figure 23.1: Chromatic predominants intensify the approach to the dominant beyond what diatonic predominant chords can achieve — the Neapolitan sixth and the augmented sixth chords each apply chromatic voice leading to the predominant function, driving toward V with maximum urgency.

Key Takeaways

- Chromatic predominants — the Neapolitan sixth and the augmented sixth chords — intensify the approach to V beyond what diatonic predominants can achieve, using chromatic voice leading to create maximum urgency
- The Neapolitan sixth (N6) is a major triad on the lowered second scale degree in first inversion; its lowered-second note

falls by half step to the dominant root, creating a sighing, distant quality

- The three augmented sixth chords (Italian, French, German) all contain an augmented sixth interval (b6 to #4) that resolves by contrary motion — both notes moving by half step into the fifth scale degree
- The German augmented sixth resolves best through the cadential 6/4 to avoid parallel fifths; it is enharmonically equivalent to the dominant seventh of bII, connecting it to the jazz tritone substitution
- Chromatic predominants appear at moments of maximum emotional weight in classical and Romantic music; in jazz, the bII7 chord is the evolutionary descendant of the Neapolitan, serving as the tritone substitution for the dominant

- Chromatic Predominants expands harmonic vocabulary beyond diatonic resources
- These techniques maintain coherence through functional logic or common-tone connections
- Careful voice leading prevents chromatic enrichment from sounding chaotic
- Understanding when and how to use these techniques is essential to advanced composition
- Context and style determine the appropriateness and effect of alterations

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Chapter 24: Diminished Chords and Passing Harmony

The Diminished Seventh Chord

The fully diminished seventh chord — four notes stacked in minor thirds — is the most symmetrical sonority in Western harmony. Its four notes divide the octave into four equal parts of three half steps each. In C: B-D-F-Ab. This symmetry means that the chord has no single root in the traditional sense: B°7, D°7, F°7, and Ab°7 are all the same chord, merely respelled with a different note on the bottom.

This symmetry is not merely a theoretical curiosity — it has profound practical consequences. A diminished seventh chord can resolve smoothly (by moving one or more voices by half step) to any of four major or minor chords. B°7 can resolve to C major, Eb major, F# major, or A major — or to their relative minor counterparts. This makes the diminished seventh chord the most harmonically flexible chord in the tonal vocabulary: from a single diminished seventh chord, the music can move convincingly in eight different harmonic directions.

The diminished seventh chord is maximally unstable. All four of its tones are tendency tones that pull toward resolution. This instability is what makes it so useful: it generates intense harmonic tension that the composer can direct wherever they choose.

The Half-Diminished Seventh Chord

The half-diminished seventh chord — also written as m7b5 — differs from the fully diminished seventh by one note: its seventh is a minor seventh rather than a diminished seventh. In C: B-D-F-A. This chord is less symmetrical than the fully diminished seventh, and consequently less tonally ambiguous — it has a clear root and a clear resolution tendency.

The half-diminished seventh chord appears diatonically as the seventh chord on the seventh scale degree in major (vii°7 in C major: B-D-F-A) and on the second scale degree in minor (ii°7 in A minor: B-D-F-A). In its diatonic role as vii°7, it functions as an incomplete dominant seventh — substituting for V7 at cadential points with a

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somewhat softer sound. In its minor role as ii°7, it is the standard predominant chord in the minor ii-V-i of jazz harmony.

Passing and Neighbor Diminished Chords

Diminished chords serve frequently as passing chords — harmonies that smooth the voice leading between two more stable chords without having strong functional implications of their own. A passing diminished chord typically moves by half step in the bass from one stable chord to the next, and the chord it creates on that passing bass note is a diminished seventh built on that chromatic bass note.

The chromatic passing chord between I and ii — the chord #I°7 in the bass — is one of the most common passing diminished usages: C major moving to Db°7 (or C#°7) moving to D minor. The bass moves C-C#-D in half steps, and the C#°7 chord above the chromatic passing bass note connects the two stable harmonies with smooth voice leading. Similarly, the passing #iv°7 — built on the raised fourth scale degree between IV and V — smoothly connects the subdominant and dominant: F major-F#°7-G major, with the bass ascending F-F#-G.

Neighbor diminished chords surround a stable chord from above or below. A diminished seventh a half step above the tonic (bII°7) or a half step below (vii°7) can function as a chromatic embellishment of the tonic itself, intensifying the sense of I by surrounding it with chromatic neighbors that resolve into it.

Enharmonic Reinterpretation and Modulation

The symmetrical structure of the fully diminished seventh chord creates a unique modulation technique: enharmonic reinterpretation. Because B°7 and D°7 and F°7 and Ab°7 are all the same notes, the same chord can be heard as leading to four different keys. A composer can sustain a diminished seventh chord and then resolve it in an unexpected direction — the surprise resolution arrives as a modulation to a remote key, but the chord that effected the modulation was present all along.

This technique appears repeatedly in Beethoven and Schubert, who use sustained diminished seventh chords at moments of maximum

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harmonic ambiguity — the music seems to pause, harmonically unmoored, before the resolution clarifies a new tonal direction. The listener experiences the modulation as sudden but logical: logical because the diminished chord contained the new key's leading tone; sudden because it was impossible to predict which of its four possible resolutions would be chosen.

Style Applications

In classical music, diminished chords serve three primary roles: as the leading-tone chord in cadential progressions (vii°7-I), as passing chords between stable harmonies (the chromatic passing bass), and as vehicles for modulation through enharmonic reinterpretation. Beethoven's development sections make extensive use of all three, using the harmonic ambiguity of the diminished seventh to destabilize the tonal center and then resolving it unexpectedly to signal the beginning of the retransition.

In jazz, the half-diminished chord (m7b5) is fundamental to minor-key harmony. Every minor ii-V-i in jazz begins with a half-diminished chord on the second scale degree. Jazz musicians refer to this chord constantly in the context of minor harmony — learning to voice and resolve it smoothly is a basic skill. The fully diminished seventh also appears in jazz as a passing chord and as the basis for diminished scale improvisation.

In film and game music, diminished seventh chords create suspense, mystery, and instability. Their unresolved, tonally ambiguous quality makes them ideal for underscore that needs to signal threat or uncertainty without committing to a clear harmonic direction. A sustained diminished seventh chord — particularly at a low dynamic — is one of the most effective tools for creating atmospheric dread.

In gospel and blues-derived music, the diminished seventh appears as the #IV°7 (the tritone-related diminished chord) used as a passing chord between IV and I in the plagal cadential area. This distinctive sound — heard in gospel piano playing and blues-influenced jazz — uses the diminished chord not for classical voice leading but as a coloristic passing sonority with a distinctly earthy, soulful quality.

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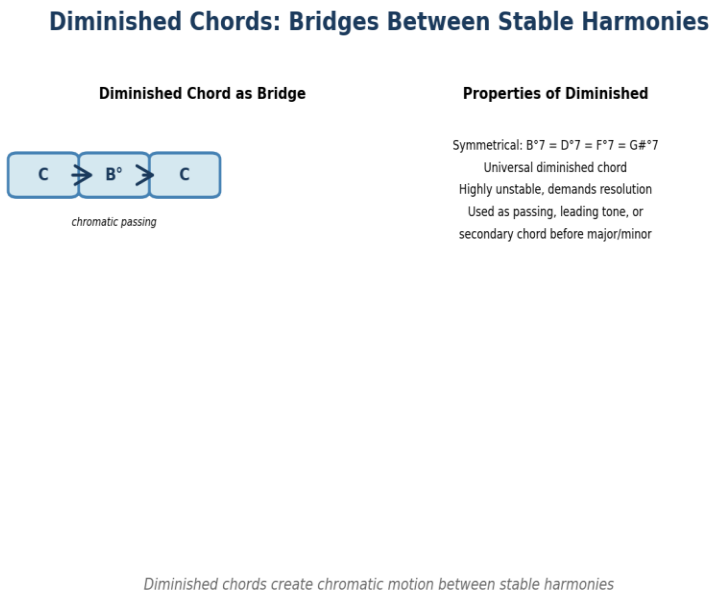


Figure 24.1: Diminished chords function as harmonic bridges — their symmetrical construction allows them to connect stable harmonies by half-step voice leading in multiple directions simultaneously, making them among the most versatile and chromatic tools in tonal harmony.

Key Takeaways

- The fully diminished seventh chord divides the octave into four equal minor thirds, making it enharmonically equivalent in four spellings and capable of resolving convincingly to eight different target chords
- The half-diminished seventh (m7b5) has a clear root and resolution tendency; it appears diatonically as vii°7 in major and ii°7 in minor, where it is fundamental to jazz minor ii-V-i harmony
- Passing diminished chords smooth voice leading between stable harmonies with chromatic bass motion; the #I°7 between I and ii and the #iv°7 between IV and V are the most common passing applications
- Enharmonic reinterpretation of the fully diminished seventh enables sudden modulations to remote keys — the chord is sustained, then resolved unexpectedly in a new direction, effecting the key change
- Diminished chords appear as cadential leading-tone chords in classical music, as ii°7 in jazz minor harmony, as suspense-creating

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sustained chords in film music, and as passing #IV°7 in gospel and blues-influenced styles

- Diminished Chords and Passing Harmony expands harmonic vocabulary beyond diatonic resources
- These techniques maintain coherence through functional logic or common-tone connections
- Careful voice leading prevents chromatic enrichment from sounding chaotic
- Understanding when and how to use these techniques is essential to advanced composition
- Context and style determine the appropriateness and effect of alterations

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Chapter 25: Augmented Chords, Suspensions, and Added-Note Color

Beyond the Triad: The Extended Harmonic Palette

Functional harmony is built on triads and seventh chords — three and four-note structures. But composers have always sought to enrich these basic sonorities with additional notes that create new colors, delay resolutions, and thicken the harmonic texture. The augmented triad, the suspension, and the added-note chord each represent a different approach to this goal. They are not independent harmonic structures so much as enrichments of the triad and seventh chord vocabulary — techniques for adding color within the functional framework rather than departing from it.

The Augmented Triad

The augmented triad consists of two superimposed major thirds: a root, a major third above, and an augmented fifth above (which is a major third above the third). In C: C-E-G#. Like the diminished seventh chord, the augmented triad is symmetrical — it divides the octave into three equal parts of four half steps each. Any inversion of an augmented triad contains the same interval structure, making it tonally ambiguous: C+, E+, and Ab+ (=G#+ enharmonically) are all the same notes.

The augmented triad appears diatonically in harmonic minor — the chord built on the third scale degree (III+) contains the raised leading tone and the natural fifth above the tonic, creating an augmented triad. In C minor: Eb-G-B (Eb augmented). This chord is inherently unstable and typically functions as a passing harmony between III (the Eb major triad) and IV (the F major triad or F minor triad), with the augmented fifth (B) resolving up by half step to C.

The augmented triad also appears as a chromatic passing chord in major keys, often between I and I6 (the tonic in first inversion): C major — C augmented — C/E. The G# in the augmented triad resolves up by half step to A, creating a smooth chromatic bass against a sustained upper harmony. This chromatic passing use of the augmented triad is common in late Romantic and impressionist music.

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Suspensions

A suspension is a non-chord tone that delays the arrival of a chord member by sustaining a note from the preceding chord until it resolves by step — usually downward — into the expected harmony. The most common suspensions are identified by the interval they create above the bass: the 4-3 suspension (the fourth resolves down to the third), the 7-6 suspension (the seventh resolves down to the sixth), and the 9-8 suspension (the ninth resolves down to the octave).

Suspensions create temporary dissonance within a functional chord. When V7 is heard beneath a sustained fourth (creating V sus4), the fourth delays the arrival of the chord's third. The fourth creates a moment of unresolved tension — the chord sounds like a dominant, but the characteristic third is missing, replaced by the more neutral suspended fourth. When the fourth resolves down to the third, the dominant seventh character of the chord emerges fully, and the resolution to I feels all the more satisfying for the delay.

The suspension has a three-part structure: preparation (the suspended note appears as a chord tone in the preceding harmony), suspension (the note is held while the surrounding harmony changes), and resolution (the note resolves by step, usually downward, into a chord tone). All three stages are typically present, though the preparation is sometimes omitted in instrumental music where the suspended note begins directly on the beat of the new chord.

Added-Note Chords

Added-note chords enrich the basic triad with additional pitch classes that are not part of the conventional seventh, ninth, eleventh, or thirteenth extensions but add color without creating suspension or passing-note dissonance. The most common is the added-ninth chord (add9 or add2): a major or minor triad with the ninth added without the seventh. In C major: C-E-G-D (Cadd9). This chord has the warmth of the major triad plus the color of the ninth, without the added tension that the seventh would bring.

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The add6 chord — a triad with an added major sixth — is another common sonority: C-E-G-A (C6). This chord was particularly common in the 1940s and 1950s and appears frequently in jazz voicings and popular song harmonizations. The sixth adds warmth and complexity without creating the dominant-seventh tension that would demand resolution.

Extended jazz chords — 9th, 11th, and 13th chords — are structural parts of jazz harmony rather than mere added colors. A Cmaj13 chord contains all seven diatonic notes of the C major scale stacked in thirds: C-E-G-B-D-F-A. In practice, jazz voicings omit several of these tones and emphasize the ones that define the chord's quality and create the most interesting harmonic color. The choice of which tones to include and which to omit is one of the primary artistic decisions of jazz chord voicing.

Chord Color and Expressivity

Each of these techniques — augmented triads, suspensions, added-note chords — contributes a distinct quality to the harmonic palette. Augmented chords create instability and motion, pulling toward resolution with particular urgency because the raised fifth is a strong tendency tone. Suspensions create temporal tension, delaying satisfaction and making the resolution more expressive when it finally arrives. Added-note chords create richness and complexity without tension — they fill the harmonic space without demanding resolution.

The expressive power of these techniques comes partly from contrast. A passage of pure triads followed by a sudden suspension has enormous impact. A chord sequence of added-ninth chords in a pop song creates warmth and sophistication compared to bare triads. The technique gains its force not from its internal properties alone but from what it replaces or follows.

Style Applications

In classical music, suspensions are among the primary expressive devices of counterpoint. The 4-3 and 7-6 suspensions appear in virtually every Bach chorale and in the cadential approaches of

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most classical phrase endings. The 9-8 suspension was particularly beloved by Handel. Augmented triads appear in Romantic harmony as chromatic passing chords and as the III+ chord in minor-key progressions.

In jazz, extended chords — ninths, elevenths, thirteenths — are fundamental to the style. A jazz pianist typically voices chords as seventh chords plus extensions, choosing the extensions that create the most interesting harmonic color against the melody and bass. The sus4 chord (suspended fourth dominant) is ubiquitous in jazz from the 1960s onward, particularly in the modal jazz of Miles Davis and Herbie Hancock, where unresolved suspensions create an open, floating harmonic texture.

In pop music, added-note chords — particularly the add9 — became fashionable from the 1970s onward. Singer-songwriter accompaniments frequently use open-voiced add9 chords (often played with an open second string on guitar) to create a spacious, contemplative sound. The sus2 and sus4 guitar chords — essentially suspended triads without the third — are also extremely common in pop and rock.

In impressionist music (Debussy, Ravel), added notes and unresolved suspensions become structural rather than ornamental. Debussy frequently uses chords with added sixths and ninths that never resolve in the traditional sense — the chord is simply heard as a color, and the next chord is another color, with no functional obligation between them.

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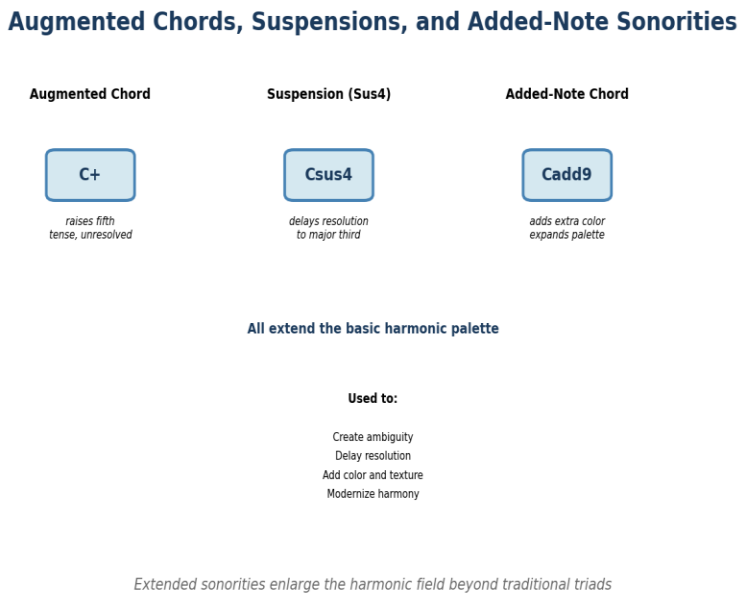


Figure 25.1: Augmented chords, suspensions, and added-note sonorities extend the basic triad and seventh chord vocabulary by introducing notes that delay resolution, thicken the harmonic texture, or create coloristic dissonance — each technique enlarges the expressive range of harmony without leaving the functional framework.

Key Takeaways

- The augmented triad (two stacked major thirds) is symmetrical and tonally ambiguous; it appears diatonically as III+ in harmonic minor and as a chromatic passing chord in major keys, always pulling toward resolution via its raised fifth
- A suspension delays a chord tone by sustaining the preceding note through the chord change, creating temporary dissonance that resolves by step — the 4-3, 7-6, and 9-8 suspensions are the most common types
- Added-note chords (add9, add6) enrich the triad with color tones that create warmth and complexity without the tension of suspensions or the functional demands of seventh chords
- Extended jazz chords (9th, 11th, 13th) stack all seven scale degrees in thirds; jazz voicing practice selects from these tones to create specific colors, emphasizing guide tones and characteristic extensions

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- These techniques gain expressive power through contrast: suspensions are most effective after plain harmony, added-note chords most warm against bare triads, augmented chords most striking within otherwise stable progressions

- Augmented Chords, Suspensions, and Added-Note Color expands harmonic vocabulary beyond diatonic resources
- These techniques maintain coherence through functional logic or common-tone connections
- Careful voice leading prevents chromatic enrichment from sounding chaotic
- Understanding when and how to use these techniques is essential to advanced composition
- Context and style determine the appropriateness and effect of alterations

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Chapter 26: Chromatic Mediant Relationships

Third Relations Beyond the Diatonic

Diatonic harmony connects chords primarily through fifth relations (V-I) and step relations (IV-V). Third relations within the key — I moving to vi, or IV moving to ii — are common but create relatively smooth, harmonically close connections because the chords share multiple common tones within the same key.

Chromatic mediants take third relations outside the key. A chromatic mediant of C major is not Am (the diatonic mediant) or Em (the diatonic submediant) but rather E major, Ab major, Eb major, or A major — major triads a third away from C whose roots lie outside the C major scale. These chords share exactly one common tone with C major (C major and E major share E; C major and Ab major share C; C major and Eb major share G; C major and A major share A and E) while introducing two entirely foreign pitches. The result is a harmonic relationship that is simultaneously smooth (one common tone provides continuity) and surprising (two new pitches create sudden color change).

The Four Chromatic Mediant Relationships

From any major triad, there are four chromatic mediant relationships — two by ascending third and two by descending third, each available in major or minor quality.

From C major ascending by major third: E major (C major → E major). The common tone is E. The new pitches are G# and B, both foreign to C major. The move creates a sudden brightening — both new pitches are sharper than their C major equivalents.

From C major descending by major third: Ab major (C major → Ab major). The common tone is C. The new pitches are Ab and Eb, both foreign to C major. The move creates a sudden darkening — both new pitches are flatter than their C major equivalents.

From C major ascending by minor third: Eb major (C major → Eb major). The common tone is G. The new pitches are Eb and Bb. This is

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the bIII chord — also reachable as a borrowed chord from the parallel minor.

From C major descending by minor third: A major (C major → A major). The common tone is A. The new pitches are A natural (a color in C major context) and C# (foreign to C major). This is the VI major chord — the major form of the submediant.

Voice Leading in Chromatic Mediant Progressions

The common tone between chromatic mediants is the key to smooth voice leading. In a C major → E major progression, the E that was the third of C major becomes the root of E major. If this E is retained in the same voice while the other voices move, the transition is acoustically coherent: the listener hears the continuity of the sustained E even as the surrounding harmony changes dramatically.

The two non-common tones in a chromatic mediant progression each move by half step or whole step in the direction of the new chord. In C major → E major: G moves to G#, and C moves to B. Both motions are smooth — a half step and a half step respectively. The result is a progression that sounds far more distant than any diatonic third relation but far smoother than the root motion alone would suggest.

Chromatic Mediants in Romantic Music

The Romantic era embraced chromatic mediant relationships as one of its signature harmonic gestures. Where Classical composers used these relationships sparingly and usually as modulation techniques, Romantic composers deployed them as coloristic tools — harmonic events with immediate expressive impact that required no preparation and no prolonged establishment of a new key.

Schubert was perhaps the greatest explorer of chromatic mediant relationships. His songs and piano works move fluidly between keys a third apart — C major to E major, C major to Ab major, E major to C major again — with an ease that suggests these relationships feel as natural to him as dominant-tonic motion. The effect in Schubert is of

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harmonic light and shadow: major chords a third apart create sudden brightening or darkening of the emotional register.

Brahms used chromatic mediants as structural tools, organizing large formal sections around third-related key areas. His First Symphony moves from C minor in its opening to E major at a climactic point of the finale — a chromatic mediant relationship at the level of the entire symphony, spanning nearly forty minutes of music. Wagner's harmony is saturated with chromatic mediants, particularly in his orchestral transitions where the music moves fluidly through a series of third-related harmonies without establishing any single key.

Chromatic Mediants Beyond the Romantic Era

The chromatic mediant continued to evolve after the Romantic era. In late 19th and early 20th century music, composers pushed the technique toward a non-functional aesthetic: chromatic mediants appeared in chains, each chord moving to a third-related chord without any dominant-tonic anchoring. This style — sometimes called "third relations" or "harmonic color" — prefigured the non-functional progressions of the 20th century.

In film music, chromatic mediants are perhaps the most ubiquitous harmonic technique of the genre. The sudden major-third shift — C major suddenly moving to E major or Ab major — creates an immediate sense of wonder, revelation, or emotional elevation that has become the harmonic language of cinematic awe. John Williams, Hans Zimmer, and James Horner all use chromatic mediant relationships as their primary tool for creating harmonic scale and emotional impact. The famous "Luke's Theme" from Star Wars uses a chromatic mediant relationship as its central harmonic gesture.

Style Applications

In classical music, chromatic mediants appear most frequently in Romantic-era works — Schubert lieder, Brahms symphonies, Wagner operas — as both local coloristic moves and large-scale key relationships. In earlier classical music, they appear primarily as part of modulation strategies or as brief chromatic coloring within a phrase.

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In jazz, chromatic mediant relationships appear as chord substitutions and reharmonization techniques. A ii-V-I in C major might be reharmonized as a ii-V-I in E major with the final chord becoming C major — a chromatic mediant relationship at the cadence. This creates a surprising but acoustically smooth arrival at the tonic.

In rock and metal, chromatic mediant relationships appear in riff-based progressions where major chords move by thirds without functional logic — the progression I-bVI-bIII-I (C-Ab-Eb-C) is a common rock progression built entirely on chromatic mediant relationships. The power chord (root and fifth only, without the third) makes these relationships easy to execute on guitar and extremely effective in high-volume contexts.

In film music, the chromatic mediant is the single most characteristic harmonic technique of the genre. The major-third upward shift (bVI to I, or I to III) has become the harmonic signature of cinematic revelation and triumph. Its appearance in countless scores has trained audience ears to associate the chromatic mediant with expanded emotional scope.

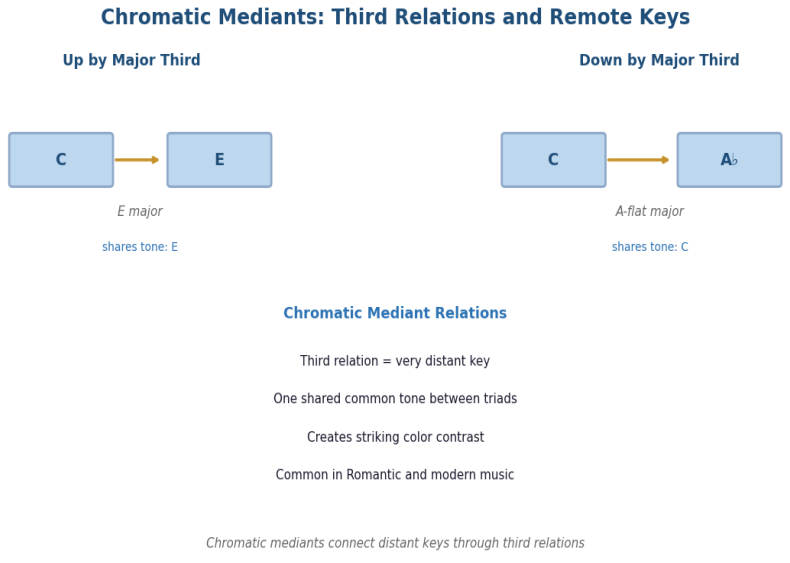


Figure 26.1: Chromatic mediant relationships connect major or minor triads whose roots are a major or minor third apart and which share one common tone — the move between them is harmonically distant yet acoustically smooth, creating a striking, coloristic effect that Romantic composers made one of their signature harmonic gestures.

Key Takeaways

- Chromatic mediants connect triads whose roots are a major or minor third apart; they share one common tone while introducing two foreign pitches, creating a simultaneously smooth and surprising harmonic move
- The four chromatic mediants of C major are: E major (ascending major third), Ab major (descending major third), Eb major (ascending minor third), and A major (descending minor third)
- Voice leading is smooth because the common tone is retained while the other two voices move by step — the acoustic continuity of the sustained tone offsets the harmonic distance of the third relation
- Schubert, Brahms, and Wagner made chromatic mediant relationships a signature of Romantic harmonic language, using them as coloristic gestures and large-scale key relationships simultaneously
- In film music, the upward major-third chromatic mediant has become the harmonic language of cinematic awe and revelation; in rock, third-related power chord progressions use the same relationships without the common-tone voice leading

- Chromatic Mediant Relationships expands harmonic vocabulary beyond diatonic resources

Listening Examples

"Der Erlkönig" D. 328 — Franz Schubert
Classical label channels · Search: Schubert Erlkonig official recording
youtube.com/results?search_query=Schubert+Erlkonig+official+recording

Links go to official artist and label YouTube channels for longevity.

- These techniques maintain coherence through functional logic or common-tone connections
- Careful voice leading prevents chromatic enrichment from sounding chaotic
- Understanding when and how to use these techniques is essential to advanced composition
- Context and style determine the appropriateness and effect of alterations

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PART IV: MODULATION AND TONAL CHANGE

Chapter 27: What It Means to Change Key

The Distinction Between Tonicization and Modulation

Throughout this volume, we have encountered moments where a progression temporarily suggests a key other than the home tonic — secondary dominants that briefly illuminate a secondary scale degree, borrowed chords that introduce parallel-mode colors, chromatic mediants that shift the harmonic register momentarily. None of these techniques constitutes a genuine key change. They are visitors, not residents. The home tonic was never truly abandoned.

Modulation is different. When a piece modulates, it genuinely relocates its tonal center — it establishes a new tonic that functions as a stable home, not merely as a temporary arrival. After a modulation, the original key is gone from the listener's immediate harmonic experience. The new key is where the music now lives. Understanding modulation begins with understanding this distinction: tonicization is a brief, passing orientation toward a secondary pitch center; modulation is a committed relocation to a new one.

What Establishes a New Tonic

A new tonic is established when three conditions are met: the new key is introduced with sufficient harmonic evidence to identify it clearly, the new key is sustained long enough to become the primary reference point for the listener's ear, and the original key recedes from harmonic memory.

The harmonic evidence for a new key typically includes a dominant-to-tonic resolution in the new key — a V-I (or V7-I) authentic cadence confirming the new tonic. A single secondary dominant followed by a brief arrival is not enough; the new tonic must receive at least a full authentic cadence, and ideally several measures of harmonic activity around it, before the ear accepts it as a new home.

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Sustaining the new key is equally important. If the music returns immediately to the original key after the cadence, the new tonic was not truly established — it was tonicized. A genuine modulation requires the new key to persist long enough that the listener loses the immediate sense of the original tonic as home. This threshold varies: in a Schubert song of thirty measures, even eight measures in the new key may constitute a genuine modulation. In a Beethoven symphony movement of four hundred measures, only an extended stay will be perceived as true modulation.

Why Composers Change Keys

Modulation serves several distinct compositional purposes. Each implies different techniques and different scales of harmonic motion.

Contrast is the most basic purpose. A verse in one key followed by a chorus in another creates tonal variety that sustains interest over a long formal span. Moving to the dominant (V) for the second theme in a sonata exposition creates a sense of arrival and contrast while remaining harmonically close to the home key. Moving to the relative major in a minor-key work creates a brightening that functions as both tonal contrast and emotional relief.

Development is a more complex purpose. In the development section of a sonata form, modulations are rapid, exploratory, and often remote — the music visits several distantly related key areas in succession, each modulation destabilizing the tonal center further before the final dominant preparation restores it. Here, the individual modulations do not need to establish their new keys deeply; the goal is harmonic restlessness, the sense of being between keys rather than in any one of them.

Narrative or expressive purpose is the most subtle. A song that modulates upward by a half step or whole step for its final verse creates an intensification that the unchanged text alone cannot achieve. A film score that modulates from minor to major at the moment of resolution enacts the emotional shift through harmonic means. These modulations are not structural necessities but expressive choices — the key change is the meaning.

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Key Relationships and Distance

Not all modulations are equally smooth. The ease of a modulation depends on the relationship between the two keys involved — specifically, how many pitches they share and how close they are on the circle of fifths.

Closely related keys share five or six of their seven diatonic pitches. The closely related keys of C major are: G major (one sharp), F major (one flat), A minor (relative minor), E minor (relative minor of G major), and D minor (relative minor of F major). A modulation between any of these keys can be achieved with great smoothness because the shared pitches create natural harmonic continuity.

Distantly related keys share fewer pitches. C major and F# major share only one diatonic pitch (G#/Ab is the only tone that appears in both scales when spelled enharmonically). A direct modulation between these keys requires significant chromatic motion and will sound abrupt or startling unless carefully prepared. This abruptness can be a feature rather than a flaw — a sudden remote modulation creates maximum harmonic surprise.

Hearing Modulation

Developing the ear to hear modulation is one of the most important skills in harmonic listening. The first sign of an approaching modulation is typically the appearance of a chromatic pitch — a note not in the current key. This chromatic note is often the leading tone of the approaching key, which arrives as the third of an applied dominant chord. The ear begins to reorient toward the new pitch center.

The confirmation of the modulation comes with the authentic cadence in the new key. At the moment of cadential arrival — the V resolving to I in the new key — the listener's ear switches its orientation, and the new tonic becomes the point of reference. The original tonic recedes into long-term memory rather than immediate harmonic context.

After a modulation is confirmed, the listener hears subsequent harmonies in relation to the new tonic. A chord that was IV in the

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original key may now be analyzed as bVII in the new key, or as bIII, depending on the new key's location. This shift in analytical perspective — from one key to another — is the clearest sign that a genuine modulation has occurred.

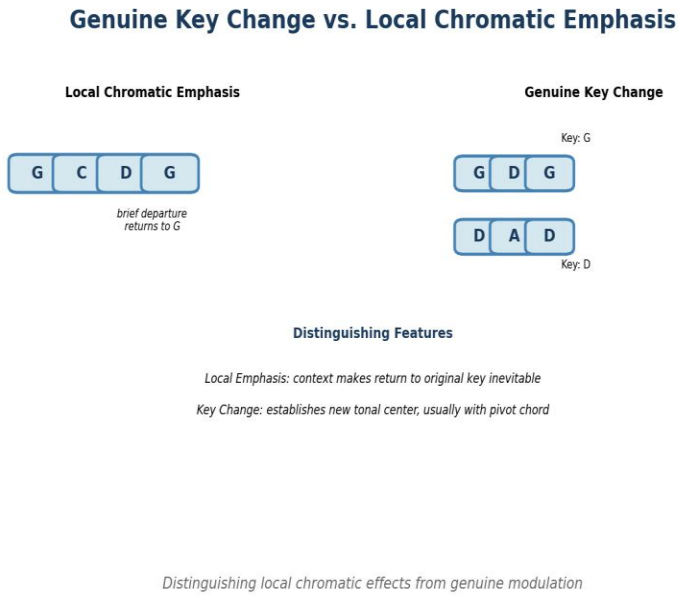


Figure 27.1: A genuine key change requires more than a chromatic inflection or a brief secondary dominant — it demands sufficient harmonic motion to establish a new tonic as a stable center, and it distinguishes itself from mere tonicization by the duration and confirmation of that new center.

Key Takeaways

- Modulation is a genuine relocation of tonal center — distinct from tonicization, which briefly suggests a secondary key without establishing it; the difference lies in the duration and confirmation of the new tonic
- A new tonic requires: clear harmonic evidence (an authentic cadence in the new key), sufficient duration to displace the original tonic from immediate memory, and harmonic activity around the new center
- Composers modulate for contrast (new sections or themes), development (exploratory harmonic instability), and expressive purpose (emotional intensification or narrative meaning)

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- Key distance determines the smoothness of a modulation: closely related keys (one flat or sharp apart on the circle of fifths) modulate easily; distantly related keys require more preparation or create deliberate harmonic shock
- The ear detects modulation through an initial chromatic leading tone of the new key, confirms it through the authentic cadence in the new key, and reorients all subsequent harmonies relative to the new tonic

- What It Means to Change Key is fundamental for extending large-scale harmonic structure
- Multiple modulation strategies exist; choice depends on desired effect
- Establishing a new tonic requires sufficient harmonic motion
- Return to the original key provides powerful structural closure
- Modulation is central to sonata form and other large-scale structures

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Chapter 28: Pivot-Chord Modulation

The Elegance of the Pivot

Of all modulation techniques, pivot-chord modulation is the smoothest and most intellectually elegant. It works by exploiting a chord that belongs simultaneously to two different keys — one that is diatonic in the original key and also diatonic in the destination key. The listener hears this chord as part of the original key until the harmony that follows it reveals the new harmonic context. In retrospect, the chord is reinterpreted as belonging to the new key.

This double membership is the defining feature of the pivot chord. It is not a chromatic chord, not an applied dominant, not a borrowed sonority. It is a purely diatonic chord in both keys simultaneously — one of those rare harmonic moments where two keys share a common vocabulary. The composer exploits this shared membership to step through a door that exists naturally in the tonal system.

Finding Pivot Chords

Any chord that is diatonic in both the original key and the destination key can serve as a pivot chord. The more chords two keys share, the more pivot chord options exist. C major and G major share six of their seven diatonic chords: I in C (C major) = IV in G; ii in C (D minor) = vi in G; iii in C (E minor) = vi... no, iii in C is E minor = vi would be E minor in G too — yes; IV in C (F major) is not in G major; V in C (G major) = I in G; vi in C (A minor) = ii in G.

The table of shared chords between C major and G major yields five pivot chord possibilities: C major (I in C = IV in G), D minor (ii in C = v in G — though v minor is not diatonic in major), E minor (iii in C = vi in G), G major (V in C = I in G), A minor (vi in C = ii in G). In practice, the most useful pivots are those that function differently in the two keys — a chord that is tonic in the first key but dominant or predominant in the second creates the strongest sense of modulation, because the functional shift accompanies the harmonic one.

Closely related keys offer many pivot chord options; distantly related keys offer fewer. C major and F# major share almost no diatonic chords, making pivot-chord modulation between them nearly

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impossible without chromatic adjustment. Composers either avoid direct modulations between remote keys or use different techniques — direct modulation, sequential modulation, or enharmonic reinterpretation.

The Pivot Chord in Context

A pivot-chord modulation unfolds in three phases. In the approach phase, the music is clearly in the original key, and the pivot chord arrives as a normal diatonic harmony. There is nothing unusual about this chord — it belongs to the original key without question, and the listener hears it as such.

In the pivot phase, the chord itself sounds — and this is the moment of double meaning. At this instant, the chord belongs to both keys. Analytically, we write a double Roman numeral label: the original key's analysis above the bar and the new key's analysis below, connected by a bracket or slash. The chord is, for this brief moment, genuinely ambiguous.

In the resolution phase, the harmony after the pivot chord reveals the new key unambiguously. Typically, an applied dominant of the new tonic (V/new key) follows the pivot chord, immediately pointing toward the new tonic. The V7 in the new key makes the modulation unmistakable: the leading tone of the new key has arrived, and the pivot chord is retrospectively understood as a diatonic chord in the new key.

Pivot Chords at Different Formal Scales

Pivot-chord modulation operates at every formal scale. At the phrase level, a modulation between closely related keys can be accomplished in four to six measures: establish the original key, arrive at the pivot chord, present the applied dominant of the new key, and cadence in the new key. The entire modulation occupies a single phrase.

At the section level, a pivot chord can effect a modulation that spans the boundary between two large sections — a verse ending on a chord that functions as the dominant of the new key for the

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chorus, for example. The listener experiences the transition as smooth and inevitable, even across a sectional boundary.

In classical sonata form, the modulation from tonic to dominant in the exposition is typically achieved by pivot-chord modulation. The music establishes the tonic key firmly in the opening theme, modulates smoothly to the dominant key using a pivot chord, and then presents the second theme in the dominant key. The pivot-chord technique ensures that the modulation feels like a natural continuation of the music rather than an interruption.

Style Applications

In classical music, pivot-chord modulation is the standard technique for all routine key changes. Mozart's sonata movements use it constantly, modulating between closely related keys with such smoothness that the listener may not consciously register the key change until the new tonic is confirmed. The elegance of the technique is part of the classical aesthetic: nothing forced, nothing abrupt, everything connected.

In Baroque music, pivot-chord modulations are equally common, but they often occur within sequences — the pivot chord appears as part of a circle-of-fifths or step-sequence, and the modulation is accomplished almost incidentally as the sequence moves through multiple key areas. Bach's preludes and fugues modulate to the dominant, subdominant, and relative minor through pivot chords embedded in sequential motion.

In jazz, the pivot chord appears as a common-tone modulation variant: a chord shared between two key areas serves as the launch point for a new section in a different key. Jazz lead sheets sometimes show this as a sustained chord labeled in both keys simultaneously — a practical notation for what is theoretically a pivot.

In pop and musical theatre, pivot-chord modulations create seamless key changes between verse and chorus, between sections, or between songs in a medley. When a key change in a pop song feels natural and inevitable rather than sudden, a pivot chord is usually responsible. The most effective pop modulations are

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often the ones the listener does not consciously hear — the new key is simply there, as if it had always been the destination.

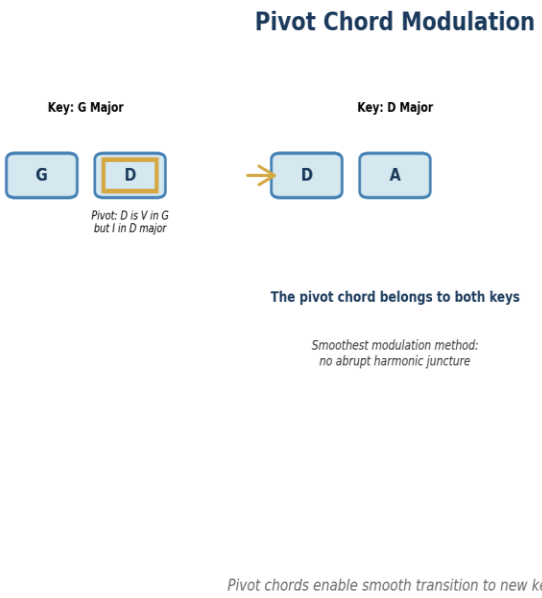


Figure 28.1: A pivot chord belongs simultaneously to both the old and the new key — it is diatonic in the original key until the moment of modulation, and immediately reinterpreted as a diatonic chord in the new key, allowing the transition to be acoustically seamless.

Key Takeaways

- A pivot chord is diatonic in both the original and destination key simultaneously — heard in the first key until the following harmony reveals the new context, then retrospectively understood in the new key
- Finding pivot chords requires identifying chords shared between two keys; closely related keys share many, distantly related keys share few
- A pivot-chord modulation unfolds in three phases: approach (chord in original key context), pivot (double-meaning moment), and resolution (applied dominant or cadence in new key confirms the arrival)
- The strongest pivots use a chord that functions differently in the two keys — a tonic in the original key that becomes predominant

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or dominant in the new key, creating a functional shift alongside the harmonic one

- Pivot-chord modulation is the standard technique in classical sonata form, Baroque sequential writing, and pop song transitions — wherever smoothness and logical continuity are preferred over abruptness

- Pivot-Chord Modulation is fundamental for extending large-scale harmonic structure

Listening Examples

"Eine kleine Nachtmusik" K. 525 — W.A. Mozart
Berlin Philharmonic · Search: Mozart Eine Kleine Nachtmusik official
youtube.com/results?search_query=Mozart+Eine+Kleine+Nachtmusik+official

Links go to official artist and label YouTube channels for longevity.

- Multiple modulation strategies exist; choice depends on desired effect
- Establishing a new tonic requires sufficient harmonic motion
- Return to the original key provides powerful structural closure
- Modulation is central to sonata form and other large-scale structures

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Chapter 29: Direct, Sequential, and Common-Tone Modulation

When There Is No Pivot

Pivot-chord modulation works because two keys share diatonic chords. But not every modulation can rely on shared diatonic material. Remote key changes, sudden expressive shifts, and certain formal situations demand modulation techniques that do not depend on a shared chord. Three such techniques — direct modulation, sequential modulation, and common-tone modulation — each solve the problem differently, and each produces a distinctly different expressive effect.

Direct Modulation

Direct modulation — also called phrase modulation or abrupt modulation — juxtaposes two keys without any preparation or transitional chord. The music is in the original key, then it is simply in the new key, with nothing in between. The new key is announced either by the new tonic chord arriving without preparation or by the V7 of the new key appearing without a preceding pivot.

The most common form of direct modulation is the upward half-step or whole-step shift — a technique beloved by pop songwriters for its immediate emotional intensification. When a song that has been in C major suddenly begins its final verse or chorus in Db major or D major, the key change is entirely direct: there is no preparation, no shared chord, no sequential approach. The new key simply arrives, and its effect is immediate. This technique is sometimes disparagingly called the "truck driver modulation" for its bluntness — but its bluntness is precisely its virtue in the right context.

Direct modulation to remote keys creates maximum harmonic shock. A passage in C major that suddenly shifts to F# major, without any preparation, produces a disjunction that sounds like stepping through a door in a completely unexpected direction. Beethoven uses direct modulations to remote keys at moments of extreme dramatic import — the sudden arrival of a completely foreign harmony, prepared by nothing, creates an effect that no smooth pivot-chord transition could achieve.

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The condition for a successful direct modulation is cadential clarity. The original key must be clearly cadenced — the final chord before the new key should confirm the original tonic — so that the new key's arrival is heard as a fresh start rather than a continuation that has gone harmonically wrong. If the original key is not clearly confirmed before the direct modulation, the new key may sound like a mistake rather than a deliberate key change.

Sequential Modulation

Sequential modulation approaches the new key through a chain of steps — either a sequence of chords moving stepwise, or a harmonic sequence (circle of fifths, step sequence, or third sequence) that carries the music from the original key to the destination key by gradual harmonic motion.

The stepwise sequential modulation is the most transparent: the bass (or the root motion) moves up or down by step through a series of chords, each chord a step away from the previous. In a two-step sequential modulation from C major to D major, the music passes through the area of G (the dominant of C) on the way to D: C-G-D. Each step is a fifth relation, and the sequence of two descending fifths lands on D major. The listener experiences the modulation as a smooth, directed journey.

The circle-of-fifths sequential modulation is more elaborate. The music may pass through several closely related keys before arriving at the destination, each key change accomplished by a perfect-fifth root motion. In moving from C major to A major, the sequence might pass through G major and then E major (or through D major and B major), arriving at A major after two or three sequential steps. This kind of sequential modulation is common in development sections of classical music, where the goal is harmonic exploration rather than direct transit.

Sequential modulations in jazz are called "turnarounds" when they bring the music back to the home key, or "transitions" when they move to a new key. The rapid-fire sequential modulations of bebop — moving through three or four keys in the space of eight measures — are built on this principle: a sequence of ii-V-I units, each unit in a

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different key, carries the music from one tonal area to another with irresistible momentum.

Common-Tone Modulation

Common-tone modulation sustains a single note that belongs to both the original and destination key, using that note as an acoustic bridge between the two harmonies. The original chord fades or is suspended while the shared note is held, and the new chord — containing that note — arrives around it.

The power of common-tone modulation lies in its acoustic logic. The sustained note maintains tonal continuity while the harmony around it changes completely. The listener hears the new chord as a recontextualization of a familiar pitch: the note was the root of C major, and now it is the major third of Ab major. The note has not changed; its harmonic identity has shifted.

Common-tone modulation is particularly effective for remote modulations. Where pivot-chord modulation between C major and E major requires finding a shared chord (C major is I in C and III in A minor but not directly in E major), common-tone modulation needs only a single shared pitch. C major and E major share the note E: if E is held as the fifth of C major and then heard as the root of E major, a smooth modulation to the remote key of E major is accomplished through the continuity of a single pitch.

Enharmonic common-tone modulation uses the same technique with enharmonically reinterpreted notes. A G# in C# minor (the leading tone, sixth scale degree) can be sustained and reinterpreted as Ab — the root of Ab major, the bVI chord — effecting a modulation through a note that sounds identical but is harmonically respelled. This technique was a favorite of Schubert, who used it to achieve astonishing tonal leaps within short passages.

Combining Techniques

In practice, composers rarely confine themselves to a single modulation technique. A modulation may begin with a common tone, use that common tone as part of what functions like a pivot chord, and then confirm the new key with sequential ii-V-I motion.

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The analytical categories — direct, sequential, common-tone, pivot — are tools for understanding, not rigid constraints.

The choice of modulation technique should serve the expressive and formal context. Where smoothness is paramount, pivot-chord and common-tone techniques are preferred. Where drama and surprise are desired, direct modulation is more effective. Where harmonic exploration and gradual transition are the goal, sequential modulation creates the right trajectory. Understanding all four techniques gives the composer a complete toolkit for navigating between keys at any distance with any degree of preparation.

Style Applications

In classical music, all three non-pivot techniques appear at specific formal moments. Direct modulation is used at section boundaries and at moments of high dramatic impact — the sudden arrival of a new key after a clear cadence in the old one. Sequential modulation is the engine of development sections, where the goal is harmonic instability and restlessness. Common-tone modulation appears as a Romantic technique for remote key changes — Schubert's songs and piano works are full of common-tone modulations to keys that would be impossible to reach smoothly by any other means.

In jazz, sequential modulation is fundamental to the music's structure. A jazz tune may modulate through three or four key centers in its bridge section, each modulation accomplished by a ii-V-I unit that both confirms the departing key and establishes the new one in a single three-chord gesture. The sequential logic is so ingrained in jazz vocabulary that musicians navigate these modulations by ear, without conscious analytical effort.

In pop and rock, direct modulation is the dominant technique. Key changes in pop songs are almost always abrupt — the new key arrives without preparation, usually at the beginning of a new section. The emotional impact of the direct modulation — the sudden uplift, expansion, or intensification — is the primary expressive goal. Pop audiences have been trained by decades of such

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modulations to receive a key change as an emotional event rather than an analytical puzzle.

In film and theatrical music, all four modulation techniques appear depending on the dramatic context. A gentle transition between scenes may use common-tone or pivot-chord modulation for smoothness. A dramatic revelation may use direct modulation for shock. A gradual escalation of tension may use sequential modulation to carry the music through a series of key areas that increase in tension with each step.

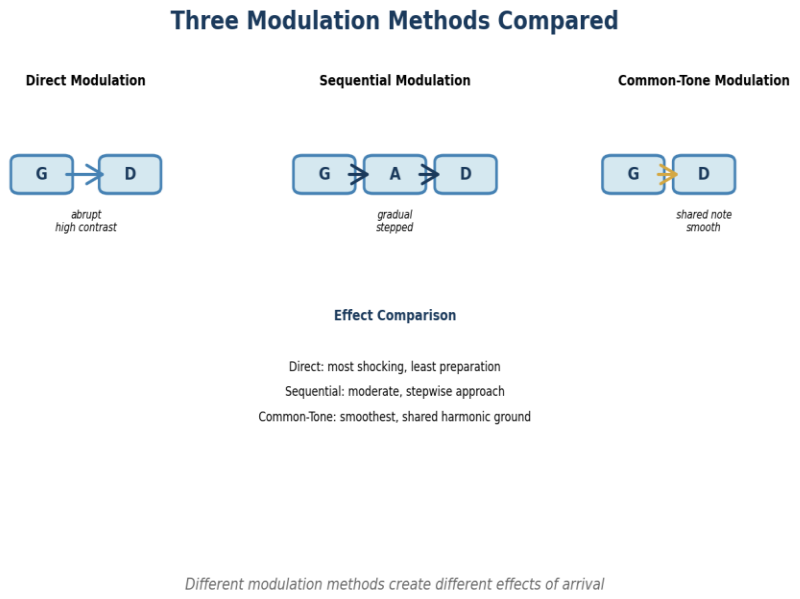


Figure 29.1: Direct, sequential, and common-tone modulation each establish a new key without a shared pivot chord — direct modulation juxtaposes the two keys abruptly, sequential modulation approaches through a chain of steps, and common-tone modulation sustains a single shared note as the acoustic bridge between the two harmonies.

Key Takeaways

- Direct modulation juxtaposes two keys abruptly without preparation — its bluntness is its expressive virtue, creating immediate emotional intensification or harmonic shock depending on the distance between keys
- Sequential modulation approaches the new key through a chain of stepwise or fifth-related key areas — it creates directed

motion through harmonic space and is the primary technique of classical development sections and jazz bridge sections

- Common-tone modulation sustains a single pitch shared between the two keys, recontextualizing that pitch harmonically to bridge remote key areas acoustically; enharmonic spelling makes it possible to modulate to almost any key
- The four modulation techniques — pivot, direct, sequential, common-tone — are tools for different expressive and formal situations: smoothness (pivot, common-tone), drama (direct), exploration (sequential)
- In practice, modulations often combine techniques: a common tone may serve as part of a pivot, and a sequential approach may end with a direct arrival; the analytical categories describe dominant strategies, not rigid rules

- Direct, Sequential, and Common-Tone Modulation is fundamental for extending large-scale harmonic structure
- Multiple modulation strategies exist; choice depends on desired effect
- Establishing a new tonic requires sufficient harmonic motion
- Return to the original key provides powerful structural closure
- Modulation is central to sonata form and other large-scale structures

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PART V: FORMAL AND LARGE-SCALE HARMONIC DESIGN

Chapter 30: The Harmonic Architecture of Sections

From Chord to Section

The first twenty-nine chapters of this volume have examined harmony at the level of individual chords and short progressions. We have studied how chords connect, how functions combine, how keys relate, and how the ear follows harmonic motion from beat to beat and phrase to phrase. This final chapter of Part V asks a different question: how does harmony organize itself across an entire section or movement?

The shift in perspective is significant. At the chord level, we ask: what is the relationship between this chord and the next? At the section level, we ask: what is the harmonic identity of this entire passage, and how does it relate to the sections before and after it? The answer requires thinking about harmony not as a sequence of events but as a distribution of behaviors — different kinds of harmonic activity distributed across different parts of a form.

Harmonic Roles of Formal Sections

In most tonal forms, different sections carry different harmonic responsibilities. Not every section does the same harmonic work, and recognizing these different roles is the key to understanding how large forms cohere.

The opening section of a tonal piece typically carries the harmonic role of establishment. Its job is to define the tonic key unambiguously — to introduce the home chord, confirm it with cadences, and give the listener a stable harmonic center from which all subsequent motion will be measured. The opening section tends to stay close to the tonic, using predominantly diatonic progressions and avoiding remote harmonic regions. Its harmonic rhythm may be moderate and its cadences clear. Stability is the goal.

A contrasting section — whether a B section, a development, a bridge, or a modulating episode — carries the role of departure. Here the harmonic goal is motion away from the established tonic:

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modulation to related or remote keys, harmonic ambiguity, instability, and the suggestion of new harmonic regions. The contrasting section derives its energy from the contrast with the stability of the opening section. It heightens expectation for the return of the tonic by moving away from it, sometimes dramatically.

A returning section — recapitulation, final chorus, da capo repeat — carries the role of confirmation. It restores the home key, often with greater harmonic certainty than the opening had, because the departure and return give the final tonic confirmation additional weight. The returning section typically stays in the tonic key throughout, and its final cadence — the structural cadence of the entire movement — may be the most harmonically emphatic moment in the piece.

The Dominant Zone in Large Form

Just as the dominant chord creates tension at the level of the single progression, a section built in the dominant key creates tension at the level of large form. The classical sonata exposition illustrates this perfectly: the first theme group establishes tonic, the second theme group is presented in the dominant key, and the exposition ends with a strong authentic cadence in the dominant. The entire exposition is a large-scale T-D motion — the same functional arc that operates at the level of the single chord change, now expanded to fill dozens of measures.

The recapitulation resolves this large-scale tension by bringing the second theme back in the tonic key — a large-scale D-T resolution. The listener who has internalized the exposition's tonal departure senses the return of the second theme in tonic as a satisfying resolution even without consciously analyzing the key relationships. This is the power of structural harmony: the same functional principles that operate at the level of individual chords create meaning at the level of entire movements.

Sectional Harmonic Contrast

A well-designed tonal piece creates harmonic contrast between its sections not only through key changes but through differences in

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harmonic density, harmonic rhythm, and the degree of functional clarity. A section that is harmonically simple — triads, slow harmonic rhythm, clear T-PD-D-T arcs — creates a sense of stability and transparency. A section that is harmonically complex — seventh chords, rapid harmonic rhythm, chromaticism, ambiguous functions — creates instability and forward drive.

Composers distribute these contrasting harmonic textures strategically across the form. The opening may be harmonically simple to establish clarity; the development may be harmonically complex to create instability; the recapitulation may return to harmonic simplicity as a sign of restored stability. But the specific distribution depends on the work's character and the composer's goals: a piece that begins with complex harmony may become simpler as it progresses, suggesting resolution through harmonic clarification rather than key return.

Phrase Hierarchy and Sectional Design

Sections are built from phrases, and the harmonic design of a section emerges from the organization of its constituent phrases. A section whose phrases all end with authentic cadences in the home key is tonally stable — it does not go anywhere harmonically. A section whose first phrase ends with a half cadence and whose second phrase answers with an authentic cadence creates a question-and-answer structure that gives the section a sense of directed motion within its own boundaries.

At the level above the phrase, a period (two related phrases forming a unit) and a sentence (a statement that develops and cadences) each create harmonic shapes. Multiple periods or sentences combine into a section, and the harmonic shape of each phrase and period contributes to the overall harmonic character of the section. A composer who wants a section to feel harmonically settled will design its phrases to confirm the tonic repeatedly. A composer who wants a section to feel harmonically restless will design its phrases to avoid strong tonic confirmations — ending with half cadences, deceptive cadences, or cadences in secondary keys.

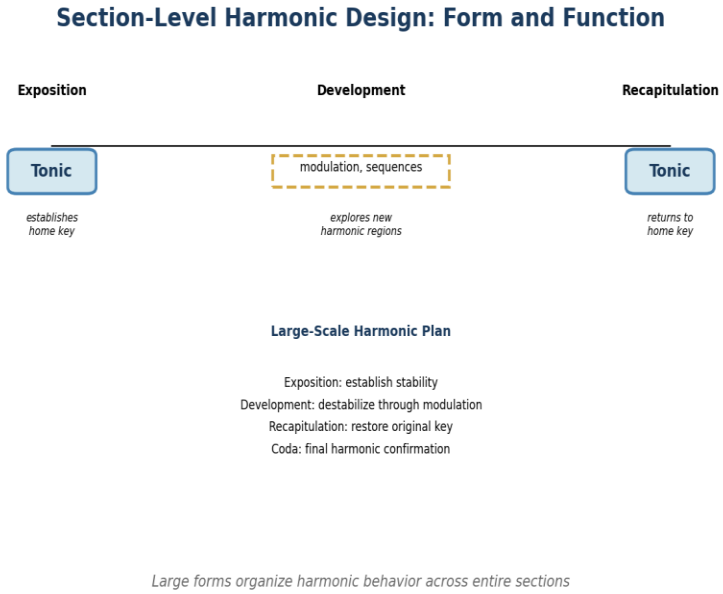
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Tonal Proportion and Balance

Experienced composers attend not only to what happens harmonically in each section but to how long each harmonic area is sustained. Tonal proportion — the relative duration of different key areas within a form — is as important to the coherence of a large work as the choice of which keys to visit.

A movement that spends ninety percent of its duration in the tonic key and ten percent in remote keys will feel tonally stable and diatonic. A movement that spends equal time in the tonic and in the dominant will feel tonally expansive and dramatic. A movement that modulates to a new key and stays there for the majority of its duration — before returning to the original tonic — will feel structurally adventurous. None of these proportions is inherently better; each serves different expressive purposes.

The principle that underlies all of these choices is the one that has governed this entire volume: the ear measures departure from stability and registers the satisfaction of return. At every scale — from the single chord change to the full movement — the same arc applies: establish, depart, intensify, return. Sectional harmonic design is the art of managing this arc at the largest scale the music spans.



Large forms organize harmonic behavior across entire sections

Figure 30.1: Section-level harmonic design distributes different functional behaviors across a musical form — each section receives its own harmonic role, and the relationship between sections creates the large-scale tonal arc that shapes the listener's experience of the whole.

Key Takeaways

- Section-level harmonic design assigns different harmonic roles to different formal sections: establishment (tonic confirmation), departure (instability and motion away), and return (confirmation with accumulated weight)
- The classical sonata exposition demonstrates large-scale T-D motion — tonic for the first theme, dominant for the second — which the recapitulation resolves by bringing both themes to the tonic, completing a large-scale functional arc
- Harmonic contrast between sections operates through changes in harmonic density, harmonic rhythm, and functional clarity — not only through key changes
- Phrase-level harmonic design aggregates into sectional design: cadence types, phrase endings, and harmonic rhythm within phrases all contribute to the overall harmonic character of the section they comprise
- Tonal proportion — the relative duration of different key areas — is as important as which keys are visited; the same T-PD-D-T arc that governs single chord changes governs the harmonic architecture of entire movements

- Section-level harmonic design shapes the experience of larger form
- Harmonic behavior changes throughout a section to maintain interest and structure
- Keys, modulations, and cadences work together to organize formal sections
- Deep listening to complete compositions reveals these large-scale patterns
- Mastery of sectional design distinguishes experienced composers

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Chapter 31: Large-Scale Tonal Planning

At the largest scale, an entire composition is itself a harmonic arc. A symphony, sonata, concerto, or song unfolds through a journey that begins at a tonic, departs into contrasting tonal regions, and eventually returns home transformed.

This deep-level structure is independent of surface details. The specific progressions, voicings, orchestrations, and melodic materials change throughout the piece, but the underlying tonal plan provides coherence and shapes the listener's journey.

Large-scale tonal planning often follows predictable patterns. A sonata-form first movement moves from tonic to the dominant (or relative major in minor keys), explores remote harmonic regions in the development, and returns to tonic in the recapitulation. A rondo alternates between a home section and contrasting sections, always returning to tonic. A theme-and-variations maintains the underlying harmonic structure while varying surface elements.

By studying large-scale tonal plans in masterworks, you develop an intuition for how to structure entire pieces. This is the culmination of all previous learning: individual progressions become sections, sections become movements, and movements become complete works. The principles remain constant: establish center, depart, intensify, and return.

Key Takeaways

- Large-scale tonal planning organizes entire pieces as harmonic arcs

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- An entire composition often moves from tonic through contrasting regions and back
- Deep-level structure provides coherence independent of surface details
- Sonata form, rondo, theme-and-variations each have characteristic tonal plans
- Mastery of large-scale planning distinguishes mature composers

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Closing Note

You have now completed a comprehensive journey through the theory of chord progressions. From the simplest concepts—what makes a chord progression meaningful—to the most complex architectures of multi-movement sonatas, you have encountered the grammar of harmonic motion.

But this is not the end of learning; it is a beginning. Theory provides a map, but the territory is vast. Every composition is a fresh exploration of harmonic possibilities. Every style and era reveals new solutions to old problems. Every musician you listen to has developed an intuition that no textbook can fully capture.

The next step is to compose, arrange, improvise, and analyze. Use the frameworks you have learned. Test them against music you love. Discover where they hold true and where they break down. This is how theory becomes living knowledge.

Volume II awaits, with exploration of style, reharmonization, ear training, and the vast atlas of progression variants found in jazz, pop, classical, and world music traditions. Return to these foundations whenever you need them. They are not arbitrary rules; they are descriptions of how music actually works.

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Glossary of Core Terms

Terms are listed alphabetically. Cross-references are indicated by See: entries.

Antecedent Phrase

The first phrase of a two-phrase period, which typically ends with a half cadence, creating an open question that the consequent phrase answers.

Applied Chord

A chord borrowed from a secondary key area to intensify a particular diatonic chord — functionally equivalent to a secondary dominant. Also called a secondary dominant. See: Secondary Dominant.

Augmented Sixth Chord

A family of chromatic predominant chords (Italian, French, and German) containing an augmented sixth interval between the lowered sixth scale degree in the bass and the raised fourth scale degree above, both resolving by half step outward into the fifth scale degree (the dominant root).

Augmented Triad

A three-note chord constructed of two superimposed major thirds (e.g., C-E-G#). Symmetrical and tonally ambiguous, it appears diatonically as the III+ chord in harmonic minor and as a chromatic passing chord in major keys.

Authentic Cadence

A V-I progression providing strong harmonic closure; perfect authentic cadence (PAC) has both chords in root position with the tonic note in the soprano. The imperfect authentic cadence (IAC) is V-I without ideal voicing. The strongest cadential formula in tonal music.

Binary Form

A musical structure in two sections (A and B), each typically repeated. Simple binary form keeps the same tonal area throughout; rounded binary adds a partial return of A material at the end of B.

Blue Note

A pitch in blues melody that clashes expressively with the underlying harmony — typically the flatted third, flatted fifth, or flatted seventh scale degree played against a chord containing the natural version of that pitch. The defining expressive dissonance of blues, jazz, and blues-derived styles.

Borrowed Chord

A chord imported from the parallel mode — typically from the parallel minor into a major key, or from the parallel major into a minor key. Common borrowed chords include the minor iv, bVII, and bVI chords in major keys. Also called a modal interchange chord. See: Modal Interchange.

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Cadence

A harmonic progression that provides closure or punctuation at the end of a phrase. Types include authentic, half, plagal, and deceptive cadences, each providing a different degree of closure or continuation.

Cadential 6/4

The tonic chord in second inversion (I 6/4) appearing immediately before the dominant at a cadential point. It functions as a pre-dominant intensifier rather than as a tonic, with the sixth and fourth above the bass resolving down by step to the fifth and third of the V chord.

Chaconne

A Baroque variation form built on a repeating harmonic progression (often a descending bass line). The melody and upper voices vary with each repetition while the harmonic pattern remains constant. Related to the passacaglia.

Chord Progression

A sequence of harmonies whose ordering creates perceived motion, expectation, and form. The fundamental unit of harmonic syntax in tonal music.

Chord Quality

The classification of a chord by its interval content: major (major third + perfect fifth), minor (minor third + perfect fifth), diminished (minor third + diminished fifth), or augmented (major third + augmented fifth).

Chromatic Mediant

A relationship between two chords whose roots are a major or minor third apart and whose qualities place them outside a shared diatonic key. Chromatic mediants share exactly one common tone and introduce two foreign pitches, creating a simultaneously smooth and surprising harmonic move.

Chromatic Predominant

A chromatic chord that serves the predominant function, intensifying the approach to the dominant beyond what diatonic IV or ii can achieve. The Neapolitan sixth and the augmented sixth chords are the primary chromatic predominants. See: Neapolitan Sixth; Augmented Sixth Chord.

Circle of Fifths

An arrangement of all twelve pitch classes in a circle, each adjacent pair separated by a perfect fifth. Moving clockwise adds a sharp; counterclockwise adds a flat. Maps both key relationships and root motion strength in tonal harmony.

Common Tone

A pitch shared between two adjacent chords. Common tones should be retained in the same voice to smooth the connection between chords. Critical to voice leading efficiency and the acoustic rationale for certain chord progressions.

Consequent Phrase

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The second phrase of a two-phrase period, which typically answers the antecedent phrase by ending with an authentic cadence, providing the harmonic closure that the antecedent left open.

Contrary Motion

Voice leading in which two voices move in opposite directions simultaneously — one ascending while the other descends. Contrary motion between bass and soprano produces the smoothest and most balanced harmonic connections.

Deceptive Cadence

A cadential progression in which V resolves to vi rather than the expected I. The deceptive cadence withholds expected resolution and redirects harmonic motion, sounding like a semicolon or dash rather than a period.

Development Section

In sonata form, the central section following the exposition in which thematic material is fragmented, developed, and harmonically explored through sequences, modulations, and destabilizing progressions. Typically ends with a dominant prolongation preparing the recapitulation.

Diatonic Progression

A progression constructed entirely from chords native to a single key, using no chromatic alterations. Diatonic progressions form the harmonic foundation of most tonal music.

Diminished Triad

A three-note chord constructed of two superimposed minor thirds (e.g., B-D-F). Diatonically, it appears on the seventh scale degree of major keys (vii°). Highly unstable, demanding resolution by half-step voice leading into a stable chord.

Dominant

The fifth scale degree and the major triad or seventh chord built on it (V or V7). The dominant function creates maximum harmonic tension through its leading tone and demands resolution to tonic. See: Dominant Function.

Dominant Function

The harmonic role of the V chord (and vii°) that creates tension through the leading tone and pulls toward tonic resolution. The dominant zone is the point of maximum instability in the T-PD-D-T functional arc.

Dominant Seventh

A four-note chord consisting of a major triad plus a minor seventh above the root (e.g., G-B-D-F). The most functionally charged chord in tonal music, containing both the leading tone and the chordal seventh, both of which resolve by step into the tonic chord.

Enharmonic Equivalence

The relationship between two pitches or chords that sound identical but are spelled differently (e.g., G# and Ab, or B°7 and D°7). Enharmonic reinterpretation is used to

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modulate between remote keys by sustaining an ambiguous chord and resolving it unexpectedly.

Exposition

In sonata form, the opening section that presents the primary thematic material. Typically moves from tonic (first theme) to the dominant or relative major (second theme), establishing the large-scale harmonic tension that the development and recapitulation will resolve.

Functional Family

A group of progressions sharing a common functional arc, such as ii-V-I. Members of a functional family move through the same sequence of harmonic functions (predominant-dominant-tonic) regardless of specific chord spellings or extensions.

Ground Bass

A repeating bass line (or harmonic pattern) that provides the structural foundation for a set of continuous variations. Associated with the Baroque passacaglia and chaconne forms. See: Chaconne; Passacaglia.

Guide Tones

In jazz, the third and seventh of a chord — the two tones that most clearly define the chord's quality and harmonic function. Guide tones carry the strongest voice-leading obligations and are prioritized in jazz improvisation and chord voicing.

Half Cadence

A phrase ending on V rather than resolving to I, leaving the harmonic progression open. Functions as a comma or question mark in musical syntax, implying continuation rather than closure. Any chord may precede the V in a half cadence.

Half-Diminished Seventh

A four-note chord consisting of a diminished triad plus a minor seventh above the root (e.g., B-D-F-A). Also written as m7b5. Appears diatonically as vii°7 in major keys and as ii°7 in minor keys, where it is the standard predominant chord in the minor ii-V-i of jazz harmony.

Harmonic Minor

A form of the minor scale in which the seventh scale degree is raised by a half step, producing a leading tone and a major dominant chord (V). The raised seventh creates an augmented second between the sixth and seventh scale degrees.

Harmonic Rhythm

The rate at which chords change in a progression. Affects temporal pacing and emotional impact: fast harmonic rhythm creates urgency; slow harmonic rhythm creates spaciousness. Acceleration toward a cadence heightens anticipation.

ii-V-I

The most important three-chord progression in jazz, compressing the T-PD-D-T arc into its essential form: the supertonic minor seventh chord (ii7) moves to the

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dominant seventh (V7), which resolves to the major seventh tonic chord (Imaj7). The foundation of jazz harmony.

Imperfect Authentic Cadence

A V-I progression without the ideal voicing of a perfect authentic cadence — one or both chords may be inverted, or the tonic note may not appear in the soprano. Provides closure but with less finality than a PAC.

Interval

The distance in pitch between two notes, measured in half steps and named by the number of scale degrees spanned (unison, second, third, fourth, fifth, sixth, seventh, octave) with a qualifier (major, minor, perfect, augmented, diminished).

Inversion

The placement of a chord tone other than the root in the lowest voice (bass). First inversion places the third in the bass; second inversion places the fifth. Inversions enable stepwise bass motion and smooth voice leading between chords.

Leading Tone

The seventh scale degree in major keys and harmonic minor — a half step below the tonic — with strong upward pull toward resolution. The leading tone is the defining active tone of dominant function and the primary source of cadential tension in tonal music.

Linear Progression

A progression organized around stepwise movement in the bass line, where chords are chosen primarily to support a melodic bass rather than for their root motion or functional logic. See: Stepwise Bass.

Mediant

The third scale degree and the chord built on it (III in major, iii in minor). Functions ambiguously as either tonic or dominant substitute; shares notes with both I and V.

Melodic Minor

A form of the minor scale in which both the sixth and seventh scale degrees are raised when ascending, eliminating the augmented second of harmonic minor. Typically reverts to natural minor (unaltered sixth and seventh) when descending.

Modal Interchange

The technique of borrowing chords from the parallel mode — most commonly importing chords from the parallel minor into a major key. Introduces foreign scale degrees while keeping the tonic constant, creating chromatic color without modulating. See: Borrowed Chord.

Mode

A scale pattern derived by starting the major scale on a degree other than the first. The seven diatonic modes are Ionian (major), Dorian, Phrygian, Lydian, Mixolydian, Aeolian (natural minor), and Locrian, each with a characteristic interval pattern and harmonic flavor.

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Modulation

A genuine change of tonal center from one key to another, requiring sufficient harmonic evidence and duration to establish the new tonic as the primary reference point. Distinguished from tonicization by duration and commitment. See: Tonicization.

Natural Minor

The unaltered minor scale (Aeolian mode), sharing the same seven pitches as its relative major but beginning from the sixth scale degree. Produces a minor dominant chord (v) rather than the major V of harmonic minor, weakening cadential pull.

Neapolitan Sixth

A major triad built on the lowered second scale degree, almost always presented in first inversion (hence 'sixth'). Abbreviated N or N6. Functions as a chromatic predominant, resolving to V with a distinctive sighing, downward half-step motion in the bass.

Parallel Motion

Voice leading in which two voices move in the same direction by the same interval. Parallel fifths and parallel octaves between outer voices are prohibited in strict counterpoint because they destroy voice independence.

Passacaglia

A Baroque variation form built on a continuously repeating bass melody (ostinato), over which a succession of variations unfolds. Related to the chaconne. See: Chaconne; Ground Bass.

Period

A formal unit of two related phrases (antecedent and consequent) in a question-and-answer relationship. The antecedent typically ends with a half cadence; the consequent ends with an authentic cadence completing the harmonic arc.

Phrase

The fundamental formal unit in tonal music — a short, relatively complete musical thought that ends with a cadence. Typically spans four or eight measures in common time.

Picardy Third

The use of a major tonic chord (I) at the final cadence of a piece or section in a minor key. Creates a sudden brightening from sustained minor harmony. Standard in Baroque music and remains a powerful expressive device.

Pivot Chord

A chord that is diatonic in both the original key and the destination key, used to effect a smooth modulation. Heard in the original key until the harmony that follows reveals the new tonal context, at which point it is reinterpreted as a diatonic chord in the new key.

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Plagal Cadence

A IV-I progression providing softer closure than the authentic cadence. Also called the Amen cadence for its use in hymn settings. Lacks the leading-tone pull of V-I, creating a gentle, confirmatory quality.

Predominant Function

The harmonic role of IV and ii chords (and their chromatic substitutes) that depart from tonic and prepare the dominant. The predominant zone creates a sense of harmonic departure without yet reaching the tension of the dominant.

Recapitulation

In sonata form, the final section that restates the material of the exposition, typically with both theme groups now presented in the tonic key, resolving the large-scale harmonic tension established in the exposition.

Reharmonization

The replacement of one chord (or set of chords) with harmonically different chords that support the same melody or bass line. A fundamental technique in jazz arranging and improvisation.

Rondo

A musical form in which a recurring refrain (A) alternates with contrasting episodes (B, C, etc.): ABACA or ABACABA. The refrain always returns in the tonic key, providing formal and harmonic stability across the form.

Root Motion

The interval between the roots of consecutive chords. Motion by descending fifth is the strongest; stepwise motion creates direction; third motion creates smoothness. The primary determinant of harmonic energy in a progression.

Secondary Dominant

A dominant seventh chord built on a scale degree other than the fifth, specifically to resolve to a non-tonic diatonic chord. Temporarily treats that chord as a local tonic through chromatic leading-tone introduction. Written V/x (e.g., V/V, V/IV). Also called an applied chord.

Sequential Progression

A progression in which a harmonic pattern (typically a specific root motion) repeats at successive pitch levels. Diatonic sequences stay within the key; chromatic (real) sequences maintain exact intervals regardless of key. Creates directed harmonic motion and formal momentum.

Sonata Form

A large-scale formal structure used primarily in first movements of classical and romantic works, consisting of three main sections: exposition (establishes tonic and modulates to dominant or relative major), development (harmonically unstable exploration), and recapitulation (restates exposition material in tonic).

Subdominant

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The fourth scale degree and the major chord built on it in major keys (IV). Functions as a predominant chord: departs from tonic and prepares the dominant without the strong leading-tone pull of V.

Submediant

The sixth scale degree and the chord built on it (VI in major, vi in minor). Functions primarily as a tonic substitute, sharing two common tones with the tonic chord. The target of the deceptive cadence (V-vi).

Subtonic

The lowered seventh scale degree — a whole step below the tonic, as opposed to the leading tone which is a half step below. Produces the VII chord in natural minor and Mixolydian mode. Lacks leading-tone pull toward tonic.

Supertonic

The second scale degree and the minor chord built on it in major keys (ii). Functions as a predominant chord, closely related in sound to IV (sharing two common tones). The ii chord is the primary jazz predominant.

Suspension

A non-chord tone created by holding over a note from the preceding chord while the harmony changes, then resolving it downward by step into the new chord tone. Common types: 4-3 (fourth resolves to third), 7-6, and 9-8. Preparation, suspension, and resolution are the three stages.

Ternary Form

A three-section musical structure (ABA) in which contrasting B material separates two statements of A material. The return of A provides harmonic and thematic closure. Common in song forms, dance movements, and character pieces.

Tonal Architecture

The large-scale harmonic structure of a complete work or movement, showing how keys, modulations, cadences, and sectional harmonic roles combine to create a coherent harmonic narrative across the full temporal span of the piece.

Tonic

The first scale degree and the chord built on it (I in major, i in minor). Establishes and confirms the tonal center. The point of departure and arrival in the T-PD-D-T functional arc.

Tonic Function

The harmonic role of the I chord (and vi as tonic substitute) that provides stability, rest, and the establishment of tonal center. The tonic zone opens and closes the T-PD-D-T arc.

Tonicization

The brief suggestion of a secondary key area through a secondary dominant or applied chord, without the duration or commitment of a genuine modulation. Distinguished from modulation by its transient, passing quality.

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Tritone Substitution

In jazz, the replacement of a dominant seventh chord with the dominant seventh chord whose root is a tritone (augmented fourth / diminished fifth) away. Both chords share the same tritone interval (third and seventh), and the substituting chord produces a chromatic half-step bass descent into the tonic.

Turnaround

In jazz, a short progression at the end of a form (typically the last two measures) that leads back to the beginning. Common turnarounds include I7-VI7-ii7-V7 and I7-bIII7-bVI7-bII7, creating continuous harmonic motion that prevents stasis at the formal boundary.

Vamp

A short repeated harmonic pattern (one or two chords) that sustains indefinitely while a soloist improvises or while music establishes a groove. Common in jazz intros, outros, and modal jazz performance. Related to the drone and ostinato techniques of other traditions.

Voice Leading

The art of connecting chords so that individual melodic voices move as smoothly as possible — typically by step, preserving common tones, and avoiding parallel fifths and octaves between outer voices. Good voice leading transforms functional progressions into coherent linear music.

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Appendix A: Diatonic Triads in All Major Keys

The following table shows the seven diatonic triads for all twelve major keys. Roman numerals indicate scale degree; chord quality is shown in the symbol (capital = major, lowercase = minor, ° = diminished). Memorizing the diatonic chords in your most-used keys is the first step toward fluent harmonic reading.

Major Keys

Key	I	ii	iii	IV	V	vi	vii°
C major	C	Dm	Em	F	G	Am	B°
G major	G	Am	Bm	C	D	Em	F#°
D major	D	Em	F#m	G	A	Bm	C#°
A major	A	Bm	C#m	D	E	F#m	G#°
E major	E	F#m	G#m	A	B	C#m	D#°
B major	B	C#m	D#m	E	F#	G#m	A#°
F# major	F#	G#m	A#m	B	C#	D#m	E#°
F major	F	Gm	Am	Bb	C	Dm	E°
Bb major	Bb	Cm	Dm	Eb	F	Gm	A°
Eb major	Eb	Fm	Gm	Ab	Bb	Cm	D°
Ab major	Ab	Bbm	Cm	Db	Eb	Fm	G°
Db major	Db	Ebm	Fm	Gb	Ab	Bbm	C°

Natural Minor Keys

The following table shows the diatonic triads for all twelve natural minor keys. Note that the dominant chord (v) is minor in natural minor. Harmonic minor raises the seventh degree, changing the dominant to V major and the leading-tone chord to vii°.

Key	i	ii°	III	iv	v	VI	VII
A min	Am	B°	C	Dm	Em	F	G
E min	Em	F#°	G	Am	Bm	C	D

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Key	i	ii°	III	iv	v	VI	VII
B min	Bm	C#°	D	Em	F#m	G	A
F# min	F#m	G#°	A	Bm	C#m	D	E
C# min	C#m	D#°	E	F#m	G#m	A	B
G# min	G#m	A#°	B	C#m	D#m	E	F#
D min	Dm	E°	F	Gm	Am	Bb	C
G min	Gm	A°	Bb	Cm	Dm	Eb	F
C min	Cm	D°	Eb	Fm	Gm	Ab	Bb
F min	Fm	G°	Ab	Bbm	Cm	Db	Eb
Bb min	Bbm	C°	Db	Ebm	Fm	Gb	Ab
Eb min	Ebm	F°	Gb	Abm	Bbm	Cb	Db

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Appendix B: Scale Degree Names and Harmonic Functions

Each of the seven scale degrees has a traditional name, a Roman numeral designation in major and minor keys, a characteristic chord quality, and a harmonic function in the T-PD-D-T framework. This table provides the complete reference.

Degree	Name	Roman (Major)	Chord (Major)	Roman (Minor)	Chord (Minor)	Function
1st	**Tonic**	I	Major	i	Minor	**Tonic (T)**
2nd	**Supertonic**	ii	Minor	ii°	Diminished	**Predominant (PD)**
3rd	**Mediant**	iii	Minor	III	Major	**Tonic/Dominant (T/D)**
4th	**Subdominant**	IV	Major	iv	Minor	**Predominant (PD)**
5th	**Dominant**	V	Major	V*	Major*	**Dominant (D)**
6th	**Submediant**	vi	Minor	VI	Major	**Tonic substitute (T)**
7th	**Leading Tone / Subtonic**	vii°	Diminished	vii°* / VII	Dim* / Major	**Dominant (D)**

** In harmonic minor, the seventh degree is raised, producing a major V chord and a diminished vii° chord — the same as major keys. Natural minor uses the unraised seventh, producing a minor v and a major VII (subtonic).*

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Appendix C: Interval Reference Table

An interval is the distance between two pitches. Intervals are named by their size (number of scale degrees) and quality (perfect, major, minor, augmented, diminished). This table covers all intervals from unison through octave relevant to tonal harmony.

Interval Name	Half Steps	Abbreviation	Inversion	Notes
Perfect Unison	0	**P1**	P8	*Identical pitches*
Minor Second	1	**m2**	M7	*Half step; leading-tone resolution*
Major Second	2	**M2**	m7	*Whole step; stepwise motion*
Minor Third	3	**m3**	M6	*Defines minor triad quality*
Major Third	4	**M3**	m6	*Defines major triad quality*
Perfect Fourth	5	**P4**	P5	*Suspension: 4-3 resolves down*
Augmented Fourth / Diminished Fifth (Tritone)	6	**A4/d5**	d5/A4	*Tritone: divides octave equally; in V7 between 3rd and 7th*
Perfect Fifth	7	**P5**	P4	*Strongest harmonic interval; basis of circle of fifths*
Minor Sixth	8	**m6**	M3	*Inversion of major third*
Major Sixth	9	**M6**	m3	*Added sixth chord tone*
Minor Seventh	10	**m7**	M2	*Defines dominant seventh; resolves down by step*
Major Seventh	11	**M7**	m2	*Defines major seventh chord; strong upward pull*
Augmented Sixth	10	**A6**	d3	*Signature interval of augmented sixth chords; resolves outward to octave*
Perfect Octave	12	**P8**	P1	*Identical pitch class, one register apart*

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Appendix D: Chord Symbol and Roman Numeral Cross-Reference

The following table shows common chord symbols as used in jazz and popular music lead sheets alongside their Roman numeral analysis in the key of C major or C minor. This cross-reference bridges the three labeling systems introduced in Chapter 1.

Symbol	Notes (in C)	RN in C Major	RN in C Minor	Description
C	C-E-G	I	III	*Major triad*
Cm	C-Eb-G	—	i	*Minor triad*
C7	C-E-G-Bb	I7*	III7	*Dominant seventh (major triad + m7)*
Cmaj7	C-E-G-B	Imaj7	IIImaj7	*Major seventh chord*
Cm7	C-Eb-G-Bb	—	i7	*Minor seventh chord*
Cdim	C-Eb-Gb	—	—	*Diminished triad*
Cdim7	C-Eb-Gb-Bbb	—	—	*Fully diminished seventh*
Cm7b5	C-Eb-Gb-Bb	—	ii°7	*Half-diminished (minor seventh flat five)*
Caug/C+	C-E-G#	—	III+*	*Augmented triad*
Csus4	C-F-G	Isus4	—	*Suspended fourth (fourth replaces third)*
Csus2	C-D-G	Isus2	—	*Suspended second*
Cadd9	C-E-G-D	Iadd9	—	*Added ninth (no seventh)*
C6	C-E-G-A	I6add	—	*Added major sixth*
Dm7	D-F-A-C	ii7	—	*Supertonic minor seventh (jazz predominant)*
G7	G-B-D-F	V7	V7*	*Dominant seventh (primary cadential chord)*
Db7	Db-F-Ab-Cb	bII7	bII7	*Neapolitan / tritone substitution for G7*
Am7	A-C-E-G	vi7	—	*Submediant minor seventh*

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Symbol	Notes (in C)	RN in C Major	RN in C Minor	Description
Bm7b5	B-D-F-A	vii°7	—	*Leading-tone half-diminished seventh*

** * I7 in a major key is not diatonic (it requires a borrowed b7); it appears as a blues tonic or secondary dominant. V7* in minor uses the raised seventh from harmonic minor. III+* appears only in harmonic minor.*

Appendix E: The Seven Diatonic Modes

The seven diatonic modes are derived by starting the major scale on each of its seven scale degrees. Each mode has a characteristic interval pattern, a set of diatonic chords, and a distinctive harmonic color. The table below shows each mode's interval pattern (W = whole step, H = half step), its characteristic chord (the chord most unlike its parallel major or minor equivalent), and the musical style most associated with it.

Mode	Starting Degree	Interval Pattern	Characteristic Chord	Associated Style	Sound Character
Ionian	1st (same as major)	**W-W-H-W-W-W-H**	I (major)	*Classical, pop, folk*	Bright, settled, the default major sound
Dorian	2nd	**W-H-W-W-W-H-W**	IV (major, not iv)	*Jazz, Celtic, funk*	Minor with a raised 6th; warm and modal
Phrygian	3rd	**H-W-W-W-H-W-W**	bII (Neapolitan)	*Flamenco, metal*	Dark minor with a half-step above tonic; Spanish character
Lydian	4th	**W-W-W-H-W-W-H**	#IV (augmented 4th)	*Film, jazz, impressionism*	Bright major with raised 4th; dreamy and floating
Mixolydian	5th	**W-W-H-W-W-H-W**	bVII (subtonic)	*Rock, blues, folk*	Major with lowered 7th; rootsy and modal
Aeolian	6th (natural minor)	**W-H-W-W-H-W-W**	v (minor dominant)	*Rock, classical, film*	The standard natural minor sound; dark and expressive
Locrian	7th	**H-W-W-H-W-W-W**	bV (diminished 5th)	*Rarely used as tonal center*	Highly unstable; used for color in metal and jazz

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Further Reading and Bibliography

The following works are recommended for deeper study. Entries are grouped by category and annotated to help readers choose resources appropriate to their level and interests. This is a selective list of high-quality, widely available works rather than an exhaustive bibliography.

Core Music Theory Textbooks

Aldwell, Edward, Carl Schachter, and Allen Cadwallader. *Harmony and Voice Leading.* Cengage Learning (4th ed., 2011).

The most rigorous and voice-leading-centered harmony textbook in the classical tradition. Ideal for students who want to understand harmonic syntax at the deepest level. Demanding but rewarding.

Kostka, Stefan, Dorothy Payne, and Byron Almén. *Tonal Harmony.* McGraw-Hill (8th ed., 2018).

The most widely adopted harmony textbook at the university level. Comprehensive, well-organized, and accessible. Covers all topics in this volume in greater depth, with extensive exercises.

Piston, Walter, revised by Mark DeVoto. *Harmony.* W.W. Norton (5th ed., 1987).

A classic text with an elegant, analytical approach. Piston's prose is clear and his harmonic categories remain influential. Particularly strong on counterpoint and voice leading.

Clendinning, Jane Piper, and Elizabeth West Marvin. *The Musician's Guide to Theory and Analysis.* W.W. Norton (3rd ed., 2016).

A comprehensive undergraduate-level text that integrates harmony, counterpoint, form, and ear training. Excellent for students who want a single integrated theory reference.

Jazz Theory and Harmony

Levine, Mark. *The Jazz Theory Book.* Sher Music (1995).

The definitive reference for jazz harmony. Covers chord scales, ii-V-I, tritone substitution, reharmonization, and modal jazz in practical, musician-friendly language. Essential for anyone serious about jazz.

Coker, Jerry. *Elements of the Jazz Language for the Developing Improvisor.* Alfred Music (1991).

A concise, practical guide to jazz vocabulary. Shorter and more accessible than Levine, with clear explanations of patterns, formulas, and the grammar of jazz improvisation.

Rawlins, Robert, and Nor Eddine Bahha. *Jazzology: The Encyclopedia of Jazz Theory for All Musicians.* Hal Leonard (2005).

A comprehensive jazz theory encyclopedia organized for reference use. Excellent for looking up specific chord types, scales, and progressions. Less sequential than Levine but highly practical.

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Counterpoint and Voice Leading

Fux, Johann Joseph, translated and edited by Alfred Mann. *The Study of Counterpoint (Gradus ad Parnassum).* W.W. Norton (1965).

The foundational text of species counterpoint, originally published in 1725. The dialogue format remains engaging and the principles it establishes underpin all subsequent voice-leading pedagogy. Historical but essential.

Schoenberg, Arnold. *Fundamentals of Musical Composition.* Faber and Faber (1967).

Schoenberg's approach to musical form and motivic development. Less about harmony than about how musical ideas are constructed, varied, and extended. Valuable for composers and arrangers.

Formal Analysis and Structure

Caplin, William E. *Classical Form: A Theory of Formal Functions for the Instrumental Music of Haydn, Mozart, and Beethoven.* Oxford University Press (1998).

The most influential recent theory of formal functions in classical music. Caplin's concepts — presentation, continuation, cadential — provide precise analytical tools for understanding phrase-level and movement-level structure.

Hepokoski, James, and Warren Darcy. *Elements of Sonata Theory: Norms, Types, and Deformations in the Late-Eighteenth-Century Sonata.* Oxford University Press (2006).

A comprehensive and revisionist approach to sonata form that emphasizes dialogic norms rather than prescriptive rules. Advanced but enormously influential in current musicological thinking about classical form.

Popular Music and Non-Classical Harmony

Tagg, Philip. *Everyday Tonality II: Towards a Tonal Theory of What Most People Hear.* The Mass Media Music Scholars' Press (2014).

A wide-ranging examination of tonal language in popular, film, and world music — explicitly designed to extend harmony theory beyond the classical canon. Challenging but highly rewarding for musicians who work across styles.

Everett, Walter. *The Foundations of Rock: From 'Blue Suede Shoes' to 'Suite: Judy Blue Eyes'.* Oxford University Press (2009).

A rigorous harmonic and formal analysis of rock music using classical theory tools. Demonstrates that rock harmony is analytically sophisticated and rewards the same close attention given to classical music.

Ear Training and Aural Skills

Karpinski, Gary S. *Aural Skills Acquisition: The Development of Listening, Reading, and Performing Skills in College-Level Musicians.* Oxford University Press (2000).

The most comprehensive academic treatment of how musicians develop aural skills. Useful for understanding the cognitive and perceptual processes behind hearing harmony.

Berklee Press. *Ear Training series (various volumes).* Berklee Press / Hal Leonard.

Practical, progressive ear training materials from the Berklee College of Music. Covers interval recognition, chord quality identification, and harmonic dictation at multiple levels.

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Reference and Encyclopedic

Randel, Don Michael (ed.). *The Harvard Dictionary of Music*. Harvard University Press (4th ed., 2003).

The standard English-language music reference dictionary. Authoritative, thorough, and reliably accurate. Essential for looking up any technical term, historical fact, or theoretical concept.

Sadie, Stanley, and John Tyrrell (eds.). *The New Grove Dictionary of Music and Musicians*. Oxford University Press (2nd ed., 2001; online edition continuously updated).

The definitive encyclopedic reference for Western music. Available online at oxfordmusiconline.com. Invaluable for biographical information, historical context, and in-depth articles on harmonic theory.

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