Bach, Beck, and Bjork Walk into a Bar: Reclassifying Harmonic Progressions to Accommodate Popular Music Repertoire in the Traditional Music Theory Class

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Introduction

Based on the premise that popular music should and will play an increased role across the traditional music theory curriculum, this article proposes juxtaposing art and popular music repertoire within a single, integrated paradigm for teaching harmonic progressions. For the purposes of this discussion, *popular music* encompasses a variety of western vernacular music disseminated to the public through commercially and independently produced media, as well as through live venues such as concerts and clubs. This definition acknowledges stylistic differences between categories such as classic rock, reggae, hip hop, house, R & B, metal, alternative, and so on, while making little distinction between what some consider to be more serious, "authentic" genres and commercial pop music; I typically use the terms *rock* and *popular music* interchangeably. Jazz**,** musical theater, film music, and other genres are beyond this discussion's scope.

A central challenge of integrating popular music into the traditional music theory core is determining to what extent this repertoire should be presented in relation to common practice music. Some textbooks make a point of examining popular music harmony on its own musical terms (e.g., Ralph Turek's *Theory for Today's Musician*[1]), but more often, popular music progressions are only examined within the context of the traditional, established framework of common practice harmony. As popular music receives greater focus in the core theory curriculum, our implicit knowledge of common practice harmony risks subsuming our perceptions of popular music harmony. To best guide students towards an informed understanding of popular music theory, instructors require a basic knowledge of the harmonic language of

[1] Ralph Turek, *Theory for Today's Musician* (New York: McGraw-Hill, 2007).

popular music on its own terms and as it may or may not relate to common practice harmony.

Music theory teachers must also grapple with the question of when to integrate popular music, and specifically its harmonic practices, into the traditional theory sequence. I advocate teaching popular music harmony alongside common practice harmony as opposed to separately, or from the primary perspective of one over the other. Thus, we must also seek new ways of presenting harmonic progressions that encompass and elucidate both traditional and popular music perspectives. Time constraints are always an issue in the core theory curriculum, and incorporating a significant amount of popular music will likely result in postponing, re-ordering, or even excluding other traditional topics. Authors of traditional core theory textbooks already vary considerably in their emphases, reflecting the need for continued debate about the content and ordering of the theory curriculum.[2] Additionally, integrating common practice and popular music repertoire may ultimately conserve classroom time if the discrete harmonic languages of classical tonal music and popular musics can be combined into a broader framework that accommodates both.

I have long used popular repertoire in teaching music theory, particularly as a tool for ear training, and like many theory instructors have found that familiar rock songs prove useful in helping students discern functional harmonic motion in the common practice repertoire. But harmonic progressions in popular music often work differently from those in common practice music, and the traditional graduated approach beginning with dominant–tonic motion or with the tonic–predominant–dominant–tonic phrase model put forth in many current textbooks does not reflect

[2] For example, respective authors' treatment of four-part writing illustrates varied levels of emphasis on this topic. Jane Piper Clendinning and Elizabeth Marvin's *The Musician's Guide to Theory and Analysis* (New York: Norton, 2011) devotes a fourteen-page chapter (out of 759 pages) to "Chorale Harmonization and Figured Bass," while Bruce Benward and Marilyn Saker's *Music in Theory and Practice* (Boston: McGraw-Hill, 2009) offers a 10-page chapter on "Voice Leading in Four Voices." In contrast, the subject of part writing underlies eleven of twenty-eight chapters that focus on "Diatonic Triads" and "Diatonic Seventh Chords" in Stefan Kostka, Dorothy Payne, and Byron Almén's widely-used *Tonal Harmony* (New York: McGraw-Hill, 2013), and remains the central focus of Thomas Benjamin, Michael Horvit and Robert Nelson's *Techniques and Materials of Music* (Belmont, CA: Thomson-Schirmer, 2008).

the breadth of popular music practice. Intrigued by the question of how harmonic progressions might be organized to accommodate both repertoires, I conceived of four primary groupings, or units, delineated by the number of different chords involved, and in the case of Unit III and the subgroupings in Unit IV, according to specific harmonic interrelationships as well. I envision these four broad categories to be presented sequentially, two per semester in the first year of the theory curriculum.

Much rock music theory frames popular music harmonic practices in relation to common practice repertoire. In "Making Sense of Rock's Tonal Systems," Walter Everett divides rock harmonic practices into categories according to the extent to which each corresponds to or departs from common practice harmonic and voice-leading practices,[3] while Ken Stephenson, in *What to Listen for in Rock*, elucidates many of rock music's salient features, stressing its independence from aspects of common practice.[4] Unlike Everett or Stephenson, I avoid approaching harmony from the strict perspective of either common practice or rock music. Further, my rather broad classifications depart from the comprehensive rock harmonic inventories of Allan Moore,[5] and David Temperley and Trevor de Clercq,[6] as well as from the approach in Richard Scott's useful book, in which each chapter focuses on a single progression.[7] While each author organizes myriad popular music progressions by type and frequency, I emphasize the number of different chords in a harmonic progression, while still acknowledging several common progression types. This approach supports teaching common practice and popular music progressions side by side, while exploring the distinct characteristics of each, and fosters harmonic aural skills across popular and classical styles so that

[3] Walter Everett, "Making Sense of Rock's Tonal Systems," *Music Theory Online* 10, no. 4 (December 2004), http://www.mtosmt.org/issues/mto.04.10.4/mto.04.10.4.w_everett.html.

[4] Ken Stephenson, *What to Listen for in Rock* (New Haven, CT: Yale University Press, 2002).

[5] Allan Moore, "Patterns of Harmony," *Popular Music* 11, no. 1 (January 1992): 73-106.

[6] Trevor de Clercq and David Temperley, "A Corpus Analysis of Rock Harmony," *Popular Music* 30, no. 1 (January 2011): 47-70.

[7] Richard J. Scott, *Chord Progressions for Songwriters* (New York: Writers Club Press, 2003).

students' aural recognition of harmonic progressions can more consistently accompany their intellectual understanding.

I propose that the study of harmonic progressions be divided into four major units:

I. Single-chord works and static harmony

II. Two- and three-chord progressions, including but not limited to progressions based solely on primary chords (i.e., I, IV, and V), and progressions using secondary dominants and mixture chords

III. Standard chord progressions of four or more chords, e.g., I–[iii]–vi–IV(or ii)–V–I in major; in minor, chord quality varies depending on the treatment of the 6th and 7th scale degrees

IV. Other progressions of four or more chords, including other functional diatonic progressions, stepwise progressions, and those involving ♭VII, ♭III, and/or ♭VI borrowed chords

Unit III acknowledges both a clearly recognizable grouping of popular music harmonic progressions, as well as what arguably comprises the most significant point of intersection between rock and common practice harmonic progressions. In Unit IV, some of the progressions are further grouped by type as a practical aid to music theory teachers grappling with the vast variety of popular music progressions falling within that broad category.

The progressions comprising each of the four units may be represented in whole works, in sections of works, or at the phrase level. The reader will likely already be familiar with classical examples that fit each unit; for those new to the popular music repertoire, sample analyses of popular songs from each category examine harmonic progressions as well as a range of topics, including form, texture, instrumentation, and lyrics.[8] The observations about extra-harmonic features demonstrate possible approaches to these and other important musical aspects of the featured popular works.

[8] The examples are the author's transcriptions of song excerpts from the indicated recordings.

Reclassifying harmonic progressions

The proposed units cover harmony typically encountered during the first year of the theory core, as well as a few more advanced harmonic topics. Using familiar methods such as listening activities, aural and written analysis, harmonic dictation, composition projects and in-class performances, the four units can be integrated into a traditional music theory curriculum, or serve as a conceptual framework for courses taking primarily a popular music approach. In the former case, Unit I's focus on a single or static harmony allows for emphasis on non-harmonic parameters such as rhythm, scales, mode, tonality, texture, and form—concepts that students may recognize and grasp more easily when presented through familiar popular music repertoire. While two- and three-chord diatonic progressions featuring pre-dominant–dominant–tonic motion are introduced in Unit II, equal focus is given to other two- and three-chord progressions typical of popular music harmony (e.g., ♭VII–I, or i–♭VII–IV). Diatonic harmonic practices involving vi (or VI), iii (or III), and the leading tone seventh chord as part of four-chord or longer progressions can be introduced in Unit III.

Although I include only limited discussion of chromatic materials such as mode mixture and secondary dominants, the proposed units can easily be expanded to accommodate these topics. Secondary dominants may be introduced with two- and three-chord progressions in Unit II, or as a part of Unit III's standard progressions, providing a valuable link between relatively simple diatonic progressions and more complex harmonies. Other harmony-related topics—e.g., cadential practice, chord structures, and harmonic cross-relations[9]—can be examined across units. While static harmony, two- and three-chord progressions, and standard progressions are represented by countless popular music examples, the vast majority of rock and popular music falls into the

[9] Here "cross-relation" refers to contrasting modalities between the scalar content of a sung or played solo line and the underlying harmony. For example, a melody above a guitar playing an open-fifth "power chord" on A may suggest major mode through the use of C# in the melody line, while a subsequent progression to open fifths on C creates a destabilizing cross-relation. Chris McDonald explores the contradiction between the scalar content of the melody and the harmonic language of the accompaniment in "Exploring Modal Subversions in Alternative Music," *Popular Music* 19, no. 3 (Oct, 2000): 355-363.

fourth, broad classification of "other progressions of four or more chords." (See the appendices for examples from each unit.[10])

Beginning music theory students should be encouraged to discover their own illustrative repertoire, whether popular or classical. The simple activity of hunting for three-chord rock songs is a valuable ear-training exercise, and doing so with specific progressions in mind (e.g., I–IV–V–I, I–♭VII–I, or I–vi–IV–V–I) is fun and challenging. Students can be asked to find popular songs with stepwise falling bass lines for comparison with lament bass lines from the early baroque. (A simple Google search for "falling bass lines" reveals scores of popular and classical examples.) This approach gives students agency in their individual learning processes, while contributing to a library of varied repertoire that might otherwise go unheard; in addition, analyzing new or unfamiliar repertoire as a class can enliven the music theory classroom. Numerous online sources provide the underlying chord progressions of countless songs (e.g., http://www.guitarsongs.info, http://www.azchords.com, http://www.911tabs.com), although it should be kept in mind that the progressions provided vary widely in accuracy.

Unit I: Single-chord works and static harmony

At first glance, beginning the study of harmonic progressions with single-chord works and other types of static harmony might seem curious. When analyzing single-chord popular songs, discerning mode, the tonic, and chord quality is relatively straightforward, even for listeners with undeveloped ears. Too often, however, music theory education neglects other musical domains in favor of harmony. While serving as an entry point into the study of harmonic progressions, single-chord popular songs and other works featuring static harmony can also provide an excellent context for examining extra-harmonic features such as rhythm, form, texture, instrumentation, vocal style, and solo instrumental riffs. When harmonic succession is removed from the musical equation, these parameters and their interactions become more readily discernable to the student listener. Instructors can thus utilize prolonged harmonic stasis to open students' ears to the many other musical features that come into play to varying

[10] I am grateful to Parker Silzer for his help in selecting songs for the appendices.

degrees in all musics, and that in popular music may arguably be considered more significant determinants of musical style than harmonic practice.[11]

There are three main types of harmonic stasis: (1) single chord stasis, achieved either through chord repetition (e.g., ostinati), or through variations in the surface-level presentation of the harmony (e.g., arpeggios or non-harmonic tones), instrumentation, or rhythmic treatment; (2) a repeated harmonic oscillation between a tonic and one or more embellishing chords, subject to the same variations mentioned above; and (3) a pronounced lack of tonal direction achieved through other means, such as variable textural layering over a prominently featured pedal point or drone. Static harmony can be found at the level of the phrase, section, or entire song. Moore and Scott offer many examples across phrases or sections,[12] but sufficient popular music examples of single-chord songs and extended harmonic stasis exist to provide students with the opportunity to observe these effects over the length of whole songs (see appendix A). Bjork's music offers many songs featuring extended harmonic stasis, often through the use of oscillating harmonies in which two chords continuously alternate, creating a rich texture that lacks harmonic motion.[13]

The study of harmonic stasis provides opportunities for several classroom activities. After examining several examples, students can be asked to draw from their personal music libraries to find works in a popular style of particular interest that contain a single chord or use prolonged static harmony. In the absence of harmonic movement, extra-harmonic parameters of songs can be analyzed and compared. Examples of harmonic stasis are useful sources for interval training as well. Both melodic and harmonic intervals can often be more easily identified in melodies constructed from

[11] One of Moore's stated goals in "Patterns of Harmony" is to debunk the claim that primary differences between rock, pop, and soul musical styles lie in their respective, characteristic harmonic progressions. Finding few differences in the harmonic practices between popular styles, he concludes that rhythm, texture, and production are more significant determinants of style than harmonic progression.

[12] Moore, "Patterns of Harmony," 82-83; Scott, "One-Chord Progressions," *Chord Progressions for Songwriters*, 342-349.

[13] See Victoria Malawey, "Harmonic Stasis and Oscillation in Bjork's *Medulla*," *Music Theory Online* 16, no. 1 (January 2010), http://www.mtosmt.org/issues/mto.10.16.1/mto.10.16.1.malawey.html.

a single scale or mode. Aural class work might include copying instrumental or vocal passages from recordings by ear, or re-creating instrumental textures in a cappella arrangements; rhythmic and melodic dictation or more extensive transcription assignments provide valuable notation-based skills training.

Two examples featuring static harmony follow. In "Loser," the eclectic and unpredictable indie-rock artist Beck, elevated to commercial fame with the song's 1993 release, uses static harmony as a means to highlight the piece's curious juxtaposition of stylistic elements.[14] Through both lyrics and music Beck evinces slapstick-style humor. The song's absurdist lyrics (it opens with Beck rapping, "In the time of chimpanzees, I was a monkey/ Butane in my veins and I'm out to cut the junkie") apparently grew out of Beck's practice of improvising nonsensical verses while performing: "I'd make up these ridiculous songs just to see if people were listening. 'Loser' was an extension of that."[15] The music comprises a stylistic montage combining clearly discernable elements of Southern rock, blues, and hip-hop. Textural changes function as an aspect of form, and the single-chord stasis heightens the dramatic effect (especially given that the artist is otherwise known for his harmonic sophistication), in this case evoking a sense of wry apathy. A looped slide guitar riff introduces the song and later reappears, sometimes under the sitar part, echoing the slide guitar introduction to "Midnight Rider" by the Southern blues-rock band, The Allman Brothers Band.[16] The drum track contains sampled loops from "I Walk on Guided Splinters" by blues musician Dr. John.[17] Beck's awkward, ironic, often nonsensical rapping, to which he attributes the song's self-deprecating title and lyrics, imitates Public Enemy's Chuck D.[18]

The conspicuous nature of the song's disparate elements makes "Loser" an excellent subject for the analysis of various

[14] Beck, "Loser," *Mellow Gold*, DGC Records, 1994. (See http://www.youtube.com/watch?v=YgSPaXgAdzE.)

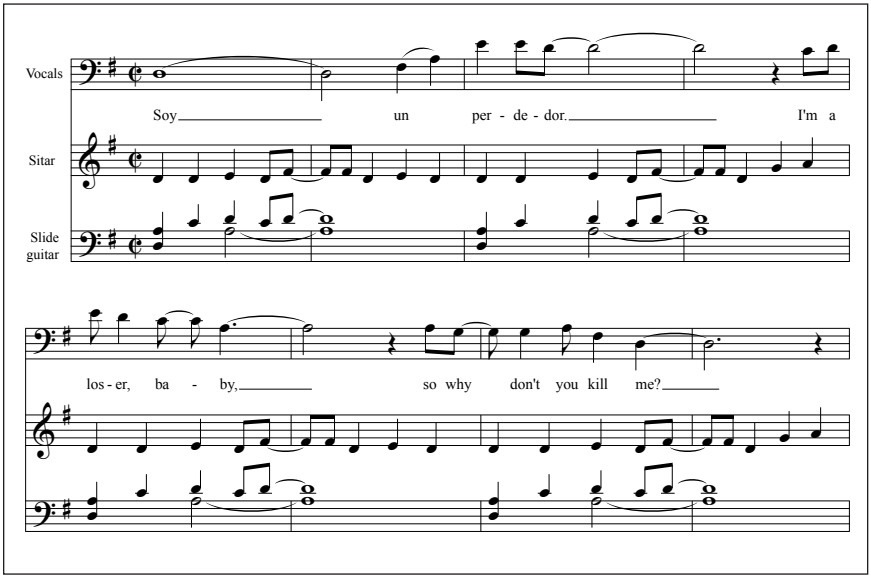
[15] David Browne, "Beck in the high life: where it's at—alternative rock's funkiest wunderkind is Grammy's newest golden boy," *Entertainment Weekly*, February 14, 1997, 32.

[16] The Allman Brothers Band, "Midnight Rider," *Idlewild South*, Capricorn Records, 1970.

[17] Dr. John, "I Walk on Guilded Splinters," *Gris-Gris*, Atco Records, 1968.

[18] Mike Rubin, "Subterranean Homeboy Blues," *SPIN*, July 8, 1994, 32.

extra-harmonic features. The combination of straightforward and syncopated rhythms carried by the individual parts create a simple yet dense rhythmic effect overall. Scalar content is limited to and clearly discernable as D Mixolydian. The chorus is structured as a simple period, with an ascending antecedent phrase and a descending consequent phrase, providing melodic interest to contrast the rapped verses (Example 1).



Example 1. Chorus of "Loser," by Beck

Several rock cadential practices identified by Stephenson appear in this song.[19] For example, the de-emphasis on leading tone motion noted by Stephenson is reflected by the use of the lowered seventh in "Loser." "Loser" also illustrates the prevalence of asynchronous melodic, harmonic, and rhythmic resolution in rock, another topic Stephenson explores. As shown in Example 1, in both the antecedent and consequent phrases the melodic resolution to the tonic pitch in the vocal part occurs on a weak beat (or part of the beat), and in the case of the antecedent phrase, is rhythmically offset from the accompaniment. The periodic phase structure of "Loser" typifies an overall lack of strong drive towards tonal closure that often distinguishes rock from classical styles.

Beck's use of instrumentation creates textural changes that align with formal aspects of the lyrics. "Loser" is structured in

[19] Stephenson, "Cadences," chapter 3 in *What to Listen for in Rock*.

eight-measure formal blocks within which layers of individual instrumental parts loop in phrases of varying, even-numbered measure lengths. Every eight measures, Beck shifts the instrumentation to create different combinations of the looped drums, bass, slide guitar, and sitar. For example, dividing verse one into four eight-measure sections, the first section is carried by drums and sitar, the second by drums, sitar, and added bass, the third by drums, sitar, bass, and added slide guitar, and the fourth by drums and slide guitar only.[20]

The voice and sitar parts are excellent sources for melodic ear training focusing on the song's D Mixolydian scalar and harmonic content. The rhythmic patterns carried by the accompanying instruments can easily be broken down for rhythmic training. Drawing from the vocal chorus, instructors can use the melodic rhythm of the two-measure slide guitar part, which contains a fairly simple eighth-note syncopation, as rhythmic dictation material. This would serve as a useful preliminary dictation exercise before moving on to rhythmic dictation of the sitar part, the first measure of which mirrors that of the slide guitar. A classroom exercise could explore the relationship between texture and form by providing students with a chart delineating four- or eight-measure sections, onto which the various appearances and disappearances of the instrumental parts could be mapped and subsequently analyzed in relationship to Beck's rapped and sung vocal parts.

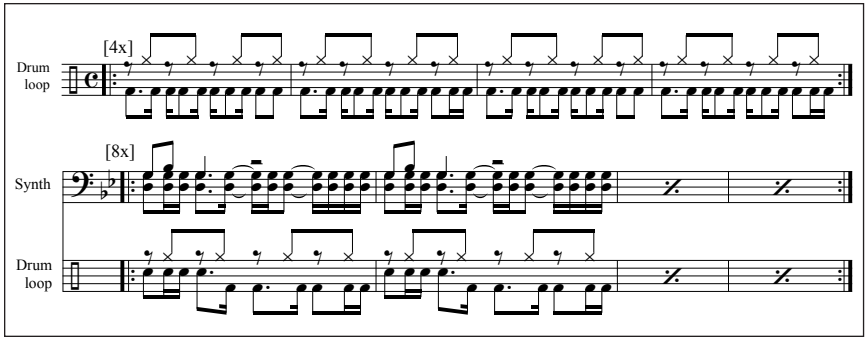
A second example of static harmony draws from house music and features long sections of single-chord stasis as well as subtly introduced chord oscillations and drone effects.[21] (This is characteristic of house music, making the style an excellent source of Unit I repertoire.) In Ane Brun's "Headphone Silence" (Henrik Schwartz remix/Dixon edit), vocal style, rhythmic usage, texture, form, and studio recording effects combine in an atmospheric

[20] For an analysis of the textural changes in "Loser," see Trevor de Clercq, "Combinatoriality in 'Loser' by Beck," The Science of Songwriting (blog), December 27, 2007, http://www.midside.com/2007/12/27/combinatoriality-in-loser-by-beck/.

[21] Mark J. Butler has written extensively on the house genre. See "Turning the Beat Around: Reinterpretation, Metrical Dissonance, and Asymmetry in Electronic Dance Music," *Music Theory Online* 7, no. 6 (December 2001), http://mto.societymusictheory.org/issues/mto.01.7.6/toc.7.6.html, and *Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Dance Music* (Bloomington, IN: Indiana University Press, 2006).

realization of the lyrics' subject: the experience of listening to music through headphones, when immersion in the sounds results in alienation from others and a changed relationship to the physical world, creating a new sonic universe—the "headphone silence" of the song's title.[22] Brun's sinewy, plaintive vocal style is noteworthy for its relaxed, vibrato-less tone quality.

From the outset, the importance of rhythmic and textural elements to the overall effect of the song is established. Following the introductory drum loop, the synthesizer's entrance begins an extended section of single-chord stasis on G minor lasting almost two minutes (Example 2). A de-emphasis on the third of the tonic chord—it is present, but overshadowed by the louder-sounding tonic and fifth of the chord—results in a striking dichotomy between the archaic atmosphere created by the D–G open fourth and the modernistic effect of the driving rhythm and electronic instrumentation. Subtle changes in rhythm and texture very gradually occur in the sparse instrumentation over the 9'22" of the work, with fading techniques utilized to either highlight or hide various tracked layers, often obscuring the precise moment that new material enters.



Example 2. Opening of "Headphone Silence," by Ane Brun, Henrik Schwartz Remix, Dixon Edit

Coupled with Brun's vocalizations, the continuous rhythmic density and slow-moving shifts in the accompaniment's texture create a trancelike effect, with specific musical events placed to shape the form. For example, at around 2'50", a repeated B♭–C–B♭ melodic motion (within G minor) gains in prominence in the

[22] Ane Brun, "Headphone Silence," Henrik Schwartz remix/Dixon edit, *Headphone Silence*, Objektivity, 2008. (See http://www.youtube.com/watch?v=s7j7kBN7OJk.)

electric piano part, evolving into a repeating pattern of oscillating G minor and C minor chords over a G pedal point. At 4'46", the single strike of a bell marks the song's approximate halfway point (about ten seconds past the halfway point). Here a striking timbral effect occurs: on the sung lyric, "the headphone silence which fills my head," the bell sounds on the G above middle C right after Brun sings the words "fills my" on G an octave lower; it is unclear to the listener whether the anticipated word "head" coincides with the strike of the bell, or whether it is merely suggested, or even imagined, but for a full forty-six seconds an indistinguishable sung syllable on G is held, blending into the increasingly rich texture, and during which time no verses are sung.

Despite the absence of functional harmonic progressions in "Headphone Silence," this middle section marks new tonal territory, in which gradually introduced sonorities add color to the G minor key center, which remains steady over a G pedal point. These coloristic changes occur so subtly as to almost escape notice. Foreshadowed by both the aforementioned G minor–C minor chord oscillation, and Brun's previous vocal lines ending repeatedly on middle C, a crescendoing ostinato motive on B♭/D→C/E♭ coupled with oscillations between the perfect fourth intervals G–C and D–G have the effect of heightening the presence of C minor. In effect, the ebb and flow of textural layers replaces harmonic function as a progressive device.

Like "Loser," "Headphone Silence" uses instrumentation as an important structural feature. The climax of the piece occurs in the central instrumental section when Brun has temporarily stopped singing following the bell strike discussed earlier. Dynamics, too, are used to dramatic effect here, with an incremental crescendo from the beginning of the song to this central climax. The most significant use of textural contrast begins at 5'33", when strings, embellished with heavy reverb, enter on a repeating stepwise Gm–Fm–E♭M–Gm/D progression moving in stately half-notes and lasting approximately a minute. Thirty seconds into this section, the drum tracks and keyboards suddenly drop out, leaving only the strings remaining as Brun reenters with a repeat of the third of the song's four loose "verses" with the lyrics, "I see a rainbow complete/resting its feet on the hill and the ground." During the last two lines of the verse, the drums and keyboards gradually re-emerge playing the opening material. An outro extends beyond the final lyrics during which parts drop out one by one.

The extensive syncopation in each part of the opening is repeated enough for students to learn the separate lines by ear, clap them in class, and break them down for rhythmic dictation. The long and unevenly-structured sung phrases render the G natural minor melody challenging as material for melodic dictation. Students might find it fun and interesting to attempt to imitate Brun's vocal style as accurately as possible, which can help illuminate salient vocal and melodic characteristics of the piece. The song's middle section contains some quartal harmonies as well as the previously-discussed interplay between G minor and C minor; while these might otherwise be considered second-year topics, the repetitive nature of the extended passage containing these elements renders them within beginning music students' ability to hear and to analyze.

As demonstrated by these two examples from Unit I, several core theory concepts such as rhythm, scales, modes, intervals, tonality, texture, and form find clear expression in single-chord or harmonically static passages and songs. Likewise, lyrics and vocal style may appear heightened in significance, and thus more accessible to analysis. As an introduction to the study of key and harmony, considering static harmony across multiple styles offers students a different perspective on tonality than that provided by the functional harmonic progressions they will also be studying.

While relatively few classical works offer extended passages of harmonic stasis (Ravel's *Bolero* as well as the more recent works of Arvo Pärt and minimalists such as Steve Reich and Phillip Glass come to mind), one-chord popular works can be juxtaposed with passages featuring harmonic stasis from the classical repertoire as an effective means of exploring how composers use extra-harmonic parameters for various musical effects. Single-chord works also offer an excellent starting point for composition projects. Students can be asked to create works or parts of works in different keys, using varied melodic and rhythmic treatments, chord qualities, and textural and structural features around a single harmonic base. An early awareness of these extra-harmonic aspects should carry through to students' subsequent study of expanded harmonic language.

Unit II: Two- and three-chord progressions

Popular music provides a plethora of examples of common practice harmonic features that may help to reinforce students' aural and intellectual understanding of the three-chord pre-dominant–dominant–tonic progressions included in Unit II. At the same time, much popular music (especially repertoire that prioritizes modal relationships) exhibits diminished tonal momentum in comparison with common practice music, with dominant chords often holding no greater significance than other chords and lacking a tendency to resolve to the tonic. By encompassing all two- and three-chord progressions, Unit II acknowledges that popular music accesses more chord combinations on the road to the tonic, while affording ample opportunity to consider functional diatonic progressions. Further, while examples of two- and three-chord progressions over phrases or sections abound in both the classical and popular repertoire, many entire popular songs utilize two or three different chords in a variety of combinations, providing ample material for analysis and aural practice (see appendix B).

Defining Unit II by the number of different chords in a progression rather than by the type of progression has several advantages. Juxtaposing short progressions from classical and popular repertoires highlights differences and similarities between their harmonic usages, and also allows consideration of their respective harmonic practices independently. Grouping classical and popular music progressions by a limited number of chords can also facilitate aural recognition: just as melodic sight-reading and dictation involves balancing an awareness of underlying scale and key with aural knowledge of isolated intervals, so a dual approach in which common practice functional harmony is examined in conjunction with progressions that are free from strict functional constraints can greatly enhance ear-training. Limiting the number of chords to two or three at an early stage ensures that students will readily grasp the basic harmonic motion involved. Additionally, examining common practice contrapuntal idioms within a two- or three-chord progression (e.g., I–vii^{o6}–I^{6}) helps students to discern common practice voice-leading, and highlights within common practice and popular repertoires the difference between individual chords that function as a harmony and short progressions that should be heard as a single prolongation within the larger phrase.

Once students can construct triads on successive tones of the major and minor scales, I have found that understanding mode mixture is well within their grasp, even though the topic is typically encountered later in the theory sequence. The preponderance of borrowed chords in popular music, even in the short two- and three- chord progressions included in Unit II (e.g., "Southern Cross," by Crosby, Stills and Nash, which employs a repeated I–♭VII–IV progression throughout[23]), suggests that mixture be introduced at a relatively early stage, before secondary dominants. My own experience has shown that popular music's emphasis on vertical sonorities and on bass and often root movement can help students hear basic harmonic movement while developing the ability to recognize individual chord quality. Later, when approaching chromatic techniques such as secondary dominants and modulation, students may well benefit from this earlier introduction, more readily distinguishing between borrowed chords used for coloristic effect and the functional harmonic relationships underlying secondary dominants and common chord modulations.

Examining two- and three-chord harmonic progressions also allows for considering classical music that departs from the common practice stress on pre-dominant–dominant–tonic motion. In *Harmonic Practice in Tonal Music*, Robert Gauldin cites the main theme of Tchaikovsky's "March" from *The Nutcracker* (featuring a I–vi–iii–I–vi progression in G major) as an example of works forgoing dominant and pre-dominant functions in major-key progressions in favor of submediant, mediant, and non-predominant-functioning supertonic chords.[24] Turek provides examples that combine mixture with a lack of dominant function altogether: an excerpt from the second movement of Brahms's Symphony no. 3, op. 90 features a I–♭VI–iv–I progression; the opening of John Williams's *Star Wars* main theme includes a I–VI–♭III–I motion over a C pedal point.[25] Examples of related progressions drawn from the popular repertoire can facilitate aural recognition of these less typical chromatic

[23] Crosby, Stills and Nash, "Southern Cross," *Daylight Again*, Atlantic Records, 1982.

[24] Robert Gauldin, "The VI, III, and Other Diatonic Triads," in *Harmonic Practice in Tonal Music*, 2nd ed. (New York: W.W. Norton, 2004), 290-306.

[25] Turek, "Mixing Modes," in *Theory for Today's Musician*, 423-450.

progressions. After a close listening to the I–♭VI–iv–I progressions occurring in the prechorus to Adele's "Set Fire to the Rain" and the chorus of Nine Inch Nails' "The Hand That Feeds," students are likely to grasp more readily the I–♭VI–iv–I progression in the excerpt from Brahms's Symphony no. 3 discussed by Turek.[26]

Drawing from popular and classical works, authentic, half, plagal, and deceptive cadences on vi or other chords can be introduced in Unit II, along with cadences employing mode mixture and those falling outside of traditional practice. Scott's chapter, "Endings," from *Chord Progressions for Songwriters* and Stephenson's discussion of cadences in *What to Listen for in Rock* are useful resources.[27] Pre-tonic chords in rock, commonly IV or ♭VII, can be compared to classical cadences utilizing atypical pre-tonic chords,[28] such as the dramatic finish to Mussorsky's "The Great Gates of Kiev" from *Pictures at an Exhibition* (ii^7–iii–I in E♭) and the final cadence of Edvard Grieg's "Morning" from *Peer Gynt* (I–vi–I in E♭). In contrast to the use of half cadences in the classical repertoire, cadences on V and other chords besides the tonic are often found at the ends of song sections in rock, as in "Twist and Shout" (originally recorded by the Top Notes, and later covered by the Isley Brothers and The Beatles), which cadences on V, and the Turtles' "Happy Together," in which the verse ends on V and the chorus on III.[29]

Certain two- and three-chord progressions common to popular music warrant emphasis. The importance of the IV chord is universally acknowledged: tonic–subdominant motion is pervasive, especially in initiating chords, as are subdominant–tonic

[26] Adele, "Set Fire to the Rain," digital download, Columbia Records, 2011; Nine Inch Nails, "The Hand that Feeds," *With Teeth*, Interscope Records, 2005.

[27] On the subject of cadences, several compilations of classical symphony finales can be found on YouTube ("Epic Classical Music: Top 10 Most Dramatic Endings," http://www.youtube.com/watch?v=Ci3uZ3zvNRM; "10 Most Epic Symphony Finales, Volume 1," http://www.youtube.com/watch?v=wGVAaVOyzEA)

[28] I prefer the term *pre-tonic* to *dominant substitute* in order to reflect rock's lack of functional tonal drive relative to common practice music.

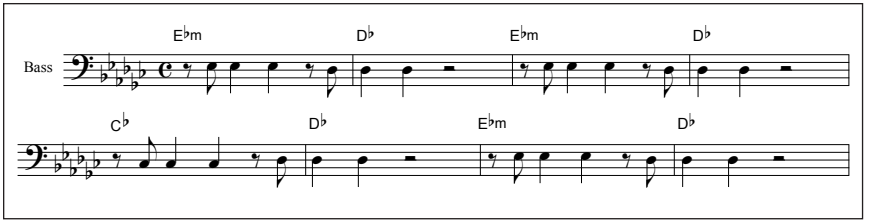
[29] The Top Notes, "Twist and Shout," Atlantic Records, 1961; The Turtles, "Happy Together," *Happy Together*, White Whale Records, 1967.

concluding harmonies.[30] The prevalence of the IV chord in many popular styles may reflect in part the influence of blues-based harmonic patterns. Three-chord blues progressions, which remain the basis of countless past and current popular songs, typically feature a IV chord through the first half of the second phrase of the twelve-bar form (and often through the second measure of the first phrase as well), and a reversal of the traditional IV–V–I authentic cadence to the more common V–IV–I cadence at the pattern's end. Among other common two- and three- chord popular music progressions, I–♭VII–IV can be presented as a classic rock progression, encountered in Crosby, Stills and Nash's "Southern Cross" as previously noted, and in Lynyrd Skynyrd's "Sweet Home Alabama."

Michael Jackson's "Beat It" features several of the harmonic practices above, especially the use of "pre-tonic" instead of traditional dominant function (Example 3).[31] Within the song's E♭ minor key, D♭ major (♭VII) appears in various contexts. It functions as a pre-tonic to E♭ minor, and also as part of a stepwise progression in seconds, first descending from E♭ minor to C♭ major, and then ascending back to the tonic. Additionally, both the verse and the chorus, which alternate every four beats between i (E♭ minor) and ♭VII (D♭ major), feature repeated cadences on ♭VII, illustrating the avoidance of harmonic closure emphasized by Stephenson, and reinforced further in the song's eventual fade out.

[30] De Clercq and Temperley, "A Corpus Analysis of Rock Harmony," offer some interesting data regarding the IV chord in rock. Not only does IV most frequently follow the tonic, but it also most frequently precedes the tonic (followed by V, ♭VII, and VI respectively, as post- and pre-tonic chords). The authors further note that rock's symmetry around the tonic holds true for root movement as well: whereas common practice music favors ascending root motion by 4ths or descending motion by 5ths, ascending and descending motion by 4ths are equally preferred in rock; indeed, whatever the specific root movement interval, ascending and descending patterns occur with equal frequency.

[31] Michael Jackson, "Beat It," *Thriller*, Epic, 1982. (See http://www.youtube.com/watch?v=oRdxUFDoQe0.)



Example 3. Root movement in the verse of "Beat It," by Michael Jackson

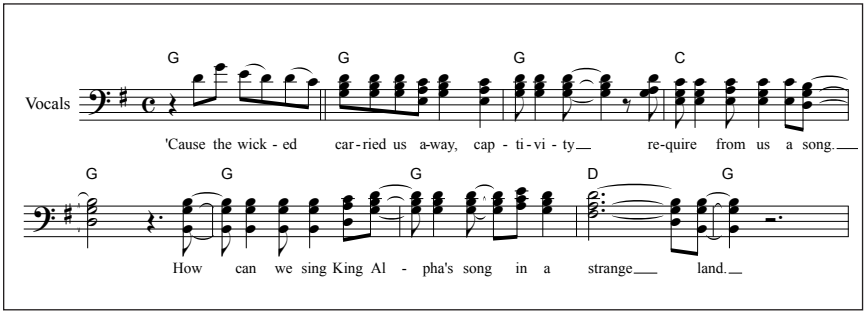
The bass line of the verse alone offers valuable melodic, harmonic, and rhythmic ear training material. Most students are already familiar with this iconic Jackson song, making it easy for them to sing the bass line or clap its rhythm, either silently, in preparation for dictation, or aloud. The three pitches of each successive triad can be sung in time with the music, following the steady harmonic rhythm of four beats per chord. As a group activity, after mastering each element of the verse, students can combine them in a vocalized and clapped realization of the passage, with one group clapping out the basic quadruple meter, accenting the last beat of each measure to mirror the strong drum backbeat on beat four, while a second group sings the syncopated bass line, and a third group, the arpeggiated triads of the underlying harmony. My own experience with this activity has led to riotous performances, complete with enthusiastic lead vocals and impressive dance moves.

As a complement to progressions falling outside standard diatonic procedures, functional I–IV(or ii)–V–I progressions comprise an equally important aspect of Unit II. Functional three-chord progressions are common to many popular music styles, including country, folk, early rock and roll, reggae, R & B, and hip-hop. The "old school" reggae classic "Rivers of Babylon," recorded by The Melodians and made famous when it appeared in the soundtrack to the film *The Harder They Come* (1972), serves as an example.[32] While not all current students are likely to be familiar with early reggae, its impact on genres from rock to hip hop remains far reaching, and "Rivers of Babylon" typifies the style's early roots. Today's

[32] Brent Dowe and Trevor McNaughton, "Rivers of Babylon," *The Harder They Come*, Island Records, 1972. (See http://www.youtube.com/watch?v=o-5E6_qtXAw.)

students may be familiar with the song through the popular ska band Sublime, which released a cover of it on their 1992 album, *40 Oz. to Freedom*.[33]

The song (in G major) features simple harmony and structure. It contains an eight-bar verse, with the first four measures remaining on the tonic and the second half containing an authentic cadence, with V–I harmony changing in two-measure units. The chorus (Example 4) is also constructed of two four-bar phrases (I–I–IV–I, and I–I–V–I respectively), moving in parallel harmonic rhythm.



Example 4. Chorus from "Rivers of Babylon," mm. 8-24, by Brent Dowe and Trevor McNaughton

As with single-chord songs, other musical parameters are heightened by the song's harmonic simplicity, illustrating several stylistic features of Jamaican "rocksteady" and the early reggae that followed. The steady drumbeat, punctuated with heavy accents by simultaneous bass drum and snare hits on beats two and four of each measure, intensifies the effect of the syncopation in the vocals. Keyboard, bass, and tambourine accent the quarter note beat, answered by staccato guitar up-strums on the eighth-note backbeat; vocal harmonies move in parallel motion, and are almost solely triadic.

The simple harmony, structure, and rhythm of "Rivers of Babylon" make the chord quality of the three-part harmonies and the form easy to discern by ear, even in real time. Learning to play quarter-note triads along with chords in the recording

[33] Ska, considered reggae's precursor, came out of Jamaica in the 1950s. Combining aspects of African, Caribbean, and American popular music, ska contained the familiar Jamaican rhythm guitar, and usually included organ, drums, bass, horns, and vocals. Ska evolved into its slower versions, first "rocksteady," and later reggae, with its spiritual connection to Rastafari. Readers are referred to Chris Potash's *Reggae, Rasta, Revolution: Jamaican Music from Ska to Dub* (New York: G. Schirmer, 1997).

can complement more traditional keyboard harmony exercises, perhaps with accompaniment by student guitarists and/or bassists. The syncopation, which heightens the challenge for beginning ear training students, can be discussed both as a stylistic feature and within the context of the interplay between melody and accompaniment: harmonic changes in the vocal part are as likely to precede changes in the accompaniment on the downbeat as they are to coincide with it (a common occurrence in popular music as observed previously in Beck's "Loser"). An invaluable classroom activity is to create an a cappella arrangement of "Rivers of Babylon" by ear. Those with collegiate a cappella experience can take leadership roles in a group effort to devise individual vocal parts to represent the instrumental accompaniment. The melody of the verse can be assigned to a soloist, or sung by several students in unison; others can master the three-part harmony in the chorus. As ambitious as this may seem, I have learned from personal experience that it is well within students'—and instructors'—abilities.

In addition, students can be asked to learn a song that uses a three-chord progression on their primary instrument, or even on an instrument they don't normally play. Non-pianists can master simply-voiced three-chord progressions at the piano; those with little or no experience on guitar, bass, or drums can learn basic parts by ear from more experienced peers. Using familiar songs as a starting point, students can explore the effects of altering the meter, harmonic rhythm, and chord qualities and voicings. Classifying harmony into two- and three-chord progressions can provide a basis for active teaching and learning through listening, arranging, composition, and performance.

Unit III: Standard progressions of four or more chords

Unit III focuses on integrating "standard" progressions of four or more different chords into students' aural and written vocabularies. In major, a standard progression is a diatonic progression in which the vi chord, possibly preceded by iii, leads to the pre-dominant IV or ii, which in turn leads to the dominant V (or dominant substitute) prior to resolving to the tonic. In some cases, the vi is optional. Standard progressions in minor mirror those in major, with some additional harmonic possibilities, depending on the scale's treatment of the 6th and 7th scale degrees and the resulting triads. As with common practice progressions, standard popular progressions

may include embellishing chromatic chords (such as secondary dominants) as well as altered pre-dominants (i.e., Neapolitan and augmented sixth chords) that are often reserved for second-year study in a two-year sequence. While focusing on standard diatonic progressions, Unit III can also offer early exposure to these basic chromatic materials. While theory pedagogues generally agree that music's vertical characteristics should not be emphasized at the expense of horizontal analysis, the vertical dimension is central to popular music, with its characteristic homophonic texture and primacy of the rhythm section. Distilled into audible foreground events, popular music employing standard progressions can facilitate aural perception of similar progressions in the context of a faster harmonic rhythm, as in the case of Bach chorales, or amidst the diffusion of harmonic sonorities through motivic development and other means of horizontal embellishment.

Standard harmonic progressions comprise a limited but significant body of the popular music repertoire (see appendix C). The doo-wop music of the 1940s, 50s, and 60s, known for its use of the I–vi–IV–V "50s progression" (which can also refer to I–vi–ii–V–I) is a useful resource. While no longer dominating commercial popular music, the style retains its influence and has seen some recent resurgence in collegiate a cappella and other post-doo-wop groups. Europe has seen a strong doo-wop revival, with male vocal groups such as England's The Roommates and Spain's The Earth Angels enjoying widespread popularity. The I–vi–ii–V progression associated with the jazz standards of the 30s and 40s, sometimes referred to as a turnaround progression, is less common in rock, though by no means absent; jazz fake books abound with examples (e.g., "Blue Moon," "Heart and Soul," and "Since I Fell").

Popular songs using standard progressions retain elements encountered in two- and three-chord popular songs: the common use of the initiating tonic to begin multiple, if not all, phrases of a song (with exceptions, such as the vi–IV–I–V progression); asynchronous melodic, harmonic, and rhythmic resolution, especially at cadence points; and the avoidance of strong cadential resolutions. When examined alongside classical music, popular songs utilizing standard harmonic progressions underscore stark differences

between the respective repertoires. Consider the harmonies used to articulate periodic structures. With some significant exceptions, common practice periodic structures often feature an antecedent phrase ending on a half cadence followed by a consequent phrase that resolves to the tonic, whereas popular music phrase structures built on standard progressions typically fail to resolve at all. I–vi–ii–V progressions repeat throughout the verses of doo-wop hits such as "Sherry"[34] and "Teenager In Love,"[35] and like countless other doo-wop numbers, both songs extend the lack of resolution with fadeouts at the end. The common popular music progression vi–IV–I–V similarly avoids resting on the tonic, and its initiating harmony on vi further weakens any feeling of resolution.

Classical works featuring continuous variation such as Baroque passacaglia and chaconne dance movements similarly contain repeating cycles of chord progressions with momentum towards the dominant, offering interesting material to compare with open-ended popular progressions. Like many popular songs, the harmonic frameworks in passacaglias and chaconnes support extensive variation and solo improvisation, but as is clearly evidenced in doo-wop, repeated progressions in popular music do not necessarily function primarily as a vehicle for variation.[36]

Many longtime artists known for their sophisticated, complex harmonic schemes—The Beatles, Stevie Wonder, Paul Simon, James

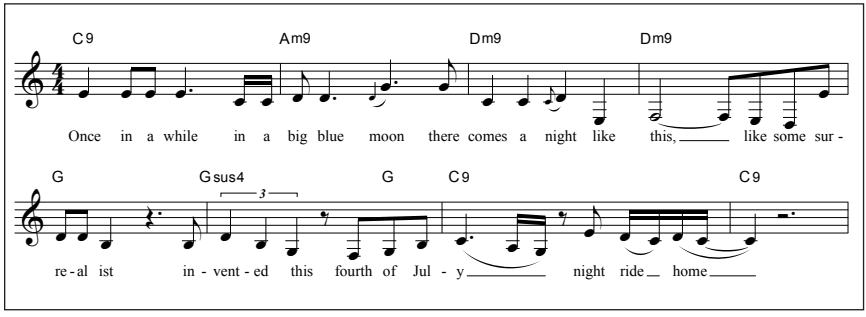
[34] The Four Seasons, "Sherry," *Sherry and 11 Others*, Vee Jay Records, 1962. (See http://www.youtube.com/watch?v=AapxXRlsdwA.)

[35] Dion and the Belmonts, "Teenager In Love," Laurie Records, 1959. (See https://www.youtube.com/watch?v=0kw6w9CPTjw.)

[36] Several writers offer comparisons between Baroque dance forms and rock/pop songs. Alex Ross, classical music critic for *The New Yorker*, devotes a chapter in his book, *Listen to This*, to tracing the descending bass line 'lament' of the Baroque chaconne throughout music history, discovering its legacy in popular music from Robert Johnson's blues to the music of Led Zeppelin and Bob Dylan ("Chacona, Lamento, Walking Blues," chapter 2 in *Listen to This* (Paris: Farrar, Straus and Giroux, 2010), 22-54); David Thurmaier, in "Rock Music, Rock Progressions, and Theory Pedagogy" shows how the descending tetrachord in works such as Purcell's "Dido's Lament" is mirrored in Eric Clapton's guitar solo in the George Harrison song, "While My Guitar Gently Weeps" (*College Music Symposium* 43 (October 31, 2003), http://symposium.music.org/index.php?option=com_k2&view=item&id=3357:rock-music-rock-progressions-and-theory-pedagogy&Itemid=128).

Taylor, Joni Mitchell, Sting, and Tom Waits, to name a few—also offer works with standard harmonic progressions. Singer-songwriter Joni Mitchell's "Night Ride Home" is a case in point.[37] The *Night Ride Home* album was released in the 1991, following a period of musical experimentation during which Mitchell explored the use of synthesizers and other music technology, collaborating with artists ranging from Charles Mingus to Billy Idol. "Night Ride Home" and the album as a whole mark a return to simplicity in terms of composition, arrangement, performance style, and production.

The song includes numerous aspects that contrast common practice. The eight-bar period comprising the verse follows a standard harmonic pattern (I–vi–ii–V–I), but the end of the first phrase rests on the supertonic, rather than on the dominant chord on which the first phrase of a traditional period typically pauses (Example 5a). Each sung phrase in the verse introduces new rhythmic and melodic material, unfolding with little reference to preceding material. The steady guitar accompaniment and a cricket chirp that marks the quarter note throughout the song support the free-flowing, conversational melodic rhythm in the vocal part in an interplay that draws the listener into the intimate car ride that the singer depicts.

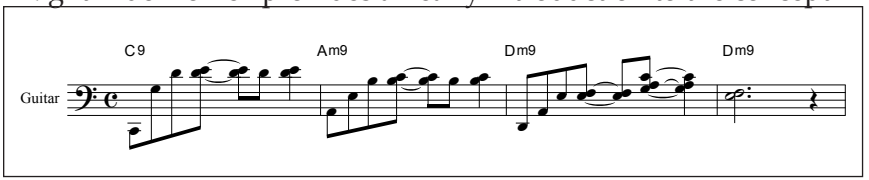


Example 5a. First verse of "Night Ride Home," by Joni Mitchell

The opening four measures of the arpeggiated guitar accompaniment reveal the importance of ninth chord sonorities throughout (Example 5b) and create a coloristic effect made familiar to Mitchell fans through her use of a wide range of altered guitar tunings, in this case, the rather low-pitched C–G–D–E–G–C replacing the normal E–A–D–G–B–E tuning. While ninth chords are typically introduced in second-year theory, their repeated appearance in

[37] Joni Mitchell, "Night Ride Home," *Night Ride Home*, Geffen, 1991. (See http://www.youtube.com/watch?v=kone5B87G2U.)

"Night Ride Home" provides an early introduction to the concept.



Example 5b. Guitar opening of "Night Ride Home," by Joni Mitchell

The harmonic independence of melody and accompaniment in "Night Ride Home," evidenced in much popular music, is another subject worthy of exploration. The harmony implied by the melody sometimes contradicts the harmony of the accompaniment, as occurs in the second and third measures of Example 5a: while the chords of the accompaniment follow the initiating tonic with vi9 and ii9 respectively, the D–G melodic motion on the lyrics "big blue moon" draw from the dominant chord rather than vi. Likewise, the descending G–C motion on "there comes" in m. 3 more strongly suggests an A minor chord moving to Fmaj7 in m. 4, or perhaps eight beats of Fmaj7, rather than the Dm9 (ii9) chord in the accompaniment. Unlike common practice music, in which non-chord tones are typically heard as melodic embellishments requiring specific resolutions, in "Night Ride Home" the harmonic clash between melody and accompaniment sounds neither dissonant nor unstable.

In addition to the ideas for classroom activities and assignments discussed in Units I and II, aural training for Unit III can include using periodic structure as a framework for determining and comparing where the respective chords of given common practice and rock progressions occur. Excerpts featuring standard progressions in common practice can also serve as the basis for group composition projects in popular styles. The opening four measures of the Bach chorale BWV 262, "Alle Menschen müssen sterben," works well for this, with the following standard progression:

$$\text{I–vi–I}^{6}\text{–IV–V–I} \;\|\; \text{I–ii–vii}^{o6}\text{–I}^{6}\text{–ii}^{6/5}\text{–ii}^{7}\text{–V–I.}$$[38]

Choosing from among familiar rock songs, students could arrange one or two consecutive phrases for four parts in collegiate a

[38] BWV 262 appears as no. 17 in *371 Four-Part Chorales*, Vol. 1, ed. Kalmus (New York: Alfred Music, 1985); no. 153 in *Bach Chorales from the C.P.E. Bach Collection*, ed. Frieder Rempp (Kassel: Bärenreiter, 2002); and no. 5 in *101 Chorales Harmonized by Johann Sebastian Bach*, ed. Walter Buszin (Miami: Belwin-Mills, 1952).

cappella style, for a comparison with four-part common practice excerpts featuring standard progressions. Alternatively, the class could create multiple arrangements of excerpts from a single work, whether in doo-wop or more current styles, and compare the creative results.

Asking students to create mash-ups of popular songs sharing the same harmonic patterns draws upon their technical, musical, and creative resources. The term "mash-up" refers to the common commercial practice of juxtaposing two or more previously released songs, usually above a continuous drum track either from one of the featured songs or from a different song. Examples of tongue-and-cheek mash-ups lampooning the overuse of certain progressions are included in Appendix D. Individual students or groups could string together parts of different songs in a continuous stream over a chosen looped progression, or with songs sharing the same harmonic rhythm, in simultaneously-played layers. The result can be a live or recorded performance (and even be posted on YouTube). Offering students a degree of freedom in choosing the progression, the songs, and the format empowers students as their personal taste and individual learning styles come into play in a project that both reinforces aural knowledge of the progression involved and is satisfying and fun to create.

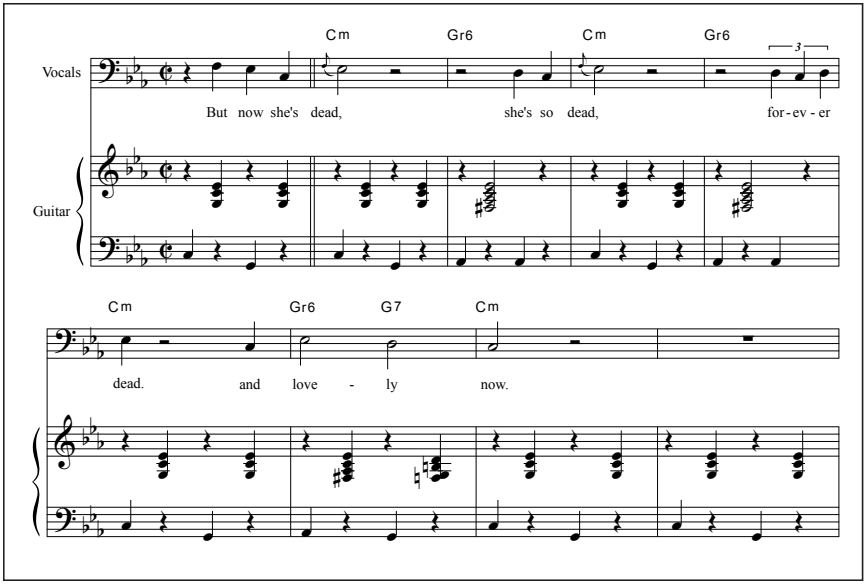
Within Unit III instructors and students can find examples of the tonal techniques and materials that traditional music theory textbooks typically cover in the theory core, from first semester topics such as scales, triads, seventh chords and cadences, to second semester or later topics such as secondary functions and basic modulatory techniques. Popular music repertoire also contains a wealth of material illustrative of more advanced chromatic procedures, which, as preparation for later study, can be introduced within the framework of standard diatonic rock progressions. A brief look at Tom Waits's song "Dead and Lovely" illustrates how the topic of augmented sixth chords might be approached within the context of Unit III.[39]

Like many popular songs featuring standard progressions, "Dead and Lovely" models this traditional music theory concept while illustrating possible expansions of these progressions within an alternative stylistic context. The haunting "Dead and Lovely" is an apt vehicle for Waits's dark and rambling storytelling. The

[39] Tom Waits and Kathleen Brennan, "Dead and Lovely," *Real Gone*, Epitaph, 2004. (See http://www.youtube.com/watch?v=KHLvlLDtCF8.)

sparse instrumentation—just electric and acoustic guitars, bass, and brushed snare drum—features a slow, steady "umpah" bass line, punctuated in the drums by quiet brushes on the offbeats. Although the excerpt below contains only three different chords and could fit within Unit II, the example is included in Unit III because the verse (not shown) and refrain together combine to create the four-chord progression i–iv–i–Gr6–V–i, including the subdominant chromatic embellishment of an augmented sixth chord. In addition, the slow tempo, harmonic rhythm, and spare texture help students follow the harmonic motion more easily, even through the entire verse and chorus, making the song an ideal introduction to this topic.

The augmented sixth chord in the refrain plays a central, coloristic role (Example 6). It delays resolution to the dominant twice, serving as an ominous and confounding afterthought—almost a response to the C minor "call" underlying the sung adjective, "dead." The harmonic rhythm doubles on the word "lovely" with the chord's final resolution, re-contextualizing the chord within a more prosaic, almost conventional authentic cadence at the conclusion of the refrain.



Example 6. Refrain of "Dead and Lovely," by Tom Waits and Kathleen Brennan

The $\hat{1}$-$\hat{5}$-$\flat\hat{6}$ motion in the bass sounds three times, making it easier for students to discern the augmented sixth chords. At the final cadence, the raised $\hat{4}$ (F#), rather than resolving upwards to the dominant, resolves downward to F (the seventh of V7), moving in parallel rather than contrary motion with the A♭–G descent in the bass. A comparison with common practice highlights Waits's relatively loose approach to voice leading: within the transparent, guitar-dominated texture, the unabashed parallel fifths go by without notice. While hardly a staple of rock harmony, the augmented sixth chord can be found in many songs using standard diatonic progressions. Waits uses them to poignant effect in several of his minor key songs (e.g., "Soldier's Things"[40]), and examples can be found in other songs, ranging from The Beatles' "I Want You (She's So Heavy)"[41] to Los Lonely Boys' "Love in My Veins."[42]

Unit IV: Other progressions of four or more chords

The broad scope of the final grouping reflects the wide variety in rock progressions. Songs featuring a single progression repeated within a relatively simple song form comprise only a fraction of popular music harmonic progressions. Much of the work of artists utilizing a sophisticated, complex, and often interesting harmonic language, from "old school" greats such as The Beatles and Steely Dan, to the current indie-pop of Animal Collective, Sufjan Stevens, and James Blake, defies categorization by harmonic progression; there is simply too much harmonic variety within and between individual songs and artists' creative output. The unique harmonic vocabulary in a song like Steely Dan's "Negative Girl,"[43] with its complex jazz voicings and roving, sleight-of-hand modulations, bears little resemblance to the meandering progressions that Sufjan

[40] Tom Waits, "Soldier's Things," *Swordfishtrombones*, Island Records, 1983. (See http://www.youtube.com/watch?v=qwg3y_FnLmg.)

[41] The Beatles, "I Want You (She's So Heavy)," *Abbey Road*, Apple Records, 1969. (See http://www.youtube.com/watch?v=FnF91s2bBpg.)

[42] Los Lonely Boys, "Love in My Veins," *Rockpango*, Playing in Traffic Records, 2011. (See http://www.youtube.com/watch?v=L9YLWckxpqg.)

[43] Steely Dan, "Negative Girl," *Two Against Nature*, Giant Records, 2000. (See http://www.youtube.com/watch?v=eAnTph40pgE.)

Stevens uses in "From the Mouth of Gabriel."[44] No simple system of chord classifications can encompass both. The loose description "other progressions involving four or more chords" reflects the author's conviction that music theory education must avoid cramming the lived experience of music making, whether classical or popular, into explanations that are too rigid or too narrow.

Notwithstanding popular music's vast variety of harmonic usage, within Unit IV there are several self-contained areas on which instructors can focus (see appendix D). The ubiquitous sequential progression underlying Pachelbel's canon (I–V–vi–iii–IV–I–IV–V) is the basis for many songs and allows for easy comparisons. The I–V–vi–IV progression is another possible subunit, so commonplace, especially in commercial pop, that it is the subject of several funny YouTube mash-ups that students find both amusing and useful for aural training. The progression i–III–♭VII–IV in minor constitutes a third grouping. While less common than some other popular music progressions, the ♭VII–IV descending fourth root motion (first encountered in Unit II and noted by both Stephenson and by de Clercq and Temperley[45]) is characteristic of many popular music styles, reflecting the high incidence of both ♭VII and IV chords in popular music compared to common practice. Examples of each of these progressions are noted in the appendix.

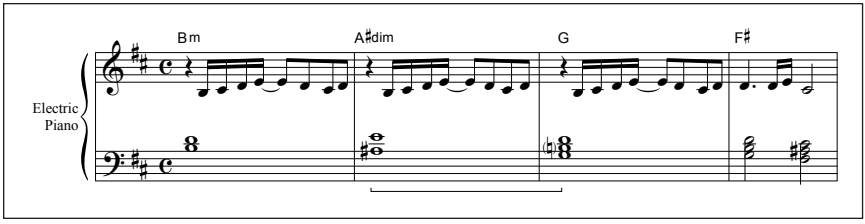
A larger subunit comprises stepwise progressions of four or more chords. (Shorter stepwise progressions were first encountered in Unit II in Michael Jackson's "Beat It.") In common practice music, bass lines moving by step, whether diatonic or chromatic, typically employ alternating root position and inverted chords. Helping beginning music students focus on the preponderance of root position rock progressions with bass lines that move by step may help them more readily identify the progressions that underlie descending stepwise bass lines in common practice. Common ascending step-wise rock progressions include: I–ii–iii–IV[–V], and i–ii–III–IV[–V]; I–iii–IV–V; and i–ii–IV–V. Less common descending step-wise progressions include the so-called Andalusian or Flamenco progression (i–♭VII–♭VI–V), which can

[44] Sufjan Stevens, "From the Mouth of Gabriel," *All Delighted People*, Asthmatic Kitty Records, 2010. (See http://www.youtube.com/watch?v=IrGMIdemDnQ.)

[45] Stephenson, "Harmonic Succession," chapter 5 in *What to Listen for in Rock*; de Clercq and Temperley, "A Corpus Analysis of Rock Harmony," 63.

be found throughout the classical repertoire. A particularly good example is Scene 1, "The Kuru Field of Justice," from Philip Glass's opera *Satyagraha* (1979), which features the repeated progression throughout.

A four-measure ostinato drawn from The Roots' hip-hop song, "You Got Me" provides a descending progression suitable for ear training (Example 7).[46] The slow harmonic rhythm and sparse instrumentation (vocals, electric keyboard, acoustic guitar, and bass) at the opening of the song make the root position chords easier to hear and identify. The many repetitions of the ostinato throughout the song reinforce the sound of the progression even as instrumental and rapped or sung vocal parts are added or changed. As shown by the bracket in Example 7, the bass line also includes an exposed interval of a descending augmented second, which appears in the context of a descending harmonic minor scale. Students can be asked to sing back the repeated bass line to solidify their aural understanding of the augmented second. That this progression and the resulting augmented second melodic interval are typically avoided in common practice clarifies this important distinction between the respective repertoires.



Example 7. Keyboard opening of "You Got Me," by Questlove, Tariq Trotter, Jill Scott, and Scott Storch

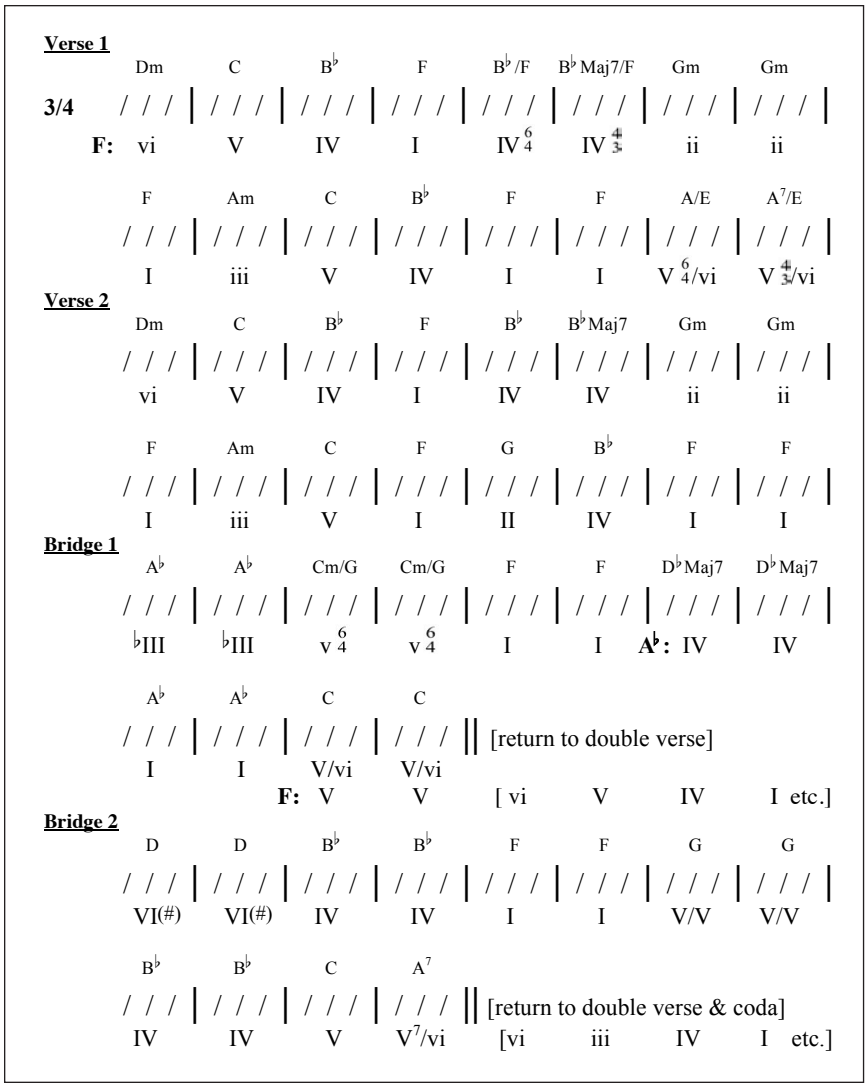
The final song to be considered, "Miss Misery," by Elliot Smith, falls outside of the previously mentioned subcategories of progressions within Unit IV.[47] The song may be familiar from its appearance in the soundtrack for the film *Good Will Hunting* (1997). The lyrics are rife with symbolism and double entendres, from the ambiguous, alliterative hook ("Do you miss me, Miss Misery, like

[46] Questlove, Tariq Trotter, Jill Scott, and Scott Storch, "You Got Me," *Things Fall Apart*, Geffen, 1999. (See http://www.youtube.com/watch?v=MJCHeEQV454.)

[47] Elliott Smith, "Miss Misery," *Good Will Hunting*, Capitol, 1997. (See http://www.youtube.com/watch?v=zH8-lQ9CeyI.)

you say you do?") to its urban imagery. Musical elements reflect the alienation and despair expressed in the lyrics. Smith's unforced and vibrato-less tone quality is embellished with a subtle double-tracking effect, and noticeable intakes of breath punctuate the beginnings of musical phrases, adding to the vulnerability that he projects. The harmonic progressions avoid strong functional motion throughout the piece. The rhythmic treatment of the vocal melody is loose over the steady $\frac{3}{4}$ accompaniment, with notes at times subtly off the downbeats, and at other times noticeably anticipating or extending past the beat. The lack of melodic and harmonic repetition within the eight-bar periods of the verse and the inclusion of two musically independent bridges contribute to a meandering musical flow that underlines the sense of being lost and alone.

The song features a rondo form (ABACA), with two twelve-measure bridge sections (B and C), rather than the eight- or sixteen-measure periodic structures suggested by the verse (Example 8). The opening harmonies of both bridge sections are surprising—having established F major in the verse, the first bridge modulates abruptly to ♭III (A♭ major), and the second begins on a D major chord. In contrast, the transitions from bridge back to verse are subtler, particularly in the case of the first bridge, where the return from the A♭ bridge to the F major verse is accomplished via a common chord modulation (C major functions as V/vi in A♭, and as V in F), leading to the opening vi chord of the verse.



Example 8. "Miss Misery," by Elliott Smith

Both bridges' respective progressions contrast with the verse as well as with each other. In the first bridge, an initiating A♭ harmony in F major foreshadows the modulation to A♭ major later in the bridge. While the second bridge does not convincingly modulate, its VI–IV–I (D major–B♭–F) motion is an interesting twist on the standard V–IV–I blues cadence. According to Stephenson's three systems of harmonic palette, this passage falls within the third, major system, which includes major and minor chords built on

the notes of the Mixolydian scale.[48] In common practice music, a major chord on the submediant would likely function outside of the key, as a secondary dominant of ii. Stephenson's concept of harmonic palette acknowledges that in rock, traditional functions do not necessarily apply, as is the case here. On the other hand, the song does include several examples of secondary dominants, most notably at the end of the first verse, where V/vi (A major) lingers for two measures in preparation for the D minor (vi) chord that begins the repeat of the verse.

The relationship between harmonic rhythm and periodic structure is intriguing. In both verses, rather than accelerating to the respective half and full cadences ending each phrase of the period, the harmonic rhythm slows from the dotted half note established in the four-measure antecedent phrase to two measures per chord in the consequent phrase. Smith seems to be putting on the brakes harmonically, stuck and slow moving as his depression suggests. In the song's two contrasting bridges, typically sections where increased harmonic activity is expected, the slower two-measure harmonic rhythm is maintained amidst relatively quick changes in key center.

Smith occasionally uses second inversion chords in the piano part. Unlike common practice usage, at times the inversions have little to do with smooth part writing. The second inversion chords lessen the sense of harmonic drive throughout the chord progression, which often moves by step and avoids strong cadences. The first second inversion chord appears in mm. 5-6, where a neighboring $\frac{6}{4}$ B♭ major chord (IV) follows the tonic F major chord. Rather than resolving back to a tonic-functioning chord as is typical in common practice, the second inversion chord leads to a cadence on a root position G minor chord (ii). Furthermore, the inverted IV appears in a metrically strong position and lasts two measures. Later in the song, second inversions create smooth bass line voice-leading to connect chords with different harmonic functions. The final two measures of verse 1 contain inverted A chords and an A7 chord over E, functioning as secondary dominants of vi. Here, in a $\hat{1}$-$\hat{7}$-$\hat{6}$ motion, the E in the bass passes from the tonic of the preceding F chord to the D minor vi chord that opens the repeated verse. This use of second inversion also differs significantly from the common practice passing $\frac{6}{4}$ chord, typically occurring on V and connecting

[48] Stephenson, "Chord Type and Harmonic Palette," chapter 4 in *What to Listen for in Rock*.

a tonic chord and its inversion (or less frequently on the tonic, connecting a IV chord to its inversion).

A valuable classroom assignment, particularly for vocalists, involves memorizing sections of the solo vocal line by ear for solo performance, including vocal embellishments and lyrics.[49] Excerpts containing the intermittent instances of vocal harmony can be learned at this stage as well, with pairs of students working to master the solo and the harmony for in-class performance. In addition to learning and singing the vocal parts, more advanced students can further hone their aural skills by transcribing excerpts of the melody. Once mastered—even by reluctant non-vocalists—the solo can then be analyzed for elements such as melodic range, harmony, periodic structure, embellishments, and its relationship to the lyrics. Important features of the intermittent vocal harmony can likewise be identified, in particular its placement both musically and in relation to the text. Melodic and rhythmic dictation exercises can follow.

Tackling the vocal parts in "Miss Misery" can be undertaken alongside consideration of the accompaniment and the recording as a whole. Working towards the goal of in-class performance, instrumentalists can memorize separate parts of "Miss Misery," attempting to recreate the performance on the recording as accurately as possible. The instrumentation (acoustic and electric guitar, drum set, piano, organ, solo voice, and vocal harmony) changes by formal section, with each section featuring individual instruments; students can concentrate on the details of the exposed parts, some of which can be simplified as necessary. For example, at the return to the verse following the first bridge, for a full sixteen measures the bass part of the piano accompaniment consists of three repeated quarter notes per $\frac{3}{4}$ measure, played on a single chord tone from each underlying harmony, which changes either every measure or every two measures. Non-keyboard players and accomplished pianists alike would benefit from mastering this simple bass part, noting its importance to the song's meter, mood, and harmony.

[49] The author has had surprising success with this activity. Imitating even a small passage of a particular vocalist's style draws upon different ear-training skills than do typical dictation or memorization exercises, heightening students' awareness of stylistic performance practices. YouTube is a great resource for impressive and often hilarious mimicry of celebrity singers (e.g., Christina Bianco, https://www.youtube.com/watch?v=C3DlDPeurRw).

Attempting an accurate realization of a given musical work requires precise listening to performance styles and the inner workings of the piece. An alternative approach that could be used in tandem with the above activities has students learning the song on their chosen instrument, again by ear, retaining musically crucial elements such as the meter, chord progression, and basic melody line in order to create a new cover version. It would be interesting to compare attempts at an "accurate" rendition of the song with a newly-conceived cover version. This activity could introduce a secondary conversation about the musical and cultural significance of song covers, a practice at the core of much current popular music performance. Centering group learning projects around a single popular music work can greatly enrich students' knowledge base, suggesting avenues through which a variety of music theory topics can be explored, and generating numerous opportunities for experientially-based learning.

Conclusion

This discussion offers a possible lens through which to examine both classical and popular music practices with a view towards developing a pedagogy that integrates popular music into the traditional, classical music-based music theory curriculum by reclassifying harmonic progressions by number and type rather than solely by harmonic function. Music educator Estelle Jorgensen has called for a renewed sense of purpose in the music education process, and notes the importance of choosing repertoire that fosters that sense:

> A sense of reverence for this time and place, for these students and teachers, and for this subject matter or repertoire makes the tasks of music teaching and learning both precious and fragile since there may never again be such a moment or opportunity as this. The selection of repertoire for study is one of the crucial endeavors of such a reverent approach to music education. [50]

[50] Estelle R. Jorgensen, *The Art of Teaching Music* (Bloomington, IN: Indiana University Press, 2008), 25.

As many of us strive to integrate popular music more fully into the traditional music theory curriculum, we too must approach this undertaking with a sense of reverence—for popular music practice, for the challenge educators face in devising effective and efficient ways for its inclusion, and for the goal of ensuring student engagement in the music educational process. As an essential component of a stylistically inclusive music theory education, popular music harmony can serve as an exciting focal point for student-centered teaching and learning, generating new ideas for experiential approaches that uphold creativity, spontaneity, and imagination as essential aspects of music theory knowledge.

APPENDIX A: SUGGESTED LISTENING, UNIT I

Single-chord songs and static harmony

Bob Dylan. "Hollis Brown." *The Times They Are A-Changin'.* Columbia Records, 1964.
http://www.youtube.com/watch?v=fEouuxAatBs

The Velvet Underground. "Venus In Furs." *The Velvet Underground & Nico.* Verve Records, 1967.
http://www.youtube.com/watch?v=9nGsUbZpCKM

Neu! "Hallogallo." *Neu!* Brain Records, 1972. [Part of the German "Krautrock" movement]
http://www.youtube.com/watch?v=ubdHYhnersU

Neu! "Für Immer (Forever)." *Neu! 2.* Brain Records, 1973.
http://www.youtube.com/watch?v=u3-86_Xq7fQ

Steely Dan. "Show Biz Kids." *Count Down to Ecstasy.* ABC Records, 1973.
http://www.youtube.com/watch?v=-9QVNbUPzgM

Brian Eno. "Discreet Music." *Discreet Music.* EG Records, 1975. [Ambient music genre]
http://www.youtube.com/watch?v=7-Vq4pmzMaE

AC/DC. "It's a Long Way to the Top (If Ya Want to Rock and Roll)." *High Voltage.* ATCO, 1976. [Intro, verse]
http://www.youtube.com/watch?v=zFDhxJJMEIY

Gang of Four. "Natural's Not In It." *Entertainment.* EMI Records, 1979. [Post-punk]
http://www.youtube.com/watch?v=1vPonjXOfYo

Hank Williams. "Honky Tonkin'." *High Notes.* Elektra Records, 1982.
http://www.youtube.com/watch?v=Dh_CQnhZ8cY&feature=results_video&playnext=1&list=PL313727266D67E0A4

ESG. "Come Away." *Come Away With ESG.* 99 Records, 1983.
http://www.youtube.com/watch?v=GkZ1bC1FQBk

Talking Heads. "Girlfriend is Better." *Speaking in Tongues.* Sire Records, 1983.
http://www.youtube.com/watch?v=t_WJgimzraM

Tom Waits. "Get Behind the Mule." *Mule Variations.* Anti- Records, 1991.
http://www.youtube.com/watch?v=l7yuTR8r6QM

Stereolab. "Super-Electric." *Switched On.* Slumberland Records, 1992.
http://www.youtube.com/watch?v=8WzHKo3uex8

John Lee Hooker. "Burnin' Hell." *Burning Hell.* Obc Records, 1993.
http://www.youtube.com/watch?v=KMlC0qjP02g

Liz Phair. "Johnny Sunshine." *Exile in Guyville.* Matador Records, 1993.
http://www.youtube.com/watch?v=Ou9r2RvSJok

Bjork. "You've Been Flirting Again." *Post.* One Little Indian Records, 1995. [Oscillating harmonies, B♭-C].
http://www.youtube.com/watch?v=tPWfpgwU5c4

Bjork. "Possibly Maybe." *Post.* One Little Indian Records, 1995.
http://www.youtube.com/watch?v=tE11_5Spq1I

Bjork. "I Miss You." *Post.* One Little Indian Records, 1995. [Verse]
http://www.youtube.com/watch?v=IKSoBJ8WirE

Stevie Ray Vaughan. "Crossfire." *In Step.* Epic Records, 1999.
http://www.youtube.com/watch?v=7cUrdvb1LaQ

Destiny's Child. "Bootylicious." *Survivor.* Columbia Records, 2001.
http://www.youtube.com/watch?v=IyYnnUcgeMc

Cornershop. "Wogs Will Walk." *Handcream for a Generation.* Wiiija Records, 2001.
http://www.youtube.com/watch?v=MDSOQWyxwqc

Bjork. "Undo." *Vespertine.* One Little Indian Records, 2001.
http://www.youtube.com/watch?v=Qg8bsVBLXjA

Keith Urban. "One Chord Song." *Golden Road.* Capitol Records, 2002.
http://www.youtube.com/watch?v=bxCWxkB4oD4

Tinariwen. "Cler Achel." *Aman Iman: Water Is Life.* Outside Music Records, 2007. [Tuareg Musicians from northern Mali]
http://www.youtube.com/watch?v=kjxzUeRXyq0

Beyoncé. "Single Ladies (Put a Ring on it)." *I Am…Sasha Fierce.* Columbia Records, 2008.
http://www.youtube.com/watch?v=4m1EFMoRFvY

Animal Collective. "My Girls." *Merriweather Post Pavilion.* Domino Records, 2009. [First two minutes]
http://www.youtube.com/watch?v=zol2MJf6XNE&feature=relmfu

APPENDIX B: SUGGESTED LISTENING, UNIT II

2-chord songs

The Seeds. "(You're) Pushin' Too Hard." *The Seeds.* GNP Crescendo Records, 1965. [i, ♭VII]
http://www.youtube.com/watch?v=IReb27tFqMg

The Beatles. "Paperback Writer." EMI Records, 1966. [I, IV]
http://www.youtube.com/watch?v=taADLPtyDb0

The Beatles. "Eleanor Rigby." *Revolver.* Parlophone Records, 1966. [i, VI]
http://www.youtube.com/watch?v=-LOgMWbDGPA

Traffic. "Feelin' Alright." *Traffic.* Island Records, 1968. [I, IV]
http://www.youtube.com/watch?v=AIYLZOp_Bzc

The Beatles. "Don't Let Me Down." *Get Back/Let It Be* Sessions. Apple Records, 1969. [i, ii]
http://www.youtube.com/watch?v=EB9tqgdCt5I

Led Zeppelin. "Whole Lotta Love." *Led Zeppelin II.* Atlantic Records, 1969. [i, ♭VII]
http://www.youtube.com/watch?v=bXKboDqiSbE

The Modern Lovers. "Road Runner." *The Modern Lovers.* Beserkley Records, 1976. [IV, I]
http://www.youtube.com/watch?v=BgRYncR1Nog&feature=related

The Fall. "Eat Y'rself Fitter." *Perverted by Language.* Rough Trade Records, 1983. [♭III, I]
http://www.youtube.com/watch?v=yFCOt6wbm80

Bruce Springsteen. "Born in the U.S.A." *Born in the U.S.A.* Columbia Records, 1984. [I, IV]
http://www.youtube.com/watch?v=lZD4ezDbbu4

Jane's Addiction. "Jane Says." *Nothing's Shocking.* Warner Brothers Records, 1988. [♭VII, I]
http://www.youtube.com/watch?v=xh-5FI21s6M

Nirvana. "Something in the Way." *Nevermind.* DGC Records, 1991. [i, VI]
http://www.youtube.com/watch?v=jDyvClUsCJU

Moldy Peaches. "Anyone Else But You." *The Moldy Peaches.* Sanctuary Records, 2001. [I, IV]
http://www.youtube.com/watch?v=WtBMF0BqDrU

Devendra Banhart. "State of Michigan." *Oh Me Oh My.* Young God Records, 2002. [I, ii]
http://www.youtube.com/watch?v=-OwgqbsfwsM

Coldplay. "Politik." *Rush of Blood to the Head.* Capitol Records, 2002. [I, iv]
http://www.youtube.com/watch?v=FHzvjIvJbfE

Ray Lamontagne. "How Come." *Trouble.* RCA Records, 2004. [I, IV]
http://www.youtube.com/watch?v=8owsUoHiD20

Weezer. "Troublemaker." *Weezer.* Geffen Records, 2008. [I, IV]
http://www.youtube.com/watch?v=R_u-6CPE74o

3-chord songs

Bob Dylan. "A Hard Rain's Gonna Fall." *The Freewheelin' Bob Dylan.* Columbia Records, 1963. [I, IV, V]
http://www.dailymotion.com/video/xq1q9k_bob-dylan-a-hard-rain-s-a-gonna-fall-

Bob Dylan. "Tambourine Man." *Bringin' It All Back Home.* Columbia Records, 1965. [I, IV, V]
http://www.timsah.com/Bob-Dylan-Mr-Tambourine-Man/eTMQrP81n27

Cream. "Strange Brew." *Disraeli Gears.* Atco Records, 1967. [i, iv, v, minor blues]
http://www.youtube.com/watch?v=oElnOb_ookE

Bob Dylan. "All Along the Watchtower." *John Wesley Harding.* Columbia Records, 1967. [i, ♭VII, VI]
http://www.youtube.com/watch?v=YanjY9CsPDQ

Van Morrison. "Brown Eyed Girl." *Blowin' Your Mind!* Bang Records, 1967. [I, IV, V]
http://www.youtube.com/watch?v=kqXSBe-qMGo

Creedence Clearwater. "Proud Mary." *Bayou Country.* Fantasy Records, 1969. [I, V, vi]
http://www.youtube.com/watch?v=Gpqz3cdVPLM&feature=fvwrel

Pink Floyd. "Money." *The Dark Side of the Moon.* Harvest Records, 1973. [i, V, iv, blues]
http://www.youtube.com/watch?v=i-j3xITvYQY

Bob Dylan. "Knockin' On Heaven's Door." *Pat Garrett and Billy the Kid.* Columbia Records, 1973. [I, V, ii]
http://www.youtube.com/watch?v=cJpB_AEZf6U

Bob Dylan. "Isis." *Desire.* Columbia Records, 1976. [I, ♭VII, IV]
http://www.youtube.com/watch?v=7SkrLadYCG4

The Ramones. "I Don't Care." Rocket to Russia. Sire Records, 1977. [i, VI, ♭VII]
http://www.youtube.com/watch?v=QveJv7V4OZI

AC/DC. "Back in Black." *Back in Black.* Albert Records, 1980.
http://www.youtube.com/watch?v=CwIvBNsSywQ

Tom Waits. "Jersey Girl." *Heart Attack and Vine.* Asylum Records, 1980. [I, IV, V]
http://www.youtube.com/watch?v=aw5JkJQgYsM

Crosby, Stills and Nash. "Southern Cross." *Southern Cross.* Atlantic Records, 1981. [I, ♭VII, IV]
http://www.youtube.com/watch?v=Bw9gLjEGJrw

John Mellencamp. "Authority Song." *Uh-Huh.* Riva Records, 1983. [I, IV, V]
http://www.youtube.com/watch?v=wsEwK69LXjQ

U2. "I Still Haven't Found What I'm Looking For." *The Joshua Tree.* Island Records, 1987. [I, IV, V]
http://www.youtube.com/watch?v=TRwoeuz5L80

Green Day. "She." *Dookie.* Reprise Records, 1995. [I, IV, V]
http://www.youtube.com/watch?v=OnF0pkWD2Tc

Alanis Morissette. "Hand in My Pocket." *Jagged Little Pill.* Maverick Records, 1995. [I, ♭VII, IV]
http://www.youtube.com/watch?v=LQ8D5Ihe4hg

Blink 182. "All The Small Things." Geffen Records, 2000. [I, V, IV]
http://www.youtube.com/watch?v=9Ht5RZpzPqw

The Jayhawks. "I'm Gonna Make You Love Me." *Smile.* American Records, 2000. [I, ♭VII, IV]

Oasis. "Songbird." *Heathen Chemistry.* Big Brother Records, 2003. [I, vi, V]
http://www.youtube.com/watch?v=0KJgBkreAuw

Arcade Fire. "Wake Up." *Funeral.* Merge Records, 2004. [Verse: I, vi, IV]
http://www.youtube.com/watch?v=Z0IAHH_OFoU

Snow Patrol. "Chasing Cars." *Eyes Open.* Interscope Records, 2006. [I, iii, IV]
http://www.youtube.com/watch?v=GemKqzILV4w

Tom Waits. "Hold On." *Mule Variations.* Anti-Records, 2007. [I, IV, V]
http://www.youtube.com/watch?v=WPnOEiehONQ

Caribou. "Odessa." *Swim.* City Slang Records, 2010. [VI, V, i]
http://www.youtube.com/watch?v=aiSa7THgxrI

Amy McDonald. "Love Love." *A Curious Thing.* Mercury Records, 2010. [I, IV, I, V]
http://www.youtube.com/watch?v=Xi557TMssE8

APPENDIX C: Suggested listening, UNIT III

I-vi-IV-V

The Beatles. "Happiness Is a Warm Gun." *The White Album.* Apple Records, 1968. [Chorus]
http://www.youtube.com/watch?v=xTU2Y0VFH0E

The Beatles. "Octopus's Garden." *Abbey Road.* Apple Records, 1969.
http://www.youtube.com/watch?v=YlKlNmoR6vM

Steely Dan. "My Old School." *Countdown to Ecstasy.* ABC Records, 1973. [Verse]
http://www.youtube.com/watch?v=4ZZTojpxW0k

Led Zeppelin. "D'yer Mak'er." *Houses of the Holy.* Atlantic Records, 1973. [Verse]
http://www.youtube.com/watch?v=P5s9illHQlc

Nena. "99 Luftballons (99 Red Balloons)." *Nena.* CBS Schallplatten Records, 1983. [Intro: I-vi-IV-V; verse: I-ii-IV-V]
http://www.youtube.com/watch?v=14IRDDnEPR4

Red Hot Chili Peppers. "Someone." Warner Brothers Records, 2002.
http://www.youtube.com/watch?v=i2s8MOXTVLo

Green Day. "Jesus of Suburbia." *American Idiot.* Reprise Records, 2004. [Verse]
http://www.youtube.com/watch?v=JMcNzjzw63I

The Riverdales. "Werewolf One." *Invasion USA.* Asian Man Records, 2009. [Verse]
http://www.youtube.com/watch?v=Vs7G-ju5J

Justin Bieber. "Baby." *My World 2.0.* Island Records, 2010.
http://www.youtube.com/watch?v=kffacxfA7G4

Earth Angels. "This Is the Night." *Street Corner Style.* Rare Rockin' Records, 2010. [Verse]
http://www.youtube.com/watch?v=IBGTrvy4b7w

vi-IV-I-V

Boston. "Peace of Mind." Epic Records, 1976. [Intro and chorus]
http://www.youtube.com/watch?v=WGRrOEbY3pI

Joan Osborne. "One of Us." *Relish.* Blue Gorilla Records, 1995.
http://www.youtube.com/watch?v=xZEO1Lug25s

Jewel. "Hands." *Spirit.* Atlantic Records, 1998. [Verse]
http://www.youtube.com/watch?v=AfsS3pIDBfw

Madonna. "The Power of Goodbye." *Ray of Light*. Maverick/Warner Brothers, 1998.
http://www.youtube.com/watch?v=xG-w52U6-x8

Nina Gordon. "Tonight and the Rest of My Life." *Tonight and the Rest of My Life*. Warner Brothers, 2000. [Verse]
http://www.youtube.com/watch?v=BiNf6uDhMac

Bon Jovi. "It's My Life." *Crush*. Island, 2000. [Chorus]
http://www.youtube.com/watch?v=jC67JzPqDG4

Sarah McLachlan. "Building a Mystery." *Mirrorball: The Complete Concert*. Arista Records, 2004. [Verse]
http://www.youtube.com/watch?v=zWxzM9_gEo0

One Republic. "Apologize." *Dreaming Out Loud*. Mosley Music, 2006. [Verse]
http://www.youtube.com/watch?v=fzq8c5pr-Ws

Moby. "Every Day It's 1989." *Last Night*. Mute Records, 2007. [Verse]
http://www.youtube.com/watch?v=gB4Y9jVo5sA

Aimee Mann. "Borrowing Time." *@#%&*! Smilers*. Super Ego Records, 2008. [Verse]
http://www.youtube.com/watch?v=CNiBazvemWk

Beyoncé. "If I Were A Boy." *I Am…Sasha Fierce*. Columbia Records, 2008. [Alternates between I-IV-I-V and vi-IV-I-V]
http://www.youtube.com/watch?v=AWpsOqh8q0M

Other standard progressions

Frank Zappa & The Mothers of Invention. "Deseri." *Cruising with Ruben and the Jets*. Bizarre/Verve Records, 1968. [I-vi-ii-V-I]
http://www.youtube.com/watch?v=i4KnMkM7ljk

Marvin Gaye. "What's Going On." *What's Going On*. Tamla Records, 1971. [Verse: I-vi-ii-V-I]
http://www.youtube.com/watch?v=H-kA3UtBj4M

The Eagles. "Lyin' Eyes." *One of These Nights*. Asylum Records, 1975. [Verse: I-IV-ii-V-I]
http://www.youtube.com/watch?v=5-NlR54PqLw

Queen. "Spread Your Wings." *New of the World*. EMI Records, 1978. [Chorus: i-vi-ii-V-i]
http://www.youtube.com/watch?v=uyd6OLyhPJo

James Taylor. "Up On The Roof." *Flag*. Columbia Records, 1979. [Verse: I-vi-IV-ii-V-I]
http://www.youtube.com/watch?v=15Qqnl3_Qr

Tom Waits. "Whistle Down the Wind." *Bone Machine.* Island Records, 1992. [I-V-I-IV-ii-V-I]
http://www.youtube.com/watch?v=YpnnMb1WtZM

Lauren Hill. "I Used to Love Him." *The Miseducation of Lauren Hill.* Ruffhouse Records, 1998. [ii°-V-i-VI]
http://www.youtube.com/watch?v=Wd3n4TjCaJY

Weezer. "Island in the Sun." *Weezer.* Interscope Records, 2001. [vi-ii-V-I]
http://www.youtube.com/watch?v=erG5rgNYSdk

APPENDIX D: Suggested Listening, UNIT IV

I-V-vi-iii-IV-I-IV-V [Pachelbel's *Canon*]

Mash-ups:

Denes Harmath [screenname]. "Pachelbel Canon Mashup."
http://www.youtube.com/watch?v=AfBOBmxVsvc

Monatee [screenname]. "Norwegian Recycling: Pachelbel Mashup."
http://www.youtube.com/watch?v=ZSxyzXHM2hs

Songs:

Coven. "One Tin Soldier." *Billy Jack.* Warner Brothers, 1971. [Verse: w/ii instead of IV; hook: I-iii-IV-V]
http://www.youtube.com/watch?v=wxQUH7EVqH4

Aerosmith. "Cryin'." *Get a Grip.* Geffen Records, 1993. [Verse: I-V-vi-iii-IV-I-V]
http://www.youtube.com/watch?v=QyXQhdkmOWo

Pet Shop Boys. "Go West." *Very.* Parlophone Records, 1993. [I-V-vi-iii-IV-I-ii-V]
http://www.youtube.com/watch?v=qPtZNoUQXvg

Blues Traveler. "The Hook." *Four.* A & M Records, 1994. [I-V-vi-III-IV-I-IV-V]
http://www.youtube.com/watch?v=arUpcpRR568

Green Day. "Basket Case." *Dookie.* 1994. [Verse: I-V-vi-III-IV-I-V]
http://www.youtube.com/watch?v=NUTGr5t3MoY

Coolio. "C U When U Get There." *My Soul.* Tommy Boy Records, 1997. [I-V-vi-III-IV-I-IV-V]
http://www.youtube.com/watch?v=tP1PXRiVoJw

Sweetbox. "Life is Cool." *Adagio.* Paramedia Records, 2004. [I-V-vi-III-IV-I-IV-V]
http://www.youtube.com/watch?v=5vdn5sjwBYY

Creed. "One Last Breath." *Weathered.* Wind-up Records, 2002. [Verse: I-V-vi-iii]
http://www.youtube.com/watch?v=qnkuBUAwfe0

I-V-vi-IV

Mash-ups:

The Axis of Awesome. "4 Chords (2011)."
http://www.youtube.com/watch?v=oOlDewpCfZQ.

RipTard [screenname]. "4 Chords, 19 Songs on Guitar."
http://www.youtube.com/watch?v=DEkPC-6Ni8Y.

Mathyou9 [screenname]. "4 Chords 65 Songs."
http://www.youtube.com/watch?v=OdVurJFMDUI.

Jimlapbap [screenname]. "One Chord Progression to Rule Them All."
http://www.youtube.com/watch?v=yk8fB4CRse4.

Songs:

The Police. "So Lonely." *Outlandos d'Amour.* A&M Records, 1978.
http://www.youtube.com/watch?v=SaNt9-QkiHI

Journey. "Don't Stop Believing." *Escape.* Columbia Records, 1981. [Verse]
http://www.youtube.com/watch?v=VcjzHMhBtf0

U2. "With or Without You." *The Joshua Tree.* Island Records, 1987.
http://www.youtube.com/watch?v=XmSdTa9kaiQ

Richard Marx. "Right Here Waiting." *Repeat Offender.* EMI, 1989. [Chorus]
http://www.youtube.com/watch?v=S_E2EHVxNAE

Bush. "Glycerine." *Sixteen Stone.* Trauma Records, 1995.
http://www.youtube.com/watch?v=sD6T5kuC86s

Blink 182. "Dammit." *Dude Ranch.* MCA Records, 1997.
http://www.youtube.com/watch?v=jEqura5HgVc

Savage Garden. "Crash and Burn." *Affirmation.* Columbia Records, 2000. [Verse]
http://www.youtube.com/watch?v=qjGSXGCi4Fc

Black Eyed Peas. "Where Is the Love." *Elephunk.* A&M Records, 2003.
http://www.youtube.com/watch?v=WpYeekQkAdc

Switchfoot. "On Fire." *The Beautiful Letdown*. Sony Records, 2003.
http://www.youtube.com/watch?v=pskjyxykBiE

Rihanna. "Take a Bow." *Good Girl Gone Bad*. Def Jam, 2007. [With occasional substituted chords]
http://www.youtube.com/watch?v=JvVSjibRByo

i (or I)-(♭)III-♭VII-IV

Mash-up:

Party Ben. "Boulevard of Broken Songs." [Featuring songs by Green Day, Oasis, Travis, and Eminem]
http://www.youtube.com/watch?v=0RCsledgOU4.

Songs:

Tears for Fears. "Mad World." *The Hurting*. Phonogram Records, 1983. [Verse]
http://www.youtube.com/watch?v=SFsHSHE-iJQ

Oasis. "Wonderwall." (*What's the Story) Morning Glory?* Creation Records, 1995. [Verse]
http://www.youtube.com/watch?v=6hzrDeceEKc

Oasis. "D' You Know What I Mean?" *Be Here Now*. Creation Records, 1997.
http://www.youtube.com/watch?v=Ucmy49Dk10Y [verse]

The Offspring. "Cool to Hate." *Ixnay on the Hombre*. Columbia Records, 1997. [Chorus]
http://www.youtube.com/watch?v=PkRJzErnRmY

The Offspring. "Gone Away." *Ixnay on the Hombre*. Columbia Records, 1997.
http://www.youtube.com/watch?v=numCZoBFcv4

Travis. "Writing to Reach You." *The Man Who*. Independiente Records, 1999. [Verse]
http://www.youtube.com/watch?v=UeCcuH-EsuM

The Dandy Warhols. "Bohemian Like You." *Thirteen Tales from Urban Bohemia*. Capitol Records, 2000. [Verse: I-♭III-♭VII-IV]
http://www.youtube.com/watch?v=W3m7Uz7hF-s

Green Day. "Boulevard of Broken Dreams." *American Idiot*. Reprise Records, 2004. [Verse]
http://www.youtube.com/watch?v=gWNRUVMboq4

Foster the People. "Pumped Up Kicks." *Torches*. Columbia Records, 2010.
http://www.youtube.com/watch?v=SDTZ7iX4vT

Ascending Stepwise Progressions

I-ii-iii-IV [-V]

Bob Dylan. "Like A Rolling Stone." *Highway 61 Revisited.* Columbia Records, 1965. [Verse: I-ii-iii-IV-V]
http://www.youtube.com/watch?v=hk3mAX5xdxo

The Beatles. "Here, There & Everywhere." *Revolver.* Parlophone Records, 1966. [Opening of verse: I-ii-iii-IV]
http://www.youtube.com/watch?v=VdCKdwxWGt4

Allman Brothers. "Melissa." *Eat a Peach.* Capricorn Records, 1972. [I-ii-iii-ii, IV-v-vi-♭VII]
http://www.youtube.com/watch?v=Pwbowi-8Yoo

The Cure. "Boys Don't Cry." *Boys Don't Cry.* Fiction Records, 1979. [I-ii-iii-IV]
http://www.youtube.com/watch?v=P9hOFOgqOds

The Wipers. "Mystery." *Is This Real?* Park Ave Records, 1980. [I-ii-iii-IV-V]
http://www.youtube.com/watch?v=5_c8a6aySgE

Billy Joel. "Uptown Girl." *An Innocent Man.* Columbia Records, 1983. [Verse: I-ii-iii-IV-V]
http://www.youtube.com/watch?v=hCuMWrfXG4E

Tears for Fears. "Everybody Wants to Rule the World." *Songs from the Big Chair.* Phonogram Records, 1985. [Chorus: ii-iii-IV-V]
http://www.youtube.com/watch?v=R-O3kYrDPbI

I-ii-IV-V, I-iii-IV-V

David Bowie. "Young Americans." *Young Americans.* RCA Records, 1975. [Verse: I-ii-IV-V]
http://www.youtube.com/watch?v=ScVi_L817ec

Bonnie Tyler. "It's a Heartache." *Natural Force.* CBS Records, 1978. [Verse: I-iii-IV-I-V]
http://www.youtube.com/watch?v=nPOy7TPjfkE

Van Morrison. "Bright Side of the Road." *Into the Music.* Mercury Records, 1979. [Verse: I-iii-IV-V]
http://www.youtube.com/watch?v=rCDZzf4ragg

Michael Jackson. "Man in the Mirror." *Bad.* Epic Records, 1988. [Chorus: I-iii-IV-V]
http://www.youtube.com/watch?v=PivWY9wn5ps

Shania Twain. "You're Still the One." *Come On Over.* Mercury Nashville Records, 1998. [Verse: I-iii-IV-V]
http://www.youtube.com/watch?v=KNZH-emehxA

OK Go. "Invincible." *Oh No.* Capitol Records, 2006. [i-♭iii-iv-V]
http://www.youtube.com/watch?v=mItuZ8i4wH8

Descending Stepwise Progressions

i-♭VII-♭VI-V

[The Andalusian/Flamenco progression]

Del Shannon. "Runaway." *Runaway.* Big Top Records, 1961. [Verse]
http://www.youtube.com/watch?v=0S13mP_pfEc

The Beatles. "I'll Be Back." *A Hard Day's Night.* Parlophone Records, 1964. [Verse]
http://www.youtube.com/watch?v=G9hO25z1Fu8

The Animals. "Don't Let Me Be Misunderstood." Columbia Gramophone, 1965. [Verse]
http://www.youtube.com/watch?v=vstNm5xzuKM

The Beach Boys. "Good Vibrations." Capitol Records, 1966. [Verse]
http://www.youtube.com/watch?v=TCeD_6Y3GQc

Stevie Wonder. "Another Star." *Songs in the Key of Life.* Tamla Records, 1977. [i-♭VII-♭VI-v-iv]
http://www.youtube.com/watch?v=vuHgs8aHFJ4

Dire Straits. "Sultans of Swing." *Dire Straits.* Vertigo Records, 1978. [First half of verse]
http://www.youtube.com/watch?v=xo-J1wf2KHc

Mötley Crüe. "God Bless the Children of the Beast." *Shout at the Devil.* Elektra Records, 1983.
http://www.youtube.com/watch?v=sCqc39USfPs

Michael Jackson. "Smooth Criminal." *Bad.* Epic Records, 1987. [Chorus: i-♭VII-♭VI-V]
http://www.youtube.com/watch?v=RWdGIbZKtmg

Foo Fighters. "Tired of You." *One by One.* RCA Records, 2002. [Verse]
http://www.youtube.com/watch?v=wVcqyB2Rbz8

White Stripes. "Seven Nation Army." *Elephant.* XL Recordings, 2003. [Verse]
http://www.youtube.com/watch?v=0J2QdDbelmY

Muse. "Resistance." *The Resistance.* Mushroom Records, 2009. [Verse]
http://www.youtube.com/watch?v=TPE9uSFFxrI