# The Harmonic-Bass Divorce in Rock

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Prior authors have identified cases of independence between melody and harmony in rock, dubbed the "melodic-harmonic divorce" (e.g., Temperley 2007). This article shows that a similar type of independence often exists between harmony and bass, which I refer to as the "harmonic-bass divorce." I categorize instances of harmonic-bass divorce using the three types of melodic-harmonic divorce introduced by Nobile (2015): hierarchy, syntax, and loop divorce. Although the concept of harmonic-bass divorce intersects with extant theoretical constructs, I argue that viewing the bass and harmony as separate layers helps explain the organization of what might otherwise appear to be arbitrary chord extensions.

Keywords: popular music, rock music, harmony, melodic-harmonic divorce, hybrid chords, pedal points.

### INTRODUCTION

Ithough pitch organization in rock music can often be explained using conventional methods, some situations call for new approaches.<sup>1</sup> One well-known scenario is the "melodic-harmonic divorce," in which the melody and the harmony of a song seem to operate independently of one another, if only for a brief moment.<sup>2</sup> A representative example can be found in the opening verse of "Rock'n Me" by the Steve Miller Band (1976), as shown in Example 1(a). In the third measure of this example (the boxed area), note how the harmony (as played by the electric guitar and bass) changes to a power chord on A, yet the vocal melody appears to be "stuck" in the original tonic key of B major—as if the melody continues to freely traverse a B-major pentatonic scale (including a bluesy D $\natural$ ) without much apparent regard to the A5 chord underneath.<sup>3</sup>

How are we to make sense of or explain a situation like this? Temperley argues that the listener senses a temporary suspension of traditional dissonance resolution, which he posits to be a hallmark of melodic-harmonic divorce, since the non-chord tones (e.g.,  $G\sharp$  and B here) do not resolve by step

as would typically occur in a common-practice context.<sup>4</sup> In other words, we expect the melody to exhibit certain behaviors due to the change in harmony, but it does not, thus implying that the melody acts as the renegade element. A different tack is taken by Nobile. As illustrated in his voice-leading reduction of this passage shown in Example 1(b), Nobile views the A5 chord as a passing sonority that harmonizes a chordal seventh in the bass between the opening I chord and the IV chord in the fifth measure.<sup>5</sup> The melody, therefore, conveys the underlying tonal motion while the surface-level chord progression acts as the renegade element. Nobile refers to this situation as a "hierarchy" divorce, in that he views the melody as existing on a deeper structural level than the harmony. Nobile goes on to describe two other types of melodic-harmonic divorce: "loop" divorce and "syntax" divorce. In a loop divorce, a nongoal-oriented chord loop allows the melody to define the formal structure, whereas in a syntax divorce, the melody and harmony participate in a shared cadential or structural motion, such as when a IV–I chordal move supports 2-1 in the melody. As this last case illustrates, Nobile-in contrast to Temperley-does not require a lack of dissonance resolution by step for divorce to occur.

In this article, I show that a similar type of independence often exists in rock music between the harmony and the bass line—what I call the "harmonic-bass divorce." I have found that Nobile's three categories for melodic-harmonic divorce apply well to instances of harmonic-bass divorce. In what follows, I thus present examples of harmonic-bass divorce organized via these same three types. In the first type, a hierarchy divorce, the harmonic layer exists at a deeper structural level while the bass provides surface-level embellishments, or vice versa. In the second type, a syntax divorce, the harmonic layer and the bass share a structural or cadential goal but approach

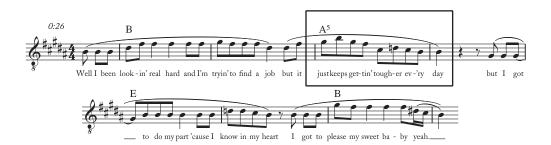
I I use the term "rock music" here in the broad sense to refer to commercially recorded Anglo-American popular music from about 1950 to the present day, including styles such as R&B, country, hip-hop, soul, and heavy metal, but excluding jazz. Although imperfect, this usage has become accepted as the best-available term for this large repertoire (Covach and Flory [2015]; Doll [2017], 2–5).

<sup>2</sup> See Moore (1995), Temperley (2007), and Nobile (2015) for prior discussions of this topic.

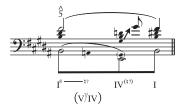
<sup>3</sup> Other authors offer alternative hearings to the melody shown in Example 1(a) for the third beat of the third measure (on the word "tougher"), where I show a C<sup>#</sup> followed by a D<sup>#</sup>. Temperley (2007, 331) posits two D<sup>#</sup> pitches whereas Nobile (2015, 191) posits a D<sup>#</sup> followed by a D<sup>#</sup>. Despite these differences, all of these hearings imply an underlying B-major pentatonic scale, with or without the addition of a bluesy D<sup>#</sup>.

<sup>4</sup> See Temperley 2007 (329-30).

<sup>5</sup> In Nobile's original article (2015, 191), this diagram is Example 3(b).



EXAMPLE 1 (a). The Steve Miller Band, "Rock'n Me" (1976), transcription of opening verse



EXAMPLE 1 (b). The Steve Miller Band, "Rock'n Me" (1976), voice-leading reduction of opening verse, showing its conceptualization by Nobile (2015) as a hierarchical divorce between harmony and melody

that goal via different pathways, such as when an implied IV chord in the upper voices and a  $\hat{5}$  in the bass both move to tonic. The final type, a loop divorce, results from a repeating ostinato pattern in the harmonic layer against which the bass moves in a seemingly independent manner. As I will show, instances of loop divorce typically begin with a hierarchy divorce and end with a syntax divorce.

Before proceeding further, some unpacking of the term "harmonic-bass divorce" is called for, since (as shown above) opinions vary on the nature of the melodic-harmonic divorce. Music theorists often take the term "harmony" to mean the sum total of all musical elements sounding at a given time, such that the melody and bass are part and parcel of the overall harmony. In Example 1(a), for instance, we might simply call the harmony of the third measure an Am9 chord (perhaps with an added sixth) and simply leave it at that-in other words, there is no divorce, only an implied tall tertian. But this is not how the term has historically been used in the context of the melodic-harmonic divorce, where "harmony" means something other than the melody. This latter meaning is similar to when we say, "harmonize this bass line" or "harmonize this melody," where the term "harmony" means separate voices added to the existing bass line or melody. That said, I appreciate the confusion potentially caused by these multiple meanings, and thus I will adopt an approach following the perspective of Allan Moore, who views rock music as having three "functional layers" for pitch: the bass, the melody (e.g., vocals), and the "harmonic filler" (e.g., guitar).<sup>6</sup> Specifically, I will refer to the inner pitch layer of a rock song's texture-i.e.,

that aggregation of pitch content distinct from the bass and the melody—as simply the "harmonic layer," reserving the term "harmony" for its more wide-reaching meaning as the outer and inner voices sounding together as a whole.

If we view rock as having three pitch layers, it would seem possible to propose three different types of divorce: melodicharmonic, bass-harmonic, and bass-melodic. In practice, though, cases of bass-melodic divorce can usually be covered by the other two types, since the harmonic layer typically (although not always) follows either the bass or the melody. Thus, if the bass were divorced from the melodic and the harmonic layers, there would be harmonic-bass divorce, while if the bass and harmonic layers were divorced from the melody, there would be melodic-harmonic divorce. Although theoretically possible, it is rare in rock music for all three layers to act independently from one another (a "melodic-harmonic-bass divorce"); thus, I will focus here on the more common scenarios.

The reader might also wonder if "divorce" is the best term to describe the surface-level musical organization in such cases. Nobile, for example, writes that the term "divorce" is problematic because it implies that the melody and accompaniment "are not related at all" and were at some point "married."7 Indeed, other authors who have noticed similar instances of apparent non-coordination between musical layers in other styles have used different turns of phrase: such as "emancipation" of melody from harmony,8 "concurrent alternative elaborations,"<sup>9</sup> or "stratification into discrete layers."<sup>10</sup> I do not find the term "divorce" to be so ill suited as to deprecate it in favor of something else, especially given its current foothold in music theory scholarship on rock. After all, while it is true that divorced partners are no longer directly related, they are often indirectly related or related through just a single degree of removal. This would be the case if the divorced

10 As found in Straus's discussion (2014, 5) of Stravinsky's music.

<sup>6</sup> Moore also discusses a fourth layer, the *explicit beat layer*, which is typically articulated by the drum set (2012, 19–27).

<sup>7</sup> Nobile (2015, 190).

<sup>8</sup> As found in van der Merwe's discussion (1989, 231) of late nineteenthcentury Anglo-American popular music.

<sup>9</sup> As found in Winkler's discussion (1978, 16–18) of jazz and ragtime music.

partners had a child together, for example, where each partner is directly related to the child and thus might be called "transitively" related.<sup>11</sup> As I define it, therefore, divorce in rock music involves surface-level independence but still some element of coordination on a more background level. My understanding thus aligns more closely with Nobile's than Temperley's, and, as we will see, does not necessarily preclude similar circumstances in common-practice music (although most that I will examine here are more easily found in rock).

I should admit that I am not the first person to identify cases of apparent independence between chordal layers and bass lines in rock music. Allan Moore, for example, devotes a paragraph to this phenomenon in his 2012 book. Generally speaking, though, Moore's five examples involve instances in which the relationship between the guitar parts and the bass is "almost random" or involves "little coordination."<sup>12</sup> This type of independence between harmonic and bass layers, he notes, is particularly endemic to musicians with a DIY approach, e.g., punk, post-punk, and new wave bands. In contrast, the musical examples that I discuss below involve some coordination between the harmonic layer and the bass, if only at a deeper level, and certainly are not random in their organization. That is to say, the divorce to be discussed here involves some sort of relationship between two functional layers.<sup>13</sup>

Finally, it is worth pointing out that the idea of harmonicbass divorce intersects with concepts that are not new to music theory, such as pedal points and hybrid chords (as explained below). Many of the examples that I will present can undoubtedly be categorized using traditional methods. When taken as a whole, however, these examples point to an overarching approach to musical organization among rock musicians—i.e., an independence of the three primary functional layers of pitch (melodic, harmonic, and bass)—that is only partially accounted for by the notion of the melodic-harmonic divorce or traditional methods. The concept of the harmonic-bass divorce, therefore, serves as an additional interpretive device to clarify the broader picture of pitch organization in rock and, as I will show, is an especially helpful conceptual tool to explain chord extension organizations that might otherwise seem capricious.

#### HIERARCHY DIVORCE

If we define "divorce" as an independence or stratification of musical layers, then a hierarchy divorce between a bass layer and a harmonic layer—in which one exists at a deeper level of structure than the other—is not uncommon in classical music.

II I use the term "transitive" here in the mathematical or logical sense, where if A is related to B, and B is related to C, then A is related to C. Of course, some relationships (e.g., "equal to," "taller than") are transitive, while others (e.g., "the square of," "loves") are not.

To be fair, Moore does not use the term "divorce" when discussing independence between harmony and bass (2012, 81), even though he coined the term to describe independence between melody and harmony (1995, 189).

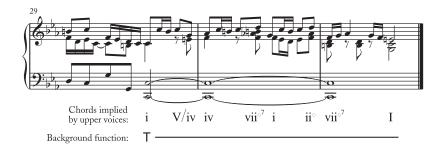
The most obvious case would be the traditional pedal point. Example 2, the final measures of J. S. Bach's Fugue in C Minor from the Well-Tempered Clavier, Book I (BWV 847), shows one of many illustrative instances of a bass pedal that could be found in the common-practice canon. Note that even though theorists traditionally think of a bass pedal as implying a single underlying tonal function (here, tonic),<sup>14</sup> above this pedal we hear a syntactically valid chord progression, complete with local predominant, dominant, and tonic functions. That is to say, there are moments in Example 2 where the surface of the music implies entirely contradictory functions, e.g., dominant versus tonic. This clash (or blend) of tonal functions on the musical surface—as opposed to, say, the clash of functions between different levels of a Schenkerian analysis-is an integral aspect of harmonic-bass divorce. Admittedly, a traditional bass pedal might not be considered a divorce if we take the term "divorce" to mean only those cases that diverge from common-practice pitch organization; but, as a familiar example of hierarchical stratification between one layer (upper voices) and another (bass), it is a useful starting point.

Bass pedal points are not difficult to find in rock music as well, of course. The introduction to Petula Clark's hit "Downtown" (1965), for example, begins with a I-IV-V progression in the upper voices of the piano over a tonic pedal in the lowest voice. Similarly, the iconic organ and guitar riff at the beginning of "Smoke on the Water" by Deep Purple (1972)-which consists entirely of "inverted" power chords (creating parallel perfect fourths)-acts as a surface-level harmonic layer once the bass enters around 0:34 with its eighthnote tonic pedal. The situation becomes more interesting once a vocal melody enters the mix. Take, for instance, the opening verse to "Jumpin' Jack Flash" by the Rolling Stones (1969). Temperley cites this song as an example of melodic-harmonic divorce, as shown in the bracketed portion of Example 3, where the repeated Db notes in the melody clash against the Ab power chord (and do not resolve down by step).<sup>15</sup> Yet, as Temperley points out, these power chords in the guitar occur over a Bb pedal in the bass. The melody and bass are not divorced, therefore, whereas the middle harmonic layer is divorced from both the melody and bass. It is thus useful in rock music, even in the simple case of a traditional bass pedal point, to view the texture as having three pitch layers, any one of which may be temporarily divorced from the other two.

A less conventional type of hierarchical harmonic-bass divorce occurs in rock when the harmonic layer sustains a background tonal function while the bass embellishes with implied foreground chords. Consider in this regard the opening to Sara Bareilles's song "Chasing the Sun" (2013), as transcribed in Example 4. Here again, we can observe three pitch layers: the bass in the left hand of the piano, the harmonic layer in the right hand, and the vocal melody. To my ears, a single

- 14 This is the stance adopted, for instance, by Laitz (2012, 220) for this excerpt.
- 15 Example 3 here re-creates Temperley's Example 11 (2007, 331).

<sup>12</sup> Moore (2012, 81).



EXAMPLE 2. J. S. Bach, Fugue No. 2 in C Minor, The Well-Tempered Clavier, Book I, mm. 29-31



EXAMPLE 3. The Rolling Stones, "Jumpin' Jack Flash" (1969), opening verse

note in the bass alone has the power to strongly convey chord function, and other authors have admitted this as well.<sup>16</sup> On the musical surface, for example, I hear a IV chord implied in m. 2, and a vi chord in m. 5. But the persistent Db5 power chord in the piano's right hand, which can be seen as prolonging a deeper-level tonic, often clashes against these bass notes-especially the C in the bass, which to me strongly conveys dominant instead of tonic function. As for the melody, I hear it as going in and out of sync (or divorce) with the background tonic or the surface-level chords implied by the bass on a measure-by-measure basis. This example thus shows what might be called an upper-voice or "inverted" pedal,<sup>17</sup> a technique that is undeniably commonplace across many musical styles when it involves just a single note, but which is particularly endemic to rock when it involves two or three notes as the pedal. The opening to "Name" by the Goo Goo Dolls (1995) is an excellent example of this, as  $\hat{1}$  and  $\hat{5}$  (i.e., a power chord on tonic) are sustained in the upper strings of the guitar over a changing bass line that implies surface-level chord function. Similarly, the opening guitar part to "Ocean Size" by Jane's Addiction (1988) pedals 5 and 1 (i.e., an "inverted" power chord on tonic) over chromatically descending major triads. We might even extend this phenomenon to include ostinato patterns that embellish a bare fifth on 1 and 5, such

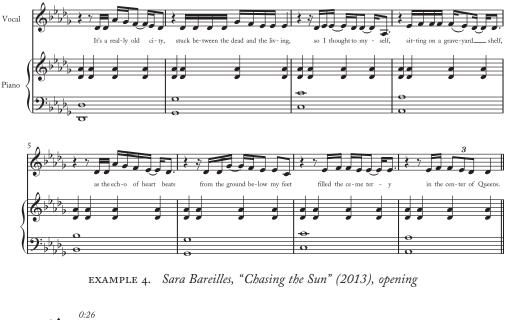
16 Stephenson (2002, 78), for example, writes that in many cases, "the movement of the bass note alone constitutes harmonic change."

17 Benward and Saker (2008, 110) use this term to describe a pedal tone that occurs above other voices. That said, their description is extremely brief and implies only a single note, not a dyad (e.g., power chord) or triad pedal.

as the main synthesizer riff to "Born in the U.S.A." by Bruce Springsteen (1984).

Stephenson explains the use of upper-voice pedal points as a source of triad extension.<sup>18</sup> Indeed, the harmonic-bass divorce (of which pedal points are one flavor) offers a way to conceptualize how sonorities that are not purely triadic might arise and be organized. In the song "With or Without You" by U2 (1987), for instance, how might we label the chords in the opening verse, as transcribed in Example 5? The bass line strongly conveys a surface-level I-V-vi-IV progression in the key of D major, yet a full tonic chord persists in the electronically generated guitar loop over this monophonic bass line. A casual listener may not even notice the tension between the tonic chord in the guitar loop and the chord progression implied by the bass. But once we do realize this disconnect (traditionally speaking), how do we hear it? There are at least two possible (and not necessarily mutually exclusive) ways: (1) we hear the repeated notes in the guitar as coloring the chord functions implied by the bass, i.e., as triads with or without chordal sevenths, added notes, and upper extensions; or (2) we hear a prolonged D chord and a bass line that diverges from the notes in this chord, i.e., a harmonic-bass divorce.

Standard chord labels used in jazz and popular music allow us to represent either of these two hearings. For instance, the third measure in Example 5 could be labeled according to the first hearing as a Bm7 chord, i.e., an extended triad; or it could be labeled according to the second hearing as a D/B chord, i.e., a D-major triad with a B in the bass. This "D over B"





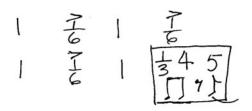
EXAMPLE 5. U2, "With or Without You" (1987), opening verse

label is an example of what jazz and pop musicians often refer to as a "hybrid chord"-i.e., a chordal sonority with a triad in the upper voices and a bass note that is not part of that triadalthough other names exist for this type of sonority as well, such as "slash chord," "ambi-chord," or "wrong-bass chord."<sup>19</sup> To some readers, the Bm7 label may seem preferable to D/B, if only because seventh chords are more familiar than hybrid chords, thus (at least tacitly) giving preference to the first hearing (i.e., no harmonic-bass divorce). But what are we to do with the sonority in the fourth measure of Example 5? It is easily represented using hybrid-chord notation as a D/G, i.e., a D-major triad with a G in the bass, yet it is less easily represented according to the first hearing. We could call it a Gmajor ninth chord (GM9), although it is missing its chordal third, which is traditionally considered an important member of the underlying triad (more so than the fifth). Perhaps we could call it a GM9(no3) chord, but that label arguably obscures or overcomplicates what is going on musically.

This discussion of labeling may seem overly taxonomic, but it reflects how we hear and conceptualize these types of sonorities. With the conventional system of Roman numerals and figured bass, there is no standard way of notating a triad with a bass note that does not belong to that triad, since the forward slash ("/") is used to indicate applied or secondary function instead of inversion. And thus when using Roman numerals and figured bass, we may be less prone to recognize harmonic-bass divorce. But popular musicians, whose chord notation system distinguishes between a triad and a bass note, may be more encouraged to think in that way (or conversely, the notation reflects a mode of thinking that is already established). Along these lines, consider the song chart excerpt shown in Example 6, which is notated using the Nashville number system. A full explanation of the Nashville number system is beyond the scope of the current article,<sup>20</sup> although, suffice it to say, it is a chord notation system, in widespread use among professional country musicians and beyond, that substitutes Arabic numbers referencing the tonic for the letters in standard popular music chord symbols, with each number equal to a measure unless otherwise indicated. The first measure shown

<sup>19</sup> Triads over a bass note that is not part of the triad are referred to as "slash chords" by Levine (1995, 103), "hybrid chords" by Felts (2002, 146), and "hybrid voicings" by Mulholland and Hojnacki (2013, 218). Mulholland and Hojnacki note that the term "ambi-chords" is also used. The term "wrong-bass chord" comes from Stephenson (2002, 178).

<sup>20</sup> For more information about the Nashville number system, see Riley (2010), Williams (2012), or de Clercq (2015).



EXAMPLE 6. Chas Williams, "White Hardware" (2012), excerpt from first verse of chart

in Example 6 is thus a root-position tonic chord. In the second measure, we see a tonic chord with  $\hat{6}$  in the bass ("1 over 6").<sup>21</sup> We might wonder: Why did the author of this song and this chart-Chas Williams, a Berklee-trained professional session musician—notate this chord as a tonic triad with  $\hat{6}$  in the bass rather than as a minor-seventh chord with a root of  $\hat{6}$  (i.e., a 6m7 chord)?<sup>22</sup> When posed this question, Williams replied, "I want the guitar players to think more in terms of hanging on a 1 chord while the bass does the movement."23 The use of the word "think" in his reply is telling, as it reveals a conceptual distinction between harmony and bass that does not see the two as necessarily dependent. This example also reveals that even though we may not hear harmonic-bass divorce in a song (e.g., aurally analyzing the tonic chord over 6 in the bass as a vi7 chord), the idea that bass lines and an upper harmonic layer can be independent entities was an important conceptual factor in the writing and performance of the song.

## SYNTAX DIVORCE

For cases of melodic-harmonic divorce, Nobile defines a syntax divorce as when both the melodic and harmonic layers do not "work together" in their motion toward a shared structural point of closure or cadence.<sup>24</sup> One example he gives is the end of the verse in "Nowhere Man" by the Beatles (1965), in which a 3-2 descent in the melody over a minor-subdominant (iv) chord resolves to 1 in the melody over a major tonic chord. The melodic and harmonic layers are divorced in this case because neither 3 nor 2 in the melody is consonant with the underlying iv chord. But despite this divorce, the two layers are "syntactically consonant" since they both participate in the same syntactical process of a cadence.

- 21 The angle bracket (">") above the chord is a rhythmic symbol that can be ignored here for the sake of the argument.
- 22 Note that other charts by this author, such as "Amazing Grace," include a 6m7 chord (Williams 2012, 106) instead of a 1/6, so the author is not necessarily opposed to the 6m7 notation.
- 23 This quote is from a personal e-mail with Chas Williams, the author of the chart, dated 29 March 2016.
- 24 Nobile (2015, 197). Note that syntax divorce is Nobile's third type of melodic-harmonic divorce, whereas it is my second type of harmonic-bass divorce. My ordering is different since harmonic-bass loop divorce also usually involves both hierarchy and syntax divorce.

With this understanding, syntax divorce between the bass and harmonic layer can be defined as the bass and the upper voices moving toward or arriving at a shared structural point (like a cadence) in an independent manner. The main synthesizer riff to Van Halen's "Jump" (1984), transcribed in Example 7(a), shows one of many such cases that can be found in rock music. The phrase begins with triadic content in the right-hand part over a long pedal point in the bass, i.e., a standard hierarchy divorce between harmonic and bass layers, and the phrase ends with what is essentially a half cadence on the Gsus4 chord.<sup>25</sup> The syntax divorce occurs in the approach to this final chord, as the bass moves from  $\hat{4}$  to  $\hat{5}$  while the upper voices exhibit tonic to dominant motion (albeit with a suspended fourth at the cadence itself). Prior to the final chord, therefore, we find a tonic chord over  $\hat{4}$  in the bass, much as we did in the fourth measure of Example 5. But unlike in the U2 song, where the "I over 4" chord arose from repeating a tonic chord in the guitar part, the sonority in the Van Halen song arises from surface-level contrary motion between the upper voices and the bass as they move toward the phrase ending. The upper voices and bass are independent, in that each seems to ignore what the other is doing at that specific moment; but they are somewhat coordinated nonetheless, in that they are moving together to a shared structural goal. At a deeper level, I view the penultimate C triad in the right-hand part as the point of resolution for the neighbor motion of the upper-voice G and F triads that precede it, as shown in Example 7(b). The F in the bass thwarts this resolution, however, and pushes the phrase forward to the half cadence. The penultimate C triad thus acts as something like a pivot, both ending the uppervoice motion over the tonic pedal but also functioning as a pre-dominant, perhaps somewhat forced into that role because of the motion in the bass.

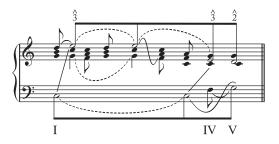
The instrumental part of a commercially released song is not always so exposed as in the introduction to "Jump." More typically, the harmonic layer is veiled or camouflaged by the complex textural combination of drums, background vocals, guitars, synthesizer pads, etc. It is therefore often difficult to tease out the exact pitch content of a professionally mixed song at any given moment. While bass lines and melodies may be clear in a dense instrumental context, we are often left guessing as to what the notes are in between.<sup>26</sup> And when we do this guesswork, we naturally fall back on familiar shapes and known patterns. Were we to be presented aurally with a tonic chord in the harmonic layer and 4 in the bass, for example, we might more readily estimate it to be a IVM9 chord rather than a hybrid chord. Undoubtedly, the task of analysis would be easier if songwriters released authorized transcriptions of their work, but that is extremely rare (and who is to say that the song remains the same once it is out of the

26 For more on the analytical aspect of transcription, see Winkler (1997).

<sup>25</sup> It may be safer here, *à la* Doll (2017, 90), to call this a "partial cadence," since the lack of a leading tone (B) in the G chord arguably compromises its identity as a traditional half cadence.



EXAMPLE 7 (a). Van Halen, "Jump" (1984), transcription of main keyboard riff at entrance of full band



EXAMPLE 7 (b) Van Halen, "Jump" (1984), voice-leading reduction of keyboard introduction, showing syntax divorce between upper-voice harmonic layer and bass in cadential motion

songwriter's hands and into those of the producer, arranger, or mixer). Available scores for rock music are thus almost always the product of human annotators, who are working with the limitations of a recorded artifact. The exceptions are thus that much more valuable. Bruce Hornsby, for example, released a book of transcriptions for forty of his best-known songs, writing in the foreword that these transcriptions "should be almost totally correct and complete."27 The melody and chord changes for the beginning of the first verse from "Every Little Kiss" are shown in Example 8, which summarizes a brief excerpt from the published score. As in Van Halen's "Jump," the phrase ends on a half cadence (here, in the key of  $B\flat$ ), which is preceded by a tonic chord with 4 in the bass. Also as in "Jump," the bass seems to be the renegade element, as the parallel thirds between the bass and the melody that begin in the fifth measure (on "sees") could have continued with a Bb in the bass under the word "day" but are instead interrupted as the bass moves to 4 and thereby increases the drive to the half cadence on F. (I encourage the reader to sing and play Example 8 with a root-position Bb chord under the word "day" and compare it to the Bb/Eb chord that Hornsby plays.) In this case, the harmonic layer and melody remain married, so to speak, while the bass engenders a syntax divorce with the upper two layers. Adopting this mode of analysis helps to explain why we find this particular hybrid chord at this particular moment in the song. Moreover, had we not been presented with an authorized transcription, we may have missed the harmonic-bass divorce entirely, simply presuming that the chord prior to the half cadence was just a IVM9 sonority.

Syntax divorce between harmonic and bass layers may not only involve independence in the motion toward the structural

point of closure but also independence with regard to the structural point of closure itself. Consider the opening verse to Anne Murray's "A Little Good News" (1983), as transcribed in Example 9. Note that the second phrase (mm. 13–16) has two instances of hierarchy divorce between the left- and right-hand parts of the piano: the first, chordal 13-16) has two instances of hierarchy divorce between the neighbor motion above the C in the bass; and the second, chordal passing motion above the A. In m. 12, we find a different type of harmonic-bass divorce, as the first phrase ends with an F triad in the upper voices of the piano while the bass moves to a G. Although it may be debatable what type of cadence we have reached in m. 12 (half? partial?), it is undeniable that we have reached some sort of structural arrival or break point, and thus we can categorize the surface-level independence between upper voices and bass as a syntax divorce.

The sonority found at the beginning of m. 12 in Example 9-a IV chord over 5 in the bass-is probably familiar to many readers, since it is fairly common in many styles of rock music. The hybrid nature of the chord has created something of a taxonomic quandary for music theorists, though, and it has been called at times the "pop dominant,"28 the "rock dominant,"29 and even the "soul dominant" because of its prevalence in soul music from the 1970s.<sup>30</sup> Of course, this Anne Murray song is rather far removed from 1970s soul, so it seems helpful to have a less style-specific label (if only to avoid the potentially confusing homonym of "sole dominant"). Stephenson refers to it as a dominant-eleventh chord (V11),<sup>31</sup> with the understanding that the chordal third should be omitted. Perhaps a more precise term is a dominant-ninth-sus4 chord (V9sus4),<sup>32</sup> although even still there is the implication of of a chordal fifth that may be absent. Note that all of these labels take this sonority to be a dominant-functioning chord, even though it contains a full subdominant triad and lacks a leading tone. In contrast, Doll argues that it may be preferable to think of it instead as a blend of dominant and subdominant

28 Schenkius (2011, 50).

- 30 Spicer (2017, §3).
- 31 Stephenson (2002, 87).
- 32 The dominant-ninth-sus4 label is used by Buckingham and Pascal (1997, 64). In this reading,  $\hat{4}$  and  $\hat{6}$  (root and chordal third of the IV) are the minor seventh and ninth, respectively, above the bass of  $\hat{5}$  thus creating a dominant-ninth chord, while the  $\hat{1}$  (chordal fifth of the IV) is a sus4 as reconciled with the bass.

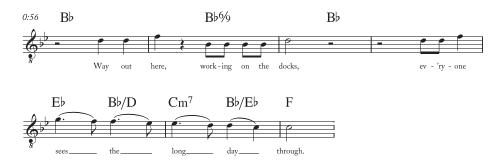
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<sup>29</sup> Spicer (2004, 38).



EXAMPLE 8. Bruce Hornsby and the Range, "Every Little Kiss" (1986), first phrase of first verse



EXAMPLE 9. Anne Murray, "A Little Good News" (1983), opening verse

functions.<sup>33</sup> This "functional multivalency" (as Doll puts it)—a blend (or clash) of two tonal functions on the musical surface—can be seen as a natural byproduct of syntax divorce involving bass and harmonic layers.

In the Van Halen and Bruce Hornsby examples above, I argued that the bass was the renegade element in the divorce. In the Anne Murray example, the upper voices seem to be the renegade element, conflicting with the bass as the bass tries to facilitate a half cadence. An even clearer example of a renegade harmonic layer can be found in the Stevie Wonder song "You Are the Sunshine of My Life" (1972). The piano and vocal parts of the opening verse are transcribed in Example 10, although I have removed the rhythmic aspects of the piano to more clearly show the underlying voice leading. The sonority of particular interest here is the  $F/G\sharp$  in the fourth measure. Played in isolation, this simultaneity is especially dissonant, perhaps heard as a dominant chord (the C $\natural$  being the enharmonically spelled chordal third) with an added sixth (enharmonically spelled as F $\natural$ ) and a  $\flat$ 9. Indeed, the sonority seems

to function as a dominant, combining with the D#m7 preceding it to imply a ii-V progression that leads to the C#m7 chord that follows (which itself begins a ii-V back to tonic). But instead of an applied dominant that hews more to the prevailing key signature (i.e., a G $\sharp$ 9 chord with F $\sharp$  and A $\sharp$ ), the upper voices slip down to the apparent F-major triad by halfstep and then down again by another half-step to the C#m7 chord. In other words, the upper voices and bass participate together in the structural motion to the C#m7 chord, but the upper voices do so by chromatic passing motion whereas the bass does so through a traditional ii-V paradigm; the result is another instance of syntax divorce between bass and harmonic layers. Overall, it is somewhat as if the upper voices in the fourth measure decide to engage in a tritone substitution while the bass carries on with the original plan. A textbook tritone substitution would have a Db in the bass, which is absent here, as well as a Cb, Ft, and Ab, which is close to but not exactly the upper-voice pitches we find here. Viewing the upper voices as a root-less tritone substitution is thus not a perfect explanation, but there is a similar sort of sliding effect.



EXAMPLE 10. Stevie Wonder, "Sunshine of My Life" (1972), opening verse

#### LOOP DIVORCE

Repetition and looping are endemic to the musical language of rock, as seen above in the guitar part of "With or Without You." Chord loops-which Nobile defines as a succession of two to four chords that repeat for a significant portion of a song—are a particularly common example of this behavior.<sup>34</sup> Because chord loops end where they begin, Nobile argues that they lack a strong sense of any tonal goal; instead, they project harmonic stasis.<sup>35</sup> In these situations, the melody more often conveys phrase and formal structure.

A similar effect can be found in cases of harmonic-bass divorce. Like loop divorce in a melodic-harmonic context, loop divorce in a harmonic-bass context involves a succession of two to four chords that repeat multiple times.<sup>36</sup> Instead of the melody bearing the burden of delineating tonal and phrase structure, though, the bass now shoulders more of this weight. A good illustration of this scenario can be found in Dolly Parton's "I Really Got the Feeling" (1978). The keyboard introduction to this song, transcribed in Example 11, begins with a straightforward hierarchy divorce, with the right-hand part alternating C and G triads over a C pedal in the bass.<sup>37</sup> This triadic ostinato pattern in the right hand continues in the third measure even though the bass moves to the note F, which is not consonant with either of the two looped triads. This is perhaps the simplest case of loop divorce between the harmonic layer and bass.<sup>38</sup> To my ears, the perception that the bass and upper voices are somewhat independent is particularly strong in a loop divorce. The looping chords-perhaps because they are repeated—become perceptually marked, such that I hear the triads in the upper voices more strongly as individual

- 36 By this definition, "With or Without You" by U2 is thus not a loop divorce between the harmonic layer and bass, since only a single chord is repeated in the upper voices.
- The G at the end of the first and second measures in the lower system can 37 be taken either as the left hand part of the piano reaching into the uppervoices' domain (as I view it) or as a true change of bass. Taking either view does not significantly affect the overall argument made here.
- 38 One might argue that the loop divorce in Example 11 begins in the first measure and not the third measure, since that is where the loop itself begins. But without the bass move to F in the third measure, there would be no loop divorce, only a standard pedal point.

triads per se rather than as extensions or chord members above a bass root note. In Example 11, the registral gap between the upper voices and the bass (which sounds an octave lower than notated) additionally strengthens the sense of two separate layers.

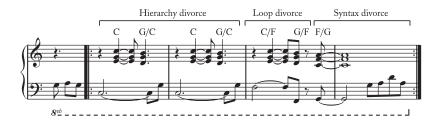
Because an upper-voice chord loop must start somewhere, all harmonic-bass loop divorces I have found begin with a hierarchy divorce.<sup>39</sup> Furthermore, harmonic-bass loop divorces also typically end in a syntax divorce between the upper voices and the bass, as seen in the cadential F/G that ends Example 11. This overall strategy-hierarchy divorce, loop divorce, and then syntax divorce-seems to be a common blueprint found in rock music. Another example, one involving a longer chord loop, can be found in "Can't Fight This Feeling" by REO Speedwagon (1984). The keyboard introduction to this song is shown in Example 12, which represents my best approximation of the opaque synthesizer and piano texture heard in the recording (and thus admittedly involves a certain amount of guesswork). The upper-voice loop here involves four chords: A, E, F#m7, and then E again.<sup>40</sup> After establishing this chord loop in the first two measures over a pedal on A, the bass moves to  $F_{\sharp}^{\sharp}$  for two measures. Without question, the F<sup>#</sup> in the bass makes mm. 3–4 sound overall like one cohesive span of submediant harmony. Yet there is still a palpable feeling of harmonic motion within this submediant space. As in the previous example, the looping chords in the upper voices establish their own identity through the act of repetition, such that despite the impression of a deeper-level chord change engendered by the bass, the more surface-level chord changes in the upper voices retain their salience. But while the loop divorce in Example 11 involved only one change of bass, the bass in Example 12 pushes forward in m. 5 to D, thereby creating an overall feeling of subdominant harmony in which the upper-voice chord loop can be reinterpreted yet again. This deeper-level subdominant chord ultimately gets cut short, though, as the bass line cadences with its move to E in the second half of m. 6. Like other instances of loop divorce, the loop

40 Admittedly, the F#m7 is missing its chordal fifth, but this seems like the most appropriate label given the sounding pitches.

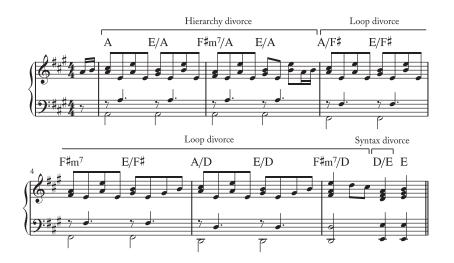
<sup>34</sup> Nobile (2015, 193).

Nobile (2015, 194). 35

<sup>39</sup> It is possible to imagine a case of loop divorce that would not begin with hierarchy divorce, such as if the bass move to G in the first and second measures of Example 11 were aligned with the upper-voice moves to G. But this strategy does not seem common.



EXAMPLE II. Dolly Parton, "I Really Got the Feeling" (1978), keyboard introduction



EXAMPLE 12. REO Speedwagon, "Can't Fight This Feeling" (1984), keyboard introduction

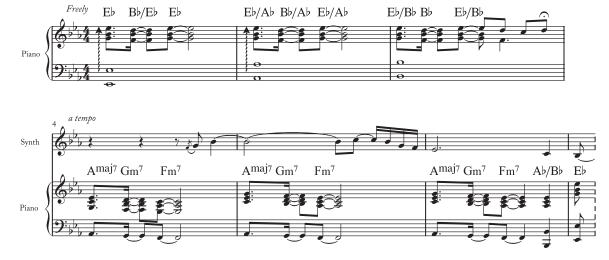
in Example 12 is broken by a syntax divorce—here, the D/E sonority. But this D/E is not the cadential chord itself; it quickly slips into a regular E-major chord, which resolves any syntactical ambiguity held by the previous chord. The phrase thus ends with a clear dominant, despite the preceding syntax divorce on the predominant (similar to Examples 7 and 8 above).

A loop divorce between harmonic and bass layers inherently creates a relatively dense pitch space (as compared to that typically found in rock music), rife with intervals of a ninth, eleventh, and thirteenth above the bass. This does not leave much room, one might think, for an additional pitch layer. Perhaps not surprisingly, therefore, the loop divorces in the previous two examples occur only in the keyboard introductions to the song; once the vocal melody enters, the divorce soon disappears (albeit after a brief pedal that gives a nod to the introduction), and the harmonic and bass layers become more "married" to support the main melodic line. That is to say, there may be a limit on how much divorce our ears (or perhaps those of the average listener) can handle without becoming overwhelmed-at least if the song is meant to be popular. Divorce between any two layers thus most often appears to be momentary, as seen in the many examples above, or to trade off between layers. A good example of the latter approach can be found in the theme to the television show Hill Street Blues, which aired from 1981-87. As transcribed in

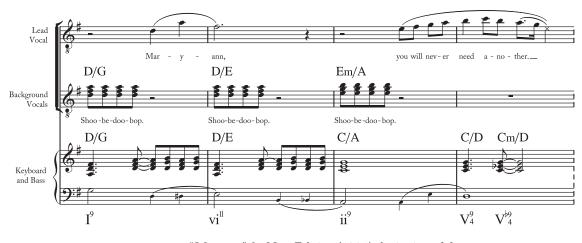
Example 13, the first three measures involve a typical hierarchy divorce followed by a loop divorce between the left- and righthand parts of the piano, with the I-V-I neighbor motion in the upper voices repeating over the I-IV-V bass line. This divorce is interrupted in m. 4, though, as the left- and righthand piano parts reunite in a simple descending passage of parallel seventh chords (IV7–iii7–ii7). Interestingly, it is at this point-where the piano has abandoned its divorce-that the synthesizer enters with its Eb-major pentatonic melody, which is divorced from the chordal content of the unified bass and harmonic layers in the piano. To put this another way, the marriage between the harmonic layer and the bass in m. 4 conceivably provides the reduction in texture necessary to allow for a new divorce to occur between the synthesizer melody and the other layers. Note that we do eventually get the syntax divorce that typically occurs following a loop divorce, as seen in the Ab/Bb chord at the end of the phrase; it is simply delayed by the intervening melodic-harmonic divorce.

As a final example for this section, consider the song "Maryann" by New Edition (1984). A transcription of the first half of the chorus, which essentially repeats in the second half, is shown in Example 14.<sup>41</sup> Like many R&B songs from the

<sup>41</sup> As is often the case when talking about interesting passages in popular music, the transcription in Example 14 is admittedly only an approximation of the full texture of the original recording, although I believe any



EXAMPLE 13. Theme song from the TV show Hill Street Blues (1981–87), introduction



EXAMPLE 14. "Maryann" by New Edition (1984), beginning of chorus

early 1980s, the harmonic language here is not simple and involves many chord extensions, suspensions, and added notes. Indeed, viewing this chorus through the lens of Roman numerals and figured bass—as shown below the staff, which accounts for all of the sounding pitches—we would find a relatively advanced chord palette. But if, instead, we view the song through the lens of various layers (melodic, harmonic, and bass), the complexity of the pitch organization becomes much more conceptually manageable. The skeleton of the bass line, for example, is simply a variation on the standard doo-wop progression of I–vi–IV–V, with ii substituted for IV and a few passing and neighbor tones as embellishments (shown in smaller note heads). Above this bass line, the opening keyboard parts dance between tonic and dominant, acting as renegade elements in the creation of a hierarchy divorce with the bass in the first measure and then a loop divorce in the second measure. In the third measure, the keyboard plays the expected IV chord (C major) of the doo-wop progression, such that we might consider the bass to be the renegade element at this moment. The independence of these parts is further asserted in the fourth measure, where the C-major chord in the keyboard sustains over the D in the bass, only to finally sink into a dissonant C-minor triad against this same bass D. Admittedly, traditional chord labels may seem more straightforward at times, such as calling the C/A sonority a ii7 chord instead. But thinking about this passage as a harmonic-bass divorce helps explain the particular voicings we find here and thus hints at the underlying compositional approach driving this passage. Overall, we find a pattern in this song seen before: an opening triadic ostinato over a pedal, a repeat of that triadic ostinato over a different pedal, all ending with a

omissions are very small and not relevant to the larger argument. I realize, for example, that I have excluded the electric guitar part, but that is as much for the sake of clarity in the transcription as it is due to the difficulty in hearing exactly what is being played.

cadential syntax divorce. A fairly simple compositional strategy, therefore, has produced here what might otherwise be considered a complex surface involving numerous chord extensions.

Unlike the cases of loop divorce described above, this example includes vocals. As such, it provides further insight into how vocal content can participate in a harmonic-bass loop divorce. The general strategy shown here is the linkage of vocals to the keyboard part, which helps simplify the texture. In the first two measures, for example, the background vocals reiterate the dissonant D-major triad from the keyboard and strategically move out of the way to make room for the keyboard's right-hand alternation between tonic and dominant. The lead vocal seems somewhat related to the other layers, too. In the first two measures, for example, the lead vocal can be seen as a horizontal manifestation of the more vertically oriented elements, as it outlines the dissonant D-major triad first heard in the keyboard and background vocal parts. Generally speaking, there seems to be an attempt here (as we have seen before) to avoid putting too high a demand on the number of simultaneous conflicting layers that a listener must attend to at any given moment.

#### CONCLUSION

I do not expect that the music discussed above will have necessarily opened readers' ears to new sounds in rock music (although I hope it has to some extent). Admittedly, existing concepts—such as pedal tones, hybrid chords, and chord extensions—can all be used to describe and label these examples. I do, however, hope to have effected a somewhat new way of thinking about these concepts. Specifically, independence or stratification between musical layers in rock music, i.e., "divorce," can occur not only between the melody and the accompanimental parts, but also between the bass and these layers. In other words, rock music can be seen as having at least three layers of pitch organization—bass, harmonic, and melodic—any one of which may act independently from the others.

I have not claimed that cases of harmonic-bass divorce cannot be found in common-practice music. We saw this in the case of the traditional bass pedal—i.e., a hierarchy divorce and I expect a search through the vast repertoire of three centuries or more of Western art music would turn up other analogous cases. (A deceptive cadence, for example, could arguably be seen as a simple instance of syntax divorce between the bass and upper voices.) But harmonic-bass divorce, like melodicharmonic divorce, would seem to be more endemic to rock music. Perhaps the high degree of timbral contrast between parts often found in a rock song, afforded especially by modern recording technology, smooths over what might otherwise be heard as clashing or dissonant pitches in a more traditional, homogeneous texture.<sup>42</sup> That said, many of the examples of

42 Huron (2016), for example, discusses how timbral differentiation and traditional voice-leading principles both help to facilitate auditory stream harmonic-bass divorce discussed above involved a keyboard texture. The types of harmonic-bass divorce described here all of which involve a certain element of coordination between the bass and harmonic layers—may thus be the result of conscious design rather than a random or arbitrary combination of musical elements.

Overall, instances of harmonic-bass divorce typically serve particular functions or roles within the form of a rock song. This is not unlike the melodic-harmonic divorce, which Temperley associates more often with verse sections than chorus sections.<sup>43</sup> A hierarchy divorce between the bass and harmonic layer often occurs in a formal section where we expect a single underlying tonal function, such as verse and chorus sections that often prolong tonic,44 since one layer-either the bass (in the case of a traditional pedal) or the harmonic layer (in the case of an inverted pedal)-will sustain a deeper level of the tonal structure than the other. A syntax divorce, since it involves coordinated yet independent motion to a structural goal, will typically occur at or near a phrase ending, although it may also occur within an embedded cadential motion (such as an applied chord or tonicization). Finally, a loop divorce usually spans an entire formal section, since it typically begins with a hierarchy divorce and ends with a syntax divorce. Instrumental introductions seem to be particularly common locations for a loop divorce, possibly because the addition of a melodic vocal layer on top of the divorce would overly complicate the texture. Presumably, future research will reveal other typical scenarios and bring further insight on the independence between musical layers in rock music.

As an "outro," I would like to offer one last example: the song "Blue" by Joni Mitchell (1971). The opening vocal material and piano part are transcribed in Example 15,<sup>45</sup> which shows a summative Roman numeral analysis (in B minor with Dorian inflections) underneath the staff as well as hybrid chord notation between the piano and vocal staves. I have chosen to end with this example for a number of reasons. First, unlike other examples shown above, the bass layer is not truly monophonic. In the first measure of Example 15, for instance, the A-major chord in the right hand occurs over a B power chord in the left hand. In fact, every left-hand part gives a low bass

segregation, such that one may obviate the need for the other to engender the perceptual identity of concurrent voices or parts.

<sup>43</sup> Temperley (2007) calls this the "loose verse, tight chorus" model, or "LVTC" for short, where "tightness" is associated with voice leading that follows conventional paradigms. Note that Nobile, who adopts a broader definition of divorce than Temperley, also broadens "tightness" to simply be something that occurs at an "important structural moment" (2015, 198).

<sup>44</sup> Everett (2001) writes that in the music of the Beatles, for example, the verse "usually prolongs the tonic" (48) and the chorus "nearly always prolongs the tonic" (49).

<sup>45</sup> My transcription of the piano part to "Blue" is based on—but departs in important ways from—Dave Blackburn's version, which I download from Joni Mitchell's official web site on 3 August 2017: <http://jonimitchell. com/music/transcription.cfm?id=387>.



EXAMPLE 15. "Blue" by Joni Mitchell (1971), opening vocal material

note as well as a perfect fifth above this bass (and thus while some measures may technically have a monophonic left hand part, such as m. 9, these passages seem to imply two- or threenote simultaneities). I view this upper fifth as a member of the bass layer, since it moves consistently in parallel with the low bass note. It may be preferable, perhaps, to think of the combination of the left- and right-hand piano parts as polychords (i.e., one chord occurring over another) rather than as hybrid chords.<sup>46</sup> But these upper fifths seem here more like a thickening agent—musical corn starch, if you will—than a full-fledged chord. Regardless, the passage illustrates a half-way point between harmonic-bass divorce and a fully fledged polychordal texture, and as such connects the basic concept of harmonicbass divorce to more complex musical textures.

A second reason for choosing this final example is that it provides clear evidence of the conceptual separation between the harmonic and bass layers. In particular, note that every single sonority in the right-hand part is a triad and that, moreover, these triads are almost all built on different roots than the low bass note beneath them (the sole exception being the recurring E-major chord). From this vantage point, the overall compositional strategy for the piano part is thus rather simple: Plain triads in the right hand are played against open fifths in the left hand, and only now and then do these two layers align. Yet from another vantage point, the harmonic palette is quite complex (especially mm. 12–14). I do not mean to imply that this latter outlook is incorrect, nor do I purport to know Joni Mitchell's thought process when she composed this song. However, the portrayal of the piano part here as a harmonicbass divorce offers a less obscure explanation of the origins of Mitchell's rich harmonic language than through traditional methods alone.

Finally, I chose this example because it shows instances of harmonic-bass divorce that go beyond the three categories described above. To be sure, there are instances of hierarchy

<sup>46</sup> See Mulholland and Hojnacki (2013, 215–18) for more on polychords and their difference from hybrid chords.

divorce here, such as in m. 5 and m. 10 (and perhaps mm. 13– 14 could be explained as one large-scale syntax divorce), but, generally speaking, the writing style that Mitchell uses transcends any of these three basic divorce types. Instead, harmonic-bass divorce seems like the fundamental, generative principle of her compositional approach, and it works well to support and convey the lyric content. Like the narrator, for example, the right hand often seems at "sea" with regard to the left hand. And while the repeated E bass notes in mm. 9–12 serve to "anchor" the undulating D and E triads above, the upper-voice layer eventually cuts loose from the bass to "sail away." Ultimately, the particular employment of harmonicbass divorce in a song has, like any other musical device, the potential for expressive effects and helps shape our overall emotional response to the musical work.

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