

The melodic-harmonic ‘divorce’ in rock

DAVID TEMPERLEY

Eastman School of Music, 26 Gibbs St, Rochester, NY 14604, USA
E-mail: dtemperley@esm.rochester.edu

Abstract

Several authors have observed that rock music sometimes features a kind of independence or ‘divorce’ between melody and harmony. In this article, I examine this phenomenon more systematically than has been done in the past. A good indicator of melodic-harmonic divorce is cases where non-chord-tones in the melody do not resolve by step. I argue that this does occur frequently in rock – often with respect to the local harmony, and sometimes with respect to the underlying tonic harmony as well. This melodic-harmonic ‘divorce’ tends to occur in rather specific circumstances: usually in pentatonically based melodies, and in verses rather than choruses. Such situations could be said to reflect a ‘stratified’ pitch organisation. A particularly common situation is where the verse of a song features stratified organisation, followed by a chorus which shifts to a ‘unified’ organisation in which both melody and accompaniment are regulated by the harmonic structure.

Introduction

The last decade has witnessed a surge of interest in the study of the musical dimensions of rock and other kinds of popular music – dimensions such as harmony, tonality, rhythm, timbre and form. For the most part, this research has been what I would call *analysis* rather than *theory*. By ‘analysis’, I mean an intensive study of a particular song (or perhaps album or artist). By ‘theory’, I mean a more general study of the features and principles of a musical style. Of course, analysis and theory inform each other; we cannot understand a style without closely examining individual works. But we also cannot fully appreciate individual works without considering the norms and regularities of the style. This is not to say that the theory of rock has been entirely neglected – there have been some important contributions in this area (some of which are cited below); but the preponderance of work to date has been analytical in nature.¹ Notwithstanding the undoubted contributions of analytical studies, I believe a more complete understanding of rock will require a deeper investigation of the style itself.

In this article, I present some ideas which I hope will contribute to the theory of rock. I focus on an aspect of rock harmony which is of particular interest, as it sets rock apart from many other genres of Western music. This is what has been referred to as the ‘divorce’ between melody and harmony. The term is due to Allan Moore (1995) who – along with several other authors – has noted that rock sometimes manifests an apparent independence or divergence between the melody and the harmonic structure. I will begin by considering – more precisely than has been done in the past – what

We all went down to Mont - reux On the Lake Ge - ne - va shore -

line To make re - cords with a mo - bile We did - n't have much time

Example 1. Deep Purple, 'Smoke on the Water', first half of first verse. (This and all other transcriptions in the paper are my own, except where indicated otherwise. Measure numbers only refer to the passage shown.)

Out here in the fields I fight for my meals

I get my back in - to my liv - ing

Example 2. The Who, 'Baba O'Reilly', first half of first verse.

a 'divorce' between harmony and melody would mean in the context of the Western musical tradition. I will then examine the ways that this divorce occurs in rock. To anticipate my argument, I will try to show that melodic-harmonic divorce in rock is not a wholesale abandonment of the usual coordination of melody and harmony, but is, rather, a highly constrained departure from that coordination which tends to occur in quite specific ways and conditions.

Melodic-harmonic divorce: four examples

Examples 1–4 show four melodies from rock songs. These four songs exemplify certain general points I wish to make about melodic-harmonic divorce in rock. In presenting these points, it will be helpful to use another style as a point of reference, namely 'common-practice' music – Western art music of the eighteenth and nineteenth centuries. This is not to imply that common-practice music somehow occupies a 'central' or 'normative' place in the musical universe; but it is a style of music in which pitch organisation has been thoroughly studied and is quite well understood, so it provides a useful point of comparison.

The first point to note about the passages in Examples 1–4 is that they have a clear harmonic structure. By this I mean that they are divided into short segments which are governed by harmonies. The harmonies are indicated above the staff in 'lead-sheet' fashion, indicating the root and quality of each chord. Following convention, a root-name alone indicates a major triad; a root-name plus 'm' indicates a minor

It's get-tin' late Have you seen my mates Oh tell me when the boys get here It's
sev-en o'clock and I wan-na rock Wan-na get a bell-y full of beer

Example 3. Elton John, 'Saturday Night's Alright for Fighting', first half of first verse.

Step off the train all a-lone at dawn Back in-to the hole where I was born
Sun in the sky ne-ver raised an eye to me

Example 4. Oasis, 'D'You Know What I Mean', first half of first verse.

Example 5. Pentatonic scales (in C): (A) major; (B) minor.

triad; a root-name plus '5' indicates a plain fifth. As is typical in rock, the harmonies are conveyed primarily by the instruments (mainly guitar and bass). The relationship of the vocal line to the harmonies will be discussed further below. The essentially harmonic character of rock is an important respect in which it is fundamentally similar to common-practice music, as well as many other vernacular styles of earlier periods (hymns, Victorian music-hall, ragtime, swing-era jazz) and today (country, middle-of-the-road pop, salsa, etc.).² In all of these styles, too, the fundamental harmonic building blocks are the same: major and minor triads, with occasional or sometimes frequent use of sevenths, diminished triads, and other secondary chords. Plain fifths – commonplace in rock – are much less common in most other harmonic styles.

A second feature one might observe about Examples 1–4 is their scalar organisation. If we consider the melodies, we find that each one fits into a pentatonic scale (see Example 5). Examples 1, 3 and 4 use minor pentatonic scales (in G, G and F#, respectively); Example 2 uses an F major pentatonic scale. The concept of scalar organisation is, again, familiar from common-practice music. In common-practice music, the notes within a section of a piece tend to be drawn from a single diatonic (major or minor) scale – the scale of the current key. This is not to imply that all notes are drawn from the scale – there may be occasional 'chromatic' notes – but the

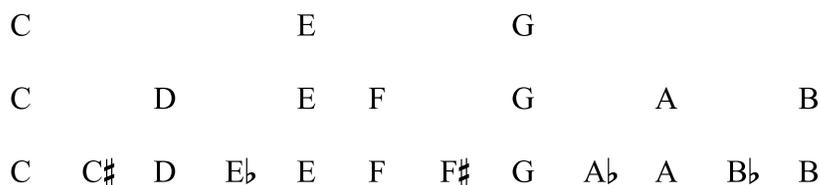


Figure 1. A pitch framework for common-practice music, assuming a C major harmony in the context of C major (Lerdahl 2001).

overwhelming majority are.³ In rock, the situation is more complex. One sometimes finds sections or whole songs that seem organised around a scale, but in other cases the concept of a governing scale seems to have little relevance, an issue I will return to below. In any case, the use of a pentatonic scale seems clear enough for the melodies in Examples 1–4.

In the case of common-practice music, we can think of harmonic and scalar structures as forming a two-levelled hierarchy of pitch organisation. A useful system for representing such hierarchies has been proposed by Lerdahl (2001). Lerdahl represents pitch systems as structures of ‘alphabets’, showing the twelve pitch-classes in terms of their stability or importance; I will call such a structure a ‘pitch framework’. Figure 1 shows the pitch framework for the usual diatonic-harmonic system of common-practice music (assuming a C major chord in the key of C major). At the bottom level we have the chromatic scale, including all twelve pitch-classes. Above that, we have a scalar level – in common-practice music, this is generally a diatonic (major or minor) scale. Above that, we have the harmonic level, including the chord-tones of whatever harmony is operative. The harmonic level of the framework shifts with every change of chord; the diatonic level shifts less often, only when there is a change of key. Lerdahl’s frameworks generally include one further level, indicating just the root of the harmony, and sometimes an additional level indicating root and fifth. These higher levels – indicating distinctions between notes of the triad – are not essential for our purposes, and we omit them in what follows.

In describing what it means for music to be ‘harmonic’, I said that it must be divided into segments, each one governed by a particular chord. Let us examine a bit more closely what this implies, focusing for the moment on common-practice music. It does not mean that the pitches of each chordal segment are restricted to the notes of the chord. One can find passages of music where this occurs, but they are not especially common. It means, rather, that notes not belonging to the chord – ‘non-chord-tones’ – are unstable, generally functioning as elaborations of the chord-tones, and are treated in restricted ways. One general rule that applies to the vast majority of non-chord-tones in common-practice music is that they ‘resolve by step’ – moving to another note that is a step away in the scale (either a minor second or major second, depending on the position in the scale). This applies, for example, to passing tones and neighbour tones, the most common kinds of non-chord tones in common-practice music (see Example 6); it applies also to appoggiaturas, incomplete neighbours, and suspensions. It does not apply to ‘escape tones’ – non-chord-tones which resolve by leap; but these are rare and generally confined to certain highly stylised situations. Consider Example 7 (practically any passage from common-practice music could be used to make this point); it can be seen that all notes that are not part of the current chord resolve by step to another note. In the case of the E in m. 4, the resolution is not to the immediately following G but rather to the F that follows.



Example 6. Common types of non-chord tones (over a C major harmony).

Example 7. Mozart, Sonata K. 333, first movement, mm. 1–4. Non-chord-tones are marked with asterisks.

Let us examine whether the 'stepwise resolution' rule applies to the excerpts in Examples 1–4. There are numerous non-chord-tones – notes not part of the current chord – in each of the excerpts. The question is, do these non-chord-tones resolve by step? To answer this question about every note would require consideration of a number of technical issues which I do not intend to address here, as my argument does not really depend on them. (For example: Is the minor seventh above the root – e.g. the F's in m. 1 of Example 1 – a chord-tone or a non-chord-tone? And what about syncopated notes, like the A in m. 2 of Example 4: Should they be shifted to their 'unsyncopated' positions, or left as they are?)⁴ However, there is one important point that requires attention, concerning the definition of a 'step'. We could define a step in diatonic terms – that is, a minor second or major second. By this criterion, we can find many non-chord tones that do not resolve by step, such as the D in m. 3 of Example 1, or the last F# in m. 2 of Example 4. (Notes referred to in this discussion are marked with arrows.) But this criterion might seem inappropriate, for we have already observed that the scalar organisation of these melodies is pentatonic, not diatonic. In light of this, it seems more logical to define a step as a move between adjacent notes on the *pentatonic* scale. For example, in a melody like Example 4, using the F# minor pentatonic (F#–A–B–C#–E), the move from F# to A would be considered a step; F# to B would still be a leap. Some notes that are not resolved stepwise by the diatonic criterion do resolve by the pentatonic criterion, such as the F# in m. 2 of Example 4 (which resolves to A). In several cases, however, non-chord tones are not resolved stepwise even in pentatonic terms. For example, the move from D to Bb in m. 3 of Example 1 is a leap on the G minor pentatonic scale; in Example 3, the Bb at the end of m. 3 (extending into m. 4) is at the end of the phrase and could not really be said to resolve at all.

One might suggest that these melodies do obey the rule of stepwise resolution, but in a different way. It might be argued that the underlying harmony of the entire verse in these songs is really the tonic; the non-tonic harmonies in the accompaniment are just ornamental. There is no doubt that these verses are dominated by tonic harmony; in all cases the tonic harmony occurs at the beginning of the phrase, it

C	E \flat	G									
C	E \flat	F	G	B \flat							
C	C \sharp	D	E \flat	E	F	F \sharp	G	A \flat	A	B \flat	B

Figure 2. A 'pentatonic-harmonic' pitch framework (assuming a C minor harmony and a C minor pentatonic scale).

Some-where some-how some - bo-dy must have kicked you a-round some

Example 8. Tom Petty & the Heartbreakers, 'Refugee', first line of second verse.

generally occurs at metrically (or hypermetrically) accented positions, and in Example 1 it is further emphasised by occupying much more time than any other harmony. In such cases, one might say, the underlying framework (at least for the melodies) is really as shown in Figure 2: a pentatonic scalar level, with an unchanging tonic-triad harmony above it. This does, indeed, account for some of the unresolved non-chord-tones in Examples 1–4. For example, the B \flat in mm. 3–4 of Example 3, a non-chord-tone of the surface F harmony, is a chord-tone of the underlying G harmony. But other cases are not accounted for even by this rule. The unresolved B in m. 1 of Example 4, which is not a chord-tone of the local harmony (A), is not part of the underlying tonic harmony (F \sharp) either. In Example 2, the D in m. 3 is an unresolved non-chord-tone with respect to the underlying tonic harmony (F). It seems, in these melodies, that *all* of the notes of the pentatonic scale are treated as 'chord-tones' – stable tones that can be left by leap or can end a phrase without resolution. Example 8 shows another striking case: the B at the end of the phrase – on 'round' – is unresolved, yet is not a chord-tone of the underlying tonic (F \sharp) harmony, which in this case is the local harmony as well.

I suggest, then, that the system of pitch organisation operative in these songs is fundamentally different from that of common-practice music. In our rock examples, the pitch organisation is *stratified*: there are different frameworks for the melody and accompaniment. The situation can be represented nicely using Lerdahl's 'alphabet' system, as shown in Figure 3. The accompaniment framework features a chordal level which shifts with each harmony. Most often, there is a scalar (pentatonic, major-diatonic or modal-diatonic) level underneath (though this might sometimes be debatable); I have shown a diatonic level in parentheses in Figure 3.⁵ The melody framework features only a pentatonic scalar level, with no harmonic level. The melodies in Examples 1–4 seem quite independent of the local harmony, in that non-chord tones are frequently not resolved stepwise. One might argue that the melodies reflect *some* influence of the underlying tonic harmony, in that phrases tend to end on 1, 3(\flat 3) or 5, and other pentatonic degrees are usually resolved stepwise to those degrees. But in some cases, as shown above, stepwise resolution is not obeyed even with respect to the underlying tonic triad.⁶

	C		E \flat		F		G		B \flat			
Melody	C	C \sharp	D	E \flat	E	F	F \sharp	G	A \flat	A	B \flat	B
	C		E \flat				G					
Accompaniment	(C		D	E \flat		F		G	A \flat		B)	
	C	C \sharp	D	E \flat	E	F	F \sharp	G	A \flat	A	B \flat	B

Figure 3. A 'stratified' pitch organisation. The accompaniment framework features a diatonic scalar level and a changing harmonic level. The melody framework features a pentatonic scalar level, with no harmonic level.

Melodic-harmonic divorce: a broader view

Having described melodic-harmonic divorce in a very specific way, we now take a somewhat broader view. In this section I discuss ways that other authors have treated melodic-harmonic independence in rock. I also discuss some variants of this phenomenon that are found in rock, beyond the specific usage described above. Finally, I consider the possible historical sources for melodic-harmonic divorce in rock, and its use in other styles.

The independence between melody and harmony has been observed by several other authors as an important aspect of rock. Middleton cites this independence as a characteristic feature of the blues: 'Blues melody *is* harmonically conscious to the extent that it usually fits the chord when that is first sounded, but otherwise it is generally independently, and often pentatonically, inclined' (Middleton 1972, p. 36). He later observes similar tendencies in rock, particularly in the music of the early Beatles (*ibid.*, pp. 167–74). Similarly, Moore first refers to the "'divorce" between melodic and surface harmonic schemes' in connection with the blues (Moore 1995, p. 189), but later notes the 'independence of melodic and harmonic patterns' in some rock songs as well (*ibid.*, p. 189). Everett observes that 'a song may present nontriadic tones in a stylistic context that creates no expectation or desire for resolution' (Everett 2000, p. 315); elsewhere, he notes that such free treatment of non-chord tones is especially characteristic of pentatonic melodies (Everett 2001, p. 58). Stephenson also discusses melodic-harmonic independence in rock; in some cases, he states, 'certain pitches of the scale are treated as stable despite the harmonic context' (Stephenson 2002, p. 75).

Everett makes an interesting point about the way we should regard melodic-harmonic independence in rock. Even in cases where non-chord-tones are unresolved, he argues, 'that still does not make the embellishments stable' (Everett 2000, p. 315); rather, he suggests, the listener is meant to perceive and appreciate their unresolved tension. I would say that Everett is partly right. Certainly one should not conclude, from the presence of unresolved non-chord-tones in rock, that rock simply has no regard for melodic-harmonic coordination – that everything is stable and anything goes. Indeed, many rock songs and sections of songs *do* reflect a close coordination of melody and harmony, as I will discuss below. On the other hand, I do

The image shows a musical score for the first verse of Chuck Berry's 'Rock and Roll Music'. It consists of four staves of music in E major (one sharp). The lyrics are: 'Just let me hear some of that rock and roll music An - y old way you choose it It's got a back-beat you can't lose it An - y old time you use it It's got-ta be rock 'n'roll mu - sic If you want to dance with me'. Chord symbols E, A, and B are placed above the notes. The melody features a prominent D note on the downbeat of measures 6, 8, and 12.

Example 9. Chuck Berry, 'Rock and Roll Music', first verse. Transcription from Stephenson (2002).

not entirely agree that unresolved non-chord-tones (for example, the B in m. 1 of Example 4) should be heard as unstable dissonances, either. Rather, I would argue, the listener senses in such situations that the adherence of the melody to the harmony has temporarily been suspended (and it may partly be the unresolved non-chord-tones that indicate this). Once this is established, we grant a certain freedom to the melody *within that context*, so that non-chord-tones may be left hanging without a strong sense of tension or incompleteness.⁷

My focus on stepwise resolution of non-chord-tones as the test of melodic-harmonic independence may seem pedantic. To my mind, however, this is crucial to distinguish the treatment of non-chord-tones in rock from that of common-practice music and other styles. Here I depart somewhat from other treatments of melodic-harmonic independence, in particular Stephenson's (2002). In discussing the independence of melody from harmony, Stephenson gives the example of Chuck Berry's 'Rock and Roll Music' (see Example 9), noting that 'the lowered seventh scale degree [D in an E major context] is treated as stable whether the chord is I, IV, or V . . . It is the highest note of the chorus, is repeated often, begins most of the vocal phrases (thus requiring no preparation), and occurs on strong beats: it cannot be an embellishment' (Stephenson 2002, p. 75). I would argue here, however, that this particular note is not a good example of independence between melody and harmony. The D's in 'Rock and Roll Music' are always resolved stepwise, and could mostly be explained in quite conventional terms. For example, the D on the downbeat of m. 6 (over an A major harmony) could be considered an appoggiatura. The fact that the D's are melodic peaks and (in some cases) metrically strong is not decisive; embellishing tones are frequently accented by contour and metrical placement in common-practice music as well (for example, every downbeat of the melody in Example 7 is a non-chord-tone). The D's over the B harmony (and arguably the E harmony as well) could

Well I been look-in' re-al hard and I'm tryin' to find a job but it
just keeps get-tin' tough-er ev-ery day

Example 10. Steve Miller Band, 'Rock'n'Me', first line of first verse.

I was born in a cross-fire hurr-i-cane And I howled
at my ma in the driv-ing rain

Example 11. Rolling Stones, 'Jumpin' Jack Flash', first verse.

be regarded as chord-tones. The C#'s in mm. 3 and 11 might be considered unresolved non-chord-tones, however. Stephenson goes on to give two other, more convincing, examples of melodic-harmonic independence – Soul Asylum's 'Runaway Train', and the Beatles' 'A Hard Day's Night'; the second of these will be discussed further below.

Having said this, I do not wish to insist that 'non-stepwise-resolution of non-chord-tones' should be the sole criterion for melodic-harmonic divorce. Certainly, there are cases where one feels that the melody is detached from the surface harmony, even when pentatonic stepwise resolution is maintained. In m. 3 of Example 10, for example, we find six non-chord-tones in a row with respect to the local A5 harmony (G#-B-G#-F#-D#-D#). We could consider them all to be resolved stepwise – each one moves to an adjacent note on the B major pentatonic scale (or to a repetition, in the case of the first D#). But to have six non-chord-tones in a row, even resolved ones, is highly unusual in other harmonic styles (e.g. common-practice music). The feel of this phrase is that the vocal is freely traversing the pentatonic scale without much regard for the underlying chord changes. Consider also m. 2 of Example 11, where we find a repeated non-chord-tone D \flat over an A \flat 5 harmony (with a B \flat pedal in the bass). We could quibble about whether such repetitions constitute a lack of resolution; but even if they do not, such insistent reiteration of a non-chord-tone is clearly unlike non-chord-tone treatment in common-practice music, and gives a sense that the melody is essentially independent of the harmony. In short, I do not argue that we can only claim melodic-harmonic independence in cases where stepwise resolution is violated; it is just that such cases seem particularly decisive.



Example 12. Sousa, 'The Washington Post' (after van der Merwe 1989, p. 231).

One might wonder what the origins are for melodic-harmonic divorce in rock. Some authors have noted a tendency towards independence between melody and harmony in earlier styles of Western music. Van der Merwe observes this with regard to 'parlour music' – middle-class popular music in late-nineteenth-century Europe and America; in much music of this period, he suggests, 'we see melodic patterns beginning to assert their independence over harmonic ones' (Van der Merwe 1989, p. 226). In a tune such as Sousa's 'The Washington Post' (Example 12), we find unresolved A's over G7 harmony, and then over C major; in this case, van der Merwe argues, 'the emancipation [of melody from harmony] is complete' (*ibid.*, p. 231).⁸ In my view, however, the case for such melodies as examples of melodic-harmonic independence is doubtful, or at least not yet proven. I would favour the more traditional explanation for such cases, which is that they represent an expansion of the harmonic vocabulary: the A's over G7 represent dominant ninths, and the A's over C major represent added sixths. This does, of course, expand the range of possible melody notes over each harmony; but not everything is possible. We might find tonic chords with (unresolved) added sixths, but hardly ever with added fourths. By contrast, one *does* find unresolved 'added fourths' in rock: see Example 8 above and Example 22 below. Similarly, Winkler (1978) points to clashes between melody and harmony in ragtime and big-band jazz; in such cases, he argues, the melody is really elaborating the 'background' tonic harmony, independently of the foreground chord changes. But as I have shown, this explanation is not convincing in the case of rock; there, we find unresolved dissonances even in relation to the background tonic harmony.

I would argue – following Middleton (1972, pp. 35–7) and Moore (1995, p. 189) – that the roots of melodic-harmonic divorce in rock lie in another source: the blues. The association of melodic-harmonic divorce with the minor pentatonic, in itself, points in the direction of the blues, since rock's pentatonicism comes mainly from this source. Many blues songs, indeed, feature a kind of melodic-harmonic independence similar to what we find in rock. In particular, as noted by Titon (1994, p. 157), it is commonplace for the first two phrases of a blues verse to be melodically the same, even though the harmonies change. In some cases, as Middleton observes, all three melodic phrases are essentially the same. Example 13 gives an example, from Muddy Waters' 'Rollin' and Tumblin''. The melody seems relatively detached from the harmony; the second melodic phrase repeats the first, despite the changing harmonic context. This leads to conspicuous clashes, notably the E–G–E over a D harmony in m. 8; notice also the unresolved A over E harmony in m. 13.⁹

Given this precedent in the blues, we might also expect to find evidence of melodic-harmonic divorce in other styles that reflect strong blues influence, and this is certainly the case. In much Motown and early soul music, one finds a kind of independence between melody and harmony which is quite similar to that characteristic of rock and blues. Consider the melody in Example 14, from Percy Sledge's 'When

Example 13. Muddy Waters, 'Rollin' & Tumblin'' (1950 version), first verse.

Example 14. Percy Sledge, 'When a Man Loves a Woman', first half of first verse.

a Man Loves a Woman'. Despite the differences between this melody and those in Examples 1–4 – there is considerably greater rhythmic freedom here, and a wider melodic range – the commonalities are also striking. Here, as in the rock melodies, there is a strong pentatonic basis, specifically a $D\flat$ major pentatonic scale. Both the first and third phrases end on $B\flat$, clashing with both the local harmony ($A\flat$ major in the first phrase, $D\flat$ major in the third) and the underlying tonic triad; note also the leap from $D\flat$ in m. 4, over an F minor harmony. In short, while we are focusing in this paper on rock in a fairly narrow sense of the term, the phenomenon of melodic-harmonic divorce as I have defined it here may have relevance to a much wider domain of popular music.

One aspect of melodic-harmonic divorce that we need to consider a bit further is scale organisation. As noted above, this is a very problematic issue in rock generally. Many rock songs appear to remain consistently within a single scale: a pentatonic

Bm D G Bm D G

Brok-en bott-les un-der chil-dren's feet Bod-ies strewn a-cross a dead-end street

Example 15. U2, 'Sunday Bloody Sunday', first half of second verse.

C5 Bb5

You get up ev-ery morn-ing to the a-larm clock's warn-ing take the

3 F5 C5

eight fif-teen in-to the ci-tty

Example 16. Bachman-Turner Overdrive, 'Taking Care of Business', first line of first verse.

scale, a major diatonic scale, or one of the other diatonic modes (especially Mixolydian, Dorian and Aeolian). However, other songs do not seem to reflect any clear scalar organisation. In many cases, a song or section of a song seems to be organised around a pattern of harmonies (usually major triads) which may not be contained in any conventional scale; we will consider examples of this below.¹⁰

In situations of melodic-harmonic divorce, one most often finds a pentatonic scale used in the melody. However, this phenomenon can also occur with other scales. In Example 15, we find a diatonic melody using the B Aeolian scale. The melody seems to be more or less independent of the changing harmonies underneath; the A–F# at the end of the passage clashes with the G major harmony. Another common situation is illustrated by the melody in Example 16. I would consider this an essentially pentatonic melody, using part of the C minor pentatonic scale Bb–C–Eb, with the C–Eb interval elaborated by a passing-tone D; such diatonic 'filling-in' of a pentatonic framework is commonplace in rock. Here again, the C–Eb alternation in m. 2 clashes conspicuously with the underlying Bb chord.

The topic of scale organisation, as well as the topic of blues influence, brings us to another problematic issue in the study of rock: 'blue notes'. Blue notes are pitch categories, found in blues, jazz, and other styles influenced by them, which in some way 'fall between the cracks' of conventional chromatic-scale categories. In particular, several scholars have argued for the existence of tones that are in between the major and minor third scale-degrees, and in between the major and minor seventh (see Borneman 1960; Middleton 1972, pp. 35–9; Titon 1994; Weisethaunet 2001). The whole area of blue notes awaits systematic study (in terms of both acoustic measurements and perceptual judgements), and we can say little more about it here, except to observe that the kind of 'free-pentatonic' melody that is associated with melodic-harmonic divorce is a frequent location for blue notes. From examples cited above, I could point to the D#s in m. 3 of Example 10 (on 'tougher') which actually sound to me like a cross between D and D#, or the Db at the end of Example 11 (on 'rain') which seems halfway between Db and D. Again, we can do little about blue notes for now except to acknowledge them as a major unresolved issue in the study of rock pitch organisation.¹¹

Smoke on the wa - ter And fi - re in the sky

Smoke on the wa - ter

Example 17. Deep Purple, 'Smoke on the Water', chorus.

All you peo - ple right here right now D'you know what I mean

Yeah yeah

Example 18. Oasis, 'D'You Know What I Mean', chorus.

The 'loose-verse/tight-chorus' model

The reader may have noted that almost all of the passages from rock songs discussed so far have been *verses*. Examples 17–19 shows the choruses for three of the songs discussed above: 'Smoke on the Water', 'D'You Know What I Mean', and 'Jumpin' Jack Flash' (the verses are shown in Examples 1, 4 and 11, respectively). It can be seen that these choruses feature quite a different kind of pitch organisation from their verses. In particular, the coordination between melody and harmony is now much closer. Whereas the verse melodies contain clear violations of 'stepwise resolution', as well as sequences of several consecutive non-chord-tones, these indications of melodic-harmonic divorce are conspicuously absent in the choruses. Every note is either a chord-tone of the current chord, or is resolved by step; sequences of several non-chord-tones in a row are likewise avoided. The one exception is the 'yeah yeah' phrase in Example 18. As opposed to the 'stratified' organisation of the verses discussed earlier, these choruses reflect what we could call a 'unified' pitch organisation: both the accompaniment and melody are closely regulated by the harmonic structure.

The scalar organisation of these chorus melodies also offers an interesting contrast with their verses. As discussed earlier, the verse melodies of these three songs are all pentatonic. While the chorus melody in Example 18 is pentatonic, the melodies of Examples 17 and 19 clearly are not. Indeed, one might well argue that these sections are not really organised around any scale. The harmonic progressions in Examples 17 and 19 – which, as noted above, govern both melody and accompaniment – do not fit within any diatonic or pentatonic set. In Lerdahl's terms, arguably, we have just a 'chordal level' here with no underlying scalar level at all.¹² This in itself is an interesting and common phenomenon in rock; to explore it further, however, would take us too far afield.

But it's all right now In fact it's a gas But it's all

right I'm jumping jack flash it's a gas gas gas

Example 19. Rolling Stones, 'Jumpin' Jack Flash', chorus.

Table. Some well-known songs reflecting the 'loose-verse / tight-chorus' model.

Song	Artist
'A Hard Day's Night'	Beatles
'Drive My Car'	Beatles
'Taxman'	Beatles
'Jumpin' Jack Flash'	Rolling Stones
'Somebody to Love'	Jefferson Airplane
'Born to be Wild'	Steppenwolf
'Smoke on the Water'	Deep Purple
'Come Together'	Beatles
'Tumbling Dice'	Rolling Stones
'Woodstock'	Crosby, Stills, Nash & Young
'We're an American Band'	Grand Funk Railroad
'Long Time'	Boston
'Riding the Storm Out'	REO Speedwagon
'Jungle Love'	Steve Miller Band
'Back in Black'	AC/DC
'Walking on the Moon'	Police
'F.I.N.E.'	Aerosmith
'Mr. Brownstone'	Guns N' Roses
'Come as you Are'	Nirvana
'No Excuses'	Alice in Chains
'Einstein on the Beach'	Counting Crows
'D'You Know What I Mean'	Oasis
'You Oughta Know'	Alanis Morissette

The fact that the verses to these songs reflect a stratified organisation (with pentatonic melody), while the choruses reflect a unified organisation, is no coincidence; for this is a very common situation in rock songs. The Table lists a number of songs in which this same situation occurs. In all of these cases, we find a pentatonic (or predominantly pentatonic) verse melody over a chordal accompaniment, often with some clashes (e.g. non-chord-tones not resolved by step) between the melody and the accompaniment harmonies. In the chorus, the melody and the accompaniment reflect a more tightly coordinated harmonic organisation, with all non-chord-tones properly resolved. This, then, is a particularly favoured strategy for the construction of rock songs; I will call it the 'loose-verse/tight-chorus' (LVTC) model.

If I am right that the LVTC model is a common pattern in rock, this raises a further question: what purpose does this strategy serve? I would argue that it conveys

a very basic expressive message: a contrast between unity and individual freedom. The verse signifies individuality by giving relative independence to the parts of the ensemble, and particularly to the vocal line (and by extension to the vocalist), which is able to wander rather freely along the scale without being tied to moment-to-moment harmonic changes. Along with individuality is the connotation of spontaneity and free expression; the lack of harmonic constraint allows the vocalist to express themselves in a natural and direct fashion. In the chorus, the parts of the ensemble – the vocal and the accompanying instruments – ‘come together’, as it were, under the unifying guidance of the harmonic structure. This signifies coordination, unity of purpose, and also the more planned and deliberate mode of action that coordination requires. The unified spirit of the chorus is also indicated, in many cases, by the addition of other vocals to the melody, either singing in unison or in harmony; we find this in ‘Jumpin’ Jack Flash’, for example.

This contrast between unity and individuality is expressed by music of many kinds in different ways. Consider, for example, the contrast between the solo and the ripieno group in a Baroque concerto, which has been seen to be emblematic of the tension between the individual and society (McClary 1987); or the contrast between homophonic and contrapuntal textures that is a hallmark of the classical period. This issue has also been raised, with regard to rock (and heavy metal in particular), by Walser (1993), in an analysis of Van Halen’s ‘Running with the Devil’. In general, Walser argues, heavy metal expresses a dialectic between controlled, collective action and individual freedom. Freedom is signified by the singer and lead guitarist, and by the sections in which they predominate, the verses and the guitar solo; control is signified by the rhythm section, and also by the choruses. Walser argues that ‘Running with the Devil’ is unusual in that the guitar riff, with its surprising harmonic twists, portrays both control and freedom – thus encapsulating the usual function of the riff and the solo all at once. While I find Walser’s analysis quite compelling, I would simply add that the phenomenon of melodic-harmonic divorce, and in particular the LVTC model, adds another important aspect to the contrast between individual freedom and controlled unity, though not an aspect that is particularly apparent in ‘Running with the Devil’.

In several cases, my interpretation of the expressive meaning of the LVTC pattern receives strong lyrical support. The Beatles’ ‘Come Together’ is a simple example: the chorus lyric, ‘Come together / right now / over me’, expresses the idea of unity with particular clarity. In ‘D’You Know What I Mean’, too, the introspective loneliness of the verse lyrics (Example 4) contrasts starkly with the communal feeling of the chorus (Example 18). A more subtle example is Crosby, Stills, Nash & Young’s ‘Woodstock’. The song tells the story of someone who comes across a ‘child of God’ on his way to Woodstock and accompanies him, joining a multitude that is eventually ‘half a million strong’. The overall sense of the song, then, is of many individuals uniting in a spirit of peace and togetherness. This is beautifully depicted in the contrast between the verse – with a solo vocal line moving rather freely over the changing harmonies – and the chorus, especially the words ‘got to get ourselves’, in which the three vocal lines and the instruments come together in perfect coordination (Example 20).

The Beatles’ ‘A Hard Day’s Night’ illustrates an interesting use of the LVTC model (Example 21). The song reflects an ‘AABAABA’ form, a common form in early rock: there is no real chorus, though each A section ends with the line ‘will make me feel all right’ (or something similar), which could loosely be considered a ‘refrain’. As

And we got to get our-selves back to the gar - - - den

Example 20. Crosby, Stills, Nash & Young, 'Woodstock', second line of chorus.

It's been a hard day's night And I been work-ing like a dog It's been a hard day's night I should be sleep-ing like a log But when I get home to you I know the things that you do will make me feel all right

Example 21. The Beatles, 'A Hard Day's Night', first verse.

Stephenson (2002, pp. 75–6) notes, the first part of the A section offers two nice examples of melodic-harmonic independence – the D over the C harmony in the second half of m. 1 and the D over F major in m. 3 (see also Middleton 1972, p. 170). In scalar terms, one could analyse mm. 1–8 of this melody as 'Mixolydian', or simply as an elaboration of the dominant-seventh G–B–D–F, a typical pattern for early rock'n'roll.¹³ From m. 9 onwards, however, the melody seems to be closely regulated by the harmony. I would argue that this represents an early, and quite subtle, instance of the LTVC model. Even within this short twelve-measure verse-refrain section (harmonically based on a blues pattern), we find a contrast between the first two four-measure phrases – in which the harmony and melody are relatively independent – and the third phrase, in which a more unified pitch organisation is found. Perhaps this expresses the contrast between the individual going it alone in the cruel world of daily work ('It's been a hard day's night, and I've been working like a dog') and the romantic togetherness of the night-time ('But when I get home to you, I know the things that you do will make me feel all right'). The B section of the song – 'When I'm home, everything seems to be right' – also reflects close melodic-harmonic coordination. More generally, 'A Hard Day's Night' illustrates how the stratified / unified contrast can be used to convey a shift between unity and individuality even within a single short section of a song; this possibility is exploited in interesting ways in other songs as well, as I hope to show in future work.

A final, witty, example of the LVTC idea is shown in Example 22 – the Beatles' 'Drive my Car'. The verse would seem to be a clear-cut example of melodic-harmonic divorce – though an extraordinary one. While the harmonies of the verse move between D major and G major and then to A7 in m. 7, the melody obstinately reiterates

D G D

Asked a girl what she want - ed to be She said ba - by

4 G D G

can't you see I wan - na be fa - mous a star of the screen But

7 A Bm7

you can do some - thing in be - tween Ba - by you can drive my car

10 G7 Bm7 G7

Yes I'm gon - na be a star

13 Bm7 E A D G

Ba - by you can drive my car And ba - by I love you

Example 22. The Beatles, 'Drive My Car', first verse and chorus.

a single note, G. The lower vocal line *does* follow the chords, and to some extent serves to reconcile the upper melody with the harmony (suggesting a Dm11 chord); but the clash between melody and harmony is still striking. In the chorus, the melody breaks out of its solipsistic obsession and joins the ensemble, presenting a clear arpeggiation of the Bm7 and G7 harmonies. It is hard to argue that the verse melody signifies 'individual freedom' here (except perhaps freedom to be obsessive), but it does represent a detachment or conflict between the elements of the ensemble which makes the unity of the chorus all the more satisfying.

In this article, I have put forth some general observations about pitch organisation in rock music, focusing in particular on the phenomenon of melodic-harmonic 'divorce' or independence. I have suggested that a good indicator of melodic-harmonic divorce is cases where non-chord-tones in the melody do not resolve by step. Such unresolved non-chord-tones do indeed occur frequently in rock – even if we define a 'step' in pentatonic rather than diatonic terms; they occur often in relation to the local harmony, and sometimes even in relation to the underlying tonic harmony. Such situations could be said to reflect a 'stratified' pitch organisation. Most often, stratified pitch organisation involves a pentatonic melody, and it normally occurs in verses of songs rather than choruses. A particularly common situation is where the verse of a song features stratified organisation, followed by a chorus which shifts to a 'unified' organisation in which both melody and accompaniment

are regulated by the harmonic structure. This strategy could be seen to express a tension between individual freedom (represented by the verse) and coordinated unity (represented by the chorus).

In the course of this discussion of melodic-harmonic divorce, I have touched on a number of other issues – each of which deserves much fuller consideration than I have given it here. As mentioned several times, scalar organisation is a particularly thorny topic: to what extent are we justified in positing scalar structures in rock, and how do we make sense of those situations where we cannot? The whole issue of blue notes also needs investigation: how and where do blue notes arise, and are they especially associated with ‘free-pentatonic’ vocal passages? What about the nature of melodic-harmonic independence in the blues and in other popular genres besides rock – do these styles reflect similar patterns of usage, or quite different ones? Many issues await our exploration as we pursue a deeper understanding of the musical language of rock.

Endnotes

1. Some of the many recent analytical studies of rock include Whiteley (1990), Walser (1993), Hawkins (1996), Wagner (2003), Everett (2004), and many of the essays in Covach and Boone (1997), Everett (2000), and Holm-Hudson (2002). Several studies of a more theoretical nature are cited below. The distinction between ‘analytical’ and ‘theoretical’ studies is of course an over-simplification – analytical studies may have some theoretical content, and vice versa; but the distinction is still a useful one.
2. Not all of the world’s musical styles have been harmonic: Those that are not include Western medieval plainchant, Indian classical music, and Javanese gamelan.
3. For evidence on the distribution of scale-degrees in common-practice music, see Temperley (2004, p. 181).
4. Regarding syncopation: in my discussion of rock in Temperley (2001, pp. 255–6), I argued that, for the purposes of harmonic analysis, notes should be shifted to their unsyncopated positions – the positions at which they are understood to ‘belong’. Some apparent non-chord-tones in Examples 1–4 then become chord-tones. For example, the B \flat on ‘shore’ in Example 1 would be shifted to the right by one eighth-note; it then becomes a chord-tone of G minor. However, other unresolved non-chord-tones discussed here cannot plausibly be ‘explained away’ as syncopations.
Another issue concerns repeated notes: If a non-chord-tone is followed by a repetition of itself, should that be considered a failure of resolution? Probably, this should be considered a *deferral* of the resolution; resolution may then occur if the line eventually moves by step to another pitch (this issue will arise in some later examples).
5. With regard to the accompaniments in Examples 1–4, the situation is varied and not always clear-cut. Example 2 is clearly diatonic, and Example 4 is pentatonic; Examples 1 and 3 could be described as diatonic, but neither one uses a complete diatonic scale.
6. A more nuanced Lerdahl analysis would perhaps include a ‘weak’ tonic-triad level in the melodic framework, indicating that the melodies still reflect some awareness of this level but are not totally constrained by it.
7. Everett’s own comments seem to reflect some ambivalence about this issue. As quoted above, he argues that unresolved embellishments are not ‘stable’, yet states that they create ‘no expectation or desire for resolution’. But one might argue that instability *is* the creation of a desire for resolution.
8. In this example, one could possibly argue that the A’s resolve by step to G’s, but in some of van der Merwe’s other examples this is clearly not the case; in his Example 98, for example, we have an unresolved B over C major.
9. See Headlam 1997 for a valuable discussion of the various treatments of this song by Muddy Waters and his collaborators and later by Cream. Headlam suggests that the verse of ‘Rollin’ and Tumblin’ begins with a IV chord (D), but in the recording transcribed here, the first chord of each verse is I (A).
10. For other discussions of scalar organisation in rock, see Moore (2001) and Stephenson (2002).
11. A somewhat different understanding of ‘blue note’ is proposed by Wagner (2003), who defines the term to mean flattened degrees – in particular, $\flat 3$ and $\flat 7$ – used in a major-mode context. For example, in the Beatles’ ‘The Word’, $\flat 3$ in the melody clashes with natural-3 in the accompaniment. This, too, could be seen to reflect a kind of divorce between melody and harmony, or at least between melody and accompaniment; in the first phrase of ‘The Word’, both accompaniment and melody are governed by the same root (D), but by major and minor versions of the chord, respectively.

12. One could also regard these progressions as diatonic with altered chords; for example, 'Smoke on the Water' could be seen as Phrygian with an altered IV.
13. Other examples of this 'elaborated dominant-seventh' model are seen in Bill Haley & the Comets' 'Rock around the Clock' and Chuck Berry's 'Rock and Roll Music' (Example 9). This model may reflect an indirect blues influence, given the scalar $\flat 7$, though this particular scalar formation is not characteristic of real blues, which normally reflects a minor pentatonic scale. Notice the trace of the minor pentatonic in mm. 11–12 of 'A Hard Day's Night', however.

References

- Borneman, E. 1960. 'The roots of jazz'. In *Jazz*, ed. N. Hentoff and A. McCarthy (New York, Grove Press), pp. 1–20
- Covach, J., and Boone, G.M. (eds.) 1997. *Understanding Rock: Essays in Musical Analysis* (Oxford, Oxford University Press)
- Everett, W. (ed.) 2000. *Expression in Pop-Rock Music: A Collection of Critical and Analytical Essays* (New York, Garland Publishing, Inc.)
- Everett, W. 2000. 'Confessions from Blueberry Hell, or, pitch can be a sticky substance', in *Expression in Pop-Rock Music: A Collection of Critical and Analytical Essays*, ed. W. Everett (New York, Garland Publishing, Inc.), pp. 269–435
2001. *The Beatles as Musicians: The Quarrymen through Rubber Soul* (Oxford, Oxford University Press)
2004. 'A royal scam: the abstruse and ironic bop-rock harmony of Steely Dan', *Music Theory Spectrum*, 26, pp. 201–35
- Hawkins, S. 1996. 'Perspectives in popular musicology: music, Lennox and meaning in 1990s pop', *Popular Music*, 15, pp. 17–36
- Holm-Hudson, K. (ed.) 2002. *Progressive Rock Reconsidered* (New York, Routledge)
- Lerdahl, F. 2001. *Tonal Pitch Space* (Oxford, Oxford University Press)
- McClary, S. 1987. 'The blasphemy of talking politics during Bach Year', in *Music and Society: The Politics of Composition, Performance, and Reception*, ed. R. Leppert and S. McClary (Cambridge, Cambridge University Press), pp. 13–62
- Middleton, R. 1972. *Pop Music and the Blues: A Study of the Relationship and its Significance* (London, Victor Gollancz Ltd)
- Moore, A. 1995. 'The so-called "flattened seventh" in rock music', *Popular Music*, 14, pp. 185–201
2001. *Rock: The Primary Text* (Aldershot, Ashgate)
- Stephenson, K. 2002. *What to Listen for in Rock* (New Haven, Yale University Press)
- Temperley, D. 2001. *The Cognition of Basic Musical Structures* (Cambridge, MA, MIT Press)
2004. 'Bayesian models of musical structure and cognition', *Musicae Scientiae*, 8, pp. 175–205
- Titon, J. 1994. *Early Downhome Blues: A Musical and Cultural Analysis* (Chapel Hill, University of North Carolina Press)
- van der Merwe, P. 1989. *Origins of the Popular Style: The Antecedents of Twentieth-Century Popular Music* (Oxford, Clarendon Press)
- Wagner, N. "'Domestication'" of blue notes in the Beatles' songs', *Music Theory Spectrum*, 25, pp. 353–65
- Walser, R. 1992. 'Eruptions: heavy metal appropriations of classical virtuosity', *Popular Music*, 11, pp. 263–308
1993. *Running with the Devil: Power, Gender, and Madness in Heavy Metal Music* (Hanover, NH, University Press of New England)
- Weisethaunet, H. 2001. 'Is there such a thing as the "blue note"?'', *Popular Music*, 20, pp. 99–116
- Whiteley, S. 1990. 'Progressive rock and psychedelic coding in the work of Jimi Hendrix', *Popular Music*, 9, pp. 37–60
- Winkler, P. 1978. 'Toward a theory of popular harmony', *In Theory Only*, 4/2, pp. 3–26

Discography

- Bachman-Turner Overdrive, 'Taking Care of Business', *Bachman-Turner Overdrive II*. Mercury Universal 822504. 1973
- Beatles, 'A Hard Day's Night', *A Hard Day's Night*. Capitol 46437. 1964
- 'Drive My Car', *Rubber Soul*. Capitol 46440. 1965
- Chuck Berry, 'Rock and Roll Music', *The Great Twenty-Eight*. MCA 92500. 1982 (original single: Chess 1671, 1957)
- Crosby, Stills, Nash, & Young, 'Woodstock', *Deja Vu*. Atlantic 7200. 1970
- Deep Purple, 'Smoke on the Water', *Machine Head*. Warner 2607. 1972
- Elton John, 'Saturday Night's Alright for Fighting', *Goodbye Yellow Brick Road*. Island 28159. 1973
- Oasis, 'D'You Know What I Mean?', *Be Here Now*. Sony 68530. 1997
- Tom Petty & the Heartbreakers, 'Refugee', *Damn the Torpedoes*. MCA 31161. 1979

Rolling Stones, 'Jumpin' Jack Flash', *Through the Past, Darkly (Big Hits Vol. 2)*. Abco 8003. 1968 (original single: London 908, 1968)

Percy Sledge, 'When a Man Loves a Woman', *The Best of Percy Sledge*. Rhino 70285. 1992 (original single: Atlantic 2326, 1966)

Steve Miller Band, 'Rock'n'Me', *Fly Like an Eagle*. Capitol 46475. 1976

U2, 'Sunday Bloody Sunday', *War*. Island 811148. 1983

Muddy Waters, 'Rollin' & Tumblin'', *Real Folk Blues*. Decca 9274. 1965

The Who, 'Baba O'Reilly', *Who's Next*. Decca 79182. 1971

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.