UNDERSTANDING RHYTHM
By Terry Dwyer

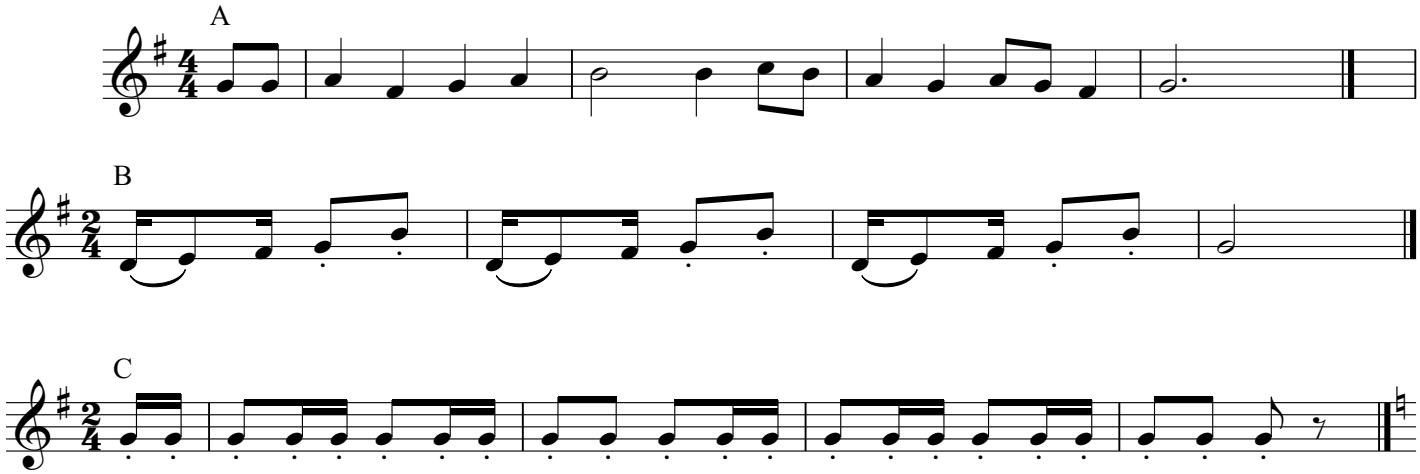
PART 2 ACCENT AND METRE

The importance of rhythm

I will define rhythm as pattern(s) in time, comprising events of differing lengths and accents. (Incidentally, since the word is often misspelt, I will offer a simple way to remember its spelling: it consists of two halves of three letters each, with an H in the middle of each half thus: rHy/tHm.)

Rhythm is more important than pitch in giving individuality to a theme.

The following well-known themes have been disguised by altering their pitch or rhythm. Identify them by mentally or actually performing them (answers at end of article):



Metre is the underlying framework which comprises regular beats, themselves organised into a self-repeating mini-hierarchy where one or more beats are more stressed than the others. To put that in plain English, metre is a repeating flow of bars (measures) each of which starts with an accent and which may contain one or more secondary accents later in the bar. Examples: ONE-two-three, ONE-two-three; or perhaps ONE-two-Three-four, ONE-two-Three-four. Or even ONE-two-three-Four-five-six, etc. Bear in mind that none of these patterns will reveal themselves in sound just by the mere appearance of a couple of numbers at the beginning of the printed music. They must be created by the sounds.

How accents are created

This is where the study of rhythm starts to get complex and interesting! Accents can be created in a number of ways, of which I give the chief six:

1) Dynamic
2) Agogic
3) Melodic
4) Motivic
5) Harmonic
6) Metric

All will be explained! Let's take them one at a time:

1) Dynamic accents. This simply means that you play some notes louder. So if confronted by a row of equal beats:

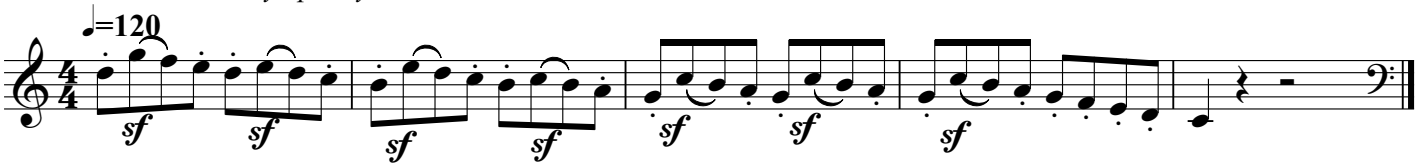
we can accent at regular intervals to create a metre, e.g:

or

Teachers will sometimes tell their pupils that a barline means "play the first beat louder than the rest". Well, that is certainly possible, but rather crude. If the music is well composed it will not be necessary to resort to brute force to create the required accents. (Incidentally the visual appearance of a barline is most misleading, suggesting as it does a series of constant breaks in the music, whereas the music should of course normally flow through the barline without a break.)

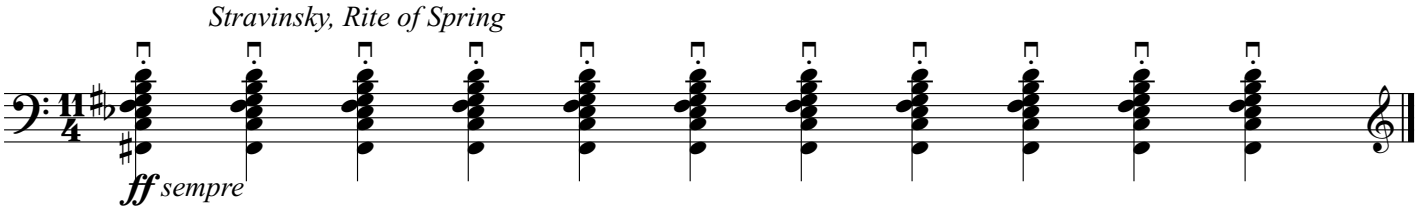
Of course it is in order to mark dynamic accents on some notes in our music, if we really want them to stand out. Beethoven frequently marks *sf* on notes that would be otherwise weak:

Beethoven, Symphony 5



Remember, though, that if you accent all the notes, none is accented and no definite metre emerges.

Stravinsky, Rite of Spring



I suppose the first note is accented as it begins the group, but after that? Your mind will group in twos or threes, perhaps? Who knows? By the end of the bar you'll have lost count.

2) Agogic accents. These are accents which accrue to notes by virtue of length. If a note is longer than its neighbours it will sound more important, i.e. accented. There are two ways in which this works:

First, by notated length:

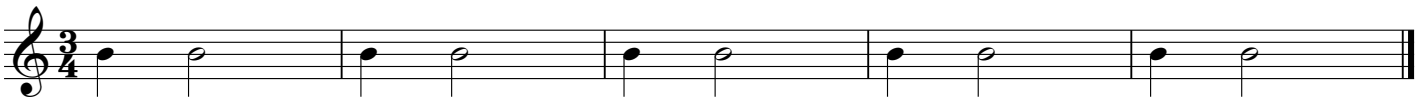
In the simple sequence

the minim is clearly more accented than the crotchets.

If a note sequence in 3:4 time goes like this:

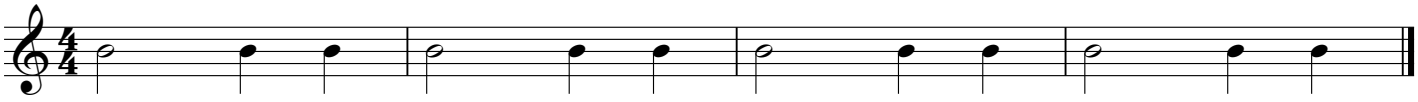
then the metre is confirmed.

But if it goes like this:

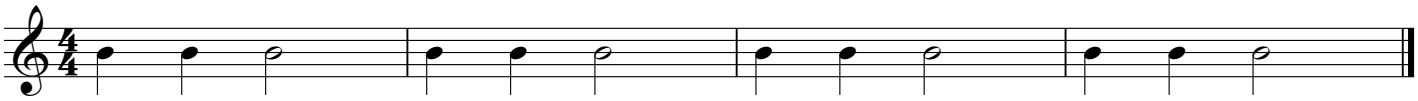


then the metre is contradicted and the result is either a series of syncopations or a reshuffle of the (aural) barlines. Which it is will depend on other factors.

Likewise

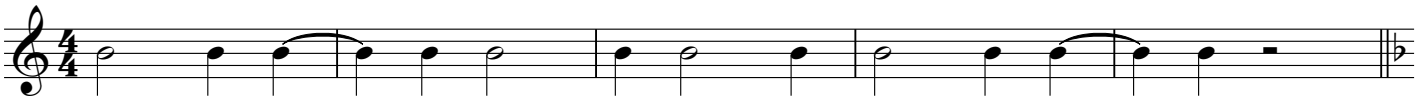


confirms the position of the barlines, whilst



throws doubt on it.

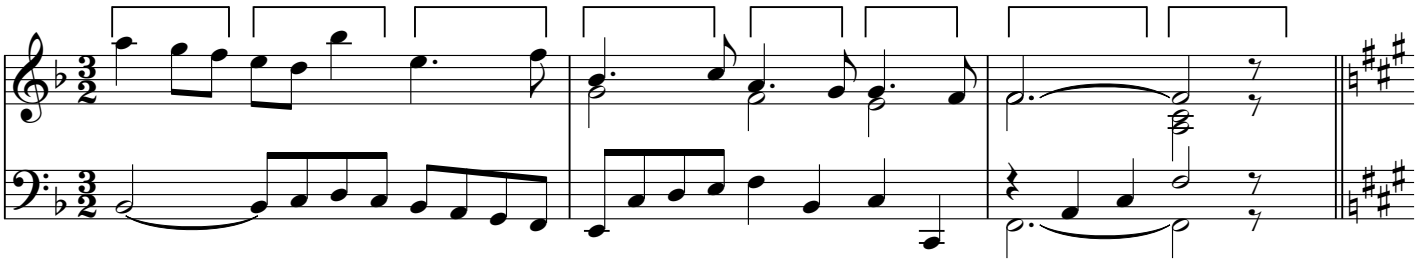
If the following occurs within a time signature of 4:4, then we may conclude that the effect is really 3:4 :-



So: to establish or confirm a metre, put the long notes on the metric accent positions; to contradict or weaken a metre, put them on weak beats. This latter method is often done to give spice to the music and effect a pleasing cross-rhythm. When carried out in triple time so as to give the effect of beats twice the length, the result is called a *hemiola*. This was very common in Baroque music and the reverse form of it was a required feature of the French Courante. This dance was in 3:2 time except that the final bar of each section flipped into 6:4 time, *not* through a new time signature but by the internal organisation of the music:

Bach, English Suite No. 1, Courante ending

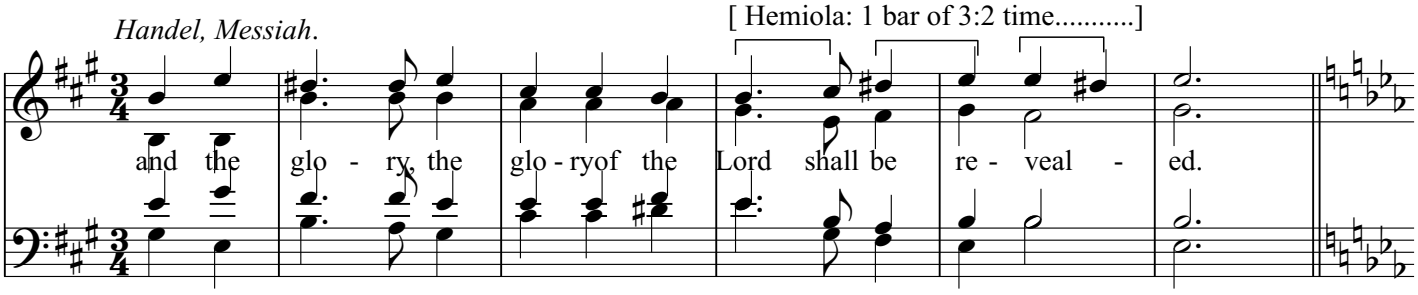
(Clearly 6:4)



And here, the apparently bad accentutation on "re-" disappears when you perceive the hemiola, which is actually created by the behaviour of the bass and harmony:

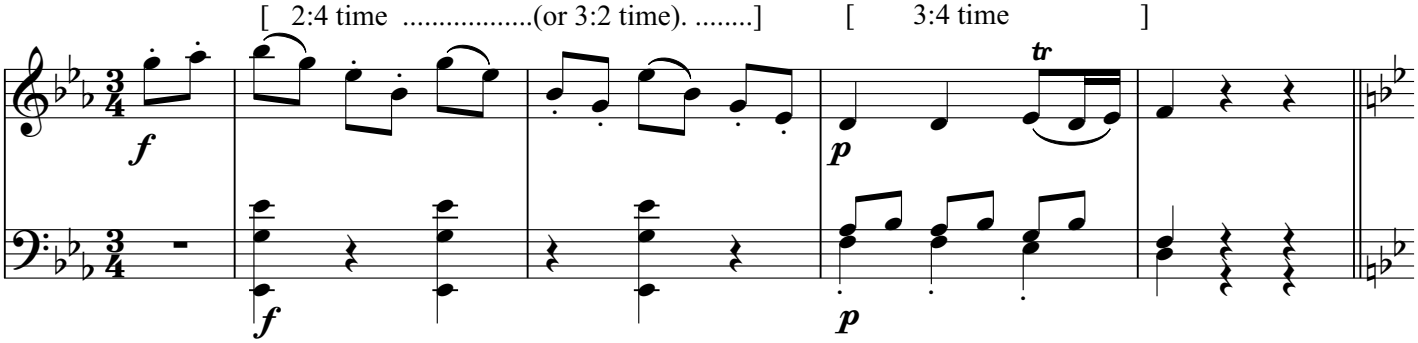
Handel, Messiah.

[Hemiola: 1 bar of 3:2 time.....]

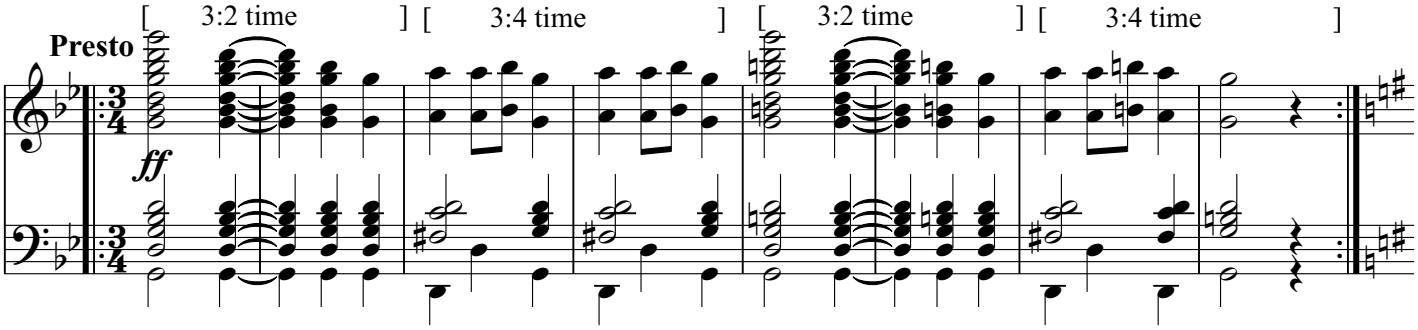


Composers are sometimes a little teasing in that they actually start a piece with displaced accents, only revealing the true metre a little later:

Mozart, Divertimento for string trio, 3rd Movement

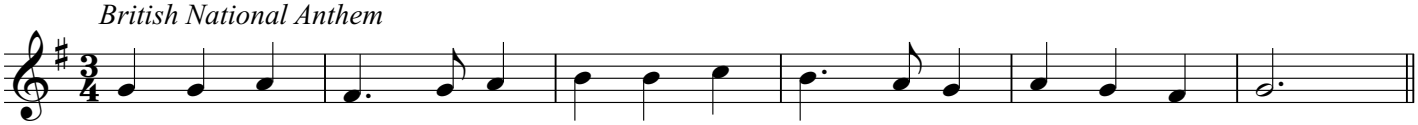


Dvorak, Slavonic Dance No. 8



It should also be noticed that a repeated note has almost the same effect as if the notes had been tied, in that the result is a staying on one pitch for a longer time, and thus producing an accent on the first of these notes:

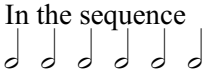
British National Anthem



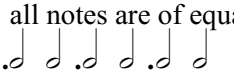
In the above, the effect of the repeated note or dotted note beginning each bar is to establish the barlines. The comparatively negative rhythm in bar 5 weakens it a little and throws the emphasis forward on to the final bar (which needs very little help, being a long note.)

Second, by the use of rests or staccato marks

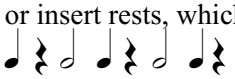
In the sequence



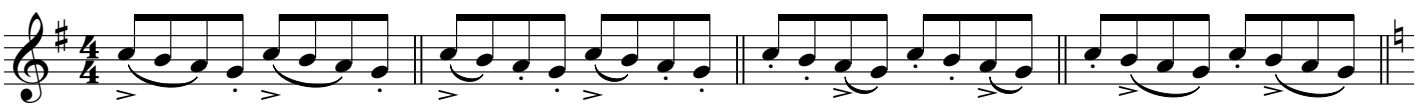
all notes are of equal accent. But mark some staccato:



or insert rests, which is virtually the same thing,

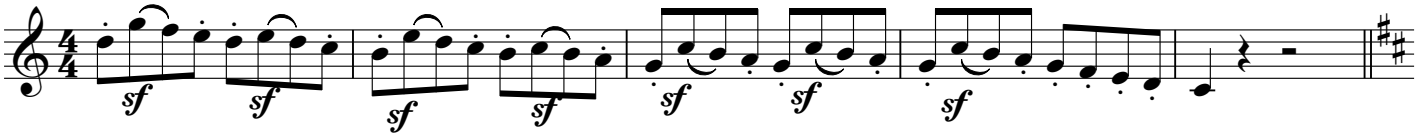


then the longer-sounding notes will stand out. This effect is much used by organists: they cannot stress a note by hitting the key harder, so to accent a note they make the previous note staccato. *N.B. making a note staccato does not emphasise it as some might suppose, it <u>weakens</u> it, on the grounds of a simple rule: the longer a note is, the more accented it sounds.* A row of staccato notes is interesting: does the first staccato note emphasise the next note? Not if that note is also staccato, the accent is passed forward until we get a held note. All this has a big impact on our use of articulation in our music. How do we effectively add slurs and staccato to say, woodwind? If staccato weakens a note, it follows that a slur strengthens all the notes under it except, possibly, the last. Let's look at some possible slurring patterns (the accents I have added will suggest themselves, whether marked or not)



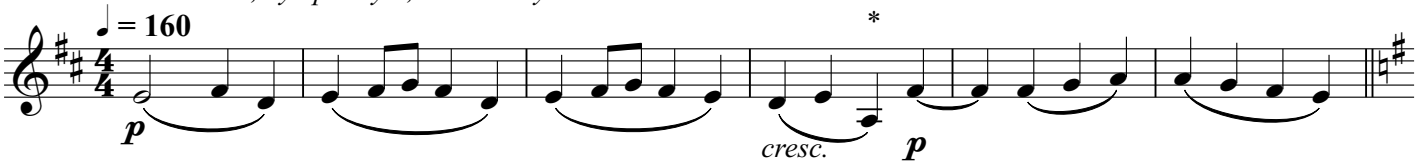
In the previously quoted extract from Beethoven it is apparent that even without *sf* marks there would be some accentuation on the second note of each group, owing to the slurs, which make a note heavier, and the staccatos, which lighten the notes.. (Not to mention the melodic height of these notes. Read on...)

Beethoven, Symphony 5



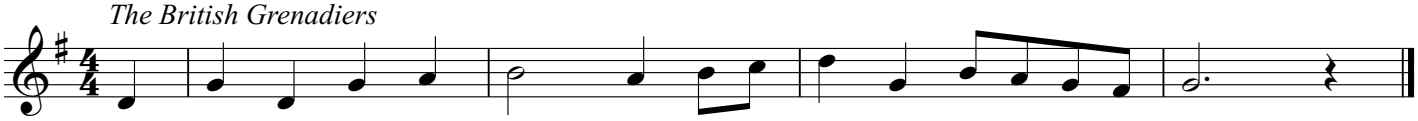
3) Melodic accents. These happen when a note is significantly higher (or lower) in pitch than its neighbours. Of course pitch is moving about all the time and we mustn't attach too much importance to a pitch change: much depends on the context. In the old Gregorian modal chanting the singers (in the psalms anyway) would be singing many syllables to the same note. Then suddenly a different note. Even if this were a step up or down it would draw attention to itself; if it dropped a fifth it would have a relatively cataclysmic effect! So in our music a leap larger then the surrounding intervals will attract attention and therefore some sort of stress. High notes are more accented than low, nevertheless a low note in the right place can have a surprisingly powerful effect of accent:

Beethoven, Symphony 9, Ode to Joy



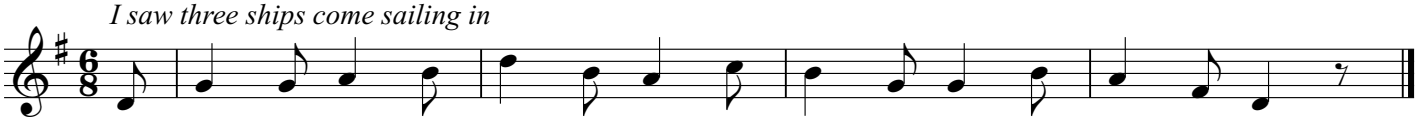
The commonest melodic beginning to a tune, whether a folk melody or a classical theme, is an anacrusic leap up from dominant to tonic:

The British Grenadiers



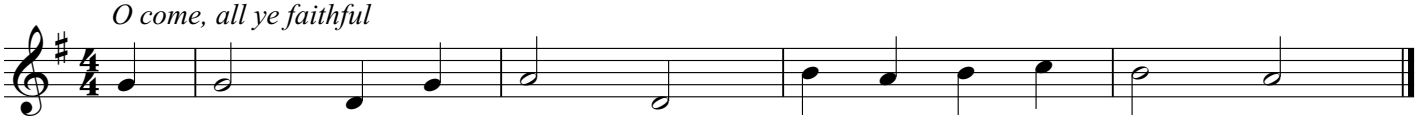
This establishes the barline firmly, especially if the second note is longer than the first:

I saw three ships come sailing in



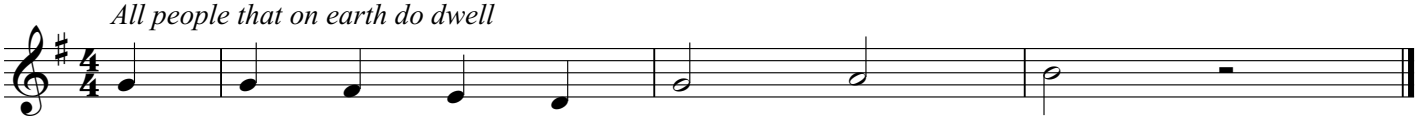
If there is no leap, but a repeated note weak to strong, then the second note had better be longer in order to create the desired accent:

O come, all ye faithful



otherwise there is no feeling of anacrusis:

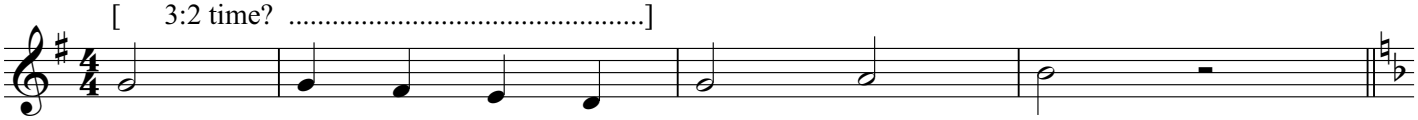
All people that on earth do dwell



This is made even worse when sung in this form:

All people that on earth do dwell

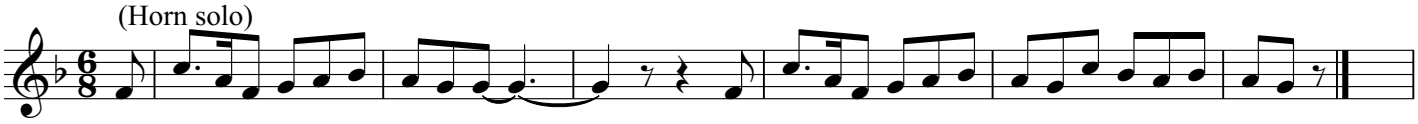
[3:2 time? .....]



If the tune leaps up from strong to weak, the wrong impression may be created. For years I thought *Siegried's Journey* contained the following:

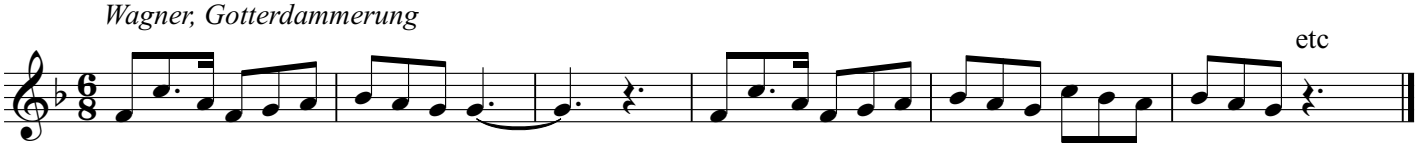
Wagner, Gotterdammerung (??)

(Horn solo)



It was only when I saw the score that I realised what Wagner meant.
Whose fault was it?

Wagner, Gotterdammerung

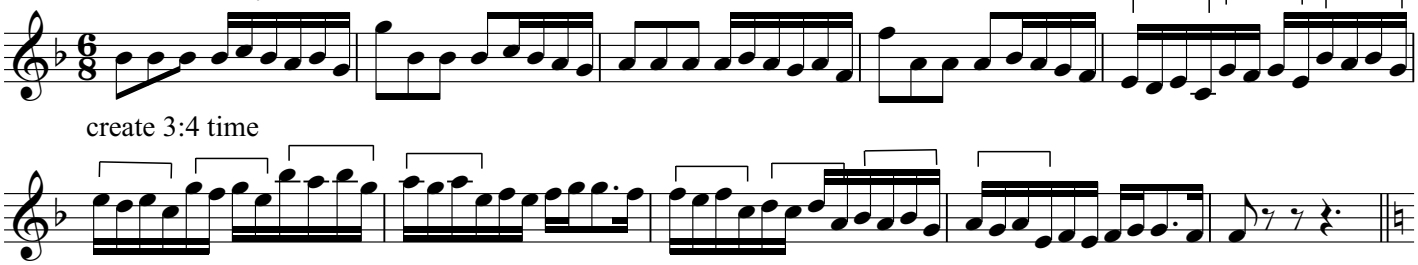


4) Motivic accents. When a melody repeats a motive, either at pitch or in a sequence, the first note of each repetition tends to set up an accent matching the original. This may produce cross-accents.

Bach, Brandenburg Concerto No. 1

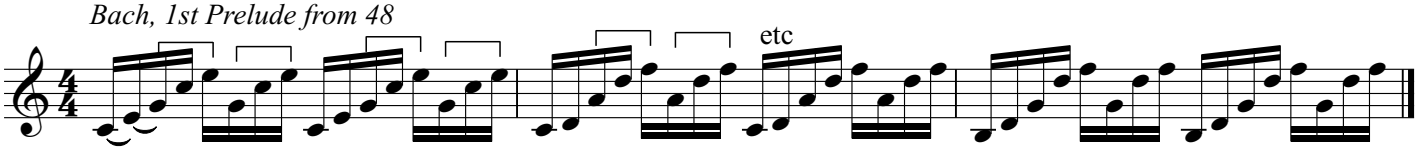
Undoubtedly 6:8 time here

The motivic repetitions



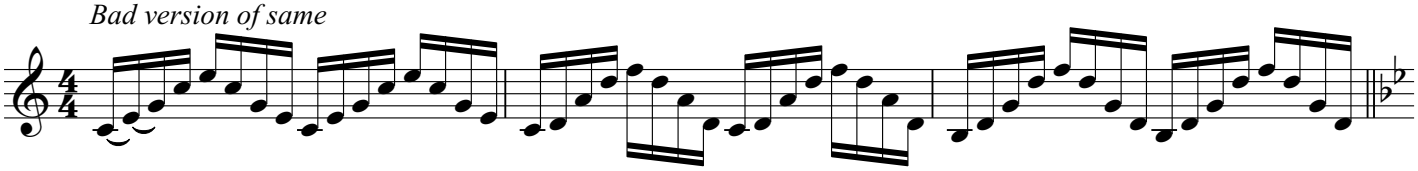
Even a simple pattern may produce mild cross-accents:

Bach, 1st Prelude from 48



This makes the incessant repetition of the same figuration more tolerable than a figure such as:

Bad version of same



5) Harmonic accents. Accents created by the chord structure.
If there is one new chord to each beat, as in many hymns or chorales, then the harmony plays no part in the metric structure (unless one is a discord, which will tend to being more prominent). However, if a chord be repeated, even if in a different inversion, then this corresponds to a long note, just as repeating a melodic note has much the same effect as if the notes had been tied. So

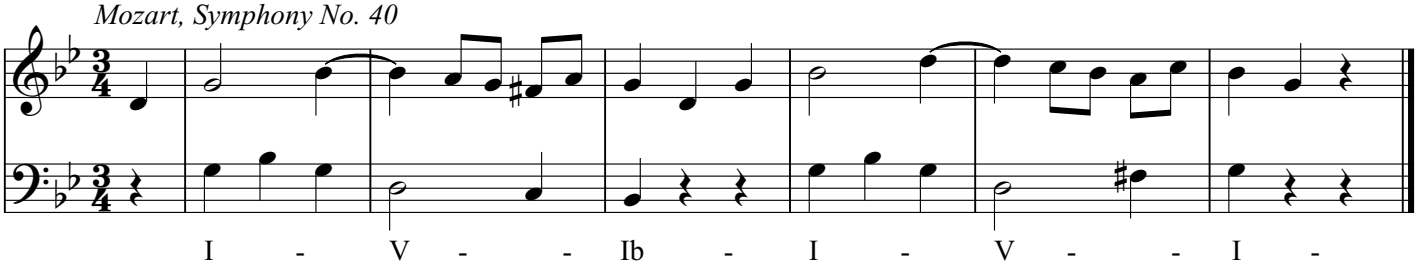
(I IV V Vb I)

throws an accent on to the third chord, regardless of where it stands in the bar. For this reason a harmony student is taught not to repeat the same chord-root weak to strong, or even the same bass note weak to strong (with exceptions) because this drags the barline backwards one beat.

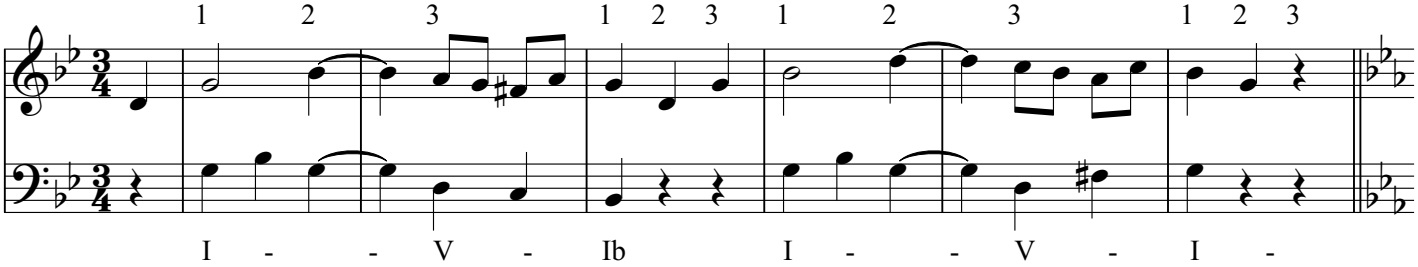
Another piece of good advice is not to change the chord more quickly than the beat, this sounds hurried and confusing. Accordingly, in much Baroque and Classical music anyway, a basic chord will be repeated or maintained for many beats, sometimes for many bars at a time. When the harmony does change, it can be on any beat, but what must not happen is that a new harmony starts on a weak beat and is maintained thereafter: that throws an accent on the weak beat. (Unless of course the composer wants the syncopated result.)

It follows that the system of harmonic change adopted by the composer has a profound effect on the metrical construction of the piece, far more perhaps than any other method other than the agogic. What if Mozart had written his G minor Minuet, not as he did:

Mozart, Symphony No. 40



but with a different bass, implying a harmonic change at a different point:

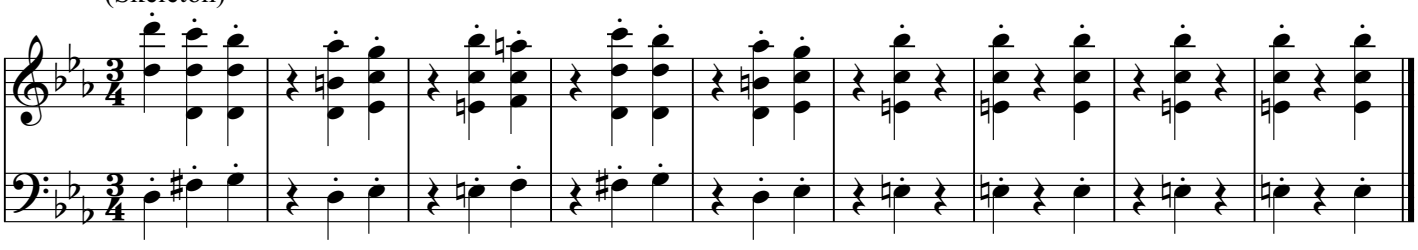


Then we would have, not the syncopated cross-rhythm in 3:4 time that he actually wanted, but an opening in 3:2 time, alternating with 3:4 time. The harmonic movement joins with the agogic in this case, but even without the tied notes in the melody, the harmony would have established 3:2 time.

6) Metric accents. Notice that this comes last in my consideraion. By placing a note on the first beat of the bar, we can let it have an accent. *Yes, but only if the metre has been previously established by other means, and only then if, (lacking other clues) the listener has to rely on his ability to continue counting the beats and bars.*

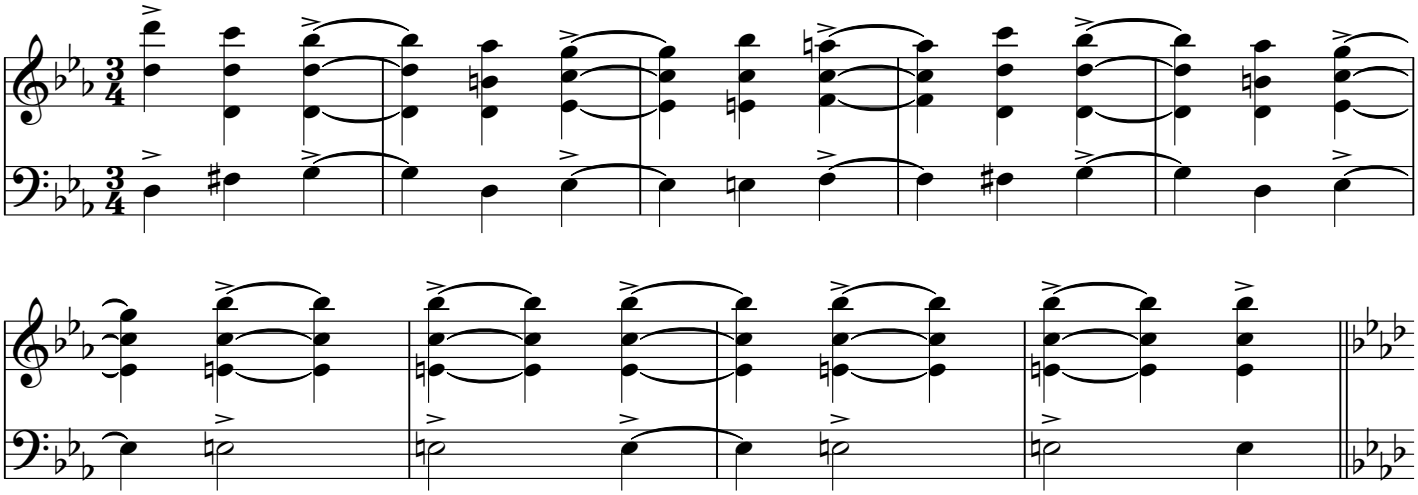
Try your luck with this passage from Beethoven's Eroica Symphony:

(Skeleton)



When nothing happens on the first beat of the bar, it is difficult to suppose an accent there, in fact the listener will mentally prolong the previous sound thus:

(Mental impression)



What use are the metric "accents" now?

Of course a similar effect accrues when a note or chord is *actually* tied over the barline. See the previous Dvorak example. So the effect of a rest is usually as if it didn't exist.

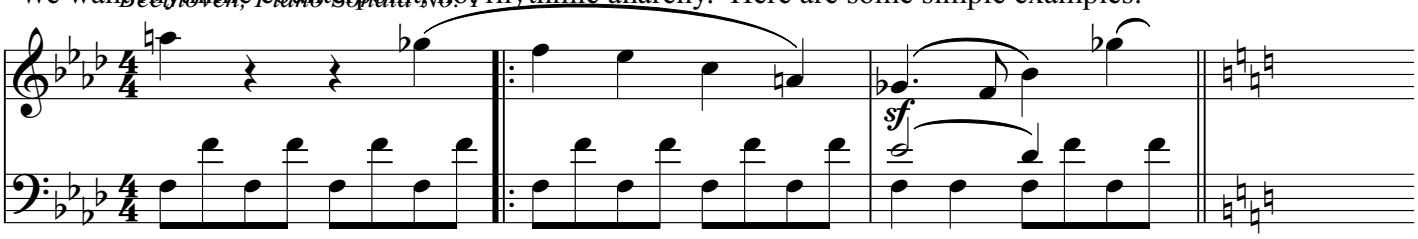
And by now you see how weak the metric accent is. A barline has no real rhythmic effect of its own accord, it relies on other factors.

Recapitulation
So what are these other factors, again? How do we get an accent on a note? Let's list the ways:

1) Play it louder (dynamic accent)
2) Make the note longer than its neighbours (agogic accent)
3) Make the previous note staccato (agogic accent)
4) Make it significantly higher or lower than its neighbours (melodic accent)
5) Start a repeating melodic outline (motivic accent)
6) Start or prolong a new harmony (harmonic accent)
7) Place it in a favourable position in a metre previously established by other means (metrical accent)

Methods in combination
When considering any of the accenting methods expounded above, by itself, we need to include the caveat "other things being equal". What if they are not? What if the metrical accent says the first note is accented, the agogic accent favours the second half of the second beat, and the harmonic favours the third beat? On top of that a melodic leap suggests that the fourth beat is the most important (*and* it is tied to the next bar)? Actually there is nothing unusual about such a situation, and part of the great power of music to move us is down to the mental reactions we have to such conflicts. Rhythmic conflicts are just as essential to good music as are dissonances in the harmony.
Purely stepwise melody, constant concords, and notes falling on the regular beats are all adding up to a bland, uninteresting result. Music spiced with syncopations and cross-rhythms (however subtle), not to mention dissonant harmonies, is invariably more stimulating. But as in harmony, we must take care not to take rhythmic distortions too far, or all sense of meaningful time-patterns may disappear.
We want rhythmic counterpoint, not rhythmic anarchy. Here are some simple examples:

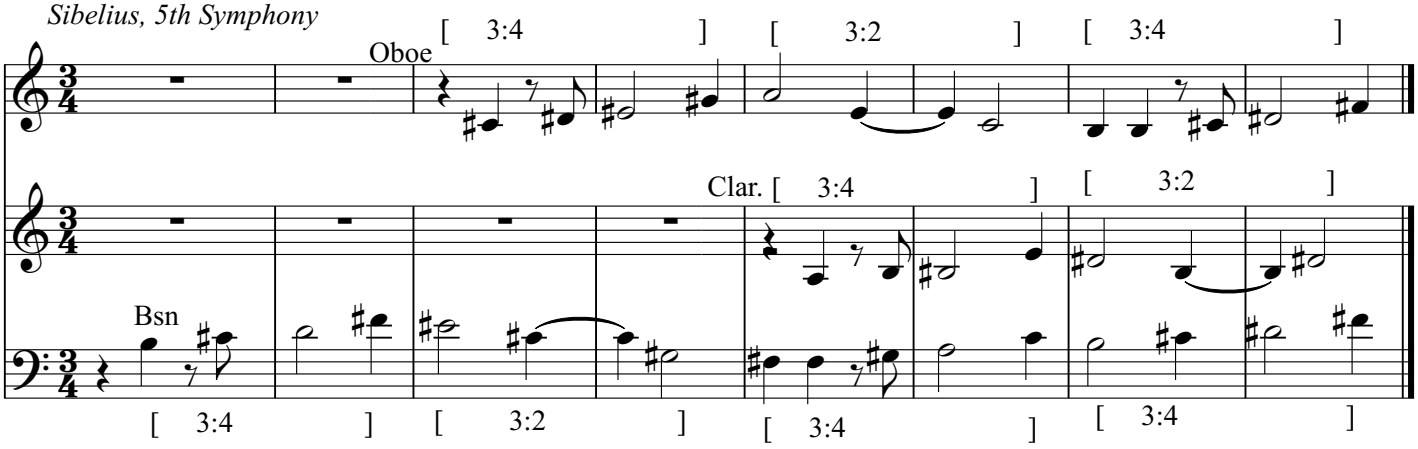
Beethoven, Piano Sonata No. 1



In the above, the harmonic discord and *sf* mark reinforcing beat 1 are obvious, but note also the leap up to Gb, the fact that it is the highest note of the passage and also it starts a slur: this all accents beat 4.

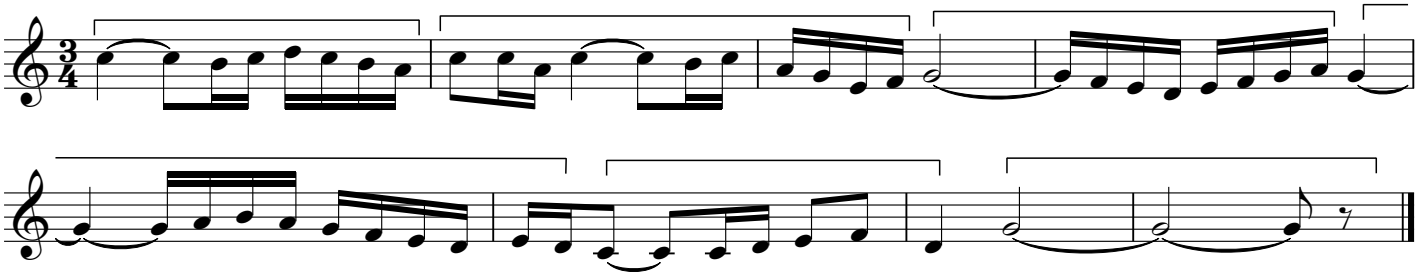
In the next example, the cross-rhythms speak for themselves:

Sibelius, 5th Symphony

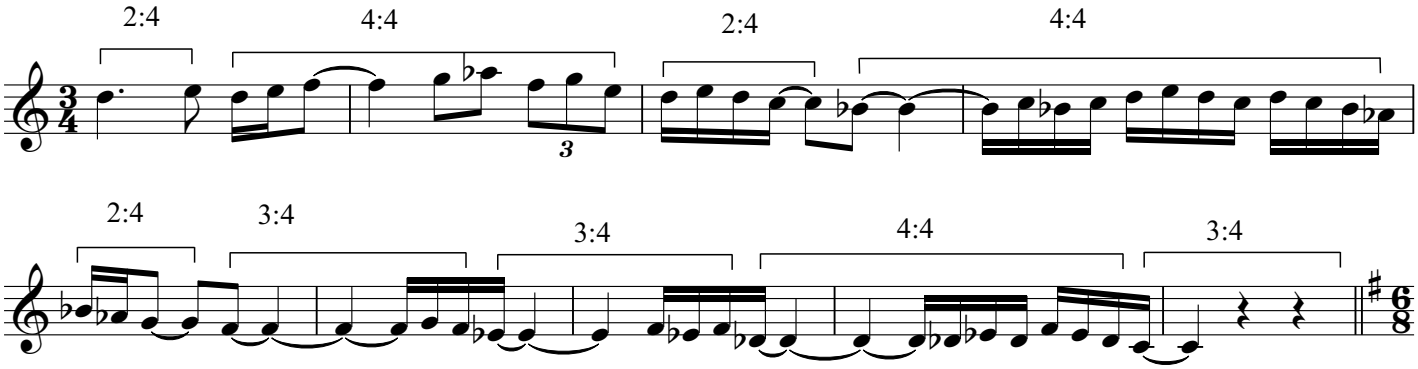


In this well-known tune, the constant relocating of the barline makes for a far more sophisticated rhythmic scheme than is usually realised. Plot the real time signatures for yourselves: and remember that these changes take place against an unremitting 3:4 accompaniment.

Ravel, Bolero



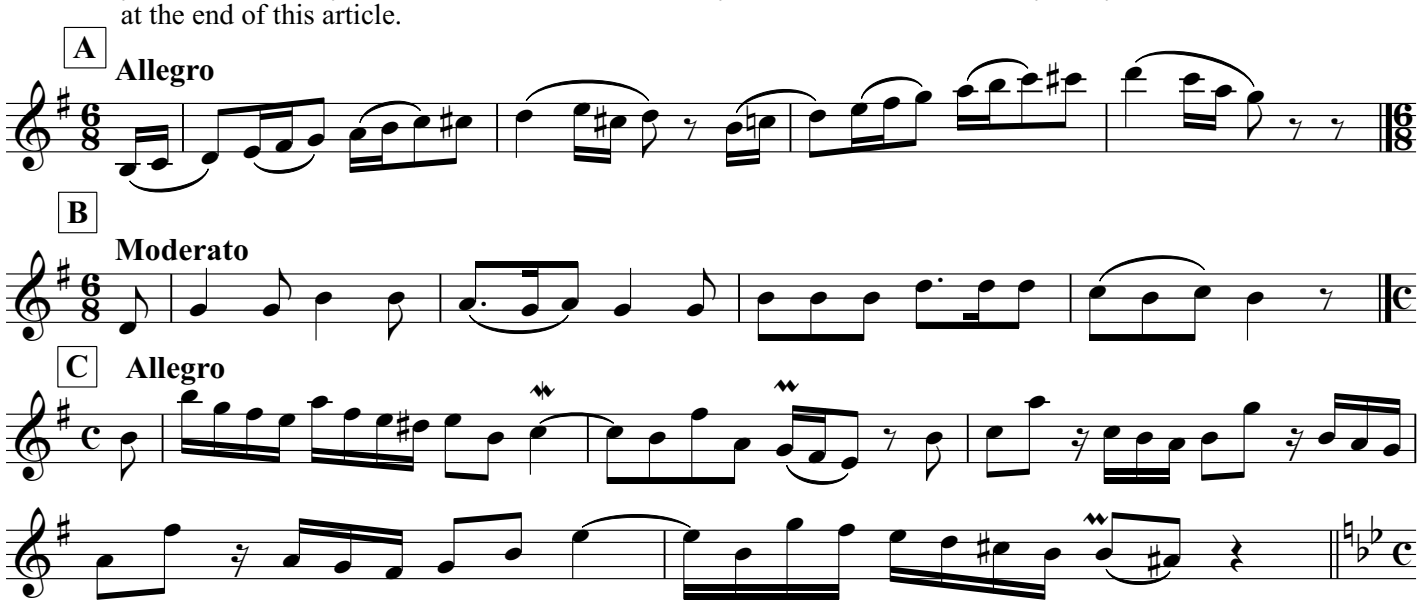
And so on. The latter part of the second tune is even more interesting. Although each bracket represents a time signature, the latest ones anticipate the barline by a semiquaver, just like a jazz player.



So for me, the enduring appeal of this piece lies not solely in the orchestration as is usually stated, but in the rhythmically fascinating power of the two melodies, not to mention the harmonic daring (against a C major accompaniment, remember) in the last bars of the second theme. One listens right through the piece not just to wonder what instrument will come next, but to follow the theme's sinuous progress, each time hoping to learn it by heart (I never have).

A test

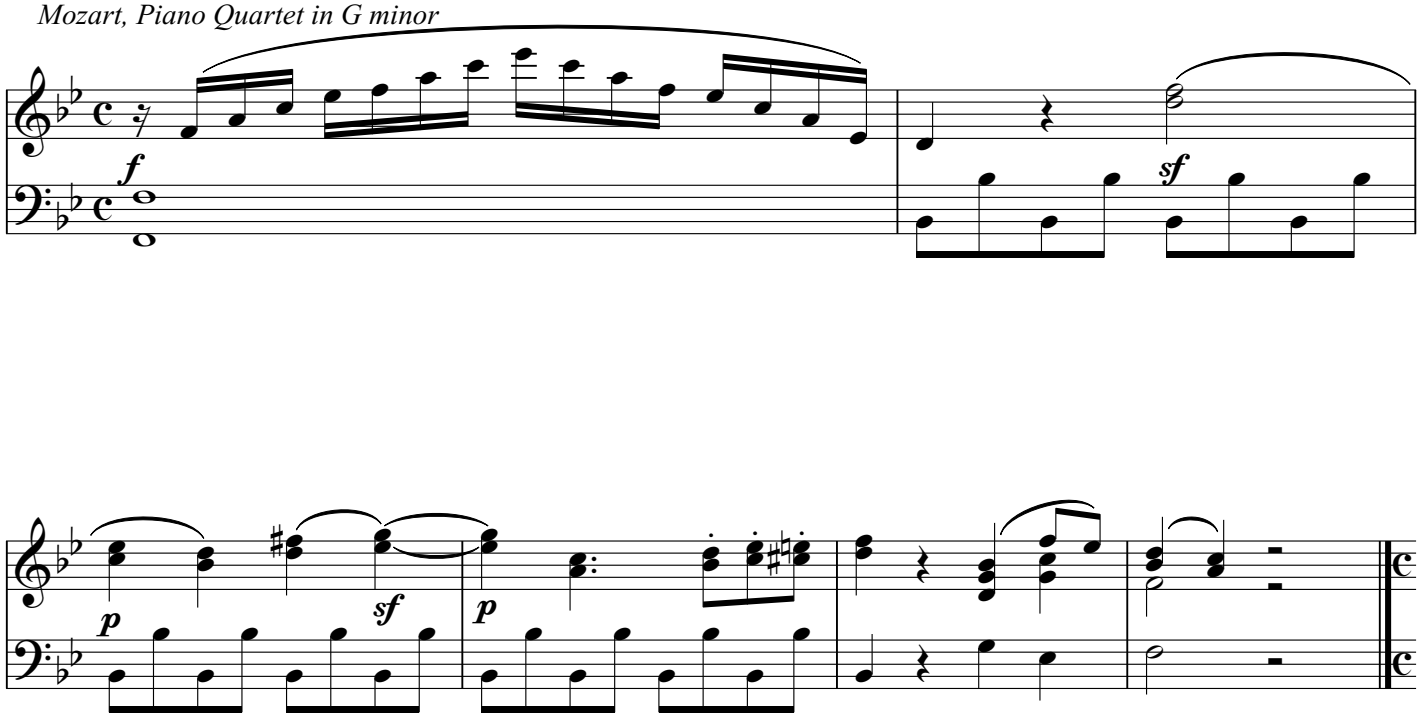
Study and play the following three melodies. Decide your order of preference: this may throw some light on your attitude to rhythmic structure in music. When you have decided, check my analysis of these themes at the end of this article.



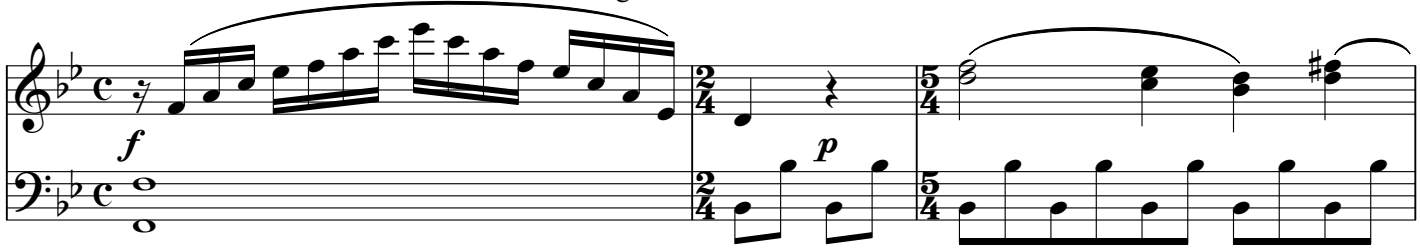
Changes of Time Signature; Wrong Time Signatures

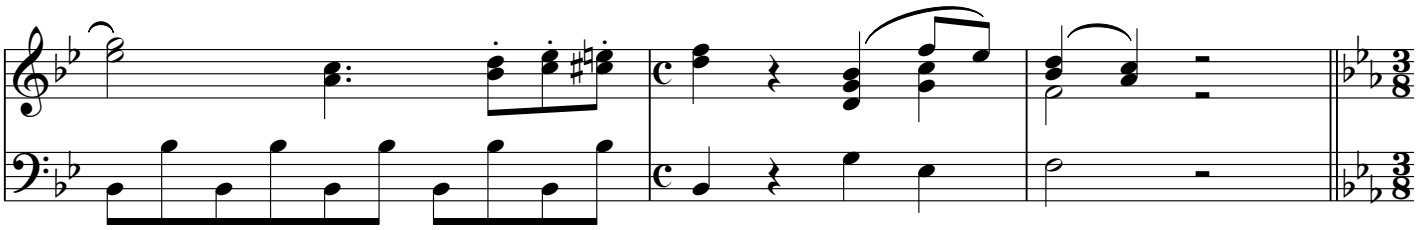
When a composer decides to change the metre in the middle of a piece, he can either put a new time signature on the staves, or he can carry on regardless, relying on the inherent accents of the music to effect the change.

Mozart, Piano Quartet in G minor



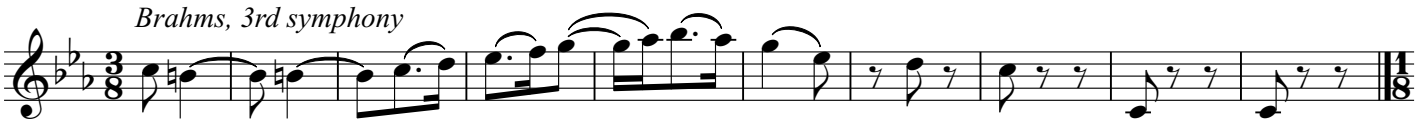
Should he have indicated the real time changes?



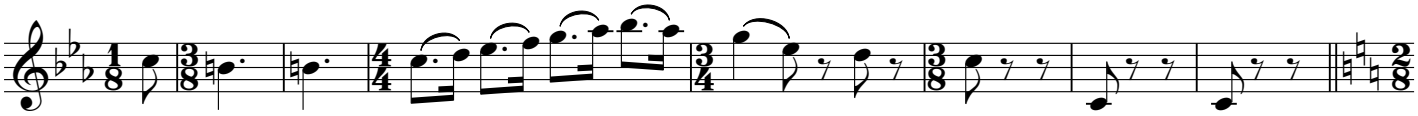


When Brahms ended a movement thus:

Brahms, 3rd symphony

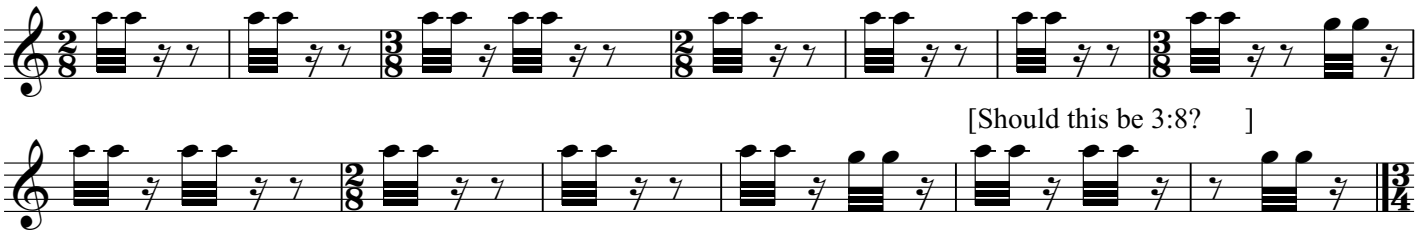


should he have indicated the real time changes, like this?

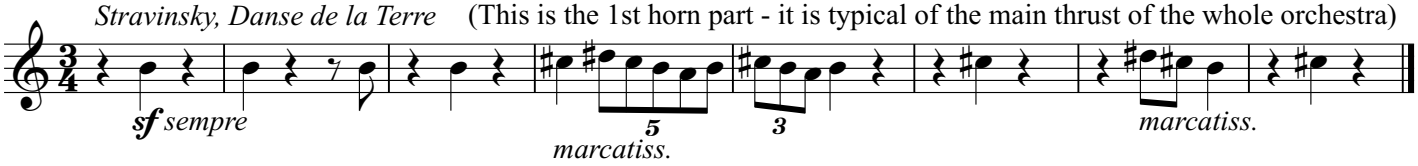


Stravinsky's Rite of Spring is full of such changes: he sometimes inserts new time signatures (with disturbing frequency) and sometimes doesn't, leaving the music to make its own effect:

Stravinsky, Danse Sacrale



Stravinsky, Danse de la Terre (This is the 1st horn part - it is typical of the main thrust of the whole orchestra)

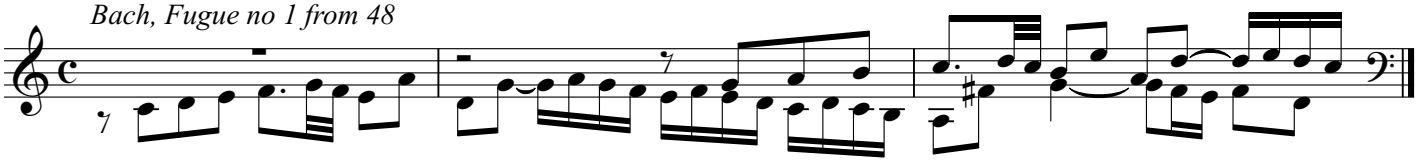


Which method should we adopt in our own music? My answer would be: whichever causes the least trouble to the performer, whether it is "theoretically" correct or not. The listener does not care what the score looks like.

Some wrong time signatures

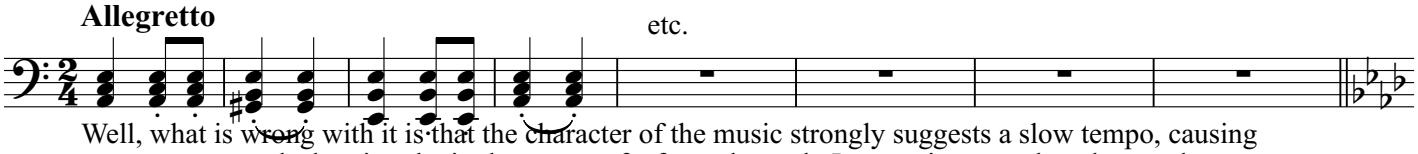
2:4 time is supposed to have one accent in the bar, 4:4 (C) is supposed to have two (medium accent on beat 3). If that is so, can we assume that in the following, Bach wanted the first appearance of his theme to have a mild accent on the fourth note (F) and a stronger one on the ninth note (D), but the other way round when the second voice enters? Not likely. The time signature is wrong, it should be 4:8 and there should be twice as many barlines. This sort of thing (theme sometimes starting on the first beat of 4:4 and sometimes on the third) occurs a great deal in Bach's organ music, and also in his orchestral works. Maybe his reason was to save writing barlines? Or perhaps the fact that on the organ and harpsichord the accents are not forthcoming anyway?

Bach, Fugue no 1 from 48



What is wrong with this time signature?

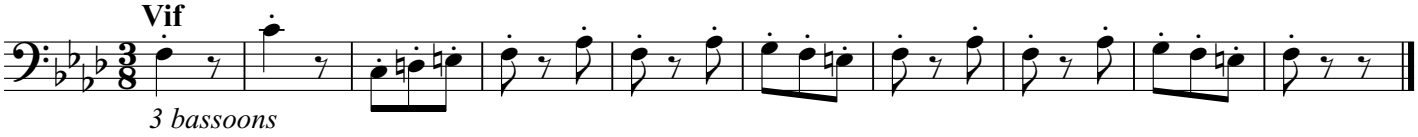
Beethoven, 7th symphony



Well, what is wrong with it is that the character of the music strongly suggests a slow tempo, causing some experts to declare it to be in the nature of a funeral march. I agree: it cannot be taken as the score suggests: 2 beats in a bar, Allegretto (fairly quick). But change the time signature to 4:8 and all becomes clear. Why didn't Beethoven put 4:8 then? I don't know, but I do know that for some obscure reason the earlier composers had a horror of writing such a time signature. For them, the lower figure 8 belonged to the compound times 6:8, 9:8, and 12:8, with the occasional 3:8. But seldom or never 2:8 or 4:8, unless I have missed something. There are other examples in Beethoven's piano sonatas of this preference for a bottom figure 4 when 8 would be truer.

One more and we're done. Does this time signature seem right to you?

Dukas, L'apprenti Sorcier



Surely this is really 9:8? Well, of course it is. The reason Dukas wrote it thus was that he was being paid by the bar!

Answers to disguised tunes at the beginning of this article

1) British National Anthem with changed rhythm
2) Debussy's Golliwogg's Cake Walk with altered pitch
3) Rossini, William Tell Overture, rhythm only.

From all of which we may conclude that rhythm is more important than pitch in creating individuality.

Comments on your preferences between three tunes

A . I immediately feel that this piece starts in 3:4 time, in spite of its appearance. Since the whole thing is virtually a rising scale, we get no clues from the melodic contour . The harmony is not given so we cannot use that. That leaves the agogic grouping of the notes. The repeating pattern is quaver, two semiquavers. The slurs imply that the last note in the slur will be slightly shortened, thus throwing the accent on to the following note and confirming this view. So 3:4 changing back to 6;8, twice over.

B. The 6:8 signature is amply confirmed by: 1) anacrusic beginning, accenting the G, 2) repeated notes in bars 1 and 3 suggest two major beats to the bar, 3) bar 2 is nearly the same (the G decorates the repeated As). So all accents coincide with the metre.

C. The anacrusis and first bar confirm the 4:4 time. But note the following non-metric accents: bar 1.4: the C is accented by its tie and by the ornament; in bar 3 the leaps up to A and G (followed by rests!) produce accents there (also the F in the next bar). In bar 4 the last note stands out by its upward leap and by the tie. Maybe the G in the last bar attracts a bit of attention too. The penultimate note B is accented by its position and by its ornament, but slightly weakened by the anticipatory note before it.

My order of preference

C (organ voluntary by John Stanley) The melody, whilst containing many different motives, achieves a degree of unity by use of sequences, and groups of three descending semiquavers. Rhythmically the metre is adorned with several syncopations, never predictably.
A (from a Beethoven piano sonata) having no great melodic interest, resorts to a rhythmic trick to command attention. Not a gripping theme really, for it relies on the one device; much would depend on what use it could be put to. Rhythmically a bit above the ordinary.
B (A folk melody) has an attractive melody but refuses to do anything but confirm the metre and abide by it. Safe; suitable for dancing. Rhythmically innocuous.

Your preferences should show whether you prefer your rhythms straightforward or challenging in nature. But much will depend on the desired character of the piece - firm, dance-like rhythm or spiky and a bit unpredictable. The main thing is not to get the wrong result by accident.