

Music Theory Issues in Dancing

Version 1.1

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1. Introduction

My other guides occasionally strayed into areas that were only of interest to those who have studied some level of music theory. This was most evident in the 'Guide to Ballroom Dance Tempi'. Feedback from most readers was that these sections were unintelligible and broke the flow of the guides, so I decided to isolate these items in this guide. The items discussed in this document are quite disparate. The only common feature is really that they probably only interest the very small subset of dancers who have a good grounding in music theory.

2. A tirade on 2/4 Tango timing

Tango originated in Buenos Aires and in its early history it often employed music in 2/4 time. Argentine Tango has continued much of the original style. Ballroom Tango hasn't. If you were to see Ballroom Tango and Argentine Tango performed side by side (and you probably won't since they usually use different music), it could be difficult to believe they have a common ancestor. But some of the original history lives on in Ballroom Tango. For example, Ballroom Tango music is in 4/4 timing. However, by tradition – that is, for no sensible reason – dance scripts continue to write tangos in 2/4 timing.

For the remainder of this section, all references to Tango music are referring to music suitable for Ballroom Tango, not Argentine Tango.

For ease of discussion, consider a hypothetical tango song in 4/4 timing played at 32 measures per minute, or 128 beats per minute. Normally, if you count dance steps in quicks and slows, a quick is 1 beat and a slow is 2 beats.

Tangos usually have 4 clear beats per bar. In some, only beat 1 is accented. 4/4 is the obvious choice of timing. In some, beat 1 is strong, beat 3 is intermediate, and beats 2 and 4 are weak. Again, 4/4 is the obvious choice of timing.

If you were told that tango dance scripts are in 2/4 timing you might guess that they have treated beat 3 as the start of a new bar, so they've split each 4/4 bar into two 2/4 bars. So for the song mentioned above, you might guess its tempo would be 64 measures per minute, or still 128 beats per minute. A quick is still 1 beat and a slow is still 2 beats. That's what most sensible musicians would guess, and they'd be wrong. Sensible, but wrong.

What dance scripts do is ignore the 2nd and 4th beat and count only the 1st and 3rd beat of the 4/4 tango. Hence 1 bar of 4/4 tango music becomes 1 bar of 2/4 tango in a dance script. Thus the hypothetical tango mentioned above would be written in 2/4 timing, still at 32 measures per minute, but only 64 beats per minute. A quick is thus only ½ a beat and a slow is one beat.

Some theory books step gingerly around this issue by saying things like 'tango music is usually in 4/4 timing', perhaps trying to imply that it is sometimes in 2/4 timing. Personally, I have yet to hear a tango that wasn't clearly in 4/4 timing, so I take the view that the sooner this 2/4 tango scripting nonsense dies out the better.

3. Don't mention compound time!

If you are a musician playing a waltz, you need to know whether the time signature is $\frac{3}{4}$ or $\frac{6}{8}$, since this affects how you accent the music. However, it wouldn't affect how you dance to the music.

For this reason, most dancers don't hear compound time signatures. The dancers are not wrong. Rather, they are simply filtering out information that isn't relevant to the task of dancing. If a waltz is in $\frac{6}{8}$, dancers hear each $\frac{6}{8}$ bar as being two $\frac{3}{4}$ bars. Most dance theory books don't acknowledge the existence of compound time signatures such as $\frac{6}{8}$, so even some dance teachers will be confused if you mention a compound time signature.

Hence, when talking with dancers, it's usually simplest to pretend compound time signatures don't exist and to "translate" back to whatever simple time signature is appropriate.

This can be interesting for $\frac{12}{8}$ music since it can go two ways.

- If it's slow enough to use the triplets as waltz steps, then pretend each bar of $\frac{12}{8}$ is 4 bars of $\frac{3}{4}$ music. For example, if a piece is at 15 bars per minute in $\frac{12}{8}$ time, a dancer will hear it as 60 bars per minute in $\frac{3}{4}$ time, which makes it suitable for Viennese Waltz.
- For anything faster than this, the triplets aren't useful for dancing. Then dancers will ignore the triplets and hear each bar of $\frac{12}{8}$ as 1 bar or $\frac{4}{4}$.

A well-known example of the latter is "Unchained Melody" by the Righteous Brothers. (And what dance teacher wouldn't like a dollar for every time a couple arrived for a wedding dance lesson clutching a CD of "Unchained Melody"?) It is about $16\frac{1}{2}$ bars per minute in $\frac{12}{8}$. If you treat each $\frac{12}{8}$ bar as 4 bars of $\frac{3}{4}$, you get a waltz at 66 bars per minute, which is definitely too fast for Viennese Waltz. Instead, a dancer will hear it as in $\frac{4}{4}$ time at $16\frac{1}{2}$ bars per minute, which is suitable for Blues.

Unfortunately I haven't found any well-known examples from popular music of $\frac{12}{8}$ time at 15 bars per minute.

The famous Louis Armstrong version of "What a wonderful world" is about 16.7 bars per minute in $\frac{12}{8}$ time. This is too fast for Viennese Waltz, so a dancer will hear as $\frac{4}{4}$ time. However, this is a much covered jazz classic, so a quick search of your favourite video sharing web site will probably find a slower version suitable for a social Viennese Waltz. The slowest I found was an Eva Cassidy version way down at 12.7 bars per minute, which a dancer would hear as 49 bars per minute in $\frac{3}{4}$ time. Incidentally, there are also simplified piano scores of this song that omit the triplets entirely and hence score it in $\frac{4}{4}$ time.

Some swing music is notated in $\frac{12}{8}$, though it seems more common to put it in $\frac{4}{4}$ and add a note to swing the beat. <http://www.dolmetsch.com/musictheory20.htm#swing> provides an explanation of interpreting the latter in the form of the eight-note triplet shuffle. According to http://en.wikipedia.org/wiki/Swung_note at 25/3/07:

"In general, where music with a swing meter is required, musicians in the jazz tradition will prefer to read music written in common time and played with a swing, while musicians in the classical tradition will prefer to read music written in compound time and played as written."

This site also notes that the amount of swing adopted can vary considerably. This is certainly true from the musicians perspective and this is part of what makes jazz music so varied. However, my impression is that swing dancers only ever use music with a strict $\frac{2}{3}$, $\frac{1}{3}$ beat split and of course it also needs to be of a constant tempo. That is, when swing dancers refer to 'swing music', they are referring to a subset of what a jazz musician would call 'swing music'.

Again, it doesn't seem to be productive to try to discuss $\frac{12}{8}$ timing with Swing dancers. Translate back to $\frac{4}{4}$ for them, but try not to mention a time signature at all, since most swing dancers are not aware of time signatures. This is not intended as a criticism, since it's just another case of only

being aware of the aspects of the music that are relevant to dancing. Most swing dancers only attend swing dances, where they never hear anything other than swing music. Hence they never need to pick the time signature of the music and so time signatures just aren't mentioned in swing classes.

4. Swinging Jive

The beat count for the 3 steps of a Jive chasse should be $\frac{3}{4}$, $\frac{1}{4}$, 1. The common problem with beginners is that they adopt the timing $\frac{1}{2}$, $\frac{1}{2}$, 1.

A useful work around for this problem is to use swing music for beginners Jive classes. Beginners following the swing beat then adopt the timing $\frac{2}{3}$, $\frac{1}{3}$, 1 for the Jive chasse. While this isn't technically correct, it does seem to stop them falling into the $\frac{1}{2}$, $\frac{1}{2}$, 1 timing and they seem more likely to adopt the correct timing when normal (non-swing) jive music is played.

5. Hearing the Beat and Emphasising the Beat

Some teachers will teach beginners Cha Cha a beat early, so that the chasse falls on beats 3 & 4 rather than 4 & 1. Perhaps beginners find it easier to learn this way, but I think it is counter-productive.

It seems to me that even beginner dancers hear and respond to the beat in the music, possibly quite unconsciously. With Cha Cha music they hear the first beat as strong and unconsciously make the step on beat 1 a stronger step. If you listen closely you can sometimes hear this effect, the footfall on beat 1 being louder than the others.

If they are dancing a beat early, the forward and back steps fall on beat 1 and they are trying to emphasise these steps, so they make these steps bigger. In Cha Cha, making the forward and back steps too big is a common problem with beginners, but it seems to me that it's a much more common problem with beginners who have been taught Cha Cha a beat early.

By contrast, when Cha Cha is performed correctly, beat 1 is the 3rd step of the chasses. Then, when we unconsciously emphasise the step on beat 1, we make the 3rd step of the chasses bigger than the first two steps, which is exactly as it should be. Also, the forward and back steps now fall on beat 2, which isn't emphasised, so we're less likely to make the forward and back steps too big.

In short, its important to get the chasses on the 4 & 1 beats since this is part of what gives this dance its character.

These ideas are consistent with Jive. Jive chasses occur on 1 a 2 or on 3 a 4. Jive is performed to Rock 'n' Roll music, the major defining feature of which is the back beat. That is, the strongest beats are 2 and 4, which matches the strongest step in the chasses. This is why Jive feels wrong if you start a beat early or late. The chasses would be landing on 2 a 3 or on 4 a 1, which makes the strongest step in the chasses fall on a weak beat.

This also explains why doing Cha Cha to Rock 'n' Roll music feels clumsy. Even if the tempo is correct, the Cha Cha wants its strongest beat on 1 but with Rock 'n' Roll music its landing on 2 and 4.

6. History

Version 1.0	10 April 2007	Initial Release. Much of the material was removed from other guides I had written dating back to 2004.
Version 1.1	21 April 2007	Fixed error in attribution of "Unchained Melody".