

CHAPTER 4

RHYTHM

Rhythm is the occurrence of varying lengths of sound and silence. *Meter* is the pattern of beat groupings and the nature of the divided beat. Rhythm does not always coincide with meter. The two must not be confused.

The sum of note and rest values in each measure equals the number of beats indicated by the time signature. Relationships between rhythm and meter can be shown in two categories: *regular* rhythm and *irregular* rhythm.

REGULAR RHYTHM

Regular rhythm occurs:

when long notes coincide with strong beats and shorter notes (when present) occur as non-syncopated divisions of weak beats; or

when repeating non-syncopated divisions occur on all beats.

Figure 4.1 illustrates various rhythmic patterns in different time signatures:

- 2/4:**
 - Measure 1: Quarter note (1), quarter note (2), eighth rest (&).
 - Measure 2: Quarter note (1), eighth note (2), eighth note (ta), eighth rest (&), eighth note (ta).
 - Measure 3: Quarter note (1), quarter note (2), eighth rest (&), quarter note (ta).
 - Measure 4: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (ta).
- 3/4:**
 - Measure 1: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (ta).
 - Measure 2: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (ta).
 - Measure 3: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (ta).
 - Measure 4: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (ta).
- 6/8:**
 - Measure 1: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (a).
 - Measure 2: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (a).
 - Measure 3: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (a).
 - Measure 4: Quarter note (1), eighth rest (&), quarter note (2), eighth rest (&), quarter note (3), eighth rest (&), quarter note (a).
- 4/4:**
 - Measure 1: Quarter note (1), quarter note (2), eighth rest (&), quarter note (3), quarter note (4), eighth rest (&).
 - Measure 2: Quarter note (1), quarter note (2), eighth rest (&), quarter note (3), quarter note (4), eighth rest (&).
 - Measure 3: Quarter note (1), quarter note (2), eighth rest (&), quarter note (3), quarter note (4), eighth rest (&).
 - Measure 4: Quarter note (1), quarter note (2), eighth rest (&), quarter note (3), quarter note (4), eighth rest (&).
- 4/4 (Simplified):**
 - Measure 1: Quarter note (1), quarter note (2), quarter note (3), quarter note (4).
 - Measure 2: Quarter note (1), quarter note (2), quarter note (3), quarter note (4).
 - Measure 3: Quarter note (1), quarter note (2), quarter note (3), quarter note (4).
 - Measure 4: Quarter note (1), quarter note (2), quarter note (3), quarter note (4).

Figure 4.1: Regular Rhythm.

Uniform rhythm is regular rhythm that occurs:

when the measure is filled by one note; or

when the measure is filled by two equal notes in quadruple meter; or

when the measure is divided equally into units of beats; or
 when the measure is divided into equal divisions of the unit of beat.

The figure displays eight musical staves illustrating uniform rhythm patterns:

- Staff 1 (2/4):** First measure: quarter note (1), quarter rest ((2)). Second measure: eighth notes (1 &, 2 &).
- Staff 2 (2/4):** First measure: quarter note (1), quarter note (2). Second measure: quarter note (1), quarter rest ((2)).
- Staff 3 (3/4):** First measure: quarter notes (1, 2, 3). Second measure: eighth notes (1 &, 2 &, 3 &).
- Staff 4 (3/4):** First measure: eighth notes (1 ta & ta, 2 ta & ta, 3 ta & ta). Second measure: quarter note (1), quarter rest ((2)), quarter rest ((3)).
- Staff 5 (9/8):** First measure: dotted quarter notes (1, 2, 3). Second measure: eighth notes (1 & a, 2 & a, 3 & a).
- Staff 6 (9/8):** First measure: dotted quarter notes (1, 2, 3). Second measure: dotted quarter note (1), dotted quarter note ((2)), dotted quarter note ((3)).
- Staff 7 (4/4):** First measure: quarter notes (1, 2, 3, 4). Second measure: eighth notes (1 &, 2 &, 3 &, 4 &).
- Staff 8 (4/4):** First measure: quarter note (1), quarter rest ((2)), quarter note (3), quarter rest ((4)). Second measure: quarter note (1), quarter rest ((2)), quarter note (3), quarter rest ((4)).

Figure 4.2: Uniform Rhythm.

All uniform rhythms are regular but not all regular rhythms are uniform.

IRREGULAR RHYTHM

Irregular rhythm occurs:

when long notes coincide with weak beats or weak parts of beats; or

when the rhythm has been syncopated.

Figure 4.3 illustrates irregular rhythms through several musical examples:

- 2/4 Time Signature:**
 - Example 1: A half note on beat 1, followed by a quarter rest on beat 2, then a quarter note on beat 2. The second measure shows a quarter note on beat 1, eighth notes on the off-beat (&), a quarter note on beat 2, eighth notes on the off-beat (&), and a quarter note on beat 2.
 - Example 2: A half note on beat 1, eighth notes on the off-beat (&), and a quarter note on beat 2. The second measure shows a quarter note on beat 1, eighth notes on the off-beat (&), and a quarter note on beat 2. A slur connects the end of the first measure to the beginning of the second.
- 3/4 Time Signature:**
 - Example 3: Quarter notes on beats 1, 2, and 3. The second measure shows quarter notes on beats 1, 2, and 3. A slur connects the end of the first measure to the beginning of the second.
 - Example 4: Quarter notes on beats 1, 2, and 3. The second measure shows quarter notes on beats 1, 2, and 3. A slur connects the end of the first measure to the beginning of the second.
- 12/8 Time Signature:**
 - Example 5: Quarter notes on beats 1, 2, 3, and 4. The second measure shows quarter notes on beats 1, 2, 3, and 4. A slur connects the end of the first measure to the beginning of the second.
 - Example 6: Quarter notes on beats 1, 2, 3, and 4. The second measure shows quarter notes on beats 1, 2, 3, and 4. A slur connects the end of the first measure to the beginning of the second.
- 4/4 Time Signature:**
 - Example 7: Quarter notes on beats 1, 2, 3, and 4. The second measure shows quarter notes on beats 1, 2, 3, and 4. A slur connects the end of the first measure to the beginning of the second.
 - Example 8: Quarter notes on beats 1, 2, 3, and 4. The second measure shows quarter notes on beats 1, 2, 3, and 4. A slur connects the end of the first measure to the beginning of the second.

Figure 4.3: Irregular Rhythm.

Syncopated rhythm occurs when notes alter the normal or expected pattern of rhythm, accent, or meter by appearing on weak beats or weak parts of beats. Syncopation may be created:

when a weak beat or weak part of a beat is accented; or

when a weak beat or weak part of a beat is tied to the strong beat which follows it; or

when a rest occurs on a beat after a note on a weak beat or when a rest occurs on any beat after a weak part of a beat.

The figure displays several musical staves illustrating syncopated rhythms. Each staff shows a sequence of notes and rests with rhythmic markings below them.

- 2/4 Time:**
 - Staff 1: Notes on beats 1, 2, 3, 4. Rhythmic markings: 1, &, (2), &, (1), &, (2). A bar line is placed between beats 2 and 3.
 - Staff 2: Notes on beats 1, 2, 3, 4. Rhythmic markings: 1 ta, 2 ta ta, 1 ta & ta 2. A bar line is placed between beats 2 and 3.
- 3/4 Time:**
 - Staff 3: Notes on beats 1, 2, 3, 4. Rhythmic markings: 1 &, 2 &, 3 &, (1), 2, (3). A bar line is placed between beats 3 and 4.
 - Staff 4: Notes on beats 1, 2, 3, 4. Rhythmic markings: (1) &, (2) &, 3 ta, (1) &, (2), (3). A bar line is placed between beats 3 and 4.
- 6/8 Time:**
 - Staff 5: Notes on beats 1, 2, 3, 4. Rhythmic markings: 1 &, 2 & a, 1 a (2) &. A bar line is placed between beats 2 and 3.
 - Staff 6: Notes on beats 1, 2, 3, 4. Rhythmic markings: 1 a (2) & a, 1 a (2). A bar line is placed between beats 2 and 3.
- 4/4 Time:**
 - Staff 7: Notes on beats 1, 2, 3, 4. Rhythmic markings: 1, 2 &, (3) &, 4. A bar line is placed between beats 3 and 4.
 - Staff 8: Notes on beats 1, 2, 3, 4. Rhythmic markings: (1), 2, (3), 4 &, (1), (2) &, (3), (4). A bar line is placed between beats 3 and 4.

Figure 4.4: Syncopated Rhythm.

All syncopated rhythms are irregular, but not all irregular rhythms are syncopated.

RHYTHMIC PHRASE INITIATION AND COMPLETION

The first beat in a measure is called the *thesis*. A phrase (a short musical thought, normally two to four measures long) that begins on the first beat has a *thetic* beginning; the phrase is said to begin *thetically*. The thesis is also called the *down-beat*. Down-beat derives its name from the downward stroke of a conductor indicating the principally accented note of the measure.

An unaccented beat in a measure is called an *arsis*. An *anacrusis*, also called *upbeat* or *pick-up*, consists of one or more notes that precede the first down-beat of a musical phrase. Normally, when a composition begins with an anacrusis, the last measure contains only the rhythmic values that will complete the first measure. However, some composers and arrangers end their compositions with a complete measure regardless of the material contained in the first (incomplete) measure.

When the last attack of a phrase coincides with the thesis, the ending is called a *masculine ending*. If the last attack does not coincide with the thesis, the ending is called a *feminine ending*.

Thesis (down-beat) Masculine Ending

Anacrusis (up-beat) (pick-up) Masculine Ending

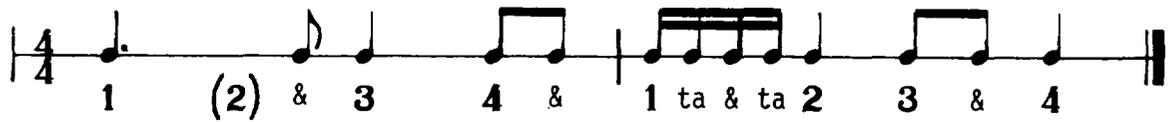
Thesis Feminine Ending

Anacrusis Feminine Ending

Figure 4.5: Rhythmic Phrase Initiation and Completion.

RELATED METERS

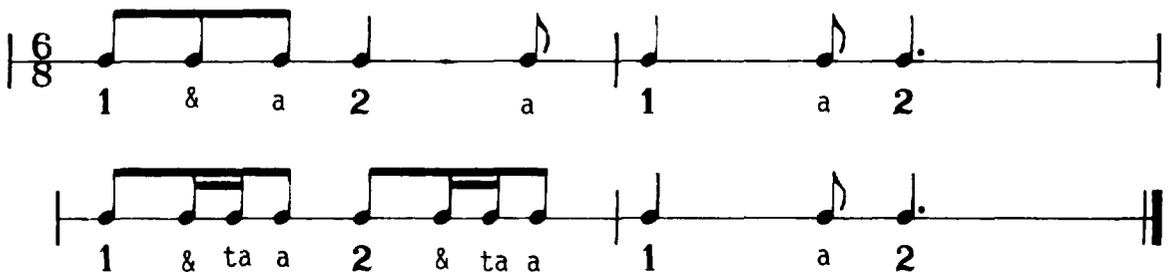
Related meters have the same metrical stress but a different unit of beat. In related meters, the upper time signature numeral is the same but the lower time signature numeral is different. Therefore, it is possible to notate the same rhythm in more than one time signature; the notation, which differs, reflects a choice of the unit of beat.



sounds the same as



and



sounds the same as

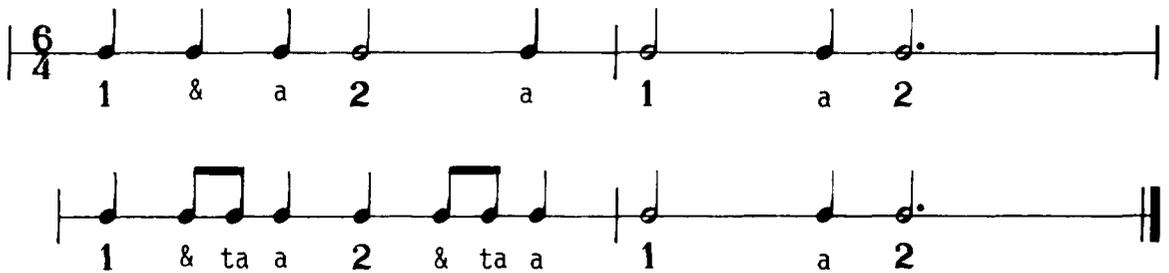


Figure 4.6: Related Meters (rhythmic transcription).

EQUIVALENT METERS

Equivalent meters are two different meters, one simple and one compound, that have the same beat grouping and the same note to represent the divided beat. The unit of beat in simple time is an undotted note and in compound time is a dotted note.

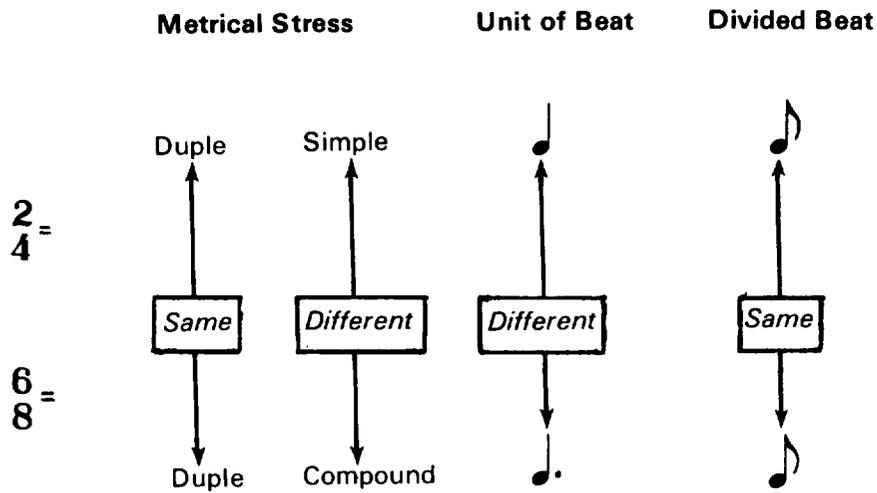


Figure 4.7: Equivalent Meters.

By making use of equivalent meters, it is possible to use the compound division of beat in simple time and the simple division of beat in compound time. These borrowed divisions of the beat are notated as the *triplet* in simple meter and the *duplet* in compound meter.

Figure 4.8: Equivalent Meters (metric conversion):
duplets and triplets.

