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## Understanding Dotted and Undotted Notes

Paula Telesco

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## UNDERSTANDING UNDOTTED AND DOTTED NOTE VALUES

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You likely know something already about note and rest values, what note gets the beat in some particular meter—what we call the *beat unit*, or *beat value*—and differences between undotted and dotted notes. This handout will review this material and introduce an additional way to think about note values, setting the stage for additional approaches to meter, as rhythm and meter can often be difficult concepts to master.<sup>1</sup>

### *1. Undotted Notes*

We will begin with what we will call the *Undotted Note Family*.<sup>2</sup> In our current system, the names of all undotted note values are derived from their relation to the whole note: half note, quarter note, eighth note, sixteenth note, etc. The most commonly used undotted notes and their corresponding rests are shown in Example 1.

☆ Note that *no* note has any absolute time value, or beat value; what is absolute is its relationship to other notes. This relationship remains constant, regardless of the time signature.

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<sup>1</sup> Meter signatures will be discussed in a subsequent handout, *Simple and Compound Time Signatures Re-examined*.

<sup>2</sup> I am adapting this term from David Newell, *Teaching Rhythm* (San Diego, CA: Kjos, 2008), 167-69.

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Example 1: Undotted Note Values and their Corresponding Rests

Notes		Rests	
	Breve (Double Whole Note)		Breve Rest (Double Whole Rest)
	Whole Note		Whole Note Rest
	Half Note		Half Note Rest
	Quarter Note		Quarter Note Rest
	Eighth Note		Eighth Note Rest
	Sixteenth Note		Sixteenth Note Rest
	Thirty-second note		Thirty-second Note Rest

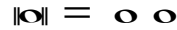
All undotted notes may be divided equally into two smaller and equal undotted notes—that is the normal division of an undotted note, as shown in Example 2.

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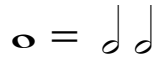
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### Example 2: Division of Undotted Notes into Two Smaller Undotted Notes

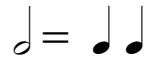
A Breve (Double Whole Note)  
divides into two Whole Notes



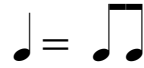
A Whole Note divides into two  
Half Notes



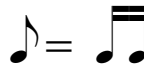
A Half Note divides into two  
Quarter Notes



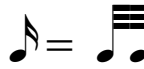
A Quarter Note divides into two  
Eighth Notes



An Eighth Note divides into two  
Sixteenth Notes

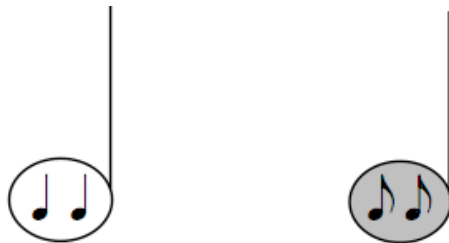


A Sixteenth Note divides into two  
Thirty-second Notes



Another way to think about this is that every undotted note contains *within* itself two undotted notes of the next smaller value, as shown in Example 3. (Thinking about it this way can help our understanding of dotted notes when we get to them.)

### Example 3: Two Undotted Notes Contained within each Larger Undotted Note<sup>3</sup>



<sup>3</sup> Graphic adapted from Newell, p. 167.

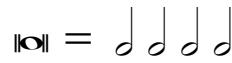
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Undotted notes can further subdivide into four equal undotted notes of the next smaller value, as shown in Example 4.

### Example 4: Subdivision of Undotted Notes into Four Smaller Undotted Notes

A Breve (Double Whole Note)  
subdivides into four Half Notes



A Whole Note subdivides into four  
Quarter Notes



A Half Note subdivides into four  
Eighth Notes



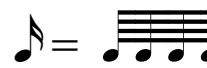
A Quarter Note subdivides into  
four Sixteenth Notes



An Eighth Note subdivides into  
four Thirty-second Notes



A Sixteenth Note subdivides into  
four Sixty-fourth Notes



Next, we need to recognize that a whole note can get 1, 2, 4, 8 or more beats:<sup>4</sup>

- If the whole note gets 1 beat, then the half note gets 1/2 beat and the quarter note gets 1/4 beat;
- If the whole note gets 2 beats, then the half note gets 1 beat and the quarter note gets 1/2 beat;
- If the whole note gets 4 beats, the half note gets 2 beats, the quarter note gets 1 beat;

And so on.

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





<sup>4</sup> Our current system derives from one in which our current whole note, historically called the semibreve, got one beat.

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Example 5 shows the relative values of notes from the breve to the 32nd note when the whole note has a value of 1, 2, or 4 beats, respectively. Notice that when the note getting the beat is an undotted note, the divisions and subdivisions of the beat—the half-beat notes, quarter-beat notes, etc.—will all be undotted as well.

Example 5: Beat Values of Undotted Notes, Given a Whole Note Value of 1, 2, and 4 Beats

	Whole Note = 1 Beat	Whole Note = 2 Beats	Whole Note = 4 Beats
 =	2 beats	4 beats	8 beats
 =	<b>1 BEAT</b>	<b>2 BEATS</b>	<b>4 BEATS</b>
 =	1/2 beat	1 beat	2 beats
 =	1/4 beat	1/2 beat	1 beat
 =	1/8 beat	1/4 beat	1/2 beat
 =	1/16 beat	1/8 beat	1/4 beat
 =	1/32 beat	1/16 beat	1/8 beat















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**2. Dotted Notes**

Now let's look at the *Dotted Note Family*. A dot may be added to any undotted note or rest value. Example 6 illustrates the most commonly used dotted notes and their corresponding rests.

## Example 6: Dotted Note Values and their Corresponding Rests

Notes		Rests	
	Dotted Breve (Double Whole Note)		Dotted Breve Rest (Double Whole Rest)
	Dotted Whole Note		Dotted Whole Note Rest
	Dotted Half Note		Dotted Half Note Rest
	Dotted Quarter Note		Dotted Quarter Note Rest
	Dotted Eighth Note		Dotted Eighth Note Rest
	Dotted Sixteenth Note		Dotted Sixteenth Note Rest
	Dotted Thirty-second Note		Dotted Thirty-second Note Rest

While all *undotted* notes divide equally into two smaller notes, all *dotted* notes divide equally into *three* smaller and equal *undotted* notes; this is their normal division, as shown in Example 7.

And once again, this relationship remains constant, regardless of the time signature.

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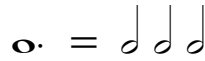
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Example 7: Division of Dotted Notes into Three Smaller Undotted Notes

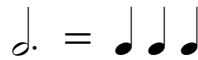
A Dotted Breve (Double Whole Note) divides into three Whole Notes



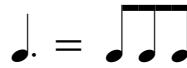
A Dotted Whole Note divides into three Half Notes



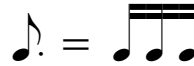
A Dotted Half Note divides into three Quarter Notes



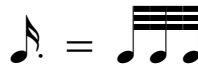
A Dotted Quarter Note divides into three Eighth Notes



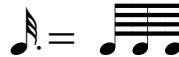
A Dotted Eighth Note divides into three Sixteenth Notes



A Dotted Sixteenth Note divides into three Thirty-second Notes



A Dotted Thirty-second Note divides into three Sixty-fourth Notes



Notice that if a dotted note divides equally into three smaller notes, then it is also true that all dotted notes contain *within* themselves three undotted divisions, as shown in Example 8.

Example 8: Three Undotted Notes Contained within each Larger Dotted Note





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You may have already learned at some point that a dot increases the value of a note by half, or that a dot makes a note worth  $1\frac{1}{2}$  as much as the undotted note, such that, for example, a dotted

half note equals a half note plus a quarter note:  $\text{♩.} = \text{♩} + \text{♩}$

However, it may be easier to visualize dotted notes as containing within themselves three (undotted) divisions, as shown above in Example 8. Thus, a dotted half note equals three quarter

notes:  $\text{♩.} = \text{♩} + \text{♩} + \text{♩}$

Dotted notes can further subdivide into *six* equal undotted notes of the next smaller value, as shown in Example 9.

Example 9: Subdivision of Dotted Notes into Six Smaller Undotted Notes

A Dotted Breve (Double Whole Note) subdivides into six Half Notes



A Dotted Whole Note subdivides into six Quarter Notes



A Dotted Half Note subdivides into six Eighth Notes



A Dotted Quarter Note subdivides into six Sixteenth Notes



A Dotted Eighth Note subdivides into six Thirty-second Notes



A Dotted Sixteenth Note subdivides into six Sixty-fourth Notes



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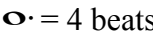
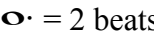
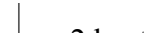


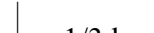
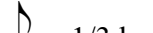
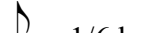
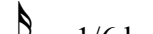

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Note also that *any* dotted note may be the beat unit, depending upon the meter.<sup>5</sup> Example 10 illustrates the relative values of notes when the dotted quarter note has a value of 1 beat; and when the dotted half note has a value of 1 beat. As you can see, when the dotted quarter note gets 1 beat, the undotted eighth note gets 1/3 of a beat; and the undotted sixteenth note gets 1/6 of a beat. Similarly, when the dotted half note gets 1 beat, the undotted quarter note gets 1/3 of a beat, the undotted eighth note gets 1/6 of a beat.

But notice that multiples of the beat—2 beats, 4 beats— are dotted notes. Thus, when the dotted quarter note gets the beat, the dotted half gets 2 beats and the dotted whole note gets 4 beats.

Likewise, when the dotted half note gets the beat, the dotted whole note gets 2 beats and the dotted breve gets 4 beats.

Example 10: Relative Beat Values given a 1-Beat Dotted Quarter Note; and a 1-Beat Dotted Half Note

Dotted Quarter Note = 1 Beat	Dotted Half Note = 1 Beat
 = 4 beats	 = 2 beats
 = 2 beats	 = <b>1 BEAT</b>
 = <b>1 BEAT</b>	 = 1/3 beat
 = 1/3 beat	 = 1/6 beat
 = 1/6 beat	 = 1/12 beat

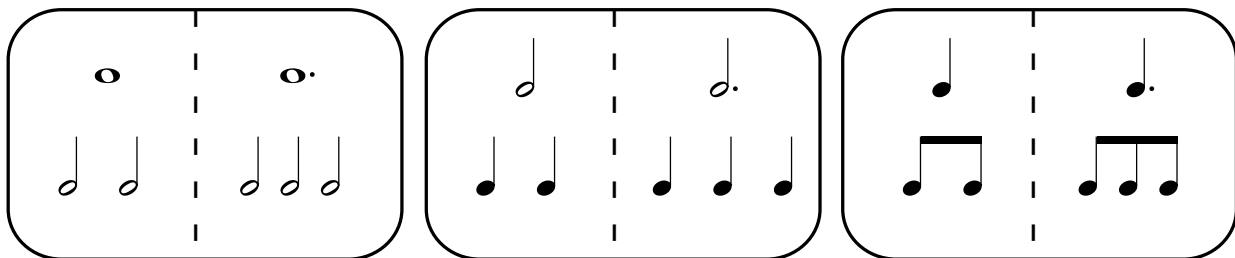
<sup>5</sup> See handout, *Simple and Compound Time Signatures Re-examined*.

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Example 11 shows a side by side comparison of the normal division of undotted and dotted notes into two and three parts, respectively.<sup>6</sup> Remember, undotted notes normally divide into two equal undotted notes, while dotted notes normally divide into three equal undotted notes.

Example 11: Division of Undotted and Dotted Notes into their Respective Two- and Three-Part Divisions



☆ To summarize:

1. When an *undotted* note gets the beat:

- normal divisions and subdivisions of the beat are *undotted* notes
- multiples of the beat are *undotted* notes

2. When a *dotted* note gets the beat:

- normal divisions and subdivisions of the beat are *undotted* notes
- multiples of the beat are *dotted* notes

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<sup>6</sup> Graphic adapted from Newell, p. 168.

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### 3. *Meter Identification: Simple vs. Compound*<sup>7</sup>

It is important to remember that ANY undotted or dotted note may be the beat note, depending on the meter. Different meters require different note values for the unit of beat.

- A meter in which an **Undotted** note gets the beat is called a **Simple Meter**. In a simple meter, the note getting the beat will ALWAYS be some type of **Undotted** note. Said another way, if an undotted note is the beat value, the meter is simple, and the normal division of the beat is into two equal parts. *Any* undotted note can be the beat unit in some given simple meter.
- A meter in which a **Dotted** note gets the beat is called a **Compound Meter**. In a compound meter, the note getting the beat will ALWAYS be some type of **Dotted** note. Said another way, if a dotted note is the beat value, the meter is compound, and the normal division of the beat is into three equal parts. *Any* dotted note can be the beat unit in some given compound meter.

### 4. *Less Common Divisions*

We noted above that the normal division of an undotted note is into two smaller undotted notes. But it is also possible to divide an undotted note equally into three smaller divisions, which we call triplets. When an undotted note divides into three equal parts, the triplet must have the number 3 above it, to show that this is not the normal division, but rather what we call a ***borrowed*** division. This division is borrowed from the normal division of the *dotted* note, which we have seen normally divides into three equal parts. Examples 12 and 13 illustrate this triplet division of undotted notes.

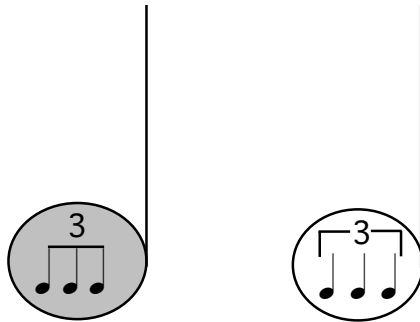
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<sup>7</sup> See handout, *Simple and Compound Time Signatures Re-examined*.

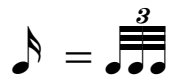
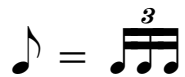
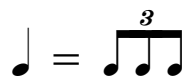
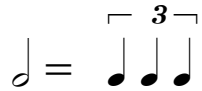
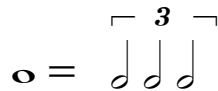
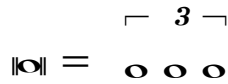
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Example 12: Triplets Contained within each Larger Undotted Note



Example 13: Division of Undotted Notes into Triplets

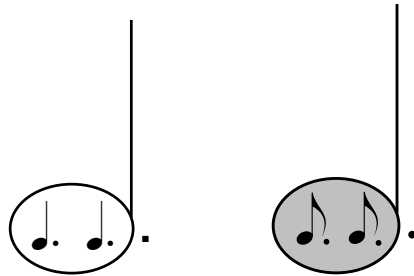


Similarly, while a dotted note normally divides into three equal *undotted* notes, it may also occasionally divide into two equal *dotted* notes, though this is not common. This division is borrowed from the normal division of the *undotted* note, which we have seen normally divides into two equal parts. These are called duplets, and are shown in Example 13.

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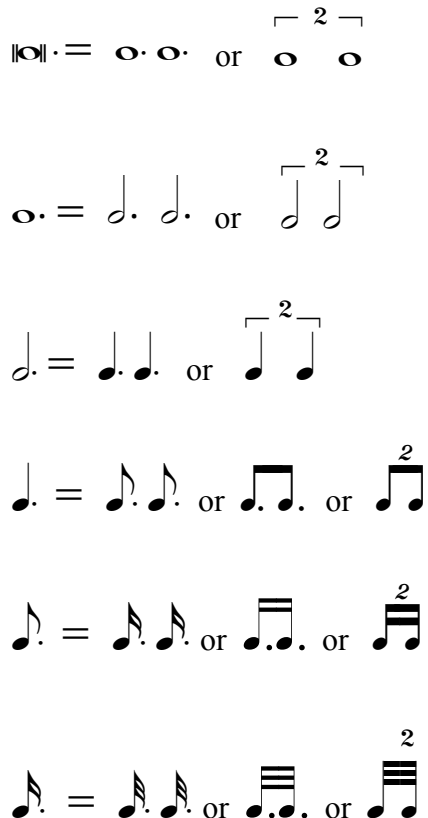
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Example 13: Duplets Contained within each Larger Dotted Note



Example 14 further illustrates the division of dotted notes into the less common duplets. Note that there are several ways to notate duplets, either as two dotted notes, or as two undotted notes with a duplet sign.

Example 14: Division of Dotted Notes into Duplets



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☆ Pay special attention to this:

- the normal division of an undotted note is into two equal undotted notes (Example 2)
- the *borrowed* triplet division of an undotted note is into three equal *dotted* notes, with a triplet sign (Example 13)
- the normal division of a dotted note is into three equal *undotted* notes (Example 7)
- the *borrowed* duplet division of a dotted note is into two equal *dotted* notes, or two undotted notes with a duplet sign (Example 14)