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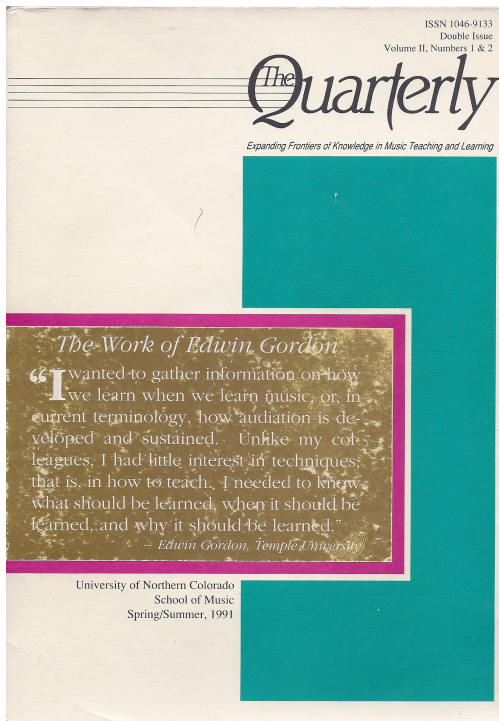
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The Evolution of Rhythm Syllables in Edwin Gordon's Music Learning Theory

By Richard F. Grunow

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While rhythm syllables do not enjoy the rich historical legacy that accompanies tonal syllables,¹ the use of rhythm syllables is perhaps more common in music classrooms today than the use of tonal syllables. Time-value names, mnemonics, note values, 1 e-and-a, and French time names are among the most prevalent systems currently in use.² Most music teachers agree that instruction is more efficient and effective when a system of rhythm syllables is part of the instructional process.

Gordon's use of rhythm syllables is a significant departure from tradition in terms of purpose, characteristics, and applications. The traditional role of rhythm syllables has been to assist in "counting"³ and "time keeping;" the purpose of rhythm syllables in Gordon's music learning theory is to facilitate audiation and the retention of rhythm patterns in long-term memory.³ Most rhythm syllables systems are based on note values, which causes them to be illogical from a functional point of view; Gordon's rhythm syllables are based on beat function, which gives them an internal logic within and among meters. Most rhythm syllable systems are inherently unmusical and cumbersome to apply; Gordon's syllables are characterized by an ease of articulation and the potential for musical expression. As should be expected, the application of Gordon's rhythm syllables in the classroom requires a familiarity with specified teaching techniques. With the intent of providing a better understanding of important and controversial issues related to the use of rhythm syllables, the purpose of this article is to discuss the evolution of the rhythm syllable system

associated with Gordon's music learning theory.

Defining Rhythm

Rhythm understanding, along with tonal understanding, has been one of the bases of Gordon's music learning theory from its inception. In 1971, Gordon (pp. 67-69) provided an operational definition of rhythm in terms of 1) tempo beats, 2) meter beats, and 3) melodic rhythm. He described the tempo beat as the walking, marching, or swaying beat in the music, and he provided notational examples

in duple meter: 

and in triple meter: 

Tempo beats, according to Gordon, were temporally equal (equally spaced in time) and organized in pairs. He described meter beats as two or three equally spaced beats superimposed over the duration of a tempo beat. Because meter beats establish the meter of the music, Gordon regarded them as more important than tempo beats. For example, duple meter is established when two equally spaced beats are superimposed within the duration of a tempo beat,

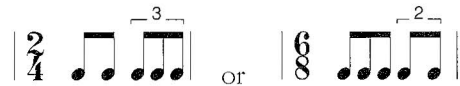


and triple meter is established when three equally spaced beats are superimposed within the duration of a tempo beat.



Melodic rhythm is the result of the simultaneous interaction of tempo beats, meter beats, and shorter and longer rhythm values. In ad-

dition to basic duple and basic triple meters, Gordon defined uncommon duple, uncommon triple, basic mixed, uncommon mixed, basic unusual, and uncommon unusual meters. He used the terms basic and uncommon to refer to the frequency with which the patterns occur in the literature, and he used the terms usual and unusual to refer to patterns in which the tempo beats were temporally equal and temporally unequal, respectively. He used the term mixed meter to refer to patterns in which the tempo beats were temporally equal, but the meter beats were grouped in two's and three's.



Assigning Rhythm Syllables

In assigning rhythm syllables to various patterns and meters, Gordon (1971, p. 73) provided the following rules. Rhythm syllables should

- 1) be fundamentally different for patterns in duple, triple, and unusual meters;
- 2) be fundamentally different for tempo beats and for each successive meter beat;
- 3) provide for all basic and uncommon patterns;
- 4) be easily articulated vocally;
- 5) not be associated with individual note values; and
- 6) not conflict in name with tonal syllables.

In light of those rules, Gordon (1971, pp. 74-75) assigned the following syllables to basic duple and basic triple meters:



The "ne" was pronounced like "na" in *nation*; the "na" was pronounced like "no" in *notch*; the "ni" was pronounced like "ne" in *neat*; and "ta" was pronounced like "to" in *topic*. Gordon applied the same syllables to mixed meter



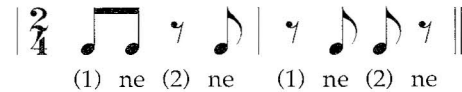
He devised the syllables "1 be" and "1 ba bi" for meter beats in unusual meter patterns, patterns in which the tempo beats are not

temporally equal.



He retained "ta" for subdivisions of meter beats in unusual patterns, because those subdivisions do not affect the function of the tempo beat or the meter beat. In Gordon's 1971 system, numbers were always associated with tempo beats in all meters.

Gordon (1971, p. 75) advocated performing silently rhythm syllables that correspond with rests in rest patterns in all meters.



In like fashion, he suggested sustaining the appropriate syllables for patterns comprising ties and notes of longer duration than a tempo beat or a meter beat.



Gordon (1971, p. 77) recommended that teachers making use of rhythm syllables in classroom instruction use the echo technique. He also recommended the use of preplanned and spontaneously created dialogues and rondos.

Discussion

Considering the aural constructs upon which the rhythm imagery subtests of MAP are based, one can infer that Gordon defined rhythm in terms of the aural aspects of music. In other words, one should be able to determine aurally the meter of a piece of music without the aid of music notation. Although Gordon's definition of tonality was somewhat consistent with the traditional definition of tonality, his operational definition of meter as the relation between tempo beats and meter beats was a distinct departure from the traditional definition of meter. According to the traditional definition, music written with a 2/4 measure signature is simple duple meter, and music written with a 6/8 measure signature is compound duple meter. When Gordon (1971) provided examples of duple meter written in 2/4, he was in agreement with the traditional definition of duple meter. When he provided

examples of triple meter written in 6/8, he was departing from the traditional definition of meter.

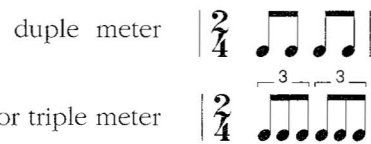
Much of the confusion and controversy surrounding Gordon's rhythm syllable system stems from his nontraditional use of words such as meter and meter beats and from his labeling music written in 6/8 as triple meter. In the absence of a label for the aural aspect of the rhythm dimension of music—a word parallel, perhaps, to the word “tonality” for the aural aspect of the tonal dimension of music—Gordon chose to use the words “meter” and “meter beats.” Further, he chose to use 2/4 and 6/8 to represent duple and triple meters, respectively, because those measure signatures provided two tempo beats within each measure for both duple and triple meters



The pairing of tempo beats was central to his operational definition of rhythm, and it was logical from a visual perspective when students were first learning to read music. It also provided a smooth transition to other time signatures (Gordon, 1971, pp. 80-84).

In retrospect, less confusion would exist had Gordon stated that 2/4 *could* be duple meter and 6/8 *could* be triple meter, in much the same manner that the key signature with one sharp *could* be major tonality. The key signature with one sharp could also be E minor, A dorian, B phrygian, etc. It follows that 2/4, considered from an aural stand-

point, “could” be



although the latter would be rare because of notational inconvenience. Similarly, 6/8 *could* be triple meter, as in “Silent Night,” or it *could* be duple meter, as in Sousa’s “Washington Post March” (see Figure 1).

Several factors contributed to Gordon's re-definition of the rhythm dimension of music in 1971. One was probably a conflict between his traditional music theory training and his aural experiences as a jazz musician.⁴ Another was the relatively primitive stage of Gordon's understanding of aural perception and musical imagery at that time as compared to his recent concept of “audiation.” While musical examples may have helped to clarify his definitions at the time, they may have only muddled the water in the long term. What is clear from Gordon's 1971 exposition on rhythm is that he defined rhythm in terms of the aural and kinesthetic properties of music, and he assigned rhythm syllables on the basis of rhythm functions (tempo beats, meter beats, and melodic rhythm), not on the basis of note values.

A Learning Theory for Music

Gordon first presented his theory of how children learn music in *Learning Sequence and Patterns in Music* (1976 and 1977). His music learning theory has evolved through

Silent Night

Washington Post March

Figure 1. Excerpts of “Silent Night” in Triple Meter and “Washington Post” in Duple Meter.

three subsequent editions of *Learning Sequences in Music: Skill, Content, and Patterns* (1980, 1984, and 1989). Gordon's music learning theory is distinctly musical in character, but at the same time it reflects the influence of Gagné and other cognitive psychologists (Woodruff, Piaget, Bruner, & Ausubel).⁵ Figure 2 shows Gordon's (1976, p. 8) music learning sequence.

Gordon's music learning sequence contains many similarities to Gagné's eight levels of learning. The only label to remain intact, however, is the label for the verbal association level of learning (see figures 2 and 3). The accommodation of rhythm syllables that was absent in Gordon's original application of the Gagné model is present in his 1976 music learning sequence. Specifically, the verbal association level of learning encompasses the use of rhythm syllables and the classifications of meters and their respective categories. Gordon cites the purpose of verbal association in relation to spoken

language:

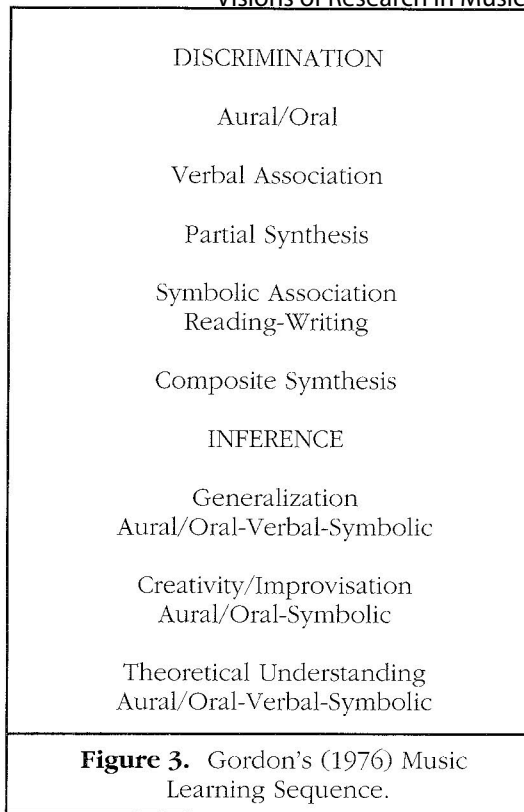
Without words (names) to represent the multitude of objects in our environment, conceptualization could take place in only a minimal way. One thinks with words; the fewer words in one's vocabulary, the more limited one's thinking.⁶

Thinking in terms of the language analogy, verbal association is a process for giving names to rhythm patterns. By participating in verbal association levels of rhythm learning, individuals enlarge their rhythm vocabularies; subsequently, they can engage more fully in higher levels of rhythm learning.

At the verbal association level of learning, rhythm syllables are assigned to patterns that have been learned through the use of neutral syllables at the aural/oral level of learning (see Figure 3). In addition to teaching rhythm syllables, the teacher should teach the classifications of meters and their respective categories at the verbal association level. The classifications and categories contained in Gordon's *Rhythm Content Learning*

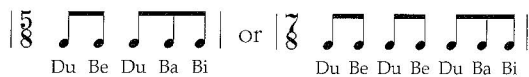
Gagné's Eight Levels of Learning	Gordon's Application to Music Learning
PERCEPTUAL LEARNING	
1. Signal Learning	1. Simple perception of sound
2. Stimulus-Response Learning	2. A musical sound--the response which it elicits from the listener
3. Chaining	3. One response becomes the stimulus for another response, etc.
4. Verbal Association	4. Spoken or written descriptions are used to identify responses (i.e., names of lines and spaces, time-value names of notes, and the names of key and meter signatures).
CONCEPTUAL LEARNING	
5. Multiple Discrimination	5. The ability to differentiate aurally or symbolically between major and minor, duple and triple, etc.
6. Concept Learning	6. The ability to transfer and generalize multiple discrimination understandings to unfamiliar music.
7. Principle Learning	7. Understanding of a theoretical nature (i.e., duple and triple meter in terms of note values, etc.)
8. Problem Solving	8. Basically the same as principle learning; both form the bases for creative thinking.

Figure 2. Gagné's Levels and Gordon's Applications



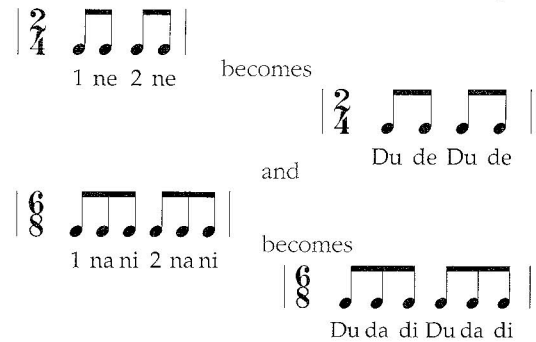
Sequence (1976) are shown in Figure 4. The "classifications" represent several changes from his earlier labels.⁷ The "categories" include divisions, elongations, rests, ties, and upbeats, in addition to tempo beats and meter beats.

Gordon's operational definition of rhythm conforms to his 1971 definition in terms of "tempo beats," "meter beats," and "melodic rhythm." His rhythm syllables remain constant as well, except for one notable addition. Gordon (1976, pp. 118-119) assigned the following syllables to unusual meter, i.e., meters in which the tempo beats are not temporally equal.



Prior to 1976, numbers had been assigned to tempo beats in both usual and unusual meters. Gordon justified the use of "Du" for tempo beats in unusual meter because it emphasizes the difference between usual and unusual meter. It also highlights the fact that tempo beats may or may not be paired.

In 1980 Gordon defined verbal association in terms of vocabulary (rhythm syllables) and proper names (names of tonalities and meters), and he made significant changes. Regarding vocabulary, he replaced the numbers "1" and "2", previously associated with tempo beats in usual meter, with the syllable that he had begun in 1976 to associate with tempo beats in unusual meter—Du. He replaced the consonant "n" in "ne" and "na ni" with the consonant "d." For example,



Gordon (1980, p. 197, and 1989, p. 265) credits the influence of James Froseth and Albert Blaser for his decision to extend the syllables that he used previously for tempo beats in unusual meter



to a parallel use in usual duple and usual triple meters. The practical research of Froseth and Blaser indicated that the syllables were easier to comprehend, and that they were easily transferred to instrumental performance.

Regarding proper names, Gordon replaced the terms "tempo beat" and "meter beat" with the terms "macro beat" and "micro beat," respectively. He justified the changes by citing the confusion created by the "established association the average reader had for the old terms."⁸ He defined the macro beat in terms of long or large, and he defined the micro beat in terms of short or small.

Gordon's current system of rhythm syllables was essentially established by 1980. Several examples of Gordon's rhythm syllables for usual duple meter, usual triple meter, usual combined meter, and unusual paired meter, are shown in Figure 6. The first example in each classification includes

CLASSIFICATION	CATEGORIES
Usual Duple	Tempo and Meter Beats Divisions and Elongations Rests Ties Upbeats
Usual Combined	Tempo and Meter Beats Divisions and Elongations Rests Ties Upbeats
Unusual Unpaired Nonmetrical	Tempo and Meter Beats Divisions and Elongations Rests Ties Upbeats
Usual Triple	Tempo and Meter Beats Divisions and Elongations Rests Ties Upbeats
Unusual Paired	Tempo and Meter Beats Divisions and Elongations Rests Ties Upbeats
Figure 4. Gordon's (1976) Rhythm Content Learning Sequence	

macro beats, micro beats, and divisions. The second example in each classification includes all functions.

Gordon has continued to modify and expand his skill learning sequence and rhythm content learning sequence in response to the results of practical and experimental research, but each retains most of the characteristics of the earlier models. It is interesting to compare the contemporary

versions shown in figures 6 and 7 with the earlier versions shown in figures 2 and 3.

Practical Applications

Although Gordon's rhythm syllable system has remained unchanged for nearly a decade, its application in the classroom has undergone many revisions in response to the results of practical and experimental research. It is not surprising that some confusion has accompanied the use of the system. In 1984, Gordon (pp.36-37) expounded on the issue of sign and symbol in an attempt to clarify the purpose and application of rhythm syllables:

In music, signs are audiated or aurally perceived and symbols are visually perceived. Verbal associations are signs which have internal logic, in contrast to symbols, which are arbitrary.

In other words, "a sign is, and a symbol represents." Rhythm syllables (signs) should be performed (chanted) and symbols (notation) should be read. Students should not read signs (du de du de); they should read the notation



that represents those signs. Also, because of the arbitrary nature of symbols, different symbols (notation) may represent the same signs (rhythm syllables). For example, the notated patterns in Figure 5 sound the same because they represent the same signs.

Gordon (1980, p. 100) coined the word "enrhythmic" to refer to those patterns that sound the same but are notated differently.

Gordon's research on tonal and rhythm pattern difficulty (1978) yielded valuable information for teachers wanting to adapt instruction to individual musical differences among students. Easy, moderate, and difficult tonal patterns and rhythm patterns became the bases of the learning sequence activities component of *Jump Right In: The Music Curriculum* (1986). Students are

1.	2.	3.	4.
du di du da di	du di du da di	du di du da di	du di du da di

Figure 5.

Figure 6 displays four sets of musical notation and corresponding syllables, categorized by meter type:

- Usual Duple Meter:**
 - Line 1: Du da Du Du ta de ta Du ta de
 - Line 2: de Du (da) Du ta ta Du
- Usual Triple Meter:**
 - Line 1: Duda di Du Du ta da ta di ta Du da ta di
 - Line 2: di Du di Du Du da di ta Du
- Usual Combined Meter:**
 - Line 1: Du de ta Du da di Du Du ta da ta di
 - Line 2: (de) Du da di Du de ta di Du
- Unusual Paired Meter:**
 - Line 1: Du ba bi Du be Du Du ta be
 - Line 2: be Du ta bi Du ta be (bi) Du

Figure 6. Gordon's Rhythm Syllables for Macro Beats, Micro Beats, Divisions and Elongations, Ties, Rests, and Upbeats in Usual Duple Meter, Usual Triple Meter, Usual Combined Meter, and Unusual Paired Meter.

taught rhythm patterns and tonal patterns in accordance with their tonal and rhythm aptitudes. The patterns are taught separately so that students will attend to the rhythm aspect of music when rhythm patterns are being taught, and to the tonal aspect of music when tonal patterns are being taught.

Techniques associated with teaching rhythm patterns and rhythm syllables have been improved and clarified by use of the *Tonal and Rhythm Pattern Audiation Cassettes* (Gordon, 1981), the *Tonal and Rhythm Pattern Cassettes* from *Jump Right In: The Music Curriculum* (Gordon & Woods, 1987), and the *Home-Study Cassette* from *Jump Right In: The Instrumental Series* (Grunow & Gordon, 1989). The availability of the cassette tapes has facilitated aural practice on a large scale and has led to greater uniformity in the pronunciation of the syllables. A change in the pronunciation of the syllable "ta" is also evident on those recorded examples. Gordon (1971) recommended pronouncing the "ta" like "to" as in *topic* for division patterns. To facilitate the rapid pronunciation of "ta" in patterns such as

Du tade taDu ta de

DISCRIMINATION
Aural/Oral

Verbal Association

Partial Synthesis

Symbolic Association
Reading/Writing

Composite Synthesis
Reading-Writing

INFERENCE
Generalization
Aural/Oral - Verbal - Symbolic
Reading/Writing

Creativity/Improvisation
Aural/Oral - Symbolic
Reading - Writing

Theoretical Understanding
Aural/Oral - Verbal - Symbolic
Reading - Writing

Figure 7. Gordon's (1989) Skill Learning Sequence

the “ta” has evolved into “ta” as in *tamale*. Teachers using learning sequence activities also employ expressive performance and musical breathing as a part of rhythm pattern instruction.⁹

Summary and Conclusions

The rhythm syllables associated with Gordon's music learning theory evolved over a span of less than a decade (1971-80). It should be understood that the purposes for using those rhythm syllables, and the proper application of rhythm syllables to music instruction, are more important than the actual syllable characteristics (Du ta de ta, Du da di, etc.). When applied by a skillful and knowledgeable teacher, the rhythm syllables associated with Gordon's music learning theory serve to enhance rhythm audiation more efficiently than will any system based on note values. On the other hand, regardless of how easy the syllables are to articulate and transfer to instrumental performance, they will serve no better than many other syllable systems when the teacher does not adhere to the proper sequence and the appropriate techniques. When that is the case, the syllables will only encourage imitation without audiation, and the effects will be short-lived.

The changes in Gordon's rhythm syllables (vocabulary and proper names) over time are related to a shift in his operational definition of rhythm. Originally, Gordon defined the tempo beat as the walking, marching, or swaying beat, or as the conductor's beat. From the beginning, his syllables were distinguishable from other syllables because they were assigned to “functions” (tempo beats, meter beats, etc.). By 1976, while his operational definition of rhythm was unchanged, he no longer characterized the tempo beat as the walking, marching, or swaying beat in the music. By 1980, Gordon changed the labels “tempo beats” and “meter beats” to “macro beats” and “micro beats” respectively. He characterized macro beats as long or large, and micro beats as short or small. Gordon's concept of macro beats appears to be more inclusive than his original concept of tempo beats.

There is perhaps a logical explanation for this change. When Gordon began to de-

METER CLASSIFICATIONS	PATTERN FUNCTIONS
Usual Duple	Macro and Micro Beats Divisions and Elongations Rests; Ties;
Usual Combined	Macro and Micro Beats Divisions and Elongations Rests; Ties; Upbeats
Unusual Unpaired	Macro and Micro Beats Divisions and Elongations Rests; Ties; Upbeats
Unusual Unpaired Intact	Macro and Micro Beats Divisions and Elongations Rests; Ties; Upbeats
Monometric Monotemporal	All Meters All Tempos
Usual Triple	Macro and Micro Beats Divisions and Elongations Rests; Ties; Upbeats
Unusual Paired	Macro and Micro Beats Divisions and Elongations Rests; Ties; Upbeats
Unusual Paired Intact	Macro and Micro Beats Divisions and Elongations Rests; Ties; Upbeats
Multimetric/ Multitemporal	All Meters All Tempos
Polymetric/ Polytemporal	All Meters All Tempos Multimetric/ Multitemporal
Figure 7. Gordon's (1989) Rhythm Content Learning Sequence.	

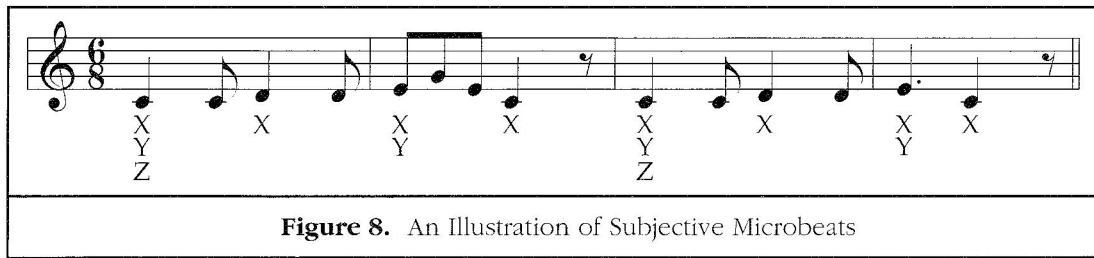


Figure 8. An Illustration of Subjective Microbeats

velop his theory of how children learn music in 1971, he was writing from a theoretical point of view guided by his music aptitude research. By 1976, he was actively engaged in the practical application of his theory. Apparently the process of practical application led Gordon to alter his perception of the tempo beat, until it often becomes what is now known as a micro beat. In current terms, the walking, marching, or swaying beat in the music is sometimes the macro beat and sometimes the micro beat.

Of course, subjectivity plays a big part in the process of feeling and labeling the temporal qualities of music. One person might feel macro beats at the X points in Figure 7, another at the Y points, and a third at the Z points. What is important to effective rhythm instruction is that music teachers use a rhythm syllable system that promotes efficient rhythm learning. Specifically, the system should be based upon beat function so that persons can internalize the aural and kinesthetic properties of music. The rhythm syllable system of Gordon's music learning theory offers those advantages.

Notes

1. Guido d'Arezzo introduced tonal syllables in the eleventh century to aid in teaching music reading. Rhythm syllables were introduced with the Galin-Paris-Chevé system in France in the nineteenth century.
2. For additional information about the history of tonal and rhythm syllables and comparisons of various syllables, see *Readings in Music Learning Theory* by Walters and Taggart (1989) and *Learning Sequences in Music: Skill, Content, and Patterns* by Gordon (1989).
3. Rhythm syllables (vocabulary) and the names of meters and rhythm pattern functions (proper names) constitute the rhythm portion of the verbal association level in Gordon's Music Learning Theory. Therefore, vocabulary and proper names actually facilitate the retention of rhythm patterns in long-term memory. The remaining portion of the verbal association level comprises vocabulary and proper names for the tonal aspect of music.
4. Gordon's traditional theory training was with Allen Irvine McHose at the Eastman School of Music.

For a time, Gordon was the bass player in the Gene Krupa Band.

5. For more information regarding the influence of other psychologists in Gordon's *The Psychology of Music Teaching* (1971), chapter four, "The Application of Current Learning Theories of Music Education."

6. Gordon (1976), p. 10.

7. Within this article, see page 73.

8. Gordon (1980), pp. 88-89.

9. For additional information about the techniques for teaching rhythm patterns and rhythm syllables, see the Reference Handbook for Using Learning Sequence Activities from *Jump Right In: The Music Curriculum* (Gordon & Woods, 1986) and the "Teacher's Guide" from *Jump Right In: The Instrumental Series* (Grunow & Gordon, 1989).

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