A STUDY OF RHYTHM IN

BACH'S ORGELBÜCHLEIN

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A STUDY OF RHYTHM IN
BACH'S ORGELBÜCHLEIN

THESIS

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by

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CHAPTER I

INTRODUCTION

Many studies have been made of the music of Bach. These have been limited largely to such elements as melody, harmony, and counterpoint. There remains a vast amount of knowledge yet to be gained from this composer whose music stands as an almost inexhaustible source of musical meaning.

One vitally important element which has seemingly been neglected is rhythm. Rhythm is the chief form-giving principle for the temporal arts. It is the background upon which are deployed the complex tonal factors, frequency (pitch), intensity (loudness, stress), wave form (quality), and duration, which combine into the higher units of motive, cadence, tonality, and the like, and culminate in the whole tonal-rhythmic pattern we call music.¹

If a complete understanding of Bach's music is desirable, the rhythmic aspect should not be overlooked.

"Every historical style-period and style-species exhibits its own peculiar rhythmic characteristics."² This is particularly true of the Baroque era. It was characterized by simple rhythms with regularly recurring accents. These rhythms, with their metrical regularity, were

¹Glen Haydon, Introduction to Musicology, p. 163.
²Ibid., p. 164.
maintained as the basis for music from c. 1600 to 1900.\(^3\)
The music of Bach illustrates most successfully the application of these rhythms to the contrapuntal style.

The present study is limited to Bach's *Orgelbüchlein*.\(^4\) The OB has been chosen because it represents a "closed" group of works which are in the same general style. It is composed of forty-five\(^5\) chorale preludes, written as part of a proposed 164 preludes which would depict the liturgical year. Bach wrote these preludes for beginners in organ-playing and primarily for his eldest son, Wilhelm Friedman.\(^6\)

In the autograph copy of the OB, the complete title is

*a Little Organ-Book*, in which it is given to the beginning organist to perform chorales in every kind of way, and to perfect himself in the study of the pedal, inasmuch as in the chorales to be in it the pedal is treated as quite obbligato. Inscribed in honour of the Lord Most High, And that my neighbour may be taught thereby.\(^7\)


\(^4\)For the remainder of this study *Orgelbüchlein* will be abbreviated to OB.

\(^5\)No. 29 of the OB is composed of three verses which are different arrangements of the same chorales-tune. In the present study each of these verses will be treated separately, thus making actually a total of forty-seven different preludes. See the Appendix for a complete list of the preludes.


\(^7\)Ibid., footnote no. 329.
Each prelude is built upon a given chorale-tune and text. They are relatively short in length depending largely on the particular chorale that is set.

Certain limitations are present in the study of rhythm in the *CGB*. It is an essential limitation in the study of any element of music that some aspects of that element cannot be isolated for study. Firstly it is difficult to isolate completely any particular element of music; the close interdependence of the elements almost precludes their separation. In addition to the indivisibility of the music there exists an essential unity. This essential unity—or the total psychological effect of a piece of music—is something different from the sum of the effects of the individual elements; thus one cannot say that "the whole is equal to the sum of the parts." Instead, it can be said that the "musical whole is not equal to the sum of the parts"; i.e., the elements cannot exist independently and still function as a musical unit. This being true, there exists a basic problem of analysis: the isolation of rhythm from the musical context. Psychology has not as yet dealt adequately with this problem, nor has it forged the necessary tools. The psychological effect of the music on the hearer, for example, cannot at present be evaluated. For this reason no attempt will be made in this study to deal with the psychological effect of the rhythm of Bach's music. Until scientists and musicians alike overcome this
obstacle, analysis will have to proceed as it has in the past. Care will be taken in this study, however, to consider rhythm not only as a separate element of the music but also in its relation to the other elements.

A second limitation is present in the study of rhythm in the OB. "The important subject of rhythm in music has not as yet been clearly and adequately treated . . . ." There exists no functional theory of rhythm which can readily be applied to all music. General definitions have been made, but most of these do not pretend to offer any answer to this particular problem. Without such a functional theory of rhythm the present study must necessarily be limited to those facts about rhythm which are generally accepted as being sound.

"Rhythm in music includes so much that the attempt to define it in any complete sense might well result in an attempt to define music itself." This contention cannot be easily overlooked, for the understanding of the function of rhythm in music could very well be a tremendous step toward an adequate understanding of all music. Perhaps the real nature of rhythm can never be fully comprehended. However, it is possible to give a general definition showing the characteristics of rhythm as an integral part of music.


Music can only exist in time: it is a temporal art. It has no spatial qualities such as width, length, depth, line, or curve. To be perceived in time, then, music must be conceived in terms of temporal organization. This temporal organization imparts design. The design can be perceived, however, only through the tonal materials of music which appear in an organized association of durations and stresses. This temporal design may be termed rhythm and may now be seen to be the form-giving principle of music.

At this point a distinction should be made between rhythm and meter. "In itself, meter has no rhythm."¹⁰ Meter is a means of measuring duration, its principle purpose being an aid in performance. The placement of the barlines depends primarily on the points in the music which have the feeling of an initial pulse. A large amount of music, being regular in pulse, can be measured into units of either two or three beats.¹¹ For this reason it is often assumed that the resultant meter itself is rhythmic, thereby placing rhythm in a subsidiary role to meter. It is important that there should be no confusion of the roles played by meter and rhythm in music. Rhythm is composed of an

¹¹ Ibid.
association of durations and stresses built on a structural design in time; meter is a man-made measurement of music and is the result of rhythm.

The procedure to be followed in this study is to be statistical. In this study we are concerned with a very small part of Bach's musical output. Generalizations about the rhythm of the OB could be made and would very likely be acceptable; however, to be certain as to the frequency of occurrence of specific rhythmic characteristics, the statistical approach would seem to be more valid. Statistics is "the science of the collection and classification of facts on the basis of relative number or occurrence as a ground for introduction." Statistics can only imply general truths and is worth very little without proper interpretation. For this reason the present study (1) will gather statistics as to the frequency of occurrence of certain characteristics of rhythm in the OB, and (2) will interpret these statistics, attempting to form conclusions as to the nature of rhythm in the OB.

Thus for these reasons the statistical procedure is adopted. This does not imply that this procedure or any other procedure will provide the answer to the problems.

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involved in the analysis; however, the statistical approach does point, scientifically, to the style techniques employed by the composer.

Many musical decisions will obviously have to be made in this study. Until a science of music is finally reached, which is based not on the analyst's musical background but on scientific realities, musical decisions will continue to be made on the basis of individual interpretation.
CHAPTER II

THE MOTIVE

In the late Baroque era the motive was one of the most significant elements in the rhythmic structure of the music. In its Baroque music's most consistent manifestation continuous expansion produced a movement that elaborated a single motive in an unbroken series of rhythmic figures, running from beginning to end like a perpetuum mobile.¹

The importance of the motive in the forms of that period cannot be underestimated. It served as the basic element in the development of the material, and its use contributed directly to the establishment of the forms of later periods.

Clear examples of this treatment of the motive can be found in Bach's OB. Here the motive was used as a developmental device. The plain notes of the chorale tune with their regular rhythm were balanced by the rhythmic variety of the motives in the accompanying contrapuntal parts.

"A rigid definition of the limits of a musical motive is as impractical as a description of the size of a thought or an idea."² It is important, however, to establish certain basic facts about the general characteristics of the motive.

¹Manfred Bukofzer, Music in the Baroque Era, p. 359.
²Walter Piston, Counterpoint, p. 99.
W. Apel defines the motive as "the briefest intelligible and self-existing fragment of a musical theme or subject."\(^3\) This definition does not seem sufficiently applicable in the present study, for the motive as it is treated in the \(\text{OB}\) is not specifically a part of a "musical theme or subject" but is rather an independent element from which all development grows. P. Goetschius understands the motive as "a brief melodic sentence, calculated to be (and adopted as) the basis and source of the evolution, \(\text{and}\) construction (or 'invention'), of the polyphonic composition in view."\(^4\) This definition can be adopted in the present study, for the motive in the \(\text{OB}\) is, as Goetschius's definition implies, the basic developmental unit in the form of the chorale prelude.

It should be noted here that the term "motive" derives from the German word "motiv" which, however, is sometimes translated as "figure"; hence there is a resultant confusion in terminology, for the term "figure" is frequently used in English as synonymous with "motive".\(^5\) A distinction should therefore be made between these two terms. A "motive" must be sufficiently characteristic to function as a vital part of the music. It must recur frequently enough in the form

\(^3\)Willi Apel, "Motive", \textit{Harvard Dictionary}.

\(^4\)Percy Goetschius, \textit{Applied Counterpoint}, p. 94.

\(^5\)Apel, \textit{Op. Cit.}
of the music to be established as a basic element of the
development; otherwise it cannot be considered a motive. A
"figure" is of secondary importance to a motive. It does
not function as a developmental device but serves rather as
an enrichment of the texture of the music. It can be said
that a figure is usually, but not always, smaller than a
motive. Fig. 1 shows a typical motive from the OB and its
division into figures.

![Motive Division Diagram](image)

Fig. 1.—A typical motive and its division into figures
from Bach’s OB, No. VII ("Der Tag, der ist so freudenreich"),
meas. 1.

In Bach’s OB the motive is the chief element of develop-
ment. The motives are

the very bricks or germinating cells of the composition.
It is through their highly developed use (repetition in
the same or in other parts; transposition into other
pitches; rhythmical modification; contrapuntal combina-
tion with other motives) that Bach . . . has bestowed
upon his work a unique quality of logical coherence
. . . .

Thus a study of the rhythmic characteristics of the motive as it is used in the OB would reveal, in part, the important function of rhythm in the OB.

The Dimensions of the Motive

In order to study the rhythm of the motives in the OB it is necessary, first, to establish their size. Two aspects are involved: 1) the number of notes and 2) the number of beats in each motive. Fig. 2 illustrates the procedure used in analysis of the dimensions of a typical motive in the OB. The determination, although somewhat arbitrary (Introduction, p. 7), of the motives depends on:

Fig. 2. The number of notes (a) and the number of beats (b) in a motive from Bach's OB, No. II, "Gott, durch deine Güte", meas. 1.

their tendency to progress to or from an accented portion of the measure. In a later section in this chapter the
different types of rhythmic motives will be discussed, and the determination of these motives will then be made more clear.\textsuperscript{7}

It was found that from a total of 125 motives in the forty-five preludes there were

15 two-note motives
20 three-note motives
63 four-note motives
12 five-note motives
10 six-note motives
5 seven-note (or more) motives

The number of beats in these same motives were classified and it was found that there were

72 one-beat motives
41 two-beat motives
10 three-beat motives
2 two-measure motives

The relationships that exist between the number of beats and the number of notes in these motives is shown below in Table 1. The figures at the head of each column indicate the number of notes, while the figures within the columns indicate the number of beats in these motives. The letters "a", "b", and "c" distinguish between motives in the same chorale prelude which have the same number of notes and yet are different motives.

\textsuperscript{7}A list of the motives in the \textit{OB} as the present writer has interpreted them can be found in Appendix 1. The motives have been subdivided into figures where it seems possible to do so.
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<th>Three-note motives</th>
<th>Four-note motives</th>
<th>Five-note motives</th>
<th>Six-note motives</th>
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<td>Time signature</td>
<td>Number of beats in each motiveb</td>
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<td>b) 1</td>
<td>c) 2</td>
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<td>Number of beats in each motive(^b)</td>
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<td>Three-note motives</td>
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<td>Six-note motives</td>
<td>Seven (or more)-note motives</td>
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<td>a) 1</td>
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<td>a) 1</td>
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<td>b) 1</td>
<td>b) 2</td>
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<td>XLIII.</td>
<td>C</td>
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### Table 1—Continued

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<th>Time</th>
<th>Number of beats in each motive²</th>
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<tr>
<td>XLI.</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>XLII.</td>
<td>C</td>
<td></td>
</tr>
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<td>C</td>
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<td>Two-meas. motives</td>
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</table>

*¹A list of the complete titles of the preludes can be found in Appendix 2.

*²The letters "a", "b", and "c" distinguish between motives in the same chorale prelude which have the same number of notes and yet are different motives.

*³The letter "C" stands for common time.

Table 1 illustrates clearly that all the motives in the C² occupy simple metrical units (from as short as one beat in 4/4 time to as long as three beats in 3/2 time). In the majority of instances there is a direct relation between the number of notes and the number of beats in the motives; i.e., the smaller the number of notes in the motive, the smaller
the number of beats it occupies. The four-note motive within the length of one beat was the most frequent dimension found, and therefore we may judge that Bach preferred this motive of small dimension for use in the OB.

Types of Rhythmic Motives

The rhythmic motives used in the OB fall into two categories: anacrustic and thetic. The term "anacrustic" describes those motives which progress from an accented portion of the measure to another accent. The sense of motion forward to the next down-beat, imparted by the anacrusis, seems to be continually present in melodies possessing unmistakable rhythmic vitality, such as those of J. S. Bach. The term "thetic" describes those motives which begin on an accent and end on an unaccented portion of the measure. Thetic motives do not, as anacrustic motives do, possess the "sense of motion forward to the next down-beat."

Two secondary types of rhythmic motives are present in the OB: the anacrustic motive with "delayed resolution"

7The anacrustic motive is often preceded by a rest taking the place of the down-beat. As in the preceding section, this rest is not to be considered as part of the motive. In his textbook, Applied Counterpoint, P. Goetschius explains that "brief rests may be inserted at the beginning (generally only at the beginning) of almost any beat, but especially any accented beat." Bach has used this device extensively in the OB.

8Piston, Op. Cit., p. 34.
and the anacrusic motive with "syncopic rhythm." The term "delayed resolution" describes those rhythmic motives which, although anacrusic, do not immediately progress to the accented portion of the measure but appear in a series in which the "accent" is several times replaced by a rest and only in the last motive appears as a note. Fig. 3 illustrates a series of anacrusic motives with their delayed resolution.

![Anacrusic motive with delayed resolution](image)

Fig. 3.—Anacrusic motive with delayed resolution from Bach's **GB**, No. XII, ("Herr Gott, nun schleuss den Himmel auf"), meas. 3-4.

The anacrusic motive with "syncopic rhythm" is a motive which, although beginning on a weak and ending on a strong beat, contains notes that displace the regular accents; i.e., a weak tied over into a strong beat. Fig. 4 illustrates an anacrusic motive with syncopic rhythm.
Fig. 4.—Anacrustic motive with syncopic rhythm from Bach's OB, No. XXIX ("Christ ist erstanden," Verses 1, 2, and 3), meas. 1-2.

Table 2 shows types of rhythmic motives in the OB and the frequency of their occurrence.

**TABLE 2**

**TYPES OF RHYTHMIC MOTIVES AND THEIR OCCURRENCE IN THE OB**

<table>
<thead>
<tr>
<th>Rhythmic Motive</th>
<th>Occurrence in OB&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Rhythmic Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-note Motives</td>
<td></td>
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<tr>
<td>![Motive Image 1]</td>
<td>I, VI, and VII</td>
<td>Anacrustic</td>
</tr>
<tr>
<td>![Motive Image 2]</td>
<td>I, III, VI, and XXVII</td>
<td>Anacrustic</td>
</tr>
<tr>
<td>![Motive Image 3]</td>
<td>XIX</td>
<td>Anacrustic with syncopic rhythm</td>
</tr>
<tr>
<td>![Motive Image 4]</td>
<td>XXVIII</td>
<td>Anacrustic with delayed resolution</td>
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<tr>
<td>![Motive Image 5]</td>
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<td>Anacrustic</td>
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### TABLE 2--Continued

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<th>Occurrence in OBA</th>
<th>Rhythmic Type</th>
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<tr>
<td></td>
<td>XXX</td>
<td>Anacrusic</td>
</tr>
<tr>
<td></td>
<td>XL</td>
<td>Thetic</td>
</tr>
<tr>
<td></td>
<td>III, XIII, XXXIV, and XXXIX</td>
<td>Thetic</td>
</tr>
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<td><strong>Three-note Motives</strong></td>
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<td>IX, XII, XXIII, XXIV, XXV, XXIX (Verse 1), XXXI, XXXV, XXXVIII, and XLI</td>
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<td>XVII</td>
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<td>XIV, XIX, XXXIII</td>
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<tr>
<td>Rhythmic Motive</td>
<td>Occurrence in OB</td>
<td>Rhythmic Type</td>
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<tr>
<td><strong>Four-Note Rhythmic Types</strong></td>
<td>I, II, III, IV(2), V, VI(2), VII, VIII(2), IX, XI(2), XII, XIII, XV(2), XVI(2), XVII, XVIII(2), XX, XXII(2), XXIII(2), XXIV(2), XV, XXVI, XXVII(2), XXIX(Ver.3)(2), XXX, XXXII, XXXIV(2), XXXV, XXXVI(2), XXXVII(2), XXXVIII, XXXIX(2), XLI, XLII, XLIII(2), XLIV, and XLV.</td>
<td>Anacrustic</td>
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<tr>
<td></td>
<td>XXI</td>
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<td>XXXII</td>
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<td>XXII, XXIX(Ver.1)</td>
<td>Anacrustic with syncopated rhythm</td>
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<td>XXXIII</td>
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<td></td>
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</tr>
<tr>
<td>Rhythmic Motive</td>
<td>Occurrence in OB&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Rhythmic Type</td>
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<tr>
<td><img src="image10" alt="Rhythmic Motive" /></td>
<td>XVIII, and XLIII</td>
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<td>Occurrence in OB&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Rhythmic Type</td>
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<tr>
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</tr>
<tr>
<td>![Image]</td>
<td>XXXVIII</td>
<td>Anacrustic with delayed resolution</td>
</tr>
</tbody>
</table>

<sup>a</sup>A list of the complete titles of the preludes can be found in Appendix 2.

<sup>b</sup>The numbers in parenthesis are used when more than one motive of the same type appears in the same chorale prelude.
It is evident from Table 2 that, compared with only eleven thetic motives, the 114 anacrustic motives are greatly in the majority. The reason for this predominance can be better understood if a close examination of the thetic motives is made.

**Thetic Motives**

The thetic rhythm occurring most frequently is the three-note motive, \( \text{\textcopyright}\text{\textcopyright} \). This motive appears in five chorale preludes: Nos. XII ("Jesu, meine Freude"), XVI ("Das alte Jahr vergangen ist"), XXIX ("Christ ist erstanden", Verse 3), XXXVIII ("Durch Adam's Fall ist ganz verderbt"), and XLI ("In dich hab' ich gehoffet, Herr"). This motive is found either coupled with an anacrustic motive or is placed in a relatively unimportant position in the developmental plan of the prelude.\(^9\) It can be proposed that this motive is a "weak inversion" of the anacrustic motive, \( \text{\textcopyright}\text{\textcopyright}\text{\textcopyright}\text{\textcopyright}\text{\textcopyright} \), and is thereby of secondary importance as a motive.

The thetic rhythm appearing next most frequently is the two-note motive, \( \text{\textcopyright}\text{\textcopyright} \). This motive appears in four preludes: Nos. III ("Herr Christ, der ein'ge Gottes-Sohn"),

\(^9\)It will be observed that in this motive there exists a mild form of syncopation. Owing to the subdivision of the first part of the beat into two sixteenth-notes and the absence of such subdivision in the second half, a slight agogic accent is produced on the weak part of the beat. In organ music this agogic accent cannot be combated by a dynamic accent on the beat; thus this agogic accent is more effective in organ music than in other instruments.
XIII ("Christum wir sollen loben schon"), XXXIV ("Herr Jesu Christ, dich zu uns wend'"), and XXXIX ("Es ist das Heil uns kommen her"). In each prelude it appears almost exclusively in the chorale-tune. It is used consistently as a rhythm for the passing tone within the melodic interval of a third in the chorale-tune. In each case the rhythm, $\uparrow\downarrow$, could have been used for the passing-tone rhythm. This shows possibly Bach's obvious concern to make the chorale-tunes interesting rhythmically as well as melodically. Fig. 5 illustrates the rhythm used by Bach in a chorale-tune and the rhythm which could have been used in its stead.

Fig. 5.—The passing-tone rhythm which Bach employed (a) and rhythm which could have been used in its stead (b) from Bach's OR, No. XXXIX ("Es ist das Heil uns kommen her"), meas. 1-2.

The two remaining thetic rhythms, the two-note motive, $\uparrow\downarrow$, and the four-note motive, $\uparrow\uparrow\uparrow\uparrow\downarrow$, occur in No. XL ("Ich ruf' zu dir, Herr Jesu Christ"), which is the only prelude containing only thetic motives. This is
possibly explained by the fact that the strong thetic rhythms in the accompanying lines of the prelude are used to balance the rhythmic freedom of the ornamented chorale-tune.

Thus the primary purpose of the thetic motives in the \( OB \) is to balance the rhythmic activity when there exists a need for such a device.

**Anacrustic Motives**

The anacrustic rhythm appearing most frequently is the four-note motive, \( \frac{2}{3} \). From the total of 125 rhythmic motives in the \( OB \) fifty-six are of this type. All but nine of the chorale preludes\(^{10}\) contain this rhythmic motive, and these preludes are either in compound time (such as 12/8 time)\(^{11}\) or contain no four-note anacrustic motives at all\(^{12}\).

\(^{10}\)Nos. X ("In dulci jubilo"), XIV ("Wir Christenleut"), XIX ("Herr Gott, nun schliesse den Himmel auf"), XXI ("Christe, du Lamm Gottes"), XXVIII ("Jesus Christus, unser Heiland"), XXIX ("Christ ist erstanden") Verse 1, XXXI ("Erschienen ist der herrliche Tag"), XXXIII ("Komm, Gott, Schöpfer, heiliger Geist"), and XL ("Ich ruf' zu dir, Herr Jesu Christ").

\(^{11}\)Nos. X ("In dulci jubilo"), XIV ("Wir Christenleut"), XIX ("Herr Gott, nun schliesse den Himmel auf"), XXVIII ("Jesus Christus, unser Heiland"), and XXXIII ("Komm, Gott, Schöpfer, heiliger Geist").

\(^{12}\)Nos. XXI ("Christe, du Lamm Gottes"), XXIX ("Christ ist erstanden"), XXXI ("Erschienen ist der herrliche Tag"), and XL ("Ich ruf' zu dir, Herr Jesu Christ").
This type of rhythmic motive was Bach’s favorite. Its simple rhythm was particularly suited to the regular rhythm that is so characteristic of the \( CB \).

The next most frequent anacusic rhythm is the three-note motive, \( \text{\textcopyright} \). This motive appears in ten of the chorale preludes.\(^{13}\) Usually this motive is used when the chorale-tune is ornamented. Bach was apparently concerned at all times with a proper balance of rhythmic activity, for he used such rhythmic motives to provide a stable rhythmic accompaniment to the ornamented chorale-tune.

The remaining anacusic motives occur much less frequently and usually occupy a position of relatively little developmental importance.

Anacusic motives with delayed resolution.--The two-note anacusic motive with delayed resolution, \( \text{\textcopyright} \), occurs in prelude No. XIX ("Herr Gott, nun schleuss den Himmel auf"). The device of delayed resolution appears only during the interludes of the prelude.\(^{14}\) Each time a new

\(^{13}\) Nos. IX ("Vom Himmel kam der Engel Schaar"), XII, ("Jesu, meine Freude"), XXIII ("Da Jesus an dem Kreuze stund"), XXIV ("O Mensch, bewein' dein' Sünde gross"), XXV ("Wir danken dir, Herr Jesu Christ"), XXIX ("Christ ist erstanden") Verse 1, XXXI ("Erschienen ist der herrliche Tag"), XXXV ("Liebster Jesu, wir sind hier"), XXXVIII ("Durch Adam's Fall ist ganz verderbt"), and XLI ("In dich hab' ich gehoffet, Herr").

\(^{14}\) The term "interlude" is here used to indicate the short passages inserted between the various phrases of the chorale-tune.
phrase of the chorale-tune begins the rhythm is resolved. 
Bach evidently employed this device to provide further 
interest, rhythmically, and at the same time to call 
attention to the interludes of the prelude. By doing so 
he achieved a constant diversity of rhythm and an incisive 
formal structure for the prelude.

The three-note anacrustic motive, \( \begin{array}{c} \underline{1} \\ \underline{3} \end{array} \), involving 
delayed resolution occurs in No. XVII ("In dir ist Freude"). 
In its first four appearances it is placed two beats ahead 
of the approaching interlude, thereby announcing the end of 
a phrase of the chorale-tune and the beginning of an inter-
lude. The last three occurrences of this motive, however, 
appear within the phrase. The unique function of this mo-
tive can perhaps be explained by its use within the form. 
This prelude is in binary form. The first use of this 
motive appears only in the "A" part of the prelude and here 
aids in identifying phrase-endings. The second use occurs 
only in the "B" part; here the motive is used within the 
phrase itself rather than following the close of the phrase. 
Thus it can be said that Bach used this particular motive 
primarily as a constructional device in such a manner as to 
distinguish parts "A" and "B".

The four-note anacrustic motive with delayed resolution, 
\( \begin{array}{c} \underline{3} \\ \underline{4} \underline{6} \underline{8} \\ 3 \end{array} \), occurs in No. XXI ("Christe, du Lamm Gottes"). 
This motive is introduced in the inner parts at the advent
of the chorale-tune in the soprano. It is resolved at the end of this first soprano phrase and does not appear again in the prelude. Being directly derived from the principle motive, \[\text{\text{\text{\text{\text{\text{}}}}}}\text{, this motive is of secondary importance.}\]

There are two five-note anacrustic motives with delayed resolution. The first, \[\text{\text{\text{\text{\text{}}}\text{\text{\text{\text{\text{}}}}}}\text{, appears in No. VII ("Der Tag, der ist so freudenreich"). It is used throughout the chorale prelude as a constant accompanying motive to the chorale-tune and is resolved only at phrase-endings. The second motive, \[\text{\text{\text{\text{\text{}}}\text{, appears in the pedal line of No. XLIV ("Alle Menschen müssen sterben"). It, too, is consistently resolved at phrase-endings.}\]

The six-note anacrustic motive, \[\text{\text{\text{\text{\text{}}}\text{, with delayed resolution occurs in the pedal line of No. XXV ("Wir danken dir, Herr Jesu Christ"). In its third appearance the motive's resolution is the result of shifting the motive intact to a different position in the measure, making it a resolved rhythmic motive (Fig. 6). The remaining motives}

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are resolved at phrase-endings by the addition of one tone on the accented portion of the measure. Here again Bach has used this device to outline the form of the prelude.

The two remaining anacrustic motives with delayed resolution are the two-measure motives, in No. XXXIII ("Komm, Gott, Schöpfer, heiliger Geist") and , in No. XXXVIII ("Durch Adam's Fall ist ganz verderbt"). In both of these motives the resolution actually takes place within the last two beats of the motives (Fig. 7). However, they are treated as are the previous motives in that they are actually only resolved at

![Fig. 7. --Anacrustic motive with delayed resolution within the motive itself from Bach's OB, No. XXXIII ("Komm, Gott, Schöpfer, heiliger Geist"), meas. 1-2.](image)

phrase-endings.

The anacrustic motives with delayed resolution are thus used in a relatively consistent fashion throughout the OB. Bach evidently used this rhythmic type to outline clearly the form of the chorale prelude, for in all instances he resolved the motives at important points in the composition.

Anacrustic motives with syncopic rhythm.--The two-note anacrustic motive with syncopic rhythm occurring most
frequently is the motive, \(\text{\includegraphics[width=0.7\textwidth]{motive.png}}\). It appears in Nos. I ("Nun komm' der Heiden Heiland"), III ("Herr Christ, der ein'ge Gottes-Sohn"), VI ("Gelobet seist du, Jesu Christ"), and XXVII ("Christ lag in Todesbanden"). Bach often uses this motive in a sequential pattern (Fig. 8). This motive

![Motive Diagram]

Fig. 8.—Anacrustic motive with syncopic rhythm used a sequential pattern from Bach's OB, No. I ("Nun komm' der Heiden Heiland"), meas. 9-10.

seems particularly suited, rhythmically, for sequences which play an important role in the development of the prelude.

The four-note anacrustic motive with syncopic rhythm, \(\text{\includegraphics[width=0.3\textwidth]{motive2.png}}\), occurs in Nos. XXII ("Christus, der uns selig macht") and XXIX ("Christ ist erstanden") Verse 1. In both preludes it is treated as the prime rhythmic motive. Bach has placed special emphasis on this motive because of its characteristic syncopation. The metrical regularity of the chorale-tune in these two preludes is effectively balanced by the motive's displacement of the regular accents.

There are three five-note anacrustic motives with syncopic rhythm. The first, \(\text{\includegraphics[width=0.25\textwidth]{motive3.png}}\), appears in
No. V ("Puer natus in Bethlehem"). Here the syncopated rhythm is placed in the bass line of the prelude, giving the pedal a rhythmic motive which is independent of the other motives. The second syncopic motive is found in No. XIII ("Christum wir sollen loben schon"). Its rhythm is \[\frac{\text{\begin{tikzpicture} \draw[black, thick] (0,0) -- (1,0); \draw[black, thick] (1,0) -- (1,1); \end{tikzpicture}}}{\text{\begin{tikzpicture} \draw[black, thick] (0,0) -- (1,0); \draw[black, thick] (1,0) -- (1,1); \end{tikzpicture}}}\]. As before this special syncopated motive is assigned to one line, the pedal. The third syncopic motive, \[\frac{\text{\begin{tikzpicture} \draw[black, thick] (0,0) -- (1,0); \draw[black, thick] (1,0) -- (1,1); \end{tikzpicture}}}{\text{\begin{tikzpicture} \draw[black, thick] (0,0) -- (1,0); \draw[black, thick] (1,0) -- (1,1); \end{tikzpicture}}}\], occurs in No. XXVIII ("Jesus Christus, unser Heiland"). This motive is imitated in all voices and is definitely the prime motive in the chorale prelude. The regular rhythm of the chorale-tune is counteracted, rhythmically, by this syncopatic motive (Fig. 9).

![Musical notation image]

**Fig. 9.**—The regular rhythm of the chorale-tune, balanced by the rhythm of the syncopatic motive from Bach's OB, No. XXVIII ("Jesus Christus, unser Heiland"), meas. 1-2.
In every instance the anacrustic motives with syncopic rhythm assume the primary role in the prelude. They function mainly to balance the rhythmic activity.

Rhythmic Development of the Motives

The process of rhythmic development of the motives in the OB does not present itself as a prime developmental technique. This is due mainly to the brevity of the preludes. Bach's short chorale prelude form is a complex of separate, though interdependent, motives, and any major change of the rhythmic design of these motives would tend to make a less logical organization of material and thereby weaken the form. Thus the rhythmic development of the motives is limited, the most apparent changes in the motives being either melodic or harmonic (Fig. 10).

![Musical notation]

Fig. 10.—Melodic changes in a rhythmic motive from Bach's OB, No. III ("Herr Christ, der ein'ge Gottes-Sohn"), meas. 1-2.
In the course of each prelude in the OB Bach employed only two devices to develop the motives rhythmically. These devices are the use of the "tie" and "shifted rhythm."

Bach most frequently used the tie as a developmental device. This type of motive development occurs in twelve preludes.\(^{15}\) The tie was often used to join two different motives together. The last unaccented portion of the first motive was tied to the first accented portion of the following motive. The result of this tying was a new rhythm, and it was produced without actually changing the original motives (Fig. 11).

![Fig. 11.](image)

**Fig. 11.**—The tying of two different motives as a developmental device from Bach's OB, No. I ("Nun komm' der Heiden Heiland"), meas. 4-5.

Bach employed shifted rhythm as a developmental device in four preludes: Nos. XXV ("Wir danken dir, Herr Jesu Christ"), XXXIV ("Herr Jesu Christ, dich zu uns wend!"),

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\(^{15}\)Nos. I, III, VI, XIX, XXVI, XXXII, XXXIII, XXVII, XXXVIII, XLI, XLII, and XLIV. The titles for these preludes can be found in Appendix 2.
XXXVIII ("Durch Adam's Fall ist ganz verderbt"), and XLIV ("Alle Menschen müssen sterben"). Shifted rhythm is the "reproduction of the motive at a different part of the measure, so that the original arrangement of accented and unaccented tones is more or less completely changed."\(^{16}\) In prelude No. XXV ("Wir danken dir, Herr Jesu Christ") the six-note motive, \(\frac{7}{4}\) is shifted one beat within the measure to become \(\frac{3}{4}\). In Nos. XXXIV ("Herr Jesu Christ, dich zu uns wend'") and XLIV ("Alle Menschen müssen sterben") the five-note motive, \(\frac{4}{4}\) is later shifted within the measure so that its rhythmic effect is altered to \(\frac{3}{4}\). No. XLIV ("Alle Menschen müssen sterben") is an especially good example of the device of shifting motives to change rhythmic stress in the prelude. Here Bach introduces the motive, \(\frac{7}{4}\), in the first phrase and changes it in the second phrase to \(\frac{3}{4}\). He continues to alternate between these rhythms in succeeding phrases. The rhythm of the two-measure motive, \(\frac{7}{4}\), appearing in No. XXXVIII ("Durch Adam's Fall ist ganz verderbt") is also varied by a shift of the motive in relation to the bar-line. In the last two measures of the prelude the rests of the original motive are replaced by eighth notes and result in the rhythm, \(\frac{7}{4}\).\(^{16}\) Goetschius, Op. Cit., p. 76.
Bach's use of the tie and the change of motive-position are the two main devices of the rhythmic development of the motives in the GB. These devices were employed primarily either to create a new rhythm from the original motives or to outline the form of the chorale prelude. Even though the melodic and harmonic development of the motives occupied a more prominent position as developmental devices, the rhythmic development of the motives cannot be overlooked. Further study will be made of the function of the rhythmic motive in the individual lines of each prelude in the following chapter.

Conclusions

The motive is the most important single element of rhythmic structure in the GB. The small motives, usually the length of one beat, are of two rhythmic types: anacrustic and thetic. The anacrustic motives, which include motives with delayed resolution and motives with syncopic rhythm, are the most prevalent. Bach developed these motives by using the tie, which created new rhythms from two different motives, and shifted rhythm, which contributed to the formal clearness of the preludes.
The study of the rhythmic motive thus reveals important characteristics of rhythm in the OEC. Its consistent use throughout each chorale prelude typifies Bach's great genius for working with small amounts of materials in creating compositions of great merit.
CHAPTER III

THE INDIVIDUAL LINE

A basic feature of true counterpoint, yet one the importance of which is not generally understood, is the rhythmic independence of the different parts. In fact, it is through their rhythmic life no less than through their melodic independence that the voices of a contrapuntal fabric acquire the character of individuality which is the very essence of counterpoint.¹

To fully understand the function of rhythm in counterpoint the rhythmic structure of each line should be carefully considered.

The individual lines as they appear in each prelude of the OB assert contrapuntal independence in three ways: (1) placement of the rhythmic motive, (2) placement of the chorale-tune, and (3) ornamentation of the chorale-tune. A study and explanation of the application of these devices reveal how Bach achieved the rhythmic independence of the parts which is so vital to successful counterpoint.

The assignment of a rhythmic motive to only one line is the most common device used by Bach to achieve rhythmic independence. By placing a motive in only one voice, and in no other, Bach gave to this line a characteristic individuality. Upon examination of the preludes of the OB it was

¹Willi Apel, Harvard Dictionary, "Counterpoint".
found that in nine of the preludes the soprano line\(^2\) is given a rhythmic motive which does not appear in any other part,\(^3\) (Fig. 12). The alto voice is assigned a separate motive in only three of the preludes,\(^4\) (Fig. 13). In five of the preludes the tenor part is given a separate rhythmic

\[\begin{align*}
\text{Fig. 12.--The placement of a rhythmic motive in the soprano line alone from Bach's OB, No. XXXIV ("Herr Jesu Christ, dich zu uns wende"), meas. 1.}
\end{align*}\]

\(^{2}\)In the present study the lines will be called "soprano", "alto", "tenor", and "bass".

\(^{3}\)Nos. III ("Herr Christ, der ein'ge Gottes-Sohn"), XVI ("Das alte Jahr vergangen ist"), XVIII ("Jesus Christus, unser Heiland"), XXXI ("Da Jesus an dem Kreuze stund"), XXIV ("O Mensch, bewein' dein' Sünde gross"), XXXIV ("Herr Jesu Christ, dich zu uns wende"), XXXIX ("Es ist das Heil uns kommen her"), XL ("Ich ruf' zu dir, Herr Jesu Christ"), and XLI ("In dich hab' ich gehoffet, Herr").

\(^{4}\)Nos. VII ("Der Tag, der ist so freudenreich"), XIII ("Christum wir sollen loben schon"), and XL ("Ich ruf' zu dir, Herr Jesu Christ").
Fig. 13.—Designation of a separate rhythmic motive in the alto voice from Bach's DB, No. XL ("Ich ruf' zu dir, Herr Jesu Christ"), meas. 1.

motive, ⁵ (Fig. 14). In twenty-six of the preludes the bass line is assigned a rhythmic motive not appearing in the other

⁵Nos. II ("Gott, durch deine Güte"), VII ("Der Tag, der ist so freudenreich"), IX ("Vom Himmel Kam der Engel Schaar"), XIX ("Herr Gott, nun schleuss den Himmel auf"), and XXVI ("Hilf Gott, dass mir's gelinge").
Fig. 14.—Assignment of a separate rhythmic motive to the tenor part from Bach’s ÖB, No. XIX ("Herr Gott, nun schleus den Himmel auf"), meas. 2.

lines,\(^6\) (Fig. 15). It is important to note that Bach uses the bass part as an independent line in over half of the preludes. The bass voice, being a prominent outer line, assumes an important position in the texture of each prelude. Because of this prominence Bach frequently gives the bass part a characteristic motive of its own.

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\(^6\)Nos. I, II, IV, V, VI, VII, VIII, IX, XI, XIV, XV, XVIII, XIX, XXIII, XXIV, XXV, XXVI, XXIX Verse 3, XXX, XXXII, XXXIII, XXXIV, XXXVII, XXXIX, XLIII, and XLV. See Appendix 2 for complete titles.
Fig. 15.—A separate rhythmic motive appearing only in the bass line from Bach's *OB*, No. XXXIX ("Es ist das Heil uns kommen her,") meas. 1.

The chorale-tune, being in a salient position in the context of each chorale prelude, is independent, rhythmically, of the accompanying lines. With the possible exception of the ornamented chorale-tunes, the majority of the chorale-tunes exhibit precise rhythmic regularity. Their rhythm is in complete agreement with the meter; i.e., the notes come at regular intervals in the measure, marking off the music into metric divisions. The placement of the chorale-tune in the chorale prelude gives prominence and contrapuntal independence to the line in which it is placed. The chorale-tunes in the *OB* are placed in the soprano in forty-two
preludes,\(^7\) in the alto in two preludes,\(^8\) and in the bass in five.\(^9\) The chorale-tune does not appear in the tenor. The soprano line was obviously better suited to give the chorale-tune the desired prominence over an arrangement of accompanying lines.

The rhythmic effect of the ornamented chorale-tune in the \(OB\) is difficult to ascertain. Although almost all of the ornaments used in the \(OB\) are written out in full and can be seen to be technically in agreement with the metric accents, there results a certain freedom of rhythm which almost defies rhythmic analysis. Rhythmic analysis of these ornaments is mainly a problem of interpretation in performance and cannot be discussed at length in this study.

The ornamentation of the chorale-tune necessarily results in prominence of the ornamented line over the remaining lines and thereby makes this line rhythmically independent. In the \(OB\) the use of ornamentation appears

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\(^7\)Nos. I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIV, XV, XVI, XVIII, XIX, XXI, XXII, XXIII, XXIV, XXV, XXVI, XXVII, XXVIII, XXIX, XXX, XXXI, XXXII, XXXIII, XXXIV, XXXV, XXXVI, XXXVII, XXXVIII, XXXIX, XL, XLI, XLI, XLIII, XLIV, and XLV. See Appendix 2 for complete titles.

\(^8\)Nos. XIII ("Christum wir sollen loben schon") and XX ("O Lamm Gottes, unschuldig").

\(^9\)Nos. II ("Gott, durch deine Güte"), X ("In dulci jubilo"), XX ("O Lamm Gottes, unschuldig"), XXII ("Christus, der uns selig macht"), and XXXIII ("Komm, Gott, Schöpfer, heiliger Geist").
in six preludes, always in the soprano line.\textsuperscript{10} In only a few isolated instances does ornamentation appear in any other voice, and then only for a short time.

**Conclusions**

The primary function of the individual line in the *GB* is to assert contrapuntal independence. The rhythmic individuality of the parts contributes to this independence by the placement of the rhythmic motive, the placement of the chorale-tune, and the ornamentation of the chorale-tune. It is through these devices that Bach has given the individual line an important function in the rhythmic structure of the music.

\textsuperscript{10}Nos. XVI ("Das alte Jahr vergangen ist"), XX ("O Lamme Gottes, unschuldig"), XXIV ("O Mensch, bewein' dein' Sünde gross"), XXXV ("Liebster Jesu, wir sind hier"), XL ("Ich ruf' zu dir, Herr Jesu Christ"), and XLII ("Wenn wir in höchsten Nöthen sein").
CHAPTER IV

THE COUNTERPOINT OF RHYTHM

The study of rhythm in Bach's OB, which includes the motive and the rhythm of the individual line, embraces finally the counterpoint of rhythm. The counterpoint of rhythm is the composite effect of the combination of rhythmically independent lines: it is the sum of all the rhythmic elements involved in a contrapuntal texture. The faculty of hearing simultaneously quite disparate rhythmic lines, which we all possess, has been of incalculable importance to the creation of great contrapuntal music, and the study of the counterpoint of rhythm in Bach's OB will reveal some of the principles involved in this phenomenon.¹

Three closely related factors involved in the counterpoint of rhythm are 1) the unit of value, 2) the harmonic rhythm, and 3) the combination of the rhythmic lines.

The Unit of Value

The individuality of the lines and the balance of rhythmic activity which are so essential to the counterpoint of rhythm are maintained largely by the placement of the unit of value. The unit of value is "the shortest value

"A certain grade of tone-values is adopted as the uniform basis of motion, and this fundamental rate is sustained with predominating regularity." The use of this device is a characteristic feature in the preludes of the OB. Fig. 16 shows the use of the sixteenth-note unit of value in a typical prelude of the OB.

The note-value which is used most frequently in the OB, as the unit of value is the sixteenth-note. This note-value


is adopted as the uniform basis of motion in thirty-one preludes. The remaining preludes use either eighth-notes, eighth-note triplets, or sixteenth-note triplets for the unit of value.

In the 06 thirty-six preludes consistently maintain a uniform unit of value. The dominating feature of the remaining preludes is the use of the rhythmic motive, \( \frac{\sqrt{3}}{4} \). By using this motive Bach establishes a strong rhythm which would be less effective if a constant unit of value were used. Of the five chorale preludes which have ornamented chorale-tunes four, XVI ("Das alte Jahr vergangen ist"), XXIV ("O Mensch, bewein’ dein’ Sünde gross"), XXXV ("Liebster Jesu, wir sind hier"), and XLII ("Wenn wir in höchsten Nöthen sein") did not have a constant unit of value; only one, No. XL ("Ich ruf’ zu dir, Herr Jesu Christ"), maintains a uniform unit of value. Bach evidently felt that the rhythmic activity of the ornamented chorale-tune could be more effectively balanced by a slower and less insistent motion in the accompanying lines.

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4Nos. I, III, IV, VI, VII, VIII, XI, XII, XIII, XV, XVI, XVIII, XX, XXII, XXIII, XXIV, XXV, XXVII, XXIX Verses 2 and 3, XXIV, XXVI, XXVII, XXVIII, XXIX, XL, XLI, XLIII, XLIV, and XLV. For titles of these and the following preludes see Appendix 2.

Bach has presented a variety of methods of dispersing the unit of value among the lines of the preludes. In four preludes\(^6\) only one line has the unit of value while the remaining lines contain longer note-values, (Fig. 17). In

![Musical notation image]

Fig. 17.—The restriction of the unit of value to only one line, from Bach's OB, No. XIX ("Herr Gott, nun schleuss den Himmel auf"), meas. 4-5.

thirteen preludes\(^7\) two lines are assigned the unit of value

\(^6\)Nos. II ("Gott, durch deine Güte"), XIX ("Herr Gott, nun schleuss den Himmel auf"), XXVI ("Hilf Gott, dass mir's gelinge"), and XL ("Ich ruf' zu dir, Herr Jesu Christ").

\(^7\)Nos. V, VII, IX, X, XI, XX, XXIII, XXX, XXXIV, XXXVIII, XXXIX, XLIII, and XLV. See Appendix 2 for complete titles.
while the chorale-tune and the remaining line or lines have longer note-values, (Fig. 18). In fifteen preludes the unit of value is dispersed through all the lines but one, usually the chorale-tune, (Fig. 19). In four preludes

Fig. 18.—The assigning of the unit of value to two lines while the chorale-tune and the remaining line have longer note-values, from Bach's **OB**, No. V ("Puer natus in Bethlehem"), meas. 1-2.

8Nos. III, IV, VIII, XII, XIII, XXI, XXVII, XXVIII, XXIX Verse 3, XXXII, XXXV, XXXVI, XXXVII, XLII, and XLIV. See Appendix 2 for complete titles.

9Nos. I ("Nun komm' der Heiden Heiland"), VI ("Gelobet seist du, Jesu Christ"), XVII ("In dir ist Freude"), and XVIII ("Mit Fried' und Freud' ich fahr' dahin").
Fig. 19.—The employment of the unit of value in all but one line, from Bach's OB, No. IV ("Lob sei dem allmächtigen Gott"), mess. 1-2.

the unit of value alternates regularly between all the voices, (Fig. 20).

Fig. 20.—The unit of value alternating regularly between all the voices, from Bach's OB, No. XVII ("In dir ist Freude"), mess. 31-32.
Thus it is evident that Bach dispersed the unit of value most frequently in two ways: 1) by assigning the unit of value to two lines while the chorale-tune and the remaining lines contain notes of longer duration and 2) by assigning the unit of value to all the lines but one, usually the chorale-tune. These arrangements of the lines are suited for the proper balance of rhythmic activity and do not detract from the importance of the chorale-tune.

The Harmonic Rhythm

The counterpoint of rhythm is controlled to a great extent by the harmony of the combined contrapuntal parts.\textsuperscript{10} The harmonic structure of counterpoint not only supplies tonal support and color, but also serves as an important factor in the total rhythmic effect. The function of harmony as a rhythmic element in counterpoint consists of the rhythmic patterns which are formed by the root changes in the harmony. This rhythmic pattern which is formed by the harmony can be determined with reasonable accuracy and can be seen to bear a direct relationship to the counterpoint of rhythm. Fig. 21 illustrates the harmonic rhythm formed by the root changes in a typical prelude.

\textsuperscript{10} Walter Piston, \textit{Counterpoint}, p. 60.
Fig. 21.—The harmonic rhythm formed by the root changes of a typical prelude, from Bach's OB, No. XXVIII ("Jesus Christus, unser Hailand"), meas. 1-2.

Harmonic rhythm "is perhaps most easily perceived when the root changes succeed one another with steady regularity while the melodic rhythm follows a more or less flexible pattern of strong and weak values,"\(^{11}\) (Fig. 21). This is the most prevalent type of harmonic rhythm in the preludes of the OB. The root changes always change with the beat in each measure and occupy from as short as one-half of a beat to as long as a full measure. By using this type of harmonic rhythm Bach enhanced the contrapuntal quality of the preludes and organized the harmony into logical, metrical

\(^{11}\) Walter Piston, Counterpoint, p. 60.
patterns. The steady harmonic rhythm was balanced by the variety of rhythms in the counterpoint.

The Combination of the Rhythmic Lines

The combination of the rhythmic lines of each prelude into a relationship which is characterized by independence of rhythmic stress and balance of rhythmic activity is an important element in the counterpoint of rhythm. The variance of the rhythmic activity throughout each prelude and the distribution of this activity between the voices lend a more contrapuntal character to the composition.

In Bach's OB the combined rhythmic lines of each prelude can be classified into six different types:

1) All the lines exhibit similar rhythmic motives: A, A, A, A, (B), $^{12}$ (Fig. 22). This treatment appears in one

$^{12}$Letters distinguish between differing rhythmic lines: "A", rhythm of the chorale-tune; "B", a second rhythmic scheme; "C", a third rhythm different from "A" or "B"; "D", a fourth rhythmic line. A, A, A, A therefore indicates a chorale prelude of four lines, all four of which employ the same general rhythmic treatment. The letters in parenthesis indicate additional lines. In the OB almost all of the preludes have four lines; however, in Nos. I ("Nun komm' der Heiden Heiland"), XVII ("In dir ist Freude"), XXI ("Christe, du Lamm Gottes"), and XXV ("Wir danken dir, Herr Jesu Christ") there are five lines and in No. XL ("Ich ruf' zu dir, Herr Jesu Christ") only three lines.
Fig. 22.--All the lines exhibiting the same rhythmic treatment: A, A, A, A, (B) from Bach's OB, No. XVII ("In dir ist Freude"), meas. 32-33.

prelude, No. XVII ("In dir ist Freude").\(^{13}\) 2) The chorale-tune has an independent rhythm of its own with the remaining lines exhibiting a second rhythmic treatment: A, B, B, B, (Fig. 23). This treatment appears in thirteen preludes, Nos. III, XII, XIII, XVI, XXVII, XXVIII, XXIX Verses 1 and 2, XXXVI, XXXVII, XLI, XLII, and XLIV.

\(^{13}\)In No. XVII ("In dir ist Freude") the pedal line ("B") has a rhythmic motive not used in the other lines; however, this motive is composed of eighth notes, as are the other motives, and is thereby closely related to the other lines.
Fig. 23.—The chorale-tune having an independent rhythm of its own with the remaining lines exhibiting a second rhythmic treatment: A, B, B, B, from Bach’s OB, No. XII ("Jesu, meine Freude"), meas. 3-4.

3) The chorale-tune is in canon and the remaining lines exhibit a second rhythm: A, A, B, B, (B), (Fig. 24). This treatment appears in six preludes, Nos. X, ("In dulci jubilo"), XX ("O Lamm Gottes, unschuldig"), XXI ("Christe, du Lamm Gottes"), XXII ("Christus, der uns selig macht"), XXXI ("Erschienen ist der herrliche Tag"), and XXXV ("Liebster Jesu, wir sind hier"). 4) Both the chorale-tune and one
Fig. 24.—The chorale-tune in canon and the remaining lines exhibiting a second rhythm: A, A, B, B, from Bach's OB, No. X ("In dulci jubilo"), mezs. 9-10.

line exhibit the same rhythmic motives and each of the remaining lines exhibits an independent rhythm of its own: A, A, B, C (Fig. 25). This treatment appears in four preludes, Nos. II ("Gott, durch deine Güte"), IX ("Vom Himmel hoch, da komm' ich her"), XIX ("Herr Gott, nun schleeuss den Himmel auf"), and XXVI ("Hilf Gott, dass mir's gelinge"). 5) The chorale-tune with two lines exhibiting a second rhythmic treatment while the remaining line
Fig. 25.—Both the chorale-tune and one line exhibit the same rhythmic treatment, and each of the remaining lines exhibit an independent rhythm of its own: A, A, B, C, from Bach's **OE**, No. XIX ("Herr Gott, nun schleuss den Himmel auf"), meas. 2.

exhibits a third rhythm: A, B, (B), B, C, (Fig. 26). This treatment appears in twenty-one preludes; Nos. I, IV, V, VI, VIII, XI, XIV, XV, XVIII, XXIII, XXIV, XXV, XXIX Verse 3, XXX, XXXII, XXXIII, XXXIV, XXXVIII, XXXIX, XLIII, and XLV. (See Appendix 2 for complete titles)
Fig. 26.—The chorale-tune with two lines exhibiting a second rhythmic treatment and the remaining line exhibiting a third rhythm: A, B, (B), B, C, from Bach's OB, No. V ("Puer natus in Bethlehem"), meas. 1-2.

b) Each line exhibits a rhythm of its own: A, B, C (D), (Fig. 27). This treatment occurs in two preludes, Nos. VII

Fig. 27.—Each line exhibiting a rhythm of its own: A, B, C, (D), from Bach's OB, No. XL ("Ich ruf' zu dir, Herr Jesu Christ"), meas. 7-8.
("Der Tag, der ist so freudenreicht") and XL ("Ich ruf' zu dir, Herr Jesu Christ").

Table 3 shows the frequency of occurrence of the six different types of combinations of rhythmic lines used by Bach in the OB.

<table>
<thead>
<tr>
<th>Types</th>
<th>Frequency of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, A, A, A, (B)*</td>
<td>1</td>
</tr>
<tr>
<td>A, B, B, B</td>
<td>14</td>
</tr>
<tr>
<td>A, A, B, B</td>
<td>6</td>
</tr>
<tr>
<td>A, A, B, C</td>
<td>4</td>
</tr>
<tr>
<td>A, B, (B), B, C</td>
<td>21</td>
</tr>
<tr>
<td>A, B, C, (D)</td>
<td>2</td>
</tr>
</tbody>
</table>

*See footnote No. 12, p. 53

Upon examination of Table 3 it is evident that Bach was able to create within the limited confines of the chorale prelude a great variety of rhythmic combinations. The most frequent type of treatment is the combination of the chorale-tune with two lines exhibiting a second rhythmic treatment and the remaining line a third rhythm (A, B, (B), B, C). In each of the preludes with this treatment the bass part functions as a rhythmically independent line.¹⁴

¹⁴Nos. I, IV, V, VI, VIII, XI, XIV, XV, XVIII, XXIII, XXIV, XXV, XXIX Verse 3, XXX, XXXII, XXXIII, XXXIV, XXXVIII, XXXIX, XLII, and XLIV. See Appendix 2 for complete titles.
In conclusion, the three elements of the counterpoint of rhythm—the unit of value, the harmonic rhythm, and the combination of the rhythmic lines—can be illustrated in their total rhythmic significance by an excerpt from a typical prelude, (Fig. 28).

Fig. 28.—The total rhythmic effect of an excerpt from Bach's OB, No. VIII ("Vom Himmel hoch, da komm' ich her"), meas. 1-2.
CHAPTER V

CONCLUSION

The statistical investigations in this study have shown much concerning Bach's contrapuntal technique from the point of view of rhythm. We have observed the great variety in his invention within the bounds of the style of the eighteenth century. The outstanding qualities of his rhythmic invention are exemplified by his treatment of the motive, the individual line, and the counterpoint of rhythm.

Bach was able to produce within the limits of the small form of the chorale prelude a variety of sizes and types of rhythmic motives. This variety was balanced by the strict observance of the rhythmic identity of each motive and served as a strong unifying factor within each prelude. Held within such strict rhythmic bounds the motive was developed mainly through melodic and harmonic changes.

The function of the individual line in the chorale was to assert rhythmic independence. Bach achieved this independence in three ways: placement of the rhythmic motive, placement of the chorale-tune, and ornamentation of the chorale-tune. By the application of these devices Bach created the rhythmic independence of the parts which is so vital to effective counterpoint.
Bach placed emphasis on three factors in the counterpoint of rhythm: the unit of value, the harmonic rhythm, and the combination of the rhythmic lines. By inventing many different combinations of these elements, he created compositions of great contrapuntal interest.

"Although much work has been done in this field [the counterpoint of Bach], much more needs to be done before we can base a definitive statement of the theory of counterpoint upon the works of Bach."\(^1\) The study of rhythm in Bach's OR was undertaken as an attempt to make a contribution towards such an ultimate theory of counterpoint based on the works of Bach.

\(^1\)Glen Heydon, *Introduction to Musicology*, p.
APPENDIX 1

THE MOTIVES IN THE PRELUDES OF BACH'S ORGELBÜCHLEIN

No. I. "Nun komm, der Heiden Heiland."

(1.) Meas. 4.

(2.) Meas. 9

(3.) Meas. 3.

No. II. "Gott, durch deine Güte."

(4.) Meas. 1.

(5.) Meas. 1-2.

No. III. "Herr Christ, der Ainiige Gottes-Sohn."

(6.) Meas. 1.

(7.) Meas. 1-2.

(8.) Meas. 2.

(9.) Meas. 1-2.

No. IV. "Lob sei dem allmächtigen Gott."

(10.) Meas. 1-2.

(11.) Meas. 4.

(12.) Meas. 1.
No. XIX. "Herr Gott, nun schliesse den Himmel auf."

No. XX. "O Lamm Gottes, unschuldig."

No. XXI. "Christe, du Lamm Gottes."

No. XXII. "Christus der uns selig macht."

No. XXIII. "Da Jesus an dem Kreuze stund."

No. XXX. "O Mensch, bewein dein Sünde gross."
No. XXV. "Wir danken dir Herr Jesus Christ." 
(67) meas. 2-3. 

No. XVII. "Hilf Gott, dass wir's gelinge." 
(70) meas. 1. 

No. XIX. "Christ lag in Todesbanden." 
(72) meas. 1. 

No. XXIII. "Jesus Christus, unser Heiland." 
(75) meas. 4. 

No. XXIV. "Christ ist erstanden." Verse 1. 
(77) meas. 1. 

Verse 2. 
(78) meas. 1-2. 

Verse 3. 
(79) meas. 5. 

Verse 4. 
(81) meas. 1. 

(84) meas. 9-10.
No. XXX.
"Erstanden ist der heil'ge Christ."

No. XXXI.
"Erschienen ist der herrlische Tag."

No. XXXII.
"Heut' triumphiert Gottes Sohn."

No. XXXIII.
"Komm, Gott, Schöpfer, heiliger Geist."

No. XXXIV.
"Herr Jesu Christ, dich zu uns wend."

No. XXXV.
"Liebster Jesu, wir sind hier."
No. XXXVII. "Dies sind die heil'gen zehn Gebot."  
(101) meas. 1.  
(102) meas. 4.

No. XXXVII. "Vater unser im Himmelreich."  
(103) meas. 1.  
(104) meas. 2.

No. XXXVIII. "Durch Adam's Fall ist ganz verderbt."  
(105) meas. 1.  
(106) meas. 1.

No. XXXIX. "Es ist das Heil uns kommen her."  
(107) meas. 1-2.  
(108) meas. 1-2.

No. XL. "Ich ruf' zu dir, Herr Jesu Christ."  
(109) meas. 1.

No. XLI. "In dich hab' ich gehoffet, Herr."  
(110) meas. 1.  
(111) meas. 1-2.

No. XLII. "Wenn wir in höchsten Notenstein."  
(112) meas. 1.
No. XLIII. "Wer nur den lieben Gott lässt walten."

(19) meas. 1.

(20) meas. 7.

(21) meas. 1.

No. XLIV. "Alle Menschen müssen sterben."

(22) meas. 2.

(23) meas. 1.

No. XLV. "Ach wie wichtig, ach wie flüchtig."

(24) meas. 2.

(25) meas. 1.
APPENDIX 2

CONTENTS OF J. S. BACH'S ORGELBÜCHLEIN

I. Nun komm' der Heiden Heiland
II. Gott, durch deine Güte
III. Herr Christ, der ein'ge Gottes-Sohn
IV Lob sei dem allmächtigen Gott
V. Puer natus in Bethlehem
VI. Gelobet seist du, Jesu Christ
VII. Der Tag, der ist so freudenreich
VIII. Vom Himmel hoch, da komm' ich her
IX. Vom Himmel kam der Engel Schaar
X. In dulci jubilo
XI. Lobt Gott, ihr Christen, allzugleich
XII. Jesu, meine Freude
XIII. Christum wir sollen loben schon
XIV. Wir Christenleut'
XV. Helft mir Gottes Güte preisen
XVI. Das alte Jahr vergangen ist
XVII. In dir ist Freude
XVIII. Mit Fried' und Freud' ich fahr' dahin
XIX. Herr Gott, nun schleuss den Himmel auf
XX. O Lamm Gottes, unschuldig
XXI. Christe, du Lamm Gottes
XXII. Christus, der uns selig macht
XXIII. Da Jesus an dem Kreuze stund
XXIV. O Mensch, bewein' dein' Sünde gross
XXV. Wir danken dir, Herr Jesu Christ
XXVI. Hilf Gott, dass mir's gelinge
XXVII. Christ lag in Todesbanden
XXVIII. Jesus Christus, unser Heiland
XXIX. Christ ist erstanden
XXX. Erstanden ist der heil'ge Christ
XXXI. Erschienen ist der herrliche Tag
XXXII. Heut' triumphiret Gottes Sohn
XXXIII. Komm, Gott, Schöpfer, heiliger Geist
XXXIV. Herr Jesu Christ, dich zu uns wend'
XXXV. Liebster Jesu, wir sind hier
XXXVI. Dies sind die heil'gen zehn Gebot'
XXXVII. Vater unser im Himmelreich
XXXVIII. Durch Adam's Fall ist ganz verderbt
XXXIX. Es ist das Heil uns kommen her
XL. Ich ruf' zu dir, Herr Jesu Christ
XLI. In dich hab' ich gehoffet, Herr
XLII. Wenn wir in höchsten Nöthen sein
XLIII. Wer nur den lieben Gott lässt walten
XLIV. Alle Menschen müssen sterben
XLV. Ach wie nichtig, ach wie flüchtig
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