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DMITRI SHOSTAKOVICH AND THE FUGUES OF
OP. 87: A BACH BICENTENNIAL TRIBUTE

THESIS

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In 1950-51, for the bicentennial of the death of J. S. Bach, Dmitri Shostakovich wrote his collection of Twenty-four Preludes and Fugues, Op. 87. This thesis is a study of the fugal technique of Shostakovich as observed in Op. 87, in light of the fugal style of Bach as observed in The Well-Tempered Clavier, Volume One. Individual analyses of each of the twenty-four Shostakovich pieces yield the conclusion that Op. 87 is an emulation of Bachian fugal methods as observed in The Well-Tempered Clavier, Volume One.

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CHAPTER I

INTRODUCTION

Purpose of This Study

This treatise will undertake to study the fugues of Op. 87 in light of the fugal technique of J. S. Bach as observed in his Well-Tempered Clavier, Volume One (WTC-I). The first of the succeeding chapters will present a summarization of selected characteristics of WTC-I fugues, for reasons to be detailed in Chapter II, to be used later in giving the fugues of Op. 87 a historical-stylistic perspective and to determine to what extent the Shostakovich collection does emulate the Bach.

Next, the fugues of Op. 87 will be analyzed individually. This will allow each fugue to reveal its own structural characteristics and facilitate the presentation of statistical material which will then be used in the final chapter to compare and contrast with the fugues of WTC-I.

Since no English-language study of Op. 87 exists, excepting cursory mention in a few sources, and inasmuch as Op. 87 is one of but a handful of large-scale efforts in fugue-cycles, it assuredly merits this further research.

Shostakovich's Style

Recent news reports relate the story of the defection of Maxim Shostakovich, son of Dmitri, from the U.S.S.R. and the granting of asylum to him and his son in the United States. He joins many other prominent Russian musicians, dancers, artists, and literary persons in their flight from a repressive government which controls creative talents through praise and honors if the state approves of a particular work, but quickly reacts with criticism, denunciation and even imprisonment for commentary critical of the government or artistic efforts which do not measure up to the standard of a desirable Soviet musical composition, art work, drama, or piece of literature. Many famous names are among those who have left Russia for various reasons: Stravinsky, Koussevitzky, Heifitz, Nuryev, Rostropovich, Baryshnikov, Solzhenitzin, and now, Maxim Shostakovich.

Dmitri Shostakovich left his homeland only on brief excursions, including trips to the U.S. He chose to live and compose within the restrictions set by the government of his motherland. He never openly turned against that government even when it bestowed harsh criticism upon him for compositions that it felt did not live up to the concept of Soviet realism but were representative of a bourgeois formalism acquired from the influence of the decadent West. Music was to be written for the people and

be representative of those people and their country and its patriotism and social progress. This was Soviet realism.

Shostakovich wrote this kind of music well; Song of the Forest (1949) and Symphonies Eleven and Twelve are prime examples. But at times he also wrote music which aroused the ire of the Party sentinels. His opera Lady Macbeth of the Mzensk District (1939) was, at first, hailed as a great achievement. Then, two years after its premiere, Pravda performed a sudden about-face and attacked the opera, in an article entitled "Confusion Instead of Music," as "fidgeting, screaming, neurasthenic music...a jungle of musical confusion, at times degenerating into complete cacophony...leftist bedlam" (5, p. 619).

The reorganization of the Union of Soviet Composers, engineered by Andrei Zhdanov to replace the earlier Association of Contemporary Musicians and Russian Association for Proletarian Music, brought renewed criticism to Shostakovich with a decree dated February 10, 1948, and issued by the Central Committee of the All-Union Communist Party (Bolsheviks), which labeled him and Prokofiev, among others, as

...representing "most strikingly the formalistic perversions and anti-democratic tendencies in music," namely the "cult of atonality, dissonance and discord...infatuation with confused, neurotic combinations which transform music into cacophony" (6, p. 265).

In reply, Shostakovich expressed his gratitude to the committee and for its decree stating that

I know that the Party is right...I shall more determinedly work on the musical depiction of the images of the heroic Soviet people...I shall again and again try to create Soviet mass songs. (5, p. 1371),

Shostakovich was also honored many times by his government for his music. He received the Stalin and Lenin prizes as well as occasional praise in other public statements, and his patriotic song "The Homeland Hears, the Homeland Knows" was sung by Yuri Gagarin during the first circumterrestrial space flight. In spite of the hostility shown by the Soviet government to some of Shostakovich's works and compositional techniques, he has received wide acceptance, most especially for his symphonies, outside of the U.S.S.R. and even within the Soviet Union as a great Russian composer.

By Western standards the preponderance of Shostakovich's music is far from avant-garde. It is primarily a style "rooted in tradition and tonality, yet using dissonance and occasional atonality as expressive means" (6, p. 272).

Shostakovich's output of 147 total opus numbers consists in part of fifteen symphonies, fifteen string quartets, ballets, cantatas, oratorios, thirty six scores for motion pictures, two operas, six concerti, sonatas, three collections of piano preludes, piano trios and a quintet, many orchestral suites based on his film scores, and a multitude

of songs and vocal music. Shostakovich's penchant for Baroque and Classical forms is evident in the preceding list of works. Other occurrences of these forms appear as movements of a multi-movement piece, for example, the passacaglia in the fourth movement of Symphony Eight.

The Twenty-four Preludes and Fugues, Op. 87 of Shostakovich are an example of a Baroque-era form cycle. Written between the years 1950 and 1951 for the bicentennial of the death of Johann Sebastian Bach, Op. 87 is written "in emulation of Bach" (2, p. 693). F. E. Kirby also states that "the connection with Bach is inescapable" (3, p. 433). Even this bicentennial tribute to Bach and the Baroque fugue-cycle was criticized by *Izvestiya* in 1951 as a work that "deviated significantly from his recent realistic stand" (4, p. 222). The most obvious Bach composition with which to compare Shostakovich's collection of preludes and fugues is The Well-Tempered Clavier, Bach's own collection of twenty-four preludes and fugues.

Definition of Terms

In order to facilitate the ensuing analytical discussion, it is necessary to present a working vocabulary of fugal construction so that the terminology that is utilized will be understood in the context in which it is employed. The following discussion is a compilation of analytical terminology for the purpose of this study.

Fugue is a genre of musical composition written in a contrapuntal style. It is generally monothematic and written in three or more parts (voices). The theme or subject is presented unaccompanied in one voice at the outset of the fugue, and then in turn in each of the remaining voices until each has stated the subject once.

Some subsequent statements of the subject appear at pitch levels different from the initial subject statement. These are then labeled answer statements. If the answer is an exact diatonic transposition of the subject, then it is termed a real answer. If, however, any modifications are made to the answer in its transposition, it is then a tonal answer. Throughout the analyses, if an obvious pairing of two thematic entries is found in the fugue, they will be labeled subject and answer. For example, the answer will be the statement on or in the dominant in relation to the subject statement a fifth below. Single entries will be labeled as subject statements.

When each voice in the fugue has stated a subject or answer at least one time, this constitutes the initial exposition. Exposition sections contain statements of the subject or answer. In the course of describing the voices in which the subject enters, the uppermost voice in the fugal texture will be designated as voice one. Voices will then be labeled from top to bottom in ascending numerical order. The lowest voice in a four-voice fugue, for example, would therefore be labeled as voice four.

A countersubject is a regularly-recurring melody which habitually occurs in conjunction with the subject throughout the course of the fugue. This will be its use in this paper. A fugue may employ one or more of these regularly-recurring countersubjects, or it may employ none.

Two other elements may appear within the initial exposition. A link is a short piece of connective melodic material found between the end of the subject and beginning of the answer. A codetta may follow the statement of the answer and precede the next subject statement. It is often used to restore the tonic key for the subject statement after the dominant motions of the answer. Roger Bullivant (1) designates this particular codetta as the answer-codetta. This term will be employed during the course of this paper to provide a direct method of referring to this codetta, and as an alternative to a lengthier terminology such as "the codetta following the answer." Expositions which contain at least one entry of the subject in each voice are termed complete expositions; otherwise they are incomplete expositions.

After the initial exposition, sections of the fugue which contain statements of the subject alternate with sections which do not present the subject. The latter, episodes, may be composed of motives derived from the subject, countersubject, or other exposition material. Their primary function is as a modulatory section connecting

statements of the subject in various keys. They frequently accomplish their modulations through sequential treatment of their motivic material.

Three special kinds of subject statements may appear in an exposition. The first is a non-adjacent entry, a subject which occurs in a voice surrounded by voices in which subjects have already appeared. The second is a false entry, a presentation of the opening notes of the subject so as to suggest a statement of the subject, which then does not materialize. The third is a redundant entry, an extra subject, appearing in the original tonic key, or its answering key, after each voice in the exposition has presented the subject once. Bach frequently employs the redundant entry to demonstrate invertible counterpoint between his subject and countersubject(s). Invertible counterpoint is the condition where any one of a number of simultaneously presented melodies may appear in any vertical position in relation to the other melodies--any melody may appear as the bottom voice, top voice, etc. All possible juxtapositions of the counterpoints need not be exhibited. So long as it is demonstrated that any of them may appear as the lowest voice, it can be inferred that all other variations will provide valid contrapuntal associations.

Often in the latter expository sections of the fugue, subjects are presented in stretto--one subject begins its

statement before the preceding subject has finished. Four types of stretto treatment are found. A complete stretto occurs if the subjects which enter after the first are complete in their statements at least through the end of the initial entry of the stretto. If, on the other hand, either the first entry does not complete its statement, or succeeding entries do not last until the end of the initial entry, the stretto is incomplete. A false stretto occurs if successive false entries of the subject suggest a stretto but either no complete subject statement occurs, or a subject does appear and only false entries are stated simultaneously. Canon is said to occur if all statements of the subject in stretto are complete and unaltered in relation to one another.

A coda, or concluding section, often closes the fugue and frequently contains a pedal point.

When, in the course of the discussion, a reference is made to a particular fugue in WTC-I, the format WTC-I, 1 will be employed. The preceding example would denote fugue one in WTC-I.

As the modal properties of Shostakovich's fugues are discussed, it will become necessary to refer to the individual diatonic members of a particular mode. To this end, scale degree names from the major and minor scales will be employed as is the practice observed in The Diatonic Modes in Modern Music (7). The first degree of

a mode will be labeled tonic; the second, supertonic; and so on through mediant, subdominant, dominant, and submediant. A seventh scale degree that appears a major second below tonic will be named subtonic. A seventh scale degree a minor second below tonic would be labeled leading tone. This method will provide an accessible, established procedure of naming scale degrees as well as facilitating the necessary comparisons with scale degree used in the entirely tonal subjects of WTC-I.

Finally, throughout the course of the analyses, references to major keys or to modes whose mediant degree is a major third above tonic will be shown as capital letters. References to minor keys or to modes whose mediant degree is a minor third above tonic will be shown as lower-case letters.

CHAPTER BIBLIOGRAPHY

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CHAPTER II

BACH'S WELL-TEMPERED CLAVIER

When Johann Sebastian Bach wrote his collection of twenty-four preludes and fugues entitled The Well-Tempered Clavier (Das Wohltemperierte Klavier), the concept of a fugue cycle was not a new one. J.K.F. Fischer had done it earlier with his Ariadne Musica in 1715, a group of nineteen preludes and fugues each in a different major or minor key. Other precursors of the WTC were Johann Krüger's Ammütige Clavierübung, a collection of preludes, fugues and ricercars, and a work actually entitled The Well-Tempered Clavier by B. C. Weber.

Post-WTC fugue cycles are few in number. Prelude cycles have also become a form separate from their connection with fugues through such works as the Chopin Preludes Op. 28, Debussy's two books of preludes, Scriabin's Twenty-Four Preludes, Op. 11, Rachmaninov's Op. 23, Shostakovich's own Op. 34, and Rodion Scedrin's Twenty-Four Preludes. The fugue cycles which do exist consist, in part, of Mendelssohn's Preludes and Fugues, Op. 35, Hindemith's Ludus Tonalis, and the Shostakovich collection which is the subject of this treatise.

The information presented in this chapter was compiled from first-hand analysis of WTC-I as well as the following

reference sources:

Gray, Cecil, The Forty-Eight Preludes and Fugues of J. S. Bach, London, Oxford University Press, 1938.

Foster, Dorothy, A Comparative Analysis of the Expositions in the Fugues of J. S. Bach in the Well-Tempered Clavier and Those of Paul Hindemith Ludus Tonalis, unpublished masters thesis, North Texas State University, Denton, Texas, 1973.

Iliffe, Frederick, Analysis of Bach's Forty-Eight Preludes and Fugues, London, Novello and Co., Ltd.

MacPherson, Stewart, Form in Music, London, Joseph Williams, Ltd., 1930.

The aforementioned source material was used in a general manner to arrive at a consensus as to particular analysis of subject length, countersubject use, and key sequences. This material and other statements were then confirmed through personal observations unless another specific source is cited.

There are two volumes of twenty-four preludes and fugues referred to as Well-Tempered Clavier volumes one and two. The first collection of twenty-four preludes and fugues is the only one of the two tomes which Bach actually called Well-Tempered Clavier (3).

The exact instrument for which Bach wrote the WTC is uncertain as was true for most keyboard music of the Middle Ages and much music, "up to and even into the eighteenth century" (5, p. 30). The word Clavier in the title denotes only that it was written for keyboard.

Volume one contains two-, three-, four-, and five-voice fugues unlike WTC volume two, which contains only three- and

four-voice fugues. It was also composed as an entity in itself, whereas volume two was collected from fugues, many of which were written earlier than its 1744 date, and arranged and transposed to fit the overall plan (3).

For these reasons, only the twenty-four fugues found in the first volume of the WTC (WTC-I) will be used in a comparison of some of their characteristics with applicable findings in Shostakovich's Op. 87. The remainder of this chapter will present information and conclusions drawn from WTC-I to be used, where appropriate, in the final chapter of summaries and conclusions.

The organizational pattern of the twenty-four fugues begins with C major and its parallel minor, c minor. This key relationship is then presented with each successive key pair occurring a minor second higher than the last.

WTC-I is made up of one two-voice fugue, eleven three-voice fugues, ten four-voice fugues, and two five-voice fugues. The fugues are written in seven different meters. There are fifteen in 4/4 meter, three in 3/4 meter, two in 2/2, and one each in 3/8, 6/4, 6/8, and 9/8 meters. The majority are in 4/4 meter.

Table I shows some characteristics of the subjects in WTC-I. Of the twenty-six subjects which appear in WTC-I (fugue four is a triple fugue), seventeen begin on tonic,

TABLE I
CHARACTERISTICS OF THE SUBJECTS IN WTC-I

Fugue	Initial Pitch	Final Pitch	Length		Range
			Pitches	Beats	
1	Tonic	Mediant	14	7	Major 6th
2	Tonic	Mediant	20	9	Major 7th
3	Dominant	Tonic	17	8	Major 10th
4-S1	Tonic	Tonic	5	7	Diminished 4th
4-S2	Supertonic	Mediant	20	7	Diminished 5th
4-S3	Tonic	Mediant	7	4	Perfect 4th
5	Tonic	Mediant	13	4	Major 6th
6	Tonic	Dominant	13	4	Diminished 7th
7	Dominant	Dominant*	16	7	Perfect 8va
8	Tonic	Tonic	13	11	Minor 6th
9	Tonic	Tonic	14	6	Perfect 8va
10	Tonic	Dominant*	26	7	Major 9th

TABLE I--continued

Fugue	Initial Pitch	Final Pitch	Length		Range
			Pitches	Beats	
11	Dominant	Mediant	15	11	Major 7th
12	Dominant	Tonic	11	12	Perfect 8va
13	Dominant	Mediant	16	9	Minor 7th
14	Tonic	Tonic	18	9	Perfect 5th
15	Tonic	Leading Tone	31	9	Major 9th
16	Dominant	Mediant	11	7	Diminished 7th
17	Tonic	Dominant	7	4	Major 6th
18	Tonic	Dominant*	15	8	Perfect 8va
19	Tonic	Mediant	13	6	Minor 9th
20	Tonic	Tonic	31	13	Minor 9th
21	Dominant	Mediant	38	13	Minor 10th
22	Tonic	Mediant	6	5	Minor 9th

TABLE I--continued

Fugue	Initial Pitch	Final Pitch	Length		Range
			Pitches	Beats	
23	Tonic	Tonic	14	9	Minor 7th
24	Dominant	Dominant*	21	13	Minor 10th

* modulating subject-final pitch given in fugue tonic key.

eight begin on dominant, and one begins on supertonic. Eight subjects end on tonic, eleven end on mediant, six end on dominant, and one ends on leading tone. Bach shows a distinct preference for beginning these subjects on tonic and a less definite preference for mediant as their final notes. The more obvious preference, however, is for tonic or dominant beginnings and endings on a member of tonic harmony.

The fugue subjects vary from five to thirty-eight pitches in length with an average pitch length of slightly more than sixteen pitches (16.35). Subject length is from four to thirteen beats, with a note occurring on a part of a beat counting as that whole beat. The average length is eight beats. The ranges of the subjects fall between a diminished fourth and a major tenth with the average range being a major seventh.

There is no question that the fugues of the WTC are tonal. After all, that is the concept behind the collection. The manner in which Bach effects his tonality is of interest. Of the twenty-six subjects in WTC-I, eighteen utilize tonic, dominant, and submediant scale degrees in prominent positions. Tonic and dominant are to be expected in the tonal contexts found, but the occurrence of submediant so frequently in relation to dominant is a style characteristic of importance.

This tonal pattern manifests itself in various manners. Tonic, dominant, and submediant or dominant and submediant degrees may appear at or near the beginning of the subject (fugues 3, 8, 11, 12, 16, 21, 22) or in succession somewhere in the subject and frequently constituting high or low points in that portion of the subject (fugues 5, 7, 13, 15, 19, 20, 24). At other times dominant and submediant occur, not necessarily in succession, but at pivotal points in the melody (fugues 1, 2, 6, 17).

Fifteen of the twenty-four fugues have tonal answers; nine are real answers. Two reasons exist for the occurrence of tonal answers in WTC-I. First is the appearance of a member of the dominant triad at or near the beginning of the subject. If the dominant harmony pitch appears in a prominent enough place, a decision which is at the discretion of the composer, an alteration will be made to the answer. Second, if the subject modulates, ending in a key other than that in which it began, the answer will be manipulated so that it returns to the original tonic key.

A prominent dominant triad pitch accounts for the tonal answers given in fugues 2, 3, 8, 11, 12, 13, 16, 17, 19, 21, 22, and 23. Three subjects (fugues 7, 18, 24) are given tonal answers both because they contain prominent, dominant harmony, and because they modulate.

The order of entries in WTC-I as well as the exposition and fugue lengths, in measures, follows in Table II. The lengths of the expositions in WTC-I range from five (fugue 9)

TABLE II
 ORDER OF ENTRIES AND EXPOSITION
 AND FUGUE LENGTHS IN WTC-I

Fugue	Entry Order	Exposition* Length	Fugue Length
1	2 1 3 4	10	27
2	2 1 3	8	31
3	1 2 3	6	55
4	5 4 3 2 1	17	115
5	4 3 2 1	7	27
6	1 2 3	9	44
7	1 2 3	12	37
8	2 1 3	10	87
9	2 1 3	5	29
10	1 2	6	42
11	2 1 3	12	72
12	3 2 4 1	21	58
13	1 2 3	13	35
14	3 2 4 1	17	40
15	1 2 3	14	86
16	2 1 4 3	7	34
17	3 4 1 2	7	35
18	3 2 1 4	8	41

TABLE II--continued

Fugue	Entry Order	Exposition* Length	Fugue Length
19	1 2 3	7	54
20	2 1 4 3	13	87
21	1 2 3	16	48
22	1 2 3 4 5	16	75
23	3 2 1 4	8	34
24	2 3 4 1	16	76

* (2, p. 117)

to twenty-one (fugue 12) bars in length. Total fugue lengths vary from twenty-seven (fugues 1, 5) to one hundred fifteen measures (fugue 4) in length. The average length for an exposition is eleven measures, while the entire fugue averages fifty-three bars.

The entry order in the expositions shown above evinces Bach's preference for adjacent entries, that is a series of subject entries which appear in a voice immediately above or below the voice which has just previously presented the subject. All but fifteen of the sixty-one entries following the first in each fugue are adjacent entries. The first two entries in every fugue are adjacent. Non-adjacent entries occur in only three of the twenty-four fugues, numbers sixteen (2 1 4 3), seventeen (3 4 1 2), and twenty (2 1 4 3).

Bach employs the entry order 1 2 3 most frequently for his three-voice fugues, seven times. The other four three-voice fugues enter in the order 2 1 3. Bach's four-voice fugue entry patterns are diverse. There are seven different patterns and none is employed more than twice. The patterns 3 2 4 1, 2 1 4 3, and 3 2 1 4 are used for two fugues each. Each five-voice fugue employs a different entry pattern, one is ascending, one is descending.

The fugue invariably begins with the subject presented in the tonic key. Tonic subject statements then usually

alternate with answer statements on or in the dominant until each of the voices in the fugue has stated a subject or answer once. This arrangement is termed the regular order of entry in the expositions. Four of the twenty-four fugues in WTC-I do not follow the regular order of entries in their respective expositions, excluding redundant entries. The four irregular entries appear in fugue one (subject, answer, answer, subject) and fugues twelve, fourteen and twenty (subject, answer, subject, subject). All of the above answers are dominant answers. Fugue four in c[#] minor follows the regular order of subject/answer alteration but presents a subdominant answer as its fourth entry.

Ten fugues in WTC-I have redundant entries in their exposition (fugues 1, 5, 6, 7, 10, 12, 13, 18, 19, 21) (2, p. 109).

The answer-codetta, "commonly in Bach...sets the general pattern for some or even all of the episodes" (1, p. 84). The answer-codetta is a short codetta following the answer and is often used to restore the tonic key after the answer's dominant motions.

Variations which occur to the subject in WTC-I include augmentation (fugues 4 and 8), inversion (fugues 6, 8, 14, 15, 19), and augmented inversion (fugue 8).

Thirteen of the twenty-four fugues (fugues 2, 3, 7, 9, 10, 11, 12, 13, 14, 16, 18, 21, 24) employ regularly-recurring countersubjects. Four of these fugues employ two countersubjects (fugues 2, 3, 12, 21), three of these occurring in three voice fugues (all but fugue 12). Thus, four times Bach uses the maximum number of countersubjects, in the above mentioned three fugues and the two-voice fugue ten. Three other fugues use freely treated or not regularly-recurring countersubjects (fugues 6, 15, 23). The following table shows some characteristics of the regularly-recurring WTC-I countersubjects.

Of the seventeen countersubjects which regularly recur in the fugues of WTC-I, the longest are twenty-eight notes (fugue 21) and thirteen beats (fugues 12, 21) long. The shortest countersubjects are six notes (fugue 3) and five beats (fugue 16) in length. The average countersubject is eighteen notes, seven and one-half beats long.

Bach's countersubjects are slightly more active than the subjects with which they appear, averaging just over eighteen notes in length, while the subjects of the thirteen fugues which contain countersubjects average just under eighteen notes. The countersubjects average seven and one-half beats in length, while the subjects of fugues with countersubjects average nine beats. This shows that Bach does not always write countersubjects of equal length to

TABLE III
 COUNTERSUBJECT CHARACTERISTICS IN WTC-I

Fugue	Length		First Pitch	Last Pitch	Range
	Notes	Beats			
2	20	9	Subdominant	Tonic	Minor 10th
	12	7	Subdominant	Dominant	Minor 10th
3	21	7	Tonic	Mediant	Minor 7th
	6	8	Subdominant	Supertonic	Diminished 7th
7	16	7	Subtonic	Leading Tone	Minor 7th
9	13	4	Subdominant	Dominant	Perfect 4th
10	16	6	Dominant	Supertonic*	Minor 7th
11	14	10	Tonic	Tonic	Minor 7th
12	26	13	Dominant	Tonic	Minor 9th
	21	11	Tonic	Mediant	Major 9th
13	25	9	Dominant	Tonic	Perfect 8va
14	20	6	Tonic	Tonic	Perfect 5th

TABLE III--continued

Fugue	Length		First Pitch	Last Pitch	Range
	Notes	Beats			
16	10	5	Dominant	Tonic	Minor 7th
18	14	8	Subdominant	Dominant*	Perfect 5th
21	28	13	Leading Tone	Dominant	Minor 7th
	22	11	Mediant	Tonic	Minor 6th
24	15	10	Supertonic	Dominant*	Diminished 7th

* modulating subject-last pitch given in original tonic key.

his subjects. When the eighteen notes in an average Bach countersubject are viewed in the perspective of a shorter average time span than the eighteen notes in his average subject, the countersubjects are seen to be more active--about five notes occurring in each two beats compared with four notes in two beats for his subjects.

The first and last pitches of Bach's countersubjects show more diversity than those of his subjects. Five begin on subdominant; four each on tonic and dominant; and one each on supertonic, mediant, subtonic and leading tone. Seven countersubjects end on tonic, five end on dominant, two end on mediant, two on supertonic and one on leading tone. Ranges of WTC-I countersubjects span from a perfect fourth (fugue 9) to a minor tenth (fugues 2 and 3), with an average range of a minor seventh.

Eight of the fugues in WTC-I (fugues 1, 6, 8, 11, 15, 16, 20, 22) present their subjects in stretto during the course of the fugue. The three manners in which Bach treats his subjects in stretto are to present them in complete and incomplete stretti as well as in canon (see Chapter I for definitions). Many false stretti also appear. Fugue twenty-four, for instance, presents only false stretti. Subjects and their inversions (fugues 6, 8) and augmentations (fugue 8) also appear in stretto combinations.

Only two of the thirteen fugues listed as employing regularly-recurring countersubjects also present their subjects in stretto. Fugues eleven and sixteen are these two. It appears, then, that Bach opts for either a regularly-recurring countersubject or a stretto fugue but does not normally write fugues that contain both in WTC-I. This is probably the case because in a stretto fugue the countersubject is generally abandoned during the stretto sections and, therefore, does not play enough of a role in the fugue to be worth its construction, presentation, and then its irregular use and abandonment.

The keys of subject presentations in WTC-I are shown in Table IV. Each key found is listed only once. Only five subject entry keys in all of the twenty-four fugues are not closely-related keys (fugues 1-D, 4-d[#], 6-A, 10-d, 24-E). These five keys are modal alterations to diatonic closely-related keys. Bach obviously shows a preference for closely-related keys for subject entries in WTC-I.

TABLE IV
KEYS OF SUBJECT PRESENTATIONS IN WTC-I

Fugue	Keys	Fugue	Keys
1	C-G-a-d-D [*] -F	13	F [#] -C [#] -d [#] -B
2	c-g-E ^b -C	14	f [#] -c [#]
3	C [#] -G [#] -d [#] -e [#]	15	G-D-e-b
4	c [#] -g [#] -f [#] -B-E-A-d ^{#*}	16	g-d-B ^b -F-c
5	D-A-b-G-e	17	A ^b -E ^b -f-b ^b
6	d-a-A [*] -g	18	g [#] -d [#] -c [#] -B
7	E ^b -B ^b -c-g	19	A-E-f [#] -D-b
8	d [#] -a [#] -F [#] -g [#] -B	20	a-e-G-d-C-F
9	E-B-c [#]	21	B ^b -F-g-c-E ^b
10	e-b-G-D-a-d [*]	22	b ^b -f-D ^b -e ^b
11	F-C-d-g	23	B-F [#] -E-c [#]
12	f-c-A ^b -E ^b	24	b-f [#] -e-A-D-E [*]

* not a closely-related key.

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CHAPTER III

THE FUGUES OF SHOSTAKOVICH'S OP. 87

Fugue I in C Major (Four Voices) 2/2 Meter

The opening six notes of the subject are taken from a bass vocal solo in Shostakovich's Song of the Forests, Op. 81. The subject is fourteen notes long and spans sixteen beats. It begins on tonic, ends on mediant and has the range of an octave. Its first nine notes consist of only the tonic, dominant, and submediant scale degrees.



EXAMPLE 1--Fugue I, subject

During the course of the fugue, which is constructed using only the notes of the C major scale, the subject appears beginning on each scale degree and lacks any chromatic modifications to make the entries either major or minor. For the purpose of this, and similar occurrences in later fugues, these will be termed modal entries and be named according to the scale degree on which they begin in the diatonic collection which they contain. Entries, on the other hand, which carry the chromatic inflections

necessary to create major/minor functional tonalities will be simply labeled major or minor. Functional tonality in minor keys, for example, demands the use of raised sixth and seventh scale degrees as they approach a tonic. If these scale members are left unaltered, the entry would then be labeled as a modal statement (i.e., dorian, phrygian, aeolian).

The fugue uses a real answer. Two regularly-recurring countersubjects accompany the theme. The first countersubject (CS1) consists of twenty-four notes spread over sixteen beats. Beginning on submediant and ending on tonic,



EXAMPLE 2--Fugue I, CS1

it has the range of an octave. The second countersubject (CS2) contains twenty pitches spanning sixteen beats.



EXAMPLE 3--Fugue I, CS2

It starts on supertonic and ends on submediant and its range encompasses a minor sixth. Both CS1 and CS2 begin and end with the subject.

The initial exposition extends through the first beat of measure thirty-three. The subject enters at the outset of the fugue in C major in voice four followed by the answer in G mixolydian in voice three, the subject (voice two), and the answer (voice one). The answer-codetta (mm. 16-18) consists of three motives. Motive one is found



EXAMPLE 4--Fugue I, answer-codetta (mm. 16-18)

in measures 5 and 7 of the subject. The second motive is from the first two measures of CS1. Motive three anticipates the first measure of CS2, which follows immediately.

The first episode (mm. 34-39) uses all three of the motives from the answer-codetta. Motive one appears in voice one in measures 34-35 and in voice four in bars 36-37. The second motive is found in voice two (mm. 33-35) while motive three occurs in voice four (m. 38).

The second exposition (mm. 39-73) is complete. It includes subject entries in e phrygian (voice three, mm. 39-47) with CS1 (voice one) and CS2 (voice two); b locrian (voice four, mm. 47-55) with CS2 (voice three changing to voice two in m. 51) and CS2 (voice one) in thirds (mm. 47-51); a aeolian (voice one, mm. 57-65) with CS1 (voice four) and CS2 (voice three); and d dorian (voice two, mm. 65-73) with CS1 (voice one) and CS2 (voice three).

The episode which follows (mm. 73-78) employs motive one (mm. 74-75), from the answer-codetta, as well as an inversion of motive one (mm. 74-75), an inversion of motive two (mm. 76-77), an augmentation of motive two (mm. 74-77), and motive three (m. 73).

The third exposition (mm. 78-95) consists of two two-voice stretto presentations of the subject. The first two entries (mm. 78-86), both in C major a half note apart, are accompanied by CS2 until measure 82. Beginning in bar 86, overlapping the end of the second entry, is the first of two stretto subjects in F lydian, separated by one measure. All four presentations of the subject are complete, making these entries canons.

The coda (mm. 95-106) contains one entry of the subject. It begins in F lydian (m. 97) and finishes in C major with the addition of one pitch, d^2 in bar 101.


Triple invertible counterpoint is demonstrated by the three voice textures in measures 18 to 26 (CS2 in bottom

voice), 39 to 45 (S in bottom voice), and 57 to 65 (CS1 in bottom voice).

Key relationships in the fugue are structured using the intervals derived from the prominent scale degrees found in the subject--tonic, dominant, and submediant. These intervals are the fifth and sixth formed by the combination of tonic with dominant and submediant.

Each pair of subject keys, C-G, e-b, a-d, and C-F, is in the traditional subject-answer intervallic relationship, being a fifth apart. The first member of each pair, C-e-a-C, are interrelated through the interval of the sixth. The pitches a and e are a sixth above and below C, respectively. The subject appearances in e phrygian (m. 39) and a aeolian (m. 57) begin a sixth below and above the opening pitch of the last entry (m. 26) in the first exposition.

Fugue II in a Minor
(Three Voices) 2/4 Meter

The subject of this fugue bears a resemblance to two themes from the Well-Tempered Clavier, Book I (WTC-I). The opening rhythmic pattern  is the same one used by Bach to begin his second fugue. The eighth-note leaps in the third and fourth measures are suggestive of the second bar of WTC-I, 3, where Bach employs leaps up a sixth, down a seventh. Shostakovich uses leaps up a seventh, down an octave in bar three, and down a seventh in the fourth bar.



EXAMPLE 5--Fugue II, subject

The subject is twenty notes and nine beats long. Its first and last notes are tonic and its range spans a diminished twelfth. The answer is real.

Shostakovich uses the maximum possible number of countersubjects, two. The first countersubject (CS1) consists of six notes and extends from the second half of the second beat to the end of the subject--a total of 7 beats. It



EXAMPLE 6--Fugue II, CS1

is comprised solely of leaps up a fourth and down a fifth and begins on dominant and ends on submediant with the range of a major sixth. Countersubject number two (CS2) is rhythmically shorter than CS1. CS2 does not begin until

the second half of beat three of the subject but concludes simultaneously with the subject, lasting six beats.



EXAMPLE 7--Fugue II, CS2

Beginning on subdominant and concluding with tonic thirteen notes later, CS2 has the range of a minor tenth. It consists of the opening four-note motive from the subject, repeated three times, followed by a cadence note.

The first exposition (mm. 1-15) presents the subject in voice three, followed by the answer in voice two and the subject in voice one. The last note of the subject and first notes of the answer overlap (m. 5).

The answer-codetta (mm. 9-11) presents three motivic ideas for use in future episodes, all of which appear in the bottom voice, motive one on the last beat of measure nine, motive two on beat one of measure ten, and motive three on beat two of measure ten. The three motives are presented here as one melody but are not consistently employed as such later in the fugue. The scale pattern found on the last beat of measure nine and the first beat of measure ten is C[#] aeolian, notable due to its insertion between subject statements in e and a. The last two

EXAMPLE 8--Fugue II, answer-codetta (mm. 9-11)

eighth notes of the answer-codetta overlap the first three notes of the subject (m. 11).

The episode (mm. 15-21) following the first exposition employs motive one (mm. 15, 19, 20), motive two (mm. 16, 17, 19, 20), motive three (mm. 16, 20), and motive three lacking its first pitch (mm. 17, 18) all from the answer-codetta, as well as CS1 (mm. 17-20).

The second exposition (mm. 21-31) contains only two subject entries and is therefore incomplete. The first presentation (mm. 21-25, voice two) is in the key of C major, relative major to a minor and is accompanied by CS1. The upper voice of the codetta (mm. 25-27) is the same as the bottom voice of the answer-codetta (mm. 9-11). The answer appears in G major (mm. 27-31, voice two) with CS1 in the lower voice.

Episodic material in measures 31 to 36 employs motives one (mm. 31, 35, 36), two (m. 32), three (m. 32), motive three with variations of its first note (mm. 33, 34), the

four-note motive from CS2 (mm. 33-35), and the eighth-note leaps from the subject (m. 36).

Exposition number three (mm. 37-47) is composed of two subject entries, first in $f^{\#}$ minor (mm. 37-41, voice one) presented with CS1 (voice three) and CS2 (voice two), then in B^b major (mm. 43-47) in voice three with CS1 (voice two) and CS2 (voice one). This exposition is incomplete. The codetta (mm. 41-43) uses the same motives as the answer-codetta (mm. 9-11) except that motive three is replaced by a repetition of motive two.

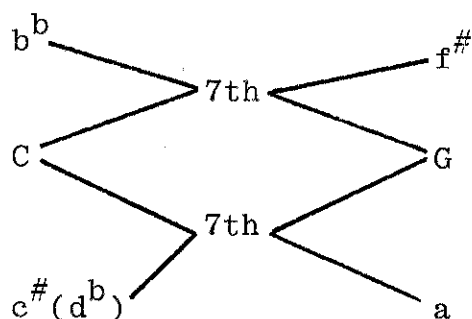
Answer-codetta motives also permeate the episode from measure 47 to 55. Motive one appears in measure 47, motive two in bars 48, 50, 52, and 54, motive three and its variants in measures 48, 49, 50, 51, and 54.

The fourth exposition (mm. 55-59) is comprised of two entries of the subject, in stretto, at the distance of an eighth note. Both are in the original tonic key of a minor and each lacks its final pitch. CS1 accompanies the second stretto entry.

The coda begins in measure 59, overlapping the end of the preceding stretto with its first two notes. These two notes are the beginning of a subject entry in $c^{\#}$ minor (mm. 59-63), the key of the scale pattern in the answer-codetta, and are therefore in stretto with the last entry of the fourth exposition.

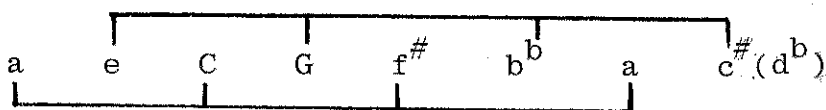
Triple invertible counterpoint is demonstrated in this fugue by the three-voice combinations in measures 10 (CS2 in lowest voice), 37 (CS1 in bottom voice), and 43 (S in lowest part).

One schema for the key relationships in this fugue is organized using the interval of the seventh found in the leaps in the subject. Following the entries in the second exposition on C and G (C is simply the relative major of a minor), each succeeding entry is at either the seventh above or below C or G.



The keys of b^b and $f^\#$ are a seventh above C and G, respectively, while the keys of $c^\#$ (enharmonic d^b) and a are a seventh below C and G, respectively.

An alternate plan of keys is based on the opening three notes of the fugue which span a minor third. This minor third span is repeated at the beginning of the second measure. Alternate keys in the fugue are members of one of



two sequences of thirds. All of the thirds in each sequence, like those in the subject, are minor thirds.

Fugue III in G Major
(Three Voices) 6/8 Meter

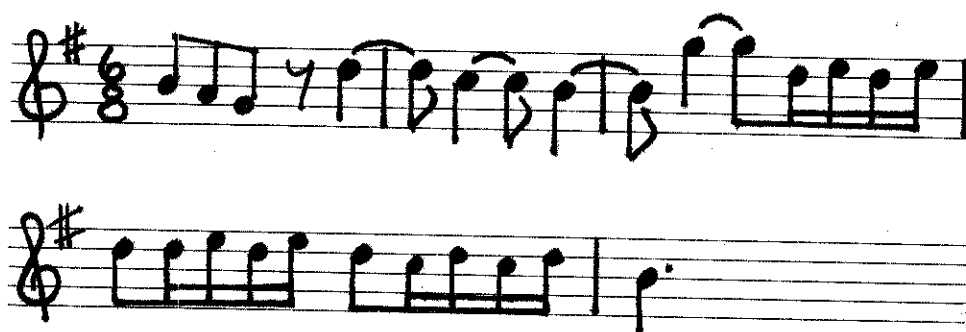
In WTC-I, 5 Bach employs a thirty-second note pattern at the beginning of his subject to herald its entry throughout the course of the fugue. This eight-note pattern is, in fact, presented thirty-three times, appearing in twenty-three of the twenty-seven measures of the piece, and becomes especially important in the latter part of the fugue (after measure 16) where the only subject entries are false.

Shostakovich's subject is structurally analogous to Bach's WTC-I, 5, employing an opening six sixteenth-note flourish as its identifying factor. This run also permeates the fugue appearing forty-four times, two of these in augmentation, and is present in forty-six of the one-hundred-one measures. The subject consists of twenty-six notes in nine beats, beginning on tonic and ending on the dominant. It has the range of a major tenth. The subject is constructed as a series of contracting intervals. It consists of the run up a seventh, leaps down a sixth, up a fifth, down a fourth, and four three-note third spans whose pitch content descends by seconds. The answer is real.



EXAMPLE 9--Fugue III, subject

There are two countersubjects present throughout the fugue. The first countersubject (CS1) is made up of twenty-two pitches, beginning and ending concurrently with the subject, a total of nine beats. CS1 begins and ends on mediant and spans an octave. The second



EXAMPLE 10--Fugue III, CS1

countersubject (CS2) begins and ends concurrently with the subject and contains thirteen notes beginning and ending on dominant and tonic, respectively. Its range is an octave.



EXAMPLE 11-- Fugue III, CS2

The exposition ends on the first beat of bar fifteen. Following the first subject entry in G major (mm. 1-5, voice one), the answer appears in D major (voice two) followed by the subject in voice three. The first subject entry and answer are in stretto as the last three notes of the subject overlap the first six notes of the answer. In fact, when CS1 accompanies the answer, immediately following a subject statement, the last three notes of the subject are also the first three notes of CS1. The answer-codetta (mm. 9-10) is comprised of three motives found in later episodic material.



EXAMPLE 12-- Fugue III, answer-codetta (mm. 9-10)

Motive one is the quarter-note-eighth-note pattern found on beat one of measure three of the subject. Here, it is

repeated and descends stepwise. Motive two is the first bar of the subject, and motive three is the three-note third spans from measures three to five of the subject. Episode number one (mm. 15-22) employs motive one (mm. 15, 20-21), motive two (mm. 16-19), and motive three (mm. 15-21, 22).

The second exposition (mm. 22-30) consists of two subject entries and is therefore incomplete. The first is in a aeolian (mm. 22-26, voice three) accompanied by CS1 (voice one) and CS2 (voice 2); the second an answer in e aeolian (mm. 26-30, voice two) with CS1 (voice three). The following episode (mm. 30-35) is comprised of motive one (mm. 30), motive two (mm. 31-34), and motive three (m. 30-35) all from the answer-codetta.

Exposition three (mm. 35-39) contains only one entry of the subject in C major (voice one) with CS1 (voice three) and CS2 (voice two). The exposition is incomplete. The succeeding episode (mm. 39-44) uses, from the answer-codetta, motive one (mm. 39-44), motive two (mm. 40-43), and motive three (mm. 39-44).

The fourth exposition contains two entries, one in B^b major (voice one, mm. 44-48) with CS1 (voice two) and CS2 (first note in voice two, completed in voice three), the other in E^b major (voice two, mm. 48-52) with CS1 (voice three). The last three notes of the B^b entry appear transposed down two octaves and a major second in the

lowest voice. This transposition is necessary due to the fact that B^b , being the answering key to E^b , would normally have a codetta between it and the E^b entry, as is found between the answer and subject in bars 9-10. The absence of this codetta would make the normal subject ending in B^b conflict with the new tonality as it overlapped the beginning of the E^b entry. Hence, the last three notes of the B^b subject are altered to fit the key of E^b . The following episode (mm. 52-61) is, except for an occurrence of motive one (m. 52), constructed of motives two and three from the answer-codetta, and ends with an augmentation of the six-note head of the subject (m. 60).

Exposition five (mm. 61-68) begins with two entries of the subject in G major in stretto at the distance of a beat. The second entry is incomplete, ending on its sixth beat while the first finishes with its last note resolving up a second instead of down. A second set of two stretto subjects follows in the key of D major (mm. 65-68) also separated by a beat. Both entries are again incomplete, the first entry ending on the first note of its eighth beat and the second having its last beat altered to become an ascending three-note pattern instead of the original descending third span. Both stretti are accompanied by the syncopated rhythmic pattern from CS1.

An episode (mm. 69-75) separates the next group of stretto subjects. This episode uses answer-codetta motives

two and three alternating between the two voices in opposition to each other. The two-voice stretto in F major (mm. 75-78) is incomplete. The second entry only extends through six beats and the first entry lacks its final beat. The syncopated rhythm from CS1 again accompanies. Another two-voice stretto follows immediately. This section (mm. 79-82) consists of the same material as the preceding section (mm. 75-78) transposed to B^b major. Both stretti are at the distance of one beat.

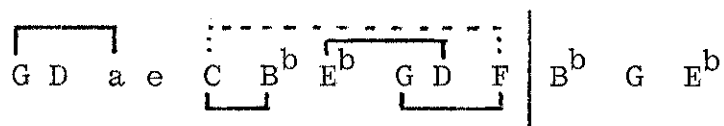
A five-measure episode, consisting of motive one from the answer-codetta and false entries (mm. 84 and 86) over a g-d pedal, leads to an incomplete three-voice stretto in G major (mm. 88-92). The voices enter at the distance of one beat. The first entry is complete while the second and third finish before the first making this stretto, like all the preceding ones, incomplete. This disappearance of the subject as a complete entity in the second half of the fugue is similar to Bach's fugue WTC-I,5 where there is no complete subject statement after measure fifteen.

Measures 92-93 use motives two and three from the answer-codetta to lead to the coda (mm. 94-101). One subject entry appears in the coda beginning on beat two of measure 94 and extending to the end of the fugue. Beginning in E^b major with its first six notes in augmentation over a neapolitan pedal, it concludes in irregular augmentation in the key of G major (mm. 99-101). Accompanying is a

paraphrased form of the subject (mm. 97-101) in the middle voice that begins with an augmented inversion of the first six notes of the subject, omits its second beat and finishes in G major (from mm. 99-101) with its last beat rhythmically altered in measure 101.

Triple invertible counterpoint is shown in the fugue by the entries in measures 11 (S in bottom voice), 35 (CS1 in bottom voice) and 44 (CS2 in bottom voice).

Key relationships in this fugue are organized using the interval of the seventh found so prominently as the outer notes of the opening sixteenth-note run of the subject. After the first set of entries following the exposition in the closely related key of a (which enters a seventh below the last entry in the exposition) and its answer in e, three pairs of entries, each a 7th apart, are present. One, and



only one, of each pair of keys in seventh relationships (C, G, D) is a closely related key to the original tonic, one in fact being that key, while the other three members (B^b , E^b , F) are all closely related to one another through the key of B^b . Shostakovich chooses for his final entries in the fugue one member from each of the aforementioned 7th pairs ($B^b \ G \ E^b$); B^b being the upper member of

its seventh relationship with G and E^b representing the lower members of their respective overlapping pairs. When the successive seventh pairs are viewed as conventional subject/answer couplings, one answer/subject pair (C-F) surrounds the other, setting this sequence of seventh related keys apart from its environs.

Fugue IV in e Minor
(Four Voices) 4/4 Meter

This is the first of two double fugues in the collection--the other being the monumental number twenty-four. For the purpose of this thesis, a double fugue is understood to be a fugue with two subjects, each with its own exposition and ensuing fugal treatment. Following the discrete presentation of each subject is a third section in which both subjects are presented simultaneously. This use of the term double fugue is in contrast to the description of a fugue whose countersubject is unique in character and is consistently found in association with the subject throughout the course of the piece.

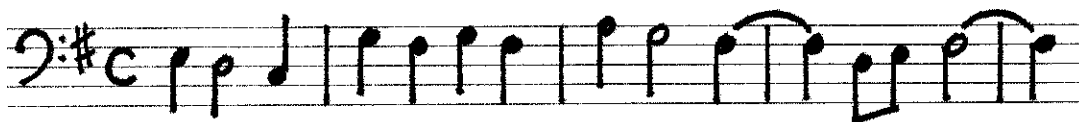
The first subject (S1) is twelve notes and seventeen beats in length. Its range is a minor seventh and its first and last scale degrees are tonic and dominant, respectively. Dominant and submediant scale degrees figure prominently in the construction of the subject, as they did in Fugue I. Opening motion from tonic up to dominant with an embellishing submediant followed by a strong-beat



EXAMPLE 13--Fugue IV, S1

submediant degree (m. 3) are evidence of this construction. A real answer is given to S1.

Three countersubjects appear with S1. The first (CS1) is thirteen notes, seventeen beats long, begins on tonic



EXAMPLE 14--Fugue IV, CS1

and ends on supertonic, and has a range of a minor sixth. The second (CS2) also lasts for seventeen beats and consists of seventeen notes, beginning on submediant and ending on



EXAMPLE 15--Fugue IV, CS2

dominant and spanning a minor sixth range. The third (CS3) is comprised of seven pitches and spans seventeen beats,

beginning on tonic and ending on mediant, with a range of a perfect fourth.



EXAMPLE 16--Fugue IV, CS3

The exposition (mm. 1-19) consists of appearances of the subject in e aeolian (mm. 1-5, voice three), answer in b aeolian (mm. 5-9, voice two), subject (mm. 11-15, voice four), and answer (mm. 15-19, voice one). The answer-codetta (mm. 9-10) consists of two motives to be found in later episodes.



EXAMPLE 17--Fugue IV, answer-codetta 1 (mm. 9-10)

Motive one, in the lowest voice, is a continuation of the same pattern found at the close of CS1, which immediately precedes this section. Motive two is a sequential pattern of a leap down a third followed by an ascending second.

Throughout the fugue on the first subject, the counter-subjects give modal tendencies to the music. In the exposition CS1 employs the flatted supertonic scale degree from phrygian mode in conjunction with entries in measures 5, 11, and 15.

The episode which follows the initial exposition uses motive one (mm. 19-21, voice four; m. 21, voice two) and motive two (m. 20, voice one) from the answer-codetta. The following exposition (mm. 22-30) contains two presentations of the subject. The first, in G major (mm. 22-26, voice four), is found with CS1 (voice two) and CS2 (voice one) while the second, an answer in D major (mm. 26-30, voice two), appears with CS1 (voice four) and CS3 (voice one). Both subject occurrences are altered three pitches from the end to include b_7 in their respective keys. CS1 (f-natural, m. 24) and CS2 (f-natural, m. 25) also include b_7 as does CS3 (c-natural, m. 29). This chromaticism effects a change to mixolydian mode in the same way that phrygian mode was presented in the initial exposition. The episode (mm. 30-35) employs motive one (mm. 30-33) and motive two (mm. 30-32, 32-33).

The next exposition (mm. 36-45) contains two subject entries and is therefore incomplete. The first entry, in C major (mm. 36-40, voice four), an answer to the next subject, is presented with CS1 (voice one), CS2 (voice two), and CS3 (voice three). The second entry (mm. 41-45, voice

three), in F major, appears with CS1 (voice four) and CS2 (voice one). Mixolydian tendencies again are found in S1 (B^b, m. 39; E^b, m. 44), CS1 (B^b, m. 39; E^b, m. 44), CS2 (B^b, m. 38; E^b, m. 43), and CS3 (B^b, mm. 38 and 39). The episode (mm. 45-47) leading to the beginning of the fugue on the second subject uses motive one (mm. 45, 46) from the answer-codetta.

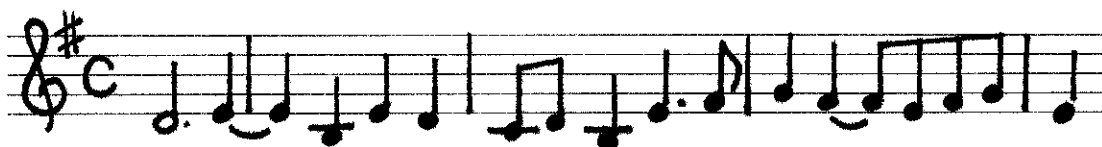
Quadruple invertible counterpoint is not shown for S1 and its countersubjects. Only the subject and CS1 appear as the lowest voice in any texture. The second subject's initial entry (m. 47) is heralded by a change of tempo from quarter note = 80 to quarter note = 116. This, in conjunction with the change in prevailing note values from quarter to eighth notes provides a marked segmentation at this point in the piece.

Structurally, the second subject (S2) is analogous to the first subject. The same pitches are present in both

EXAMPLE 18--Fugue IV, S2 and S1 pitch structure

in prominent places, as shown above. Twenty-five notes and seventeen beats comprise S2 in its initial presentation (mm. 47-51). S2 begins on tonic and ends on dominant and, like S1, has a range of a minor seventh. Despite an opening tonic-dominant interval, the answer is real.

Two regularly-recurring countersubjects are presented with S2. Countersubject one (CS1) contains sixteen pitches



EXAMPLE 19--Fugue IV, CS1 to S2

that begin on subtonic and end on tonic spanning seventeen beats, and encompassing a minor sixth. Countersubject two (CS2) contains fourteen notes, equalling seventeen beats, beginning on subdominant and ending on submediant, and has a range of a minor sixth.



EXAMPLE 20--Fugue IV, CS2 to S2

The initial exposition of the second fugue (mm. 47-62) contains four entries of S2 (mm. 47-50 in voice one, mm. 50-54 in voice two; mm. 55-59 in voice three; and

mm. 59-62 in voice four). The first and third entries are in b aeolian while the answers, entries two and four, occur in f[#] aeolian. The second answer-codetta (mm. 54-55) uses a pervading pattern of a half-note tied, in this case, to the first of four succeeding eighth notes. A similar pattern appears in the first answer-codetta (mm. 9-10), where a half-note is tied to the first of two ensuing



EXAMPLE 21--Fugue IV, answer-codetta 2 (mm. 54-55)

quarter-notes. The change to eighth-notes in the new pattern is a result of the change in pervading note values in this second fugal section. The episode (mm. 62-66) contains the motive from the second answer-codetta in at least one voice in each of its measures.

The next exposition (mm. 66-83) contains four presentations of the subject. The first, in d aeolian (mm. 66-70, voice two), is accompanied by CS1 (voice one) and CS2 (voice four). The second entry, an answer in a aeolian (mm. 70-73, voice one), appears with CS1 (voice two) and CS2 (voice three). Entry three, in c aeolian (mm. 76-79,

voice four), is found without any complete countersubject statements. The fourth statement, an answer in g aeolian (mm. 79-83, voice one), appears with CS1 (voice four) and a paraphrased version of CS2 (voice two). The exposition is incomplete as no entry appears in voice three.

The episode (mm. 83-87) leading to the third section of the fugue begins with the motive from the second answer-codetta in the two outer voices from measure 83 through measure 85 and in voice four in measure 87.

The final section of the fugue (mm. 88-115) presents various simultaneous combinations of both subjects beginning (mm. 88-91) with S1 in e aeolian (voice four) doubled at the octave, S2 in e aeolian (voice one) and CS1 from S2 (voice two) altered in the addition of an extra quarter-note value to its second note. Immediately following (mm. 92-96), S1 appears (voice one) in b aeolian, S2 enters next one-half beat later (voice four) followed by another S2 two beats later, both in the same key. The first occurrence of S2 is altered. The pitch five notes from the end becomes a dotted quarter note, the next two pitches are omitted and then the subject finishes normally.

The episode (mm. 96-106) begins with the motive from the answer-codetta of the second subject (mm. 96-97) followed by two, two-measure false entries of S2 (mm. 99-102), which are accompanied by the second and third measures of

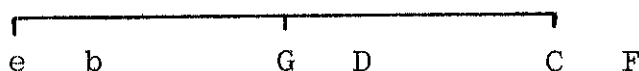
CS1 from S1. Four false entries of S2 follow (mm. 103-105), each two beats apart. The first and third entries are complete through five notes; the second and fourth use only four notes of the subject. Measures 98, 105, and 106 contain the first four notes of the motive used in bars 96 and 97.

Measures 107 to 110 begin with S1 (voice four) in a aeolian, followed by S2 (voice one) in a aeolian one-half beat later and S2 in C major two beats later. This last entry is a tonal answer to S2 with its opening perfect fifth altered to become a perfect fourth and is only complete through thirteen notes. The final stretto section (mm. 111-115) is composed of four entries, two each of S1 and S2. S1 enters first in e aeolian (voice two) followed by S2 in e aeolian (voice one) a half beat later. One measure after the first S1, another S1 enters in C major in voice four followed, an eighth note later, by S2 also in C (voice three). Of the four stretto sections, only the third is incomplete.

Prominent subject intervals are again seen as determinants of the keys of subject entries. The openings of the respective subjects are similar in their motion to the dominant with its embellishing submediant and dissimilar in the omission of mediant and the resulting subdominant passing tone to the dominant from S2. The prominent motion

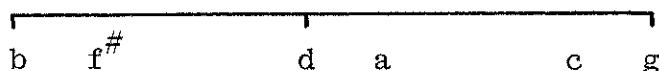
to the dominant in each subject is reflected in the key chosen for the initial presentation of the second subject, b. aeolian, dominant of e, the opening key of the fugue.

The interval of the third, the one found at the beginning of S1 but absent from the opening of S2, plays the primary organization role for the rest of the keys in the fugue. The entry levels of S1 in the first fugue (mm. 1-46) are first evidence of this relationship. Three pairs of subject/answer related keys are present. One member of



each pair of keys following those of the initial exposition (e-b) is in a third relationship to the initial key of e aeolian. The key of G is a third above e, while C is a third below. G is the subject member of the pair of keys (G-D) and C is the answer member of its pair (C-F).

The key relationships of the fugue on the second subject are identical to the first fugue. The key of d (the subject member of its pair, d-a) is a third above b,



while the key of g (the answer member of its pair, c-g) is a third below b.

The four stretti likewise employ third relationships as organizing factors. The first stretto entries are in the tonic key (e); the second stretto entries are in the dominant (b) and third above (D). The third stretto keys

are the subdominant (a), the pitch other than mediant omitted from the beginning of S2, and third above (C), while the fourth stretto begins back in the tonic (e) and concludes with entries a third below (C).

The final occurrence of S1 (mm. 119-123) is followed immediately by the first nine notes of S2 (voice one, mm. 123-124), the last four of which are in augmentation, the first six notes of S2 (voice two, mm. 123-124), the first five pitches of S2 (voice three, m. 124), and the first eleven notes of S2 (voice four, mm. 125-126). The top voice of the last two measures presents the first four notes of S2 in augmentation with an augmented retrograde of the first three pitches of S2 in the bottom voice.

Fugue V in D Major
(Three Voices) 2/4 Meter

The subject of this fugue, again, as in Fugues I and IV (S1 and S2), uses tonic, dominant, and submediant pitches as structurally important elements. The opening sixteen of the twenty-four pitches consist of only these scale degrees.



EXAMPLE 22, Fugue V, subject

Spanning fourteen beats, the subject begins and ends on tonic and has the range of a major sixth. A tonal answer is given for the first time in the collection. An opening dominant-tonic is answer by tonic-dominant.

The fugue uses two countersubjects. The first (CS1) consists of twelve notes starting with mediant and closing



EXAMPLE 23--Fugue V, CS1

with submediant. It spans fourteen beats and covers a minor sixth range. The second countersubject (CS2) is nine notes and fourteen beats long. Subdominant and



EXAMPLE 24--Fugue V, CS2

leading tone, respectively, begin and end CS2, which has the range of a minor seventh. No alterations are made to either countersubject in conjunction with the tonal answer.

The main exposition (mm. 1-25) begins with the subject in voice two in D major (mm. 1-7) followed by the answer in A major in voice one (mm. 8-14) and subject (mm. 19-25) in voice three. The answer-codetta (mm. 15-18) consists of three motives to be employed in future episodes.

The image shows a musical score for Example 25, Fugue V, answer-codetta (mm. 15-18). The score is written for two staves, treble and bass clef. The key signature is one sharp (F#). Motive 1a is in the treble staff, Motive 1b is in the bass staff, Motive 2 is in the bass staff, and Motive 3 is in the bass staff. The score includes dynamic markings like 'mf' and 'dim.'.

EXAMPLE 25--Fugue V, answer-codetta (mm. 15-18)

Motives 1a and 1b are taken from the stepwise eighth-note patterns found in measures six and seven of the subject. Motive two is similar to the opening bar of the subject, while motive three is new material. The episode (mm. 26-32) contains motives 1a (mm. 26-27, 31-32), 1b (mm. 28-30), motive two (m. 27) and motive three (mm. 26, 28-30), as well as the descending second pattern from measure three of the subject (mm. 31-32).

The exposition (mm. 33-65) is composed of four entries, two each of the subject and answer. First the subject appears (mm. 33-39, voice one) in b minor accompanied by CS1 (voice two) and CS2 (voice three). Next is an answer entry (mm. 40-46, voice three) in f[#] minor with CS1 (voice two) and CS2 (voice one). The codetta (mm. 47-51), leading to a return of the subject in its original key, contains motive 1a (mm. 47-48), 1b (mm. 49-51), and motive three (mm. 47, 49-51) from the answer-codetta.

Measures 52 to 65 present both subject and answer in their original tonalities. The subject entry in D major

(mm. 52-58) begins with CS1 in the lower of the two voices for the first two measures and switches CS1 to the upper voice to finish the statement. An answer in A major follows immediately (mm. 59-65, voice three) with CS1 (voice two) and CS2 (voice one). The first note of CS2 is altered to occur a fourth higher than normal. The following episode (mm. 66-74) uses motives 1a (mm. 66-67, 70-71), 1b (mm. 68-70, 73, 74 in retrograde), motive two (m. 67), motive three (mm. 66, 68-70) and the descending stepwise pattern from measure three of the subject (mm. 71-74).

Exposition three (mm. 75-97) contains three entries, one in each voice, and is therefore complete. Beginning with a statement of the subject in B^b major (mm. 75-81, voice three) accompanied by CS1 (voice one) and CS2 (voice two) followed by the answer in F major (voice two) with CS1 (voice three), this section includes a statement of the subject (mm. 92-97) altered in three manners. First, this entry in c minor (voice one) opens with mediant to tonic instead of the original dominant to tonic interval. Second, the last five pitches (g-c-b^b-a-g), if taken as scale degrees 1-4-3-2-1 as in the other statements, end in g minor. Third, and most important for its later significance, the fourth measure of the subject is omitted. The episode preceding the c minor statement (mm. 89-91) uses motive 1b (mm. 89-91) as well as motive three (mm. 89-91) from the answer-codetta this time in ascending one-measure patterns.

Episodic material (mm. 98-106) consists of three false entries of the first three measures of the subject (mm. 98, 101, 104), the first two of which appear with false presentations of CS1 and CS2. The last false entry occurs in conjunction with motive three from the answer-codetta.

The fourth exposition (mm. 107-124) is composed of two, three-voice strettii. In the first section (mm. 107-117) Shostakovich, by including an extra measure of rest between the first and second bar of each entry, manages to present the first measure of each subject, one bar apart, before the remainder of the respective subjects is heard. The first subject to enter (voice one) is then completed without further interruption while the second (voice two) finishes with a missing fourth measure (as seen in mm. 92-97) and an additional two bars of rest between its remaining third and fifth measures. The third entry (voice three) is found complete but with an extra measure of rest following its fourth bar. All entries are in D major, are subject statements, and are complete except for omissions of measure four of each.

The second three-voice stretto (mm. 117-124), consisting of only answer statements in C major, begins over the last four notes of the preceding section. Each statement enters, one measure distant, and finishes without interruption excepting that each lacks its fourth measure.

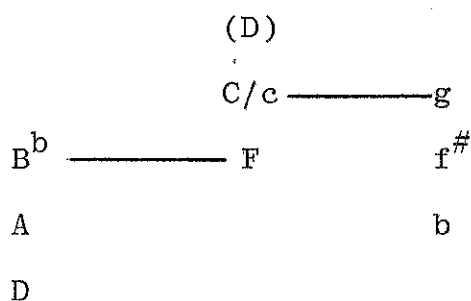
Triple counterpoint is not demonstrated in the fugue as CS1 never appears in the lowest voice in a three-part setting, although it does in the two-voice sections (mm. 51 and 82).

The coda (mm. 125-148) contains an entry in B major (mm. 128-133, voice one) which lacks its fourth bar and replaces the 4-3-2-1 eighth-note pattern with quarter notes. Another statement follows in D major (mm. 134-140, voice three) accompanied by false entries of CS1 and CS2. The close of the fugue is primarily constructed of variations of the 1-4-3-2-1 pattern found in the last three bars of the subject. This is found (mm. 139-141) in imitation of the same pattern in the subject just presented, in double augmentation (mm. 142-148, lowest voice) in augmented inversion (mm. 142-144, upper voice) lacking its final note (b), in its original form (mm. 144-146, inner voice), and in irregular durations (mm. 144-147, upper voice).

The key scheme of this fugue is closely related to the opening pitches of the subject, tonic, dominant, and submediant. Following the tonic and dominant subjects and answer which open the piece, the key of b minor, a closely related key and submediant to D, appears with its answering f[#] minor. Further use of the sixth degree in D can be observed in measures 75-88 where B^b major, submediant of D, is found with its answer of F major. The other keys

presented are c minor and g minor (m. 92-97) and C major (mm. 117-124).

The following diagram shows three interrelated tonic-dominant-submediant associations explaining all keys encountered in the fugue. Two of these patterns recur at



the very end of the piece, in measures 142-143 b-f[#]-g in the upper voice and C-F(♯)-D (with an E between F[#] and D) in the lowest voice. The lowest notes of each of the three tonic-dominant-submediant structures are also related through the intervals formed by tonic-dominant and tonic-submediant pitches, the fifth and sixth. The lowest pitch of the first structure (D) is a sixth above the lowest pitch of the second pattern (F) which is a fifth above the lowest pitch of the third pattern (b).

Fugue VI in b Minor
(Four Voices) 3/4 Meter

The subject of this fugue is another example of Shostakovich's prominent use of tonic, dominant, and submediant scale degrees, and the intervals derived from them

(5th and 6th), which play a prominent role in the structure of the overall fugue, as will be seen. The initial four measures consist of two ascending lines beginning on tonic (m. 1) and submediant (m. 2), respectively, and ending on dominant (m. 4). The subject is bipartite in structure owing to the abrupt increase in rhythmic activity in its fifth and sixth measures. The first half of the subject

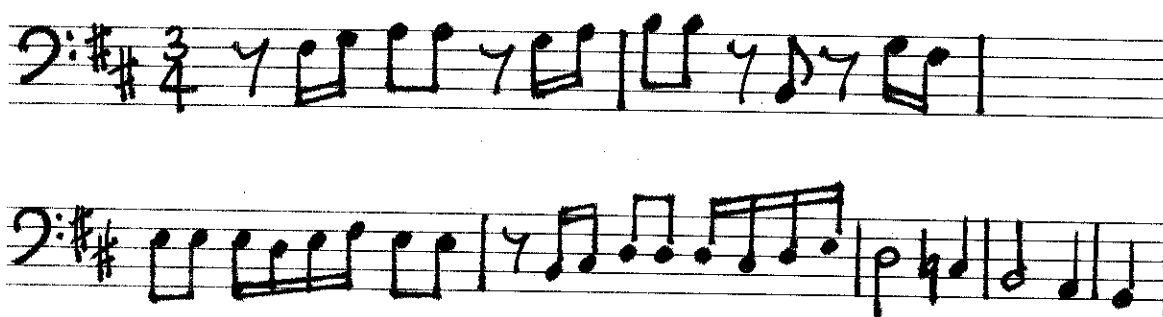


EXAMPLE 26--Fugue VI, subject

(mm. 1-4) has the range of a minor sixth while the second section (mm. 5-6) spans a perfect fifth.

The subject contains twenty-six pitches covering nineteen beats and has the range of a minor tenth. It begins on tonic and ends on dominant. A real answer is employed.

Three regularly-recurring countersubjects are found in the fugue. The first countersubject (CS1), resembling the second part (mm. 5-6) of the subject, is thirty-two



EXAMPLE 27--Fugue VI, CS1

notes and nineteen beats in length. It begins on dominant, ends on submediant and has a range of a major tenth. The second countersubject (CS2) consists of twenty pitches spanning nineteen beats, beginning with mediant, ending



EXAMPLE 28--Fugue VI, CS2

with tonic and having the range of a minor tenth. Counter-subject three (CS3) begins on tonic and ends on submediant



EXAMPLE 29--Fugue VI, CS3

eighteen notes, nineteen beats, later. All countersubjects begin and end with the subject.

The exposition consists of entries of the subject in b aeolian (voice four), answer in f[#] aeolian (m. 7, voice three), subject in b aeolian (m. 14, voice two), and answer (m. 20, voice one). Two redundant entries, one each of the subject and answer, occur in measures 30-36 in b and measures 36-42 in f[#], respectively. Both redundant entries occur in the lowest voice accompanied by CS1 and CS2. The exposition ends in bar 42. The answer-codetta (m. 13) contains two motives used in later episodic sections.



EXAMPLE 30--Fugue VI, answer-codetta (m. 13)

The upper voice, motive one, bears similarity to the fifth and sixth measures of the subject while motive two in the lower voice is an intervallically contracted version of the second measure of the subject.

The episode preceding the redundant entries (mm. 26-29) consists of motives one (mm. 26-29), two (mm. 26, 28), and a variation of motive two (mm. 27, 29) from the answer-codetta employing a descending third and second instead of a descending third and ascending second. Following the redundant entries is another episode (mm. 42-45) containing both motives from the answer-codetta, the modified version of motive two (m. 44), and a new counterpoint (mm. 42-45), a two measure melody altered slightly in its restatement (mm. 44-45), is presented in the uppermost voice. It is derived, in character, from CS2.

The next group of entries (mm. 46-58) is comprised of two statements of the subject. The first occurs (mm. 46-52) in voice four in D major in conjunction with CS1 (voice two), CS2 (voice three) and CS3 (voice one), while the second entry, an answer, is found in A major (mm. 52-58, voice three) accompanied by CS1 (voice one) and CS2 (voice four). The second of the four sixteenth notes at the end of the first subject entry is altered (m. 51) to become $g^{\#}$ in order to facilitate a modulation to the key of A for the succeeding answer. This exposition is incomplete. The episode (mm. 58-65) employs, from the answer-codetta, motive one

(mm. 58, 59, 60, 61), a variation of motive one (mm. 62, 64), motive two (mm. 59, 61), motive two and its variant with octave displacement of the first pitch (mm. 58, 60), the new counterpoint from measures 42-45 (mm. 58-62) and the same melody lacking its second bar (mm. 62-65).

The two succeeding entries, a subject and answer which comprise exposition three (mm. 66-78), are in g aeolian (mm. 66-72, voice one) accompanied by CS1 (voice two), CS2 (voice four) and CS3 (voice three); and in d aeolian (mm. 72-78, voice two) with CS1 (voice one) and CS3 (voice four). The exposition is incomplete. The following episode (mm. 78-82) uses motive one (mm. 78-82) and motive two (mm. 79-81) from the answer-codetta alternating between the upper and lower voices.

Following this episode is a single subject entry in c aeolian (mm. 83-89; voice four) in association with allusions to CS1 in the upper two voices. The episode (mm. 89-95) employs the opening bar of CS1 (m. 89), and various allusions to motive one from the answer-codetta (mm. 90-95), but never an unaltered presentation. Measures 92-93 are the same as bars 5-6 of the subject.

Beginning in measure 96 are found three subjects in stretto, all in b aeolian, at the distance of one measure, and the first being doubled at the octave through its first four bars. The first entry is complete, while the second is only stated through its first four measures and is followed

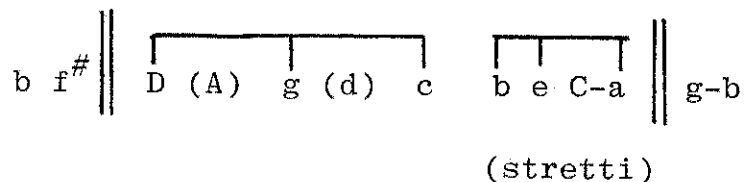
immediately by two more statements of the subject's first four bars (mm. 100-104) in the same key. The first of these has its first note shortened to a quarter note (m. 100). Interspersed (mm. 99, 103) is the fifth bar of the subject as well as motive one (m. 102) from the answer-codetta. The ensuing episode (mm. 104-107) contains motives one (mm. 104, 105, 106) and two (mm. 105, 106) from the answer-codetta and measure two of the subject (m. 104) from which answer-codetta motive two is drawn.

Another set of statements of the subject in stretto begins in measure 107 with a complete entry in e aeolian (mm. 107-113) followed one bar later by a statement of the first four bars of the subject (mm. 108-111). A paraphrased CSI accompanies (mm. 107-110). A third presentation of the first four measures occurs (mm. 111-114) beginning over the last note of the second entry. A fourth subject appears (mm. 112-118) with its first four bars intact and last two measures beginning a fifth higher than normal and having the interval between its ninth and tenth notes from the end contracted from a fourth to a third. Concurrently with these last altered measures are found two more statements of the subject in C major, in stretto, one measure apart. The first (mm. 116-122) is altered in its final three measures to end in the key of a. The second entry (mm. 117-120) is complete only through its first four

measures. The entire set of entries from measure 111 through measure 123 occurs over a b-natural pedal. Motive one from the answer-codetta is also present in bar 119.

The coda (mm. 122-131) begins with two false entries of the subject, in thirds, in the upper two voices over the ongoing b-natural pedal. Motive one (answer-codetta) appears (m. 122) as does the first bar of CS1 (m. 123). Another subject beginning in one key and ending in another follows (mm. 124-130). This entry begins in g minor, its first note in voice two switching to voice one, and employs an altered fourth measure (m. 127) moving down by second instead of by fifth. The fifth and sixth bars of this statement (mm. 128-129) abruptly switch to b but are presented on scale degrees other than those found in the original subject form. The sixth measure of this statement (m. 129) appears with its second and third beat contents reversed. This entry, the stretto entry which changes key after its first four bars (mm. 116-122), and the frequent occurrence of the four-measure abridged versions of the subject served to evince the implementation of the bipartite structure of the subject in the fugue. Quadruple invertible counterpoint is not demonstrated in this fugue. CS1 does not appear as the lowest voice in the four-voice texture. Its only occurrence as a lowest voice is in the two-part texture in measure 7.

The interval of the sixth plays a primary organizational role in the schema of keys in this fugue, as does the fifth. The importance of these two intervals has been seen in the structure of the subject itself.



Two groups of keys are noted following the initial exposition and the redundant entries in b and $f^{\#}$, $D-g-c$ and $b-e-C/a$, the second group representing the keys in which the subject is presented in stretto. The keys A and d in the first group are present as answers to the keys D and g . The first key of the first group (D) is the relative of b , and also a sixth distant from it. By using the key of a in the second group, the key in which this subject entry and the stretto section ends, two sets of descending fifths are noted, $D-g-c$ and $b-e-a$. Each member of group two is a sixth from the corresponding member of group one ($D-b$, $g-e$, $c-a$). The last stretto keys ($C-a$) are also related by sixth. A final manifestation of the influence of the sixth on the key relationship is found in the final entry (mm. 124-130). The entry begins in g and ends in b , a sixth apart, and, in fact, the distance between the last note of the first four measures in g and the first pitch of the last bars in b (mm. 127-128) is written as a sixth.

Fugue VII in A Major
(Three Voices) 2/2 Meter

In stark contrast to the chromaticism to be found in some of the fugues in the collection stands this subject built solely of pitches from the tonic triad. In fact, not one note of the entire piece is anything but a member of the harmony with which it is presented. In short, this is a fugue built entirely of chord tones; there is not one non-harmonic tone to be found.

The subject consists of twenty-three pitches, lasting eight beats, beginning and ending on tonic with the range of a perfect eleventh. The subject is given a real answer based only on pitches of the dominant triad.



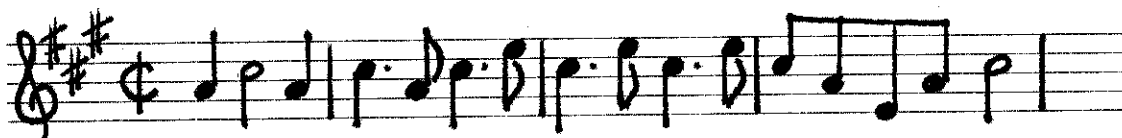
EXAMPLE 31--Fugue VII, subject

There are two regularly-recurring countersubjects in the fugue. The first (CS1) is sixteen notes and eight beats long, begins and ends on mediant and has an octave



EXAMPLE 32--Fugue VII, CS1

range. The second (CS2) also consists of sixteen notes and eight beats, begins on tonic and ends on mediant, and has an octave range. Both begin and end with the subject.



EXAMPLE 33--Fugue VII, CS2

The exposition consists of entries of the subject in A major (mm. 1-4, voice one), the answer in E major (mm. 5-8, voice two) and the subject in A (mm. 11-14, voice three). CS1 is comprised primarily of a syncopated pattern of a quarter-note tied to the first of two eighth-notes. CS2 is composed of the same pattern in its second and third bars except that now the pattern is shifted so that there is no syncopation. The answer-codetta (mm. 9-10), which contains alternating subdominant and tonic harmonies,

contains four motives seen in later material. Motive one



EXAMPLE 34--Fugue VII, answer-codetta (mm. 9-10)

(m. 9, top voice) is new material. Motive two (m. 9, bottom voice) is similar to measure three of the subject. Motive three (m. 10, top voice) is from CS1, while motive four (m. 10, bottom voice) is similar to the second and third bars of CS2. The exposition contains only tonic, subdominant and dominant harmonies. It ends in measure fourteen.

The episode (mm. 15-20) presents a new melody in the upper voice. It consists of a quarter note and two eighth notes followed, in alternate measures, by two quarters or an eighth and dotted-quarter. It is a two-measure pattern that is repeated in measures 17 and 18. Also found in this episode are motive one (mm. 15, 17, voice two) and motive two (mm. 15, 17, voice three) from the answer-codetta, a new motive formed by two eighths/two quarters/two eighths (mm. 16, 18, voice two) derived from the third measure of the subject, and a fourth pattern, similar to answer-codetta motive four (mm. 16, 18, voice three). Bars 19-20 use a

divided form of the new motive (mm. 16, 18, voice two) with the first half, two eighths/quarter, in the upper voice and the second half, quarter/two eighths, in the lower voice.

The second exposition (mm. 21-28) contains two entries and is incomplete. The first subject enters in $f^{\#}$ minor (mm. 21-24, voice two) accompanied by CS1 (voice one) and CS2 (voice three). CS1 undergoes slight modification in octave transpositions at its fourth, sixth, eleventh and sixteenth notes as well as a change from the seventh pitch to the end which retains the basic contour of the melody but adds a new note (number eight) and alters the member of the chord which appears from that of the original countersubject on note thirteen--tonic becomes mediant. The second subject statement (mm. 25-28, voice two) is in $c^{\#}$ minor and is found with CS1 (voice three) and CS2 (voice one). After one and a half beats the subject and CS2 switch voices. The first pitch of CS2 is altered, as is its fifth beat. The first note is a fifth above the original and beat five is rhythmically altered from the original dotted-quarter/eighth to become eighth/quarter/eighth, the last pitch being an added one. The episode (mm. 29-32) includes all of the motives from the answer-codetta. Motive one appears in measures 29 and 31 (fifth note altered), motive two occurs in measures 29 and 31, motive three is found in bar 30, and motive four is in bars 30 and 32 (last beat rhythmically altered).

Exposition three (mm. 33-40) shifts back to the original key of A major. A subject entry in A (mm. 33-36, lower voice) appears in CS1 and the answer statement in E (mm. 37-40, upper voice) is also found with CS1 which has octave shifts on its second and fourth pitches. The episode (mm. 41-46) employs motive one (m. 41), motive two (mm. 41,43), motive three (m. 42), variants of motive three (mm. 43,44), and motive four (mm. 42,44) from the answer-codetta. Also present (mm. 45-46) is the motive originally found in voice two in bars 16 and 18 used in the divided manner in which it was found in bars 19 and 20.

The fourth exposition (mm. 47-54) is incomplete, having only two statements of the subject. The first answer statement in F major (mm. 47-50) begins in the bottom voice and switches to the top voice after one beat. It is found with CS1 which has alterations in its chord tone occurrence in its last three beats. Entry two, a subject in B^b major, (mm. 51-54, voice three) is accompanied by CS1 (voice two) and CS2 (voice one). The succeeding episode (mm. 55-61) employs the first measure of the subject in each measure from 58 through 61 as well as the new melody from bars 15-16 (mm. 55-56) and motives one (m. 55), two (m. 55) and three (mm. 59-60) from the answer-codetta. These last answer-codetta motives are retained primarily as rhythmic motives as their pitch content is not consistent with their original occurrences.

A single subject entry in the key of A major (mm. 62-65, voice one) appears, over an e-natural pedal, in conjunction with CS1 (voice two) which contains octave displacements on its second and fourth notes. Episodic material (mm. 66-69) is comprised of motive two (m. 69) from the answer-codetta, a rhythmic retrograde of motive four (mm. 66-67), the motive from measure 16 (mm. 66-67), and an allusion to the first two measures of the subject (mm. 68-69).

A series of stretto entries begins in measure 70 with the subject in the key of A major (mm. 70-73, voice two). This first entry is complete and unaltered. The second A major statement (mm. 70-72, voice three), which follows the first entry by one beat, contains only the first nine notes of the subject. Statement three in A major one bar later (mm. 72-74) is altered in two respects. First, it begins on mediant and all succeeding pitches are correspondingly one chord tone higher than the original. Second, the sixth and seventh beats of the subject are left out. The eighth-note ascending arpeggio, found originally on beat eight, is still used to signal the end of the subject, but now appears on beat six. The top voice (m. 75) repeats the new ending found previously in bar 74. In voice two (m. 74) is a new syncopated counterpoint which is employed again in bar 75.

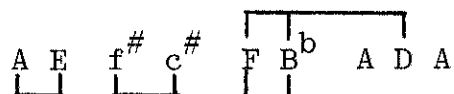
A presentation of the new abridged subject appears (mm. 76-78) with its first pitch altered to become dominant

instead of tonic. Another subject statement follows immediately (mm. 79-81) with its opening now altered from the original 1-5-1 pattern to a 5-3-1 chord outline after which the subject proceeds normally through the three-measure abridged version.

The coda begins in measure 82. Material (mm. 82-86) consists primarily of one-measure false entries of the subject, all of the altered version. In measures 87-88 the only reference in the fugue to an inversion of the subject is found in voice one. Following this (mm. 89-92, 94) are more false entries. Measures 89, 91, 92 and 94 are the original opening measure pattern, while measure 90 is the altered version. The final subject entry (mm. 96-98) is the abridged version with the altered arpeggio on the first beat (see mm. 79-81).

Triple invertible counterpoint is shown in this fugue. The subject is observed in the bottom voice in a three-voice texture (m. 11) as are CS1 (m. 25) and CS2 (m. 21).

The keys of subject statements in the fugue are as follows. Other than the tonic key statement (A) and its

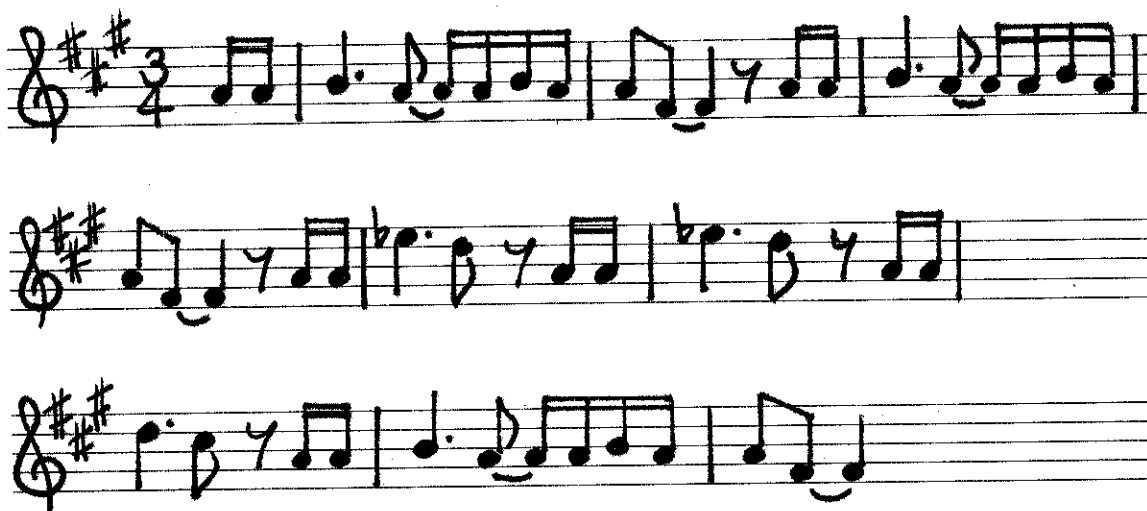


answer (E) and the relative minor statement ($f^\#$) and its answer ($c^\#$), the other three tonal centers spell the B^b major triad (B^b , D, F) which is the subject member of the pair (F, B^b).

This fugue is the most thematically diverse piece observed thus far. The subject itself undergoes transformation by, first, being abridged from eight to six beats and, second, acquiring a variation of altered first beats. The final statement exhibits both of these qualities. Countersubjects are altered as to octave and chord member content. Episodic material is diverse and contains a variety of motivic material.

Fugue VIII in f[#] Minor
(Three Voices) 3/4 Meter

This subject contains thirty-nine notes, beginning with mediant and ending with tonic.



EXAMPLE 35--Fugue VIII, subject

It is twenty-seven beats in length with the range of a diminished seventh. A real answer is given. A flatted-seventh scale degree (e^b), employed as an appoggiatura to

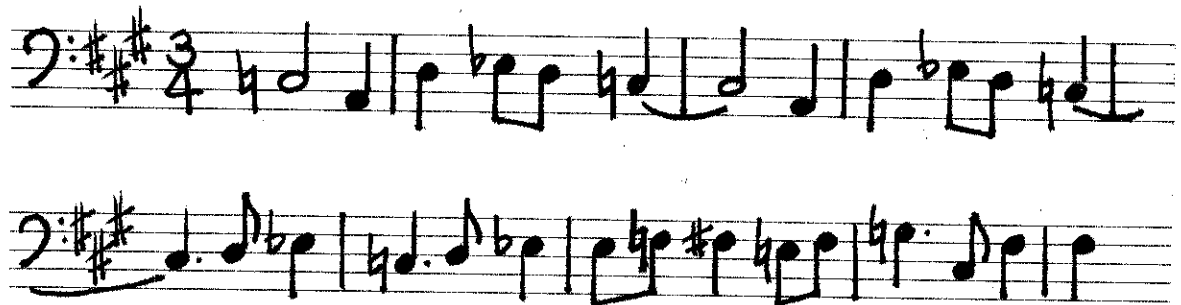
the following pitch (d-natural), is found in the fifth and sixth measures of the subject.

Two countersubjects are found in this fugue. The first (CS1) is twenty-two notes, twenty-six beats, long. Starting with flatted-supertonic and ending with dominant, it has the range of a minor seventh, and contains flatted-dominant as



EXAMPLE 36--Fugue VIII, CS1

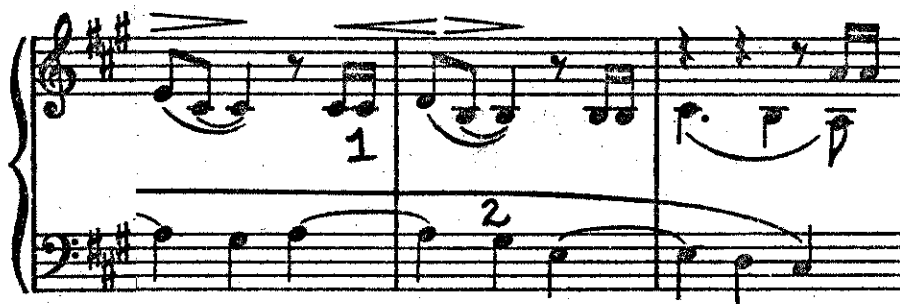
well as the previously mentioned b^2 . The second counter-subject (CS2) is twenty-three notes and twenty-five beats long, begins on flatted-dominant and ends on tonic. It



EXAMPLE 37--Fugue VIII, CS2

has a range of a minor seventh. Both countersubjects begin on the first beat after the anacrusis of the subject and end with the subject. In addition to b^5 , CS2 also contains b^7 (e^b) and flatted-tonic (f -natural).

The exposition (mm. 1-29) contains entries of the subject in $f^\#$ (mm. 1-9, voice three), the answer in $c^\#$ (mm. 9-18, voice two), and the subject (mm. 20-29, voice one). The answer-codetta (mm. 18-20) presents two motives found in later episodic material. Motive one is comprised



EXAMPLE 38--Fugue VIII, answer-codetta (mm. 18-20)

of the sixteenth-note anacrusis from the subject followed by the intervallic third patterns from measures two, four and nine of the subject. This is followed by a variation of this motive, consisting of a pattern like the first four notes of the subject. Motive two is simply a descending quarter-note pattern of three pitches, the first time (mm. 18-19) a pattern down a second, down a third and the second time (mm. 19-20) down by step both times. The two motives are similar in their use of a step-third pattern

for their first halves which is then replaced by a step-step pattern for their respective second halves.

A definite prevalence of the interval of the seventh can be seen in the exposition. First, the subject and both countersubjects all have ranges of a seventh. In addition, in each measure of the subject there is a dotted-quarter note or its equivalent in tied note values. In five of the nine occurrences of this value (mm. 1, 3, 5, 6, 7 of the subject), the combination of this pitch with another in one of the countersubjects yields the interval of a seventh (i.e., mm. 21, 23, 25, 26, 27). On two other occasions (mm. 2 and 4 of the subject), the interval formed by this dotted-quarter value and a simultaneous pitch in CS2 is a second, the inversion of the seventh. Also notable is the fact that the altered pitch in the subject is the seventh scale degree.

The episode (mm. 29-33) following the initial exposition uses motive one (mm. 29-31, 31-33) and motive two (mm. 29-31) from the answer-codetta. A new melody (mm. 32-33, middle voice) appears and is used again in later episodes as is the melody in measures 29-33 (bottom voice).

A subject statement in b^b minor appears (mm. 33-42, voice three) with CS1. Following (mm. 42-51, voice two) is an answering statement in f minor with CS1 (voice three) and CS2 (voice one). The succeeding episode (mm. 51-55)

employs answer-codetta motives one (mm. 51-53, 53-55) and two (mm. 52-53) as well as the two new melodies from the initial episode (mm. 54-55 and 51-55). Exposition two is incomplete.

Exposition three begins with a subject entry in a minor (mm. 55-64, voice one) accompanied by CS1, which is the answer to the next subject. Following is an entry in d minor (mm. 64-73, voice three) with CS1 (voice two) and CS2 (voice one). The episode (mm. 73-85) contains answer-codetta motives one (mm. 73-75, 75-77), two (mm. 74-75) and the melody originally seen in mm. 32-33 (mm. 76-77).

Various false entries of the subject are also present. The first and second (mm. 77-79, 79-81) consist of the initial nine notes of the subject, the last interval altered to descend an octave instead of the original third. The third false entry (mm. 81-83) is the unaltered first nine notes of the subject, while the fourth (mm. 83-86) is an irregular augmentation of the first nine notes of the subject, omitting the eighth pitch, and leaving the first two sixteenth notes unaltered.

Stretto entries of the subject (mm. 85-94) occur at the distance of one measure in the keys of f[#] minor (m. 85) and d[#] minor. The first of these is complete, while the second is only found through its first eighteen notes with its nineteenth pitch altered to become e[#] instead of d.

The episode (mm. 94-96) is a transposed version of the answer-codetta (mm. 18-20). Following are two more stretto statements of the subject (mm. 96-105) in b minor (m. 96) and g[#] minor (m. 97). The statement in b is complete, while the g[#] statement reaches the thirtieth note, omitting pitches twenty-three through twenty-six. Each of these last two keys (b, g[#]) is a corresponding subject key to one of the keys in the preceding stretto statements (f[#], d[#]).

Connecting material (mm. 105-107) consists of motive one (mm. 105-107) from the answer-codetta as well as the melody originally seen in measures 32-33 in the bottom voice and the last two measures of the other melody from the initial episode (mm. 29-33) in the middle voice. A new form of the subject follows in a stretto presentation of two subjects (mm. 107-114) in e minor and g minor. The opening notes of each subject now contain a flatted subdominant scale degree (third, sixth, twelfth, fifteenth pitches). These statements are again not complete. The entry in e is complete through thirty notes. Notes twenty-seven through thirty are repeated immediately (mm. 114-115). The entry in g is presented in the same form as the one in e. The last of its repeated twenty-seventh through thirtieth pitches overlaps directly into a series of three false entries of the first nine notes of the subject in voice two (mm. 115-121). Accompanying this are

two false entries of the same nine notes (voice one). Allusions to the subject using the two-sixteenth-note anacrusis follow (mm. 120-123) in voice one.

Two false entries of the first nine notes of the subject (mm. 123-127), the last altered to descend by fifth, precede the final entry (mm. 127-137). This final statement utilizes the lowered fourth scale degree initially observed in measure 108. Measures 134 and 136-137 contain irregular augmentations of the pitches of the subject which they contain (29th, 30th, 38th, and 39th). The thirty-fourth note is omitted and the thirty-third is held over to fill its space. The final note is altered to become an a^\sharp , making the final triad major.

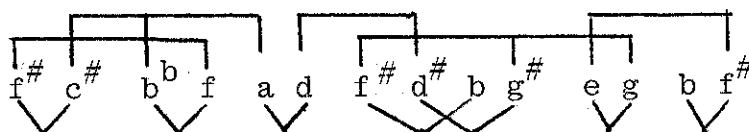
Triple invertible counterpoint is shown by the three-voice textures in measures 21 (CS2 in voice three), 42 (CS1 in voice three), and 64 (S in voice three).

An idiomatic device used by Shostakovich in some of his compositions is his personal monogram, D. SCH, similar to Bach's own BACH. It, like Bach's, is comprised intervallically of a minor second, minor third, and minor second. This is achieved by use of the notes D, E^b , C and B (D, Es, C and H in German notation) (2, 3, 1). Shostakovich also employs this technique in his Tenth Symphony and Eighth String Quartet. It can be seen in this fugue most clearly in measures 122-123 in the top voice.



EXAMPLE 39—Fugue VIII, DSCH motive (mm. 122-123)

The chromaticism found throughout the fugue is reflected in the key sequence of subject statements. The first key following the initial exposition, b^b , is not



closely related to $f^\#$, as has been seen in previous fugues, but is flat subdominant, foreshadowing its own use as a chromatic alteration in later subject entries. Also notable is the fact that the only member of the chromatic pitch spectrum not employed as a key for a subject statement is c , flat dominant. Finally, reflecting the prominence of the interval of the seventh previously observed, at least one member of each pair of keys used as subject/answer pairs (denoted by connectors below the key sequence) or stretto combinations is a seventh distant (some enharmonically) from a member of the set of keys immediately succeeding its

sets; $c^\#-b^b$ or $f^\#-f(e^\#)$, b^b-a , $d-d^\#(e^b)$ or $a-f^\#(g^b)$, $f^\#-g^\#$ or $d^\#-b(c^b)$, $g^\#(a^b)-g$, $g-f^\#$ or $e-f^\#$. This is shown by brackets above the key sequence.

Fugue IX in E Major
(Two Voices) 3/4 Meter

Shostakovich's only two-voice fugue bears some striking similarities to Bach's only two-voice effort, WTC-I, 10.



EXAMPLE 40--Fugue IX, subject

First, the meters are the same, 3/4. Second, the subject employed in Bach's fugue rises from a tonic triad arpeggio to tonic where it then descends chromatically to dominant with tonic interspersed between each new chromatic pitch. Shostakovich's subject expands diatonically from tonic to dominant in an inversional manner to Bach's. Third, both tonic are the same, e. Bach uses e minor while Shostakovich employs E major.

The subject of this fugue is twenty-two pitches, nine beats, in length, begins and ends on tonic, and has the range of a major sixth. Shostakovich gives a real answer to this subject, as does Bach to his subject. There is a regularly-recurring countersubject (CS) which is twenty-four notes long and begins on the second half of the first

beat of the subject and ends concurrently. The first and last notes are mediant and its range is a minor tenth or a minor seventh depending on the octave placement of its first note.



EXAMPLE 41--Fugue IX, CS

The exposition (mm. 1-6) contains entries of the subject (mm. 1-3, voice one) and the answer (mm. 4-6, voice two) with CS. This order of entry is the same one used by Bach in WTC-I, 10. The answer-codetta (mm. 6-10) uses, as a

EXAMPLE 42--Fugue IX, answer-codetta (mm. 6-10)

primary motive, the melody found in measure 7 and repeated in bar 8. The sixteenth-note patterns on beats one and two are taken from beat two of the subject. An obvious motivic factor in the lower voice is the rhythmic motive of two sixteenths and an eighth found throughout the subject and countersubject. The answer-codetta is used virtually intact in later episodic sections. It is therefore employed in a more melodic than motivic fashion. Earlier answer-codettas were motivic in their use.

A subject statement in $c^\#$ minor (mm. 11-13) accompanied by CS is followed by an answer in $g^\#$ minor (mm. 14-16) also with CS. The episode (mm. 16-20) is the same as the answer-codetta except for minor differences in measure 20 (top voice beat three, bottom voice beat two) and the voices have been exchanged. This exposition is complete.

An entry in B major appears (mm. 21-23, voice one) which is a mirror inversion of the subject presented with the mirror inversion of CS. Following is a statement in E major (mm. 24-26, voice two), also an inversion, which appears with an inversion of CS. Interestingly, the order of keys is also inverted for the presentation of these inversions of the subject in that the answering key of B precedes the subject key of E. The succeeding episode (mm. 26-30) is again the same as the answer-codetta except for slight modifications in measures 26 (voice two, beat four), and 30 (voice one, beats one and two; voice two, beats two and three). This exposition is also complete.

The original form of the subject appears (mm. 31-33, voice two) in $f^{\#}$ minor with CS and also (mm. 34-36, voice one) in the answering key of $c^{\#}$ minor also with CS. The episode (mm. 36-43) preceding the first stretto entries begins with an inversion of the first three measures of the answer-codetta through measure 39. Bars 40 and 41 are like answer codetta bars 7 and 8 with voice interchanges in bar 41. Measures 42 and 43 primarily employ the two-sixteenth-eighth-note motive from the subject and CS in a loose reference to the answer-codetta measures 7 and 8 (bottom voice).

Subjects in E major are presented in stretto (mm. 43-45) at the distance of one beat. The stretto is complete though the second subject lacks its final pitch. Another set of stretto subjects in B major (mm. 46-48) follows, again complete, with the second entry again lacking its last pitch. The episode (mm. 48-52) begins with two measures (mm. 48-50) taken from the answer-codetta's first two bars with voices exchanging in bar 50. Bars 51 and 52, like measures 42-43, use motives found in the subject, CS and answer-codetta but not in the same context in which they were previously employed in bars 42-43.

An A major presentation of the subject in inversion occurs (mm. 53-55, voice one) with a free counterpoint as does the inversion of the subject in F major (mm. 56-58, voice two). The accompanying counterpoint in measures 53

and 56 (beats two and three) is a rhythmically altered false entry of the uninverted subject, a false stretto of both forms of the subject. Both of these entries are in the subdominant tonal region, A, in fact, being subdominant while F is neapolitan, subdominant in function. A codetta (mm. 58-59) again uses the two-sixteenth-eighth-note motive (bottom voice) previously observed in the subject, CS, answer-codetta and various episodic material.

The final subject statement (mm. 60-62, voice one) is again found with a free counterpoint based on the two-sixteenth-eighth motive followed by two eighth notes. The coda (mm. 62-66) is presented in octaves comprised primarily of the same motives just used for the free counterpoint.

The subject and countersubject are shown to be written in invertible counterpoint with each other with combinations in measures 4 (S in bottom voice) and 14 (CS in bottom voice). The same relationship is proven to be true for the inversion of the subject and countersubject by the combinations in bars 21 (CS inversion in bottom voice) and 24 (S inversion in bottom voice).

Every key of a subject entry in the fugue, except the one in F major, is a closely related key to E major, the tonic key. Every closely related key is used, and the only diatonic pitch not found in the subject, $d^\#$, leading tone, is also not a closely related key to E and is

therefore not employed in the key scheme. Like the subject opening where a tonic note is interspersed between each new

$$\begin{array}{ccccccc} \underline{E} & \underline{B} & \overset{\frown}{c^\#} & \overset{\frown}{g^\#} & \underline{B} & \underline{E} & \overset{\frown}{f^\#} & \overset{\frown}{c^\#} & \underline{E} & \underline{B} & \overset{\frown}{A} & \overset{\frown}{F} & \underline{E} \end{array}$$

diatonic pitch in the expansion away from tonic, entries in the tonic key (E) and its answer key (B) alternate with each excursion to a new tonal level! Finally, as the subject expands in its opening measure the intervals observed are up and down a second, third, fourth, and up a fifth. These intervals also occur, each in one directions only, in the key scheme. The first entry of each new non-tonic tonal area forms one of these intervals with the tonic key of E. The key of $f^\#$ is a second above E, $c^\#$ is a third below and A is a fourth above. The answer key to E, B, provides the interval of the fifth. The key of $g^\#$ is an answer to a subject statement in $c^\#$, while F is simply an extension of an already established (by the key of A) subdominant tonal region.

Fugue X in $c^\#$ Minor
(Four Voices) 3/4 Meter

Shostakovich again uses a subject with prominent occurrences of dominant, submediant and tonic, this time right at the beginning with its dominant-submediant-dominant-tonic motion. The subject is comprised of thirteen notes, fifteen beats, has a range of an octave, and begins with



EXAMPLE 43--Fugue X, subject

dominant and ends with tonic. A tonal answer is given due to the opening dominant-tonic pitches. The alteration to the answer is to the first pitch only. It is subdominant in the answering key of g^\sharp instead of the dominant note found in the subject. Bach's fugue WTC-I, 3 opens with dominant-submediant-dominant, the same as this fugue, and his tonal answer is altered in exactly the same manner as Shostakovich's subject is here.

Three countersubjects are used in counterpoint with the subject. The first countersubject (CS1) contains twelve



EXAMPLE 44--Fugue X, CS1

pitches covering fourteen beats, beginning on the subject's second beat. Its first pitch is subdominant, last pitch is dominant, and range is a minor sixth. The second countersubject (CS2) is thirteen notes, fifteen beats long, begins

on tonic and most frequently ends on mediant and has the



EXAMPLE 45--Fugue X, CS2

range of a minor sixth. Countersubject three (CS3) contains seventeen pitches, fourteen beats, begins on subdominant, ends on tonic, and has a range of an octave. The beginnings



EXAMPLE 46--Fugue X, CS3

and endings of all three countersubjects are frequently altered in the course of the fugue as to the pitches involved and their duration.

The exposition (mm. 1-25) is comprised of statements of the subject in $f^\#$ (mm. 1-6, voice three), answer in $c^\#$ (mm. 6-11, voice one) with CS1 (voice three), subject (mm. 15-20, voice two) with CS1 (voice one) and CS2 (voice three), and answer (mm. 20-25, voice four) with CS1 (voice two), CS2 (voice one) and CS3 (voice three). The chromatic inflection $a^\#$ (mm. 8-9) in CS1 in the key of $c^\#$ gives a


dorian flavor to the answer entry. Notable is the internal entry (mm. 15-20) of the subject in voice two following previous entries in voices one and three. The answer-codetta (mm. 11-14) uses primarily an eighth-note motive alternating between the lower and upper voices. This motive (motive one) is bipartite, consisting of a three-note neighboring-tone pattern occurring on either the first or last beat and one-half of the measure. In addition to the neighbor pattern, the motive contains three stepwise pitches (mm. 11, 13) which are often permuted to form, for instance, a third-second interval pattern (mm. 12, 14).



EXAMPLE 47--Fugue X, answer-codetta (mm. 11-14)

Both of these patterns are themselves permutations of measure four of CS1 (i.e., m. 9). Motive two is found in measures 12 (bottom voice) and 15 (top voice). Both are rhythmically identical although their pitch content differs. A third motive (motive three) appears in the lower voice (m. 14). This motive is rhythmically derived from CS3 (mm. 21, 23). Both motives two and three are primarily

rhythmic in nature. The answer-codetta is motivic in organization and future use.

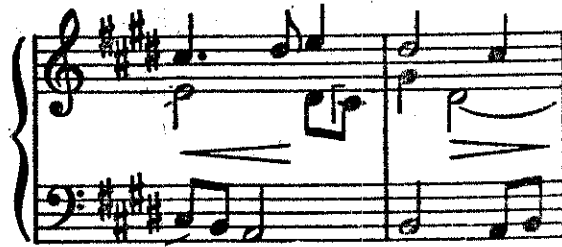
The rhythmic characteristic use of motives two and three makes available to Shostakovich a procedure called resultant rhythm. This term refers to the creation of a third rhythmic pattern which is the result of the attack points of two other simultaneously presented rhythmic patterns. Shostakovich's first use of this procedure occurs in measure 17 where the upper two voices provide the resultant rhythm  which is the rhythm of answer-codetta motive two.



EXAMPLE 48--FUGUE X, measure 17

The episode (mm. 25-33) uses answer-codetta motive one (mm. 25-28), motive two (mm. 26, 28), motive two in rhythmic retrograde (mm. 25-27), motive three (m. 29), and a new motive to be found later (mm. 26, 28, 29, 30, 32) consisting of the dotted-quarter-eighth patterns found in measures two and three of CS2. One form is an ascending stepwise pattern while the other descends by step, but both are similar enough to be called one motive type and both appear

in CS2. Another form of the same motive (m. 32) finds its third beat quarter note replaced by two eighth notes. Resultant rhythmic motives two and three are also found (mm. 31, 30, respectively).



EXAMPLE 49--Fugue X, measures 30 and 31

Subject presentations in $g^\#$ and $c^\#$ comprise the second exposition section (mm. 33-43). The entries and their accompanying counterpoints combine to affect an aeolian mode. The presentation in $g^\#$ (mm. 33-38, voice three) occurs with CS1 (voice one) and CS2 (voice two). The $c^\#$ entry (mm. 38-43, voice four) is found with CS1 (voice three) and CS2 (voice one). The episode (mm. 43-38) employs answer-codetta motives one (mm. 43-46), two (m. 45), retrograde of two (mm. 43, 45), three (m. 47), and the CS2 motive (mm. 44, 46, 47, 48).



An entry of the subject in E major (mm. 48-53, voice three) occurs with CS1 (voice two), CS2 with its first pitch altered (voice four) as well as its last two pitches, and CS3 (voice one) with its first beat altered. Another

subject statement in B major (mm. 53-58, voice one) is found accompanied by CS1 (voice three), its last note changed, CS2 (voice two), and CS3 (voice four) with an octave displacement between its fifteenth and sixteenth pitches. Episodic material (mm. 58-65) employs motive one (mm. 58-61), motive two (mm. 59, 61), the rhythmic retrograde of motive two (m. 63), motive three (m. 62) and the CS2 motive (mm. 62-63). The two rhythmic patterns necessary to produce a resultant rhythmic motive three are found (mm. 63-64, bottom voice) but are here presented consecutively versus simultaneously.

A major and E major subjects appear next (mm. 65-75) in two and three voice textures. The A major subject (mm. 65-70, middle voice) appears with CS1 (bottom voice). The E major subject (mm. 70-75, top voice) is accompanied by CS1 (middle voice) with two, one octave displacements and CS2 (bottom voice). A lengthy episodic section (mm. 75-88) contains motive one (mm. 73-76, 86-87) motive two and its retrograde (mm. 76, 77, 78) motive three (mm. 79, 83), a resultant rhythmic motive two (m. 81, bottom two voices), a resultant rhythmic motive three (mm. 80, bottom two voices; 84, top and bottom voices), and CS2 motives (mm. 75-76, 78-85, 88) and an augmentation of motive three in thirds (mm. 86-87).

Returning to aeolian mode, Shostakovich presents statements of both subject and tonal answer. The subject

entry in d aeolian (mm. 88-93, voice four) occurs with CS1 (voice three) and CS2 (voice two). An answer statement follows (mm. 93-98, voice one) presented with CS1 (voice four), CS2 (voice three), its first beat altered to become a neighboring tone pattern, and CS3 (voice two) with octave displacements occurring on its first and third beats. The following episode (mm. 98-107) contains answer-codetta motive one (mm. 98-102), motive two (mm. 99, 101), its rhythmic retrograde (mm. 98, 100, 102), a resultant rhythmic motive two (m. 105, top two voices), motive three (m. 103), a resultant rhythmic motive three (m. 104, top two voices) and the CS2 motive (mm. 99, 101, 103, 106).

A subject in c aeolian appears (mm. 107-112, voice one) with CS1 (voice three) and CS2 (voice two), followed by an answer on g in c aeolian (mm. 112-117, voice two) accompanied by CS1 (voice one) and CS2 (voice four), which begins on its third beat but contains all of its pitches due to rhythmic alteration of  to become . CS3 is also present (voice three). Episode material (mm. 117-129) is drawn from motive one (mm. 117-120, 121 rhythm only, 126-128 stepwise portion altered to become leap-step), motive two (m. 120), motive two retrograded (mm. 119, 123), and a divided form of the new motive one type from measures 126-128 (mm. 123-125) where the pattern is divided with the first four eighth notes appearing in

one of the top two voices and the last two eighths coming in the other of the top two parts.

The first stretto section of the fugue begins (mm. 129-135, voice one and three) with a two-part stretto of subjects in c^\sharp aeolian at the distance of one measure. Both subjects are complete and are accompanied by a primarily eighth-note pattern reminiscent in mood of answer-codetta motive one. Two stretto subjects in g^\sharp follow (mm. 135-141, middle voices) and are given a phrygian setting by the a-naturals found in the running eighth notes. The subjects are again at the distance of one measure and both are complete. Both sets of stretti (mm. 129-141) are found over a g^\sharp pedal point that continues on into measure 144 and is then reiterated (mm. 147-148). An episode follows (mm. 141-147) consisting basically of the eighth-note patterns resembling motive one (mm. 141-145) as well as motive two (m. 147), its retrograde (m. 146) and the motive from CS2 (mm. 145-146).

Preceding the next stretto entries is a subject in c^\sharp aeolian (mm. 147-152, voice four) found with CS1 (voice one) and CS2 (voice two). This c^\sharp key is a resolution of the lengthy g^\sharp pedal (mm. 129-146). Following this are two subjects in stretto (mm. 152-158, voices one and three). The first of these is in f^\sharp aeolian (voice three) while the second (voice one) is in A major. Both subjects are complete, occur at the distance of one measure and are

accompanied by the predominately eighth-note pattern seen in the earlier stretti, over a $c^\#$ pedal which continues throughout most of the coda except for measures 167-170.

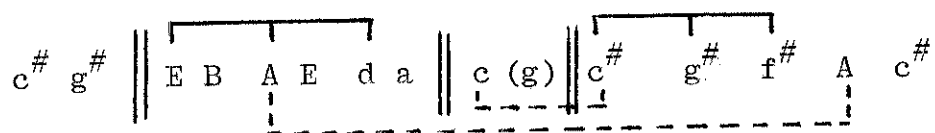
The coda (mm. 158-177) employs motive one and its variants almost exclusively (mm. 158-170). Also seen is motive two (mm. 159, 161). Concluding the fugue are two stretto subjects in $c^\#$ aeolian (mm. 171-177, voices one and three) at the distance of one measure over a $c^\#$ pedal. Both subjects are again complete.

Quadruple invertible counterpoint is demonstrated by the four voice textures in measures 22 (A bottom voice), 48 (CS2 bottom voice), 53 (CS3 bottom voice) and 93 (CS1 bottom voice). All of these except measure 48 are answer occurrences. CS2 appears with the answer in measure 113. All exposition sections are incomplete after the first exposition. All stretti are canons.

The schema of keys in this fugue are again the result of subject structure. The first pitch in each bar of the subject is either tonic, subdominant or dominant. The only other scale degree prominently employed in the subject is submediant. Mediant, the only other degree found, is seen only as a lower neighbor to subdominant (m. 3). Submediant, on the other hand, is found not only as a prominent upper neighbor at the beginning of the subject, but in a unique approach to the final tonic. The penultimate measure of

the subject rises from subdominant to dominant to submediant which then resolves directly to tonic, lacking a seventh scale degree.

Keys in the fugue consist of two tonic-subdominant-dominant patterns. The subject keys, A, E and d from the



section of the fugue following the initial exposition and preceding the stretti fit this pattern as do all the keys in the stretto section but one, A. The other keys in the first section (B, E, a) are answers to each of their preceding keys. The key of A found in both sections is the submediant key earlier seen as prominent in the subject. The key of c aeolian is the only key which is a chromatic inflection of another key in the fugue and serves to separate the two sets of tonic-subdominant-dominant keys.

Fugue XI in B Major
(Three Voices) 2/4 Meter

The subject of fugue eleven again shows a prominence of dominant and submediant scale degrees as well as mediant. In the first six beats tonic, mediant, dominant, submediant, dominant and mediant, respectively, occur on each beat. The subject consists of twenty-three pitches spanning fourteen beats. Its first and last pitches are tonic and its range is a perfect twelfth. Measures three and four



EXAMPLE 50--Fugue XI, subject

and six and seven of the subject contain a predominance of off-the-beat pitches. A real answer is given to the subject. A two-note link connects the subject and answer (m. 7) but does not always appear.

Two countersubjects are employed in the fugue. The first (CS1) is fifty notes, fourteen beats, in length. It begins on tonic and ends on dominant and has a range of an



EXAMPLE 51--Fugue XI, CS1

octave. Countersubject two (CS2) begins with and ends on tonic. Its range is a perfect eleventh and it contains twenty-three pitches which span fourteen beats. Both countersubjects begin and end with the subject.



EXAMPLE 52--Fugue XI, CS2

The exposition (mm. 1-27) is comprised of entries of the subject in B major (mm. 1-7, voice one), the answer in F[#] major (mm. 8-14, voice two) and the subject (mm. 21-27, voice three). The answer-codetta (mm. 15-20) provides two, five-bar melodies which are employed, virtually intact, in later episodes. The first melody (melody one) is in the upper voice and uses the trill-like sixteenth-note patterns from CS1 near its end. Melody two, found in the lower voice, begins with the trill-like patterns like CS1 measures two and six, and uses, as well, the sixteenth-note patterns like CS1 measure six inverted. The episode (mm. 28-33) uses melody one (voice three) and melody two (voice two) from the answer-codetta. A new counterpoint appears in voice one.

An entry in $g^\#$ aeolian begins the next exposition (mm. 34-47). This entry (mm. 34-40, voice one) is accompanied by CS1 (voice three) which is altered on its first two beats to consist of two eighth-notes sounding octave c-sharps and two eights sounding octave g-sharps. Immediately following is an answer statement in $d^\#$ aeolian (mm. 41-47, bottom voice) with CS1 (top voice). The episode (mm. 48-53) is composed of answer-codetta melody one (bottom voice) and melody two (top voice). Each is altered on its last beat.

A new exposition begins with a subject in $c^\#$ aeolian, the answering key to the following $f^\#$ subject (mm. 54-60, voice two) found with CS1 (voice one) and CS2 (voice three). Both countersubjects contain octave shifts in measure 55. CS2 does the same in measure 59 and has an altered last beat creating a passing tone pattern instead of the lower neighbor which originally appeared. A subject in $f^\#$ aeolian (mm. 61-67, voice one) occurs with CS1 (voice three). Episodic material (mm. 68-75) again employs answer-codetta melodies one (bottom voice) and two. Melody one is complete through five of its six measures. The fifth measure is found in a sequence down by step and repeated at this level (mm. 73-74) and a new measure is added (m. 75). Melody two is stated in its entirety, its last measure is then repeated with its initial beat altered to become two eighth notes and a new measure is added (m. 75).

Following (mm. 76-82) is a single subject statement in c aeolian (voice three) accompanied by both CS1 (voice one) and CS2 (voice two). The last measure of both CS1 and CS2 is not held intact. Preceding the first stretto entries are three false entries of an altered first two bars of the subject (mm. 83-84, 85-86, 87-88). The first-beat, dotted-eight-sixteenth pattern now descends by step to the second beat which now ascends stepwise. Accompanying these false entries are various motivic patterns, all drawn from melodies one and two of the answer-codetta. No exposition since the first has been complete.

The first set of statements of the subject in stretto (mm. 90-97) begins with a subject in B major followed, one measure later, by a subject in F[#] major. Both subjects are rhythmically altered in their final measure. The B major entry has its penultimate duration lengthened to a quarter note while the F[#] entry has its final duration changed from a quarter note to an eighth rest followed by an eighth note.

A false stretto (mm. 97-100) contains three false entries of the subject beginning on a (mm. 97-99), c[#] (mm. 97-98) and g[#] (mm. 98-99). The false entry starting on a uses the ascending sixteenth-note pattern from measures 83, 85, and 86 as its second beat and is complete through thirteen notes with the last altered, proceeding up by step from the preceding note. The false entry beginning on c[#] is complete

through ten pitches with the seventh pitch lengthened to two, tied dotted-quarter notes and the ninth pitch occurring a second higher than normal. The false entry which begins on $g^{\#}$ is unaltered through eight pitches. The ninth and tenth pitches (m. 100) are only rhythmic references to measure four and six of the subject.

The foundation upon which the next section of this fugue is constructed is an augmentation of the subject, in its entirety (mm. 101-114, voice three). Entering simultaneously is a subject statement also in the key of E major (mm. 101-107, voice two). Over the final two bars of the unaugmented subject in E is an entry in $c^{\#}$ aeolian (mm. 106-111, voice one). This entry is unaltered except for the omission of its entire sixth measure. Three measures after the $c^{\#}$ entry begins, a subject statement (mm. 109-113, voice two) appears in the key of E major. This statement occurs with both its fifth and sixth measures missing. A false two-voice stretto of entries in B major and $g^{\#}$ minor appears (mm. 112-116) over the closing bars of the augmented subject. The B entry is complete through its third measure while the $g^{\#}$ entry also finishes three measures, beginning (m. 114) in voice two, continuing (m. 115) in voice one, and finishing (m. 116) in voice two.

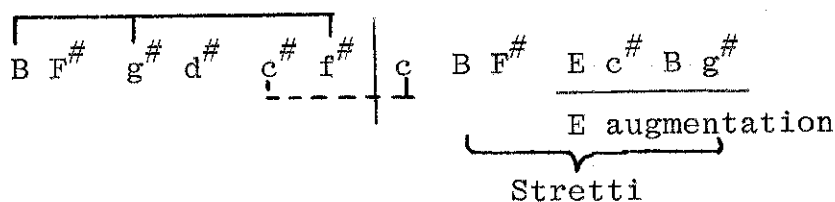
An incomplete statement of the subject in B major (mm. 117-121, voice two) begins the coda (mm. 117-137). The

subject is intact through its fifth bar. Over the fourth measure of the B statement (m. 120) appears a subject, again incomplete, in E major, intact through two bars. Both of these entries use the previously seen stepwise ascending second beat. Bars 122-127 employ motives resembling measures two and four of the subject.

Two, two-measure false entries (mm. 128-219, 130-131) of the subject on B employ the scalewise second beat. The augmentation of the first two measures of the subject (mm. 132-135) is followed by an augmentation of the first seven notes of the subject to close the fugue. Both again use the altered second beat (now two beats).

Triple counterpoint is not demonstrated between the subject and countersubjects as CS1 does not appear as the bottom voice in a three-voice texture in the fugue.

The key organization in the fugue shows the predominance of tonic, dominant, and submediant as well as mediant scale degrees. As in the preceding fugue, only one entry of the



subject, a single entry in c aeolian, occurs on a scale degree which is not diatonic to the key of this fugue, and again serves as the delimiting key between normal and stretto entry sections of the piece.

The subject members of the first three pairs of subject/answer keys (B, g[#], f[#]) are in a tonic, submediant, dominant scale degree relationship and are shown by the bracket above them. The first answer key (F[#]) is a duplication of the dominant scale degree. The second answer key (d[#]) is mediant, while the third (c[#]) provides the initial super-tonic degree to which the c aeolian entry is a chromatic alteration.

The initial stretto keys (B, F[#]) are a return to the tonic key area. The second set of stretto keys (E, c[#]) and false stretto keys (B, g[#]), all occur over the augmented subject in E major. With E as tonic, g[#] is mediant, B is dominant, and c[#] is submediant.

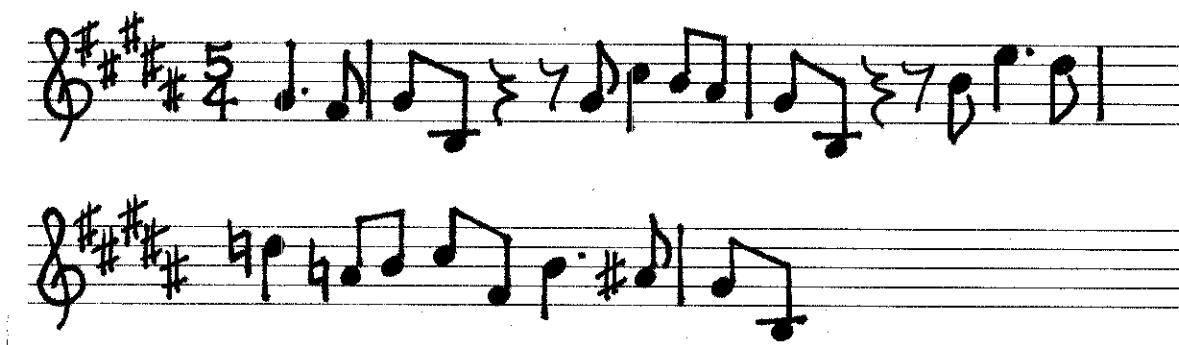
A microcosm of the tonic, dominant, submediant scheme can be witnessed in the false entry opening pitches (mm. 97-99, a[#] (submediant), c[#] (tonic), and g[#] (dominant, respectively).

Fugue XII in g[#] Minor
(Four Voices) 5/4 Meter

This is the first fugue in which Shostakovich employs an asymmetrical meter. An asymmetrical meter is comprised of two dissimilar smaller meters of two, three or four beats, in this case two and three beats. This pattern 2 + 3 beats may also be reversed to reaccentuate a measure into 3 + 2 beats. The subject statements in the fugue take

on a 2 + 3 accentuation while episodic sections are written with a 3 + 2 metric feeling with their counterpoints.

The subject is twenty-two notes, eighteen beats, in length. Beginning on tonic and ending on mediant, its range



EXAMPLE 53--Fugue XII, subject

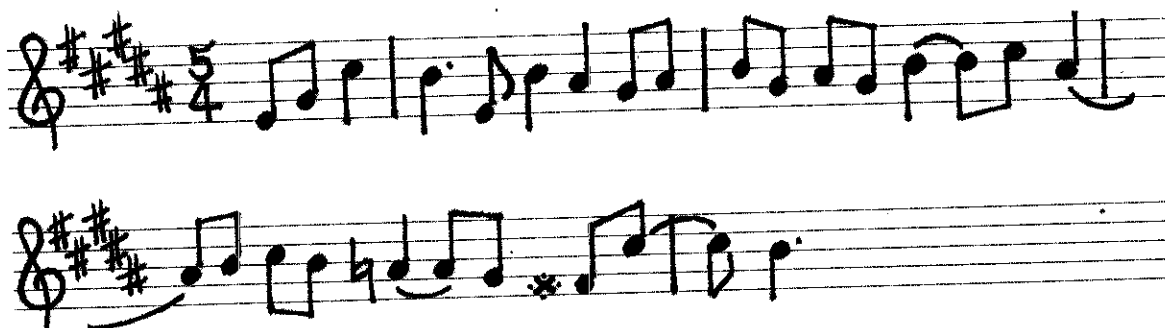
spans a perfect eleventh. Bar three of the subject contains two chromatically altered pitches, d-natural (flat-dominant) and a-natural (flat-supertonic) but does not modulate. The interval of the sixth plays a prominent role in the subject structure. The first non-stepwise interval $g^\sharp-b$ is a sixth. This same $g^\sharp-b$ is repeated on the first beat of the second measure and as the last interval in the subject. Furthermore, the range of the subject, a perfect eleventh, extends from a sixth below g^\sharp , b, to a sixth above g^\sharp , e. A real answer is given to the subject.

There are three countersubjects present with the subject in the fugue. Countersubject one (CS1) is nineteen pitches long and spans nineteen beats. It begins on subdominant, ends on dominant and has a range of an octave.



EXAMPLE 54--Fugue XII, CS1

Countersubject two (CS2) contains twenty-four notes, covering nineteen beats, begins on submediant, ends on mediant,



EXAMPLE 55--Fugue XII, CS2

and has major sixth range. Countersubject three (CS3) is twenty pitches and nineteen beats in length. It begins on subdominant and ends on tonic and its range is a minor seventh. CS1 contains flatted-subtonic, and CS2 and CS3 both contain flatted-supertonic.



EXAMPLE 56--Fugue XII, CS3

The exposition (mm. 1-18) contains statements of the subject in $g^\#$ (to m. 4, voice two), the answer in $d^\#$ (mm. 4-8, voice one), the subject (mm. 10-14, voice four), and the answer (mm. 14-18, voice three), an internal entry. A two-note link (m. 4) separates subject and answer. A unique situation occurs with this subject and its association with CS2. The subject takes on an aeolian appearance at its outset due to the subtonic degree which occurs as its second pitch. Later, however, three pitches from the end of CS2, the f -double sharp necessary to put the subject into $g^\#$ minor does occur. The flat-supertonic degree even lends a phrygian flavor. For the purpose of giving these entries a unified description, they will be termed minor entries throughout the analysis of this fugue.

The answer-codetta (mm. 8-10) contains two melodies used in later episodes. Melody one (top voice) is similar in nature to CS1 and CS2 with their predominantly eighth-note motions, melody two (bottom voice) resembles CS3 in its

quarter-note and half-note predominance. The episode (mm. 18-20) uses melody one (middle voice) and melody two (bottom voice) and a new melody (top voice) which opens as an inversion of CS3. The second pitch in melody two appears a fourth lower than it did in the answer-codetta.

The second exposition section (mm. 20-28) contains two entries of the subject. The first entry in B major (mm. 20-24, voice two) is found with CS1 (voice one) and CS2 (voice four). CS1 is seen with its first two notes omitted; CS2 begins on its sixth pitch. The second entry in F[#] major, an answer to the preceding entry, (mm. 24-28, voice four) is accompanied only by CS1. The succeeding episode (mm. 28-30) employs answer-codetta melodies one (bottom voice) and two.

Two entries of the subject comprise the next exposition section (mm. 30-38). An entry in g[#] minor (mm. 30-34, voice one) is accompanied by CS1 (voice two) and CS2 (voice four). The conflicting modal colors found in the first statements of the fugue also occur here. A second entry in d[#] minor, answer to g[#], (mm. 34-38, voice three) appears with CS1 (voice one), CS2 (voice two), and CS3 (voice three). The eleventh note of CS2 is omitted and the tenth note is lengthened to fill its place. CS3 lacks its own discrete fourth and eighth pitches, although they are actually heard as the subject crosses below CS3 in measures 35-36. The

fifth note of CS3 becomes two pitches, the $c^\#$ being added on beat three, and the rhythmic values of its fourteenth and fifteenth notes are interchanged. The episode (mm. 38-42) is composed of answer-codetta melody one (mm. 38-40, middle voice), melody two (mm. 38-40, top voice), and the new melody from measures 18-20 (mm. 38-40, bottom voice). Measures 40-42 present melody one without its opening five pitches (middle voice) and a paraphrasing of both melody two (m. 40, bottom voice; mm. 41-42, top voice) and the new melody from measure 18-20 (bottom voice).

Subject statements in E major (mm. 42-46, bottom voice) and B major (mm. 46-50, middle voice) comprise the next section of entries. The E major entry occurs with CS1 (top voice) lacking its first two notes and CS2 whose first three pitches are the ones normally associated with CS1. The B major answering statement occurs with CS1 (bottom voice) and CS2 (top voice) with its first two pitches omitted. The episode (mm. 50-52) is made up of new material.

An entry in C major (mm. 52-56, top voice) is accompanied by CS1 (bottom voice) lacking its first two notes and by CS2 (middle voice) also lacking notes one and two with its third and fourth pitches rhythmically altered. Following is an entry in g minor, a minor answer to the C major entry, (mm. 56-60, voice two). It is present with CS1 (voice three), CS2 (voice four), and CS3 (voice one). The first two notes

of CS3 are omitted and CS2 uses its pitches 6, 7, and 10-13 to replace its first five notes and then proceeds normally from note six to the end. The episode (mm. 60-64) is again new material resembling measures 50-52, but is more dense in texture than the earlier section, expanding to five simultaneous pitches with the octave doublings of the lowest voice in measures 60-65.

Subject statements in e and a minor follow (mm. 64-72). The e minor statement (mm. 64-68, voice four) is presented with the first twelve notes of CS1 (voice one), the first two of which appear a step higher than normal. Voices two and three contain pitches to fill out a harmonization of the subject and are not thematically identifiable. The answering statement in a minor (mm. 68-72, voice one) is also accompanied by CS1 (voice three), this time complete through its thirteenth pitch. The texture of this section (mm. 64-72) of the piece is a continuation of the texture begun in the episode (mm. 60-64).

In the episode (mm. 72-76) Shostakovich gradually thins the thickened texture he has used from measure 60 to 72 using the same types of patterns found in measures 60-64 and earlier in measures 50-52; patterns of stepwise eighth notes interspersed with leaps resembling those in the subject (notes 3-4, 9-10, 17-18, 21-22). Periodically a pattern from one of the answer-codetta melodies contributes a

fragment to the counterpoint. Melody one appears, with only its first five pitches (mm. 72-73, bottom voice, last five pitches).

The next subject entry in $g^\#$ minor (mm. 76-80) occurs over a $d^\#$ pedal point. The final two notes of the subject are altered in that the penultimate pitch occurs a minor second higher than usual and the final interval is contracted from a sixth to a fourth. CS1 accompanies the subject until it is abandoned on its fifteenth pitch after its fourteenth pitch duration is lengthened by a quarter-note value. The subject begins in the top voice with CS1 in the middle voice. In bar 78 the two exchange voices on beat three. The episode (mm. 80-83) contains two false entries of the first four notes of the subject (mm. 82, 83).

Over the last false entry, a subject entry in $g^\#$ minor begins (mm. 83-86) with the same alterations to the last two pitches as in the immediately preceding subject (mm. 76-80). An answer in $d^\#$ minor follows (mm. 86-89, top voice) but is only complete through its seventeenth pitch. CS1, which accompanies the $d^\#$ answer, has its first two pitches and seventh pitch omitted, and ends on its fourteenth pitch.

A two-voice stretto (mm. 89-93) contains entries in $g^\#$ and $c^\#$ minor at the distance of one beat. The first entry in $g^\#$ proceeds normally through sixteen notes. Its seventeenth through nineteenth notes are rhythmically altered,

and its last three notes are omitted. The $c^\#$ entry is altered in its last two notes like the entries in measures 76-80 and 83-86. The stretto is incomplete. A short episode (mm. 93-94) precedes the next stretti. It contains new material.

The next stretto is again in two-voices with entries in $c^\#$ and $f^\#$ minor again at the distance of one beat. The $c^\#$ entry has its penultimate note altered to a third higher than usual. The eighteenth note of the $f^\#$ entry descends from the preceding note by step instead of by fifth and the entry ends there. The stretto is complete but with alterations to the subjects.

A return to single subject statements occurs (mm. 98-101) with CS1. The subject begins in the bottom voice, shifts to the top voice (m. 99, beat three) and returns to the bottom voice (m. 100, beat three). It ends with the minor second-perfect fourth ending seen three times previously. CS1 begins in the top voice, changes to the bottom voice (m. 99, beat three) and returns to the top (m. 100, beat two). CS1 is only complete through fourteen notes and its first two notes are omitted. A subject in a minor (mm. 101-104, bottom voice) is presented with CS1. The subject only completes seventeen notes and CS1 drops out on its fourteenth note and again omits its first two notes.

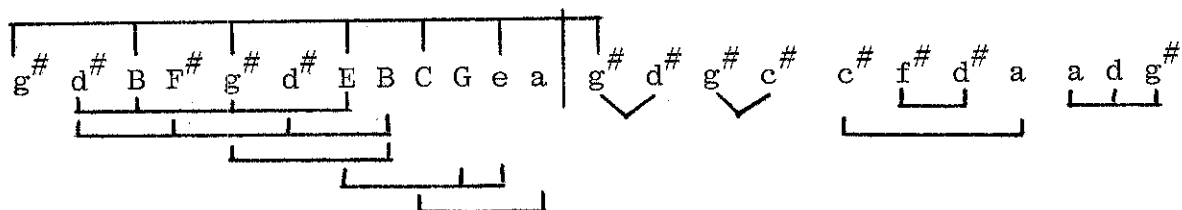
Stretto entries recur in a minor and d minor at the distance of one beat (mm. 104-108). The entry in a minor

is found with rhythmically altered seventeenth through nineteenth notes (see m. 92) and ends with note nineteen. The d minor entry has its last two pitches altered as has been seen before (mm. 80, 86, 93). The episode (mm. 108-113) preceding the final subject entry uses new material similar to that used in the previous new episodes (mm. 50-52, 93-94) as well as answer-codetta melody one (mm. 111-112, bottom voice).

The last complete subject statement (mm. 113-117, voice one) is in the tonic key of $g^\#$ minor. It is unaltered.

The coda (mm. 117-122) contains one false entry of the first eight notes of the subject (mm. 118-121) with the first three pitches harmonized in thirds (mm. 118-119). The fifth subject pitch is unaltered, while notes six through eight are presented in irregular augmentation (top voice). This descending top voice is presented over a $g^\#$ pedal (mm. 119-122) and an ascending voice three. Voice two descends from $e^\#$ to a and then rises to $b^\#$. Quadruple invertible counterpoint is not demonstrated in the fugue.

The interval of the sixth, important to the structure of the subject, as was seen at the beginning of this discussion, plays a primary organizing role in the organization of the subject keys in the fugue.



The first member of each of the first seven pairs of keys is a sixth distant from the first key of the pair directly preceding and following it. The bottom set of brackets in the above sequence of keys shows other sixth relations in the first seven key pairs. An interlocking series of sixth can be seen between the ninth and tenth pairs of keys ($c^{\#}f^{\#}d^{\#}a$).

The central set of keys ($g^{\#}d^{\#}g^{\#}c^{\#}$) besides constituting a mid-fugue return to the tonic also is reflective of the adjustment made to the end of the subject on several occasions in the fugue when the last interval was contracted from a sixth to a fourth. The keys $d^{\#}$ and $c^{\#}$ are in fact a fourth below and above the interspersed key of $g^{\#}$. The final three keys ($a, d, g^{\#}$) reflect this same interval of the fourth. Interestingly, this last occurrence of the fourth replacing the sixth comes at the end of the fugue just as the same alteration was made to the end of the subject.

Fugue XIII in $F^{\#}$ Major
(Five Voices) 2/4 Meter

Shostakovich's only five voice fugue in the collection, the greatest number of voices present in any of the fugues, utilizes the shortest subject of all the fugues. It is only seven notes long, spanning ten beats. The subject begins and ends on tonic and has the range of a perfect fourth. The answer is real.



EXAMPLE 57--Fugue XIII, subject

There are actually five melodic counterpoints to the subject presented in the exposition which recur in various places throughout the course of the fugue. The first countersubject (CS1) is eleven pitches, eleven beats long.



EXAMPLE 58--Fugue XIII, CS1

It begins on subdominant and ends on dominant. Its range is a major sixth. Countersubject two (CS2) is twelve notes long spanning ten beats. Beginning on tonic and ending on



EXAMPLE 59--Fugue XIII, CS2

mediant, its range is a major sixth. The third counter-subject (CS3) contains only four pitches and spans ten beats. It has a range of a perfect fourth and begins on



EXAMPLE 60--Fugue XIII, CS3

submediant and ends on tonic. Countersubject four (CS4) begins and ends on dominant, has a range of a perfect fifth, and contains thirteen pitches covering eleven beats. A



EXAMPLE 61--Fugue XIII, CS4

fifth counterpoint to the subject is eight pitches long. Spanning eleven beats, this counterpoint begins and ends on tonic and has a range of a perfect fourth. The last three notes are intervallically the same as the first three notes of the subject.

The exposition consists of statements of the subject in F[#] (m. 1 with anacrusis - 5, voice four), the answer in C[#] (mm. 5-10, voice three) with CS1 (voice four), the

subject (mm. 14-19, voice two) with CS1 (voice three) and CS2 (voice four), the answer (mm. 19-24, voice one) with CS1 (voice two) and CS2 (voice three) and CS3 (voice four), and the subject (mm. 28-33, voice five) with CS1 (voice three), CS2 (voice four), CS4 (voice one) and the fifth counterpoint mentioned above (voice two). Subject entries in the exposition are in $F^\#$ major while answer entries are harmonized in mixolydian mode due to the unaltered b-natural which occurs with statements of the answer.

The first answer-codetta (mm. 10-14) presents two melodies used as primary source material in later episodes. Melody one (top voice) and melody two (bottom voice) employ a similar motive (motive one) in their first two and last two measures, respectively. This motive is the dotted-quarter-eighth-note pattern which ascends by step (mm. 10, 11, 12, 13). The second answer-codetta (mm. 24-28) employs melodies one (voice one) and two (voice two). Two new melodies (three and four) appear in voices three and four, respectively, which are important as source material for later episodes.

The episode (mm. 34-38) uses answer-codetta melody two (voice one) with an added note on the second half of beat one, melody four (voice five), a variation on motive one (voice three) which separates the dotted-eighth note into a quarter note followed by an eighth on the same pitch.

In this variation the last eighth note of the measure sometimes descends (m. 35). This motive (motive one) is found in measures 34-35.

A subject statement in $d^\#$ phrygian appears (mm. 38-43, voice one) with CS1 (voice three) and CS2 (voice four). The e-naturals present through the six-measures account for the phrygian setting. Following is an answer in $a^\#$ phrygian (mm. 43-48, voice four) with CS1 (voice one) and CS2 (voice three). The episode (mm. 48-59) employs melody one (mm. 48-52, top voice) with its first note shortened to an eighth note. Also used are melodies two (mm. 48-52) and four (mm. 48-51). The dotted-quarter eighth-note motive from melodies one and two is also found (mm. 52-53, 56).

The first of the next set of subject statements is in $C^\#$ mixolydian (mm. 59-64, voice two) and is found with CS1 (voice one) and CS2 (voice four) and CS3 (voice three). The second entry in this group is an answer in $g^\#$ phrygian (mm. 64-69, voice four) with CS1 (voice three), CS2 (voice five), CS4 (voice five), the fifth counterpoint from the initial exposition (voice two). The episode (mm. 69-79) uses answer-codetta melodies one (mm. 70-74, voice five; mm. 74-78, voice one) and two (mm. 70-73, voice two). Motive one is also found alone, not resulting from the use of one of the melodies from the answer-codettas (mm. 73-75, voice three; mm. 77, 78).

An entry in D major (mm. 79-84, voice four) is accompanied by CS1 (voice two) and CS2 (voice one). The first pitch of each countersubject appears in the opposite voice as the rest of the statement. A subject in g phrygian (mm. 84-89, voice four) appears with CS1 (voice one), CS2 (voice two) and CS3 (voice three). CS1 and CS2 again have their first notes in the opposite countersubject's voice. Episodic material (mm. 89-107) begins with answer-codetta melodies one (mm. 89-93, voice three; mm. 94-98, voice four) and two (mm. 89-93, voice one). The second occurrence of melody one begins normally (mm. 94-96) but upon reaching bar 96 it turns into the first three notes of the subject with the second pitch being doubled in length and the third being halved. This subject material appearance sets the scene for the next part of the episode.

The second half (mm. 98-107) of the episode consists of permutations of the first three notes of the subject and an appearance of the DSCH motive (see Fugue VIII). The occurrences of the head of the subject (mm. 98-99) begin with the retrograde inversion of the subject's first three notes. Next (mm. 99-100) is an inversion followed (mm. 100-101) by both another retrograde inversion and, one note later, a regular subject head. All of these motives occur in voice three. In voice one (mm. 102-107) are more three-note variations of the head of the subject beginning with

a retrograde inversion (mm. 102-103) followed by a normal subject head (mm. 102-103). The normal head overlaps the last two notes of the retrograde inversion. The same pattern appears in measures 105-106. Underscoring all of this (mm. 99-106, voice five) is an irregular augmentation of the first three notes of the subject with the initial interval expanded to a fourth.

Shostakovich's monogram DSCH (D, E^b, C, B) makes an appearance (mm. 99-105) beginning with the D half notes (mm. 99-100) over which (m. 100) appears an E^b. The E^b lasts for two bars (mm. 100-101) under which (m. 101) the C appears. The C lasts until measure 104 where it becomes a B-natural, thus completing the motive.

A subject in F[#] major appears (mm. 107-112, voice two) harmonized at the third above with a subject in a[#] phrygian. The last measure (m. 112) repeats the penultimate note of the subject on the first beat and gives the final subject pitch on beat two. A diminution of the first four notes



EXAMPLE 62--Fugue XIII, subject irregular diminution

of the subject (mm. 113-114) introduces a section consisting of strettos of the subject and its diminution.

The strettì of complete subjects and irregular diminutions of the subject begins in measure 116 with a subject statement in F[#] major (mm. 116-123, voice five) lacking its final pitch and extending the penultimate pitch to six times its normal length. Over this entry occurs a subject diminution (mm. 117-118, voice one) in C[#] mixolydian beginning a beat and one-half after the initial subject entry. Another normal subject in C[#] mixolydian enters (mm. 118-123, voice three) on the fifth beat of the initial entry in F[#] and on the fourth and final beat of the preceding diminution. The second-to-last pitch is held into the last measure of the subject (m. 123) and the last note appears on the second beat in voice five and is altered to become c-double sharp. A beat and one-half later (mm. 119-121) another subject diminution enters, this time in g[#] dorian, in voice one and finishes its last note in voice two (m. 121). Following (mm. 122-124, voice one) is a diminution of the subject in a[#] phrygian. The c-double sharp which ended the subject in C[#] mixolydian (mm. 118-123) now becomes the altered first note of an entry which, except for its first and last pitches (c-double sharp, d-natural), which are enharmonically identical, is in C[#] mixolydian. The fifth note of this subject is shortened to a quarter note. Although the final note of the subject is d-natural, the c[#] which would normally occur is found in the next measure

(m. 128). Over this entry, in voice one, melody one from the answer-codetta appears. The greatest number of voices involved in the preceding stretti at any one time is three. This stretto exposition is complete as there is one entry in each voice.

Another set of stretto entries begins with the subject in F[#] major (mm. 127-132, voice one) with its first four notes harmonized at the sixth below. A beat and one-half later (mm. 128-130, voice four) a diminution in C[#] mixolydian enters followed, two bars later, by another diminution in g[#] dorian (mm. 130-132, voice three). Between these two diminutions is found a false entry of the subject in C[#] mixolydian (mm. 129-132, voice five), complete through five notes.

The episode (mm. 132-140) uses melody one from the answer-codetta (mm. 132-135, voice two). A new melody appears (mm. 133-136, voice one) based initially on motive one and is repeated in sequence (mm. 137-140). Other voices are new material occasionally utilizing motive one (mm. 135, 139) and its variant (mm. 133, 134, 137, 138).

More stretto statements of the subject and its irregular diminution follow (mm. 140-147) beginning with a diminution of only the first four subject pitches (mm. 140-141, voice four) in c[#] phrygian. One-half beat later (mm. 140-147, voice one) a statement of the subject

in b aeolian appears with its penultimate pitch extended to six beats and its final b-natural coming as an eighth note in measure 147. One and one-half beats after the c[#] subject is a diminution in f[#] phrygian (mm. 141-143, voice two), followed (mm. 142-147, voice three) by a subject in f[#] phrygian which ends on mediant instead of tonic. A beat and one-half later (mm. 143-145, voice four) a subject diminution in c[#] locrian appears. Over the final c[#] of this diminution is a final diminution of the subject in D major.

The coda section (mm. 147-163) is primarily free material from measure 147 to 153. Answer-codetta melody one does appear (mm. 147-153, voice two) with its fifth and sixth pitches irregularly augmented and repeated (mm. 149-153) and its last pitch (f[#], m. 153) also being the first pitch of the subject statement in F[#] major (mm. 153-163). This entry in F[#] has an irregular augmentation of the fourth through sixth notes (mm. 161-162) before the final f[#] is heard (m. 163). This subject is also presented simultaneously, in thirds, with a subject in a[#] phrygian (voice one) except for the repetition (mm. 161-162) of notes five and six in the F[#] subject, simultaneous with the final a[#] of this entry. A subject in d[#] aeolian appears (mm. 155-160, voice three) with the durational values of its fourth and fifth notes exchanged. Finally, a subject statement in C[#] mixolydian (mm. 157-163, voice four) again has its fourth and fifth durations exchanged.

Invertible counterpoint between the subject and all countersubjects is not shown in this fugue. All expositional sections except the stretti (mm. 116-124) are incomplete, after the first.

No obvious relationship can be observed interrelating the order of keys of subject entries in this fugue as has been seen in earlier fugues. Many entry keys are repeated frequently (i.e., $c^\#$, $g^\#$), and their order is not easily set to a pattern.

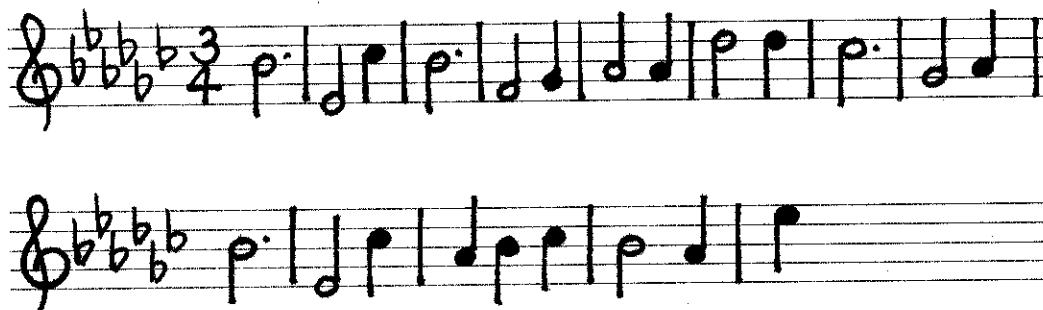
There is, however, a method to the keys that are used, if not to the orderings and sequence.

$f^\#$	$g^\#$	$a^\#$	$c^\#$	$d^\#$
	g			d

Of the five closely related members to $f^\#$, all are employed except b , the fourth member of the $f^\#$ tonal schema. Chromatically related keys (g , d) to two of the closely related keys ($g^\#$, $d^\#$) are used and their occurrence may be explained as such. All diatonic modes are employed except one, lydian, the mode built on the fourth scale degree of a major key. An association of the above occurrence of the interval of a fourth with the subject exists in that the subject rises from tonic to subdominant, the fourth scale degree and its range is a perfect fourth.

Fugue XIV in e^b Minor
(Three Voices) 3/4 Meter

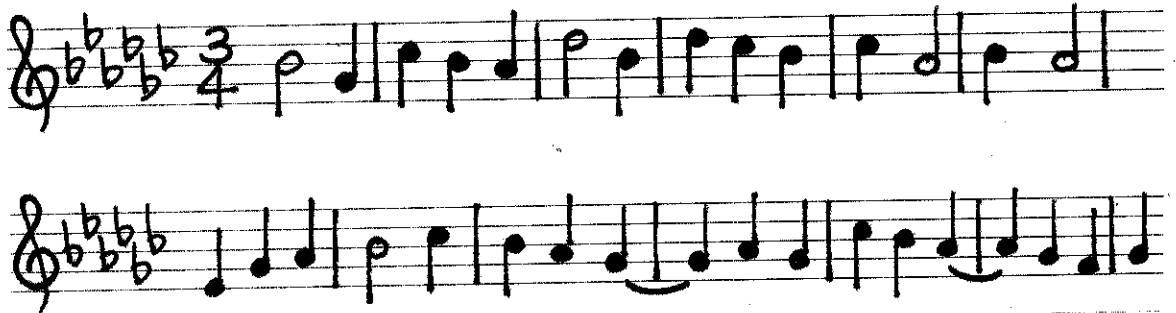
The opening four notes of the subject of this fugue consist of tonic, dominant, and submediant pitches. These scale degrees have been seen as prominent structural members of the subjects of earlier fugues. The subject is twenty-two notes, thirty-seven beats in length. It begins on



EXAMPLE 63--Fugue XIV, subject

dominant, ends on tonic, and has a range of an octave. A tonal answer is given to the subject due to the opening dominant to tonic motion. Only the first note of the answer is altered, giving an answering tonic to the subject's opening dominant.

Two regularly-recurring countersubjects are found in this fugue. The first, CS1, is thirty pitches long. Spanning thirty-seven beats, CS1 begins on dominant, ends on mediant, and has a minor seventh range. Its first two pitches are altered to occur a second higher with the



EXAMPLE 64--Fugue XIV, CS1

tonal answer. The second countersubject, CS2, begins on mediant and ends on dominant twenty-two notes, thirty-eight beats later. Its range is a minor seventh. The only time



EXAMPLE 65--Fugue XIV, CS2

that CS2 appears with a statement of the tonal answer (mm. 72-84) its first measure is altered to two pitches ascending stepwise to its third note and a new fourteenth pitch is added.

The exposition (mm. 1-45) consists of statements of the subject in e^b aeolian (mm. 1-13, voice one), the answer in b^b aeolian (mm. 14-26, voice two), and the subject in e^b (mm. 33-45). The non-alteration of scale degrees six and seven place the answer and second subject in aeolian mode, and thus the first entry can be inferred to be in aeolian mode.

The answer-codetta (mm. 26-32) presents two melodies used in later episodes. Melody one (voice one) and melody two (voice two) both make extensive use of a half-note/quarter-note motive (in melody one) and its retrograde quarter-note/half-note motive (in melody two) from CS1 (mm. 5-6). This motive will be labeled motive one when it appears unrelated to melodies one and two.

The episode (mm. 45-58) begins with answer-codetta melody one (mm. 45-49, voice two) and melody two (mm. 45-50, voice three) lacking its last five pitches. A false entry of the first five notes of the subject, with the fifth note altered to be the same as the first (mm. 55-57, voice one), is also a part of the episode. Melodies one and two are expanded (mm. 50-54) with new material which reappears in future episodes. A new melody (melody three) appears (voice one) and also reappears later.

The next expositional section (mm. 59-84) contains two entries, one each of subject and answer. The subject

statement (mm. 59-71, voice two) is in G^b mixolydian and is accompanied by CS1 (voice three) which has its first two pitches lowered by a third and its twenty-third note also occurring a third lower than usual. The f-flats present during the statement of the subject put it in mixolydian mode. The tonal answer (mm. 72-84, voice one) in D^b mixolydian occurs with CS1 (voice two) with its fifteenth pitch omitted, and CS2 (voice three) altered as described earlier.

The episode (mm. 84-101) uses the same three melodies as the earlier episode (mm. 45-54) until measure 93. The rest (mm. 93-101) of this episode is built primarily using an ascending or descending stepwise group of three notes and the primary rhythmic motives from melodies one and two. Two false entries of the subject (like mm. 55-57) occur in voice two (mm. 94-97, 98-101).

The next section (mm. 102-127) again contains two entries. This time both are subjects. The first entry, in b aeolian (mm. 102-114, voice two), appears with CS1 (voice one). The second entry (mm. 115-127, voice three) is in E mixolydian and is found with CS1 (voice one) with its fifteenth pitch omitted and with CS2 (voice two) appearing as it did with the earlier answer statement (mm. 72-84). CS1 and CS2 cross voice parts (mm. 126-128).

The following episode (mm. 127-155) is initially (mm. 127-144) drawn from the preceding episode (mm. 84-101)

and contains the same melodies with melody two complete through bar 144 and melodies one and three complete through bar 135. Voice two (mm. 137-319) contains a false entry of the subject as does voice three (mm. 141-143). Voice two (mm. 141-144) contains the stepwise patterns from the previous episode. Measures 136-144 also contain motives used in bars 94-101 again in sequential occurrences and in alternating voices. The two false entries seen in the preceding episode also occur in this episode (mm. 137-140, voice two; mm. 141-144, voice three). The balance of the episode (mm. 145-155) employs motives drawn from the earlier section of this episode. A false entry of the unaltered first five pitches of the subject is also presented (mm. 145-148, voice one) but with a new rhythm on notes four and five.

A series of stretto entries begins with a two-voice stretto (mm. 155-168). The first voice (voice three) presents a subject in e^b aeolian (mm. 155-167). One measure later a subject appears in D^b mixolydian (voice one). Both subjects are complete. Voice two is new material. An episode (mm. 168-178) precedes the next stretto entries. This episode makes much use of the two versions of motive one from answer-codetta melodies one and two.

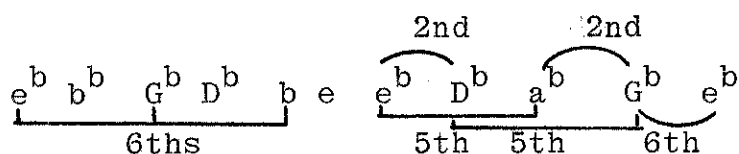
Another two-voice stretto (mm. 178-191) begins with a statement of the subject in a^b aeolian (voice one) followed one bar later by a subject statement in G^b mixolydian (voice three). Both statements are again complete. Voice two is again new material.

Another episode (mm. 191-204) precedes the final entry of the subject. This episode, though not directly relatable to any melody from a previous episode, is built using motives found in preceding episodic sections (mm. 168-178, 127-155) such as the two forms of motive one.

The final subject entry (mm. 204-216, voice one) is in the key of e^b and appears in aeolian mode. Voice two is new material. An e^b pedal appears from bar 212 to the end. The coda (mm. 218-224) continues the motivic material from voice two (mm. 204-217), now in voice one, over a second e^b pedal (voice two).

CS1 never appears as the lowest voice in a three-voice texture; hence, triple counterpoint is not demonstrated in this fugue. No exposition after the first in the fugue is complete.

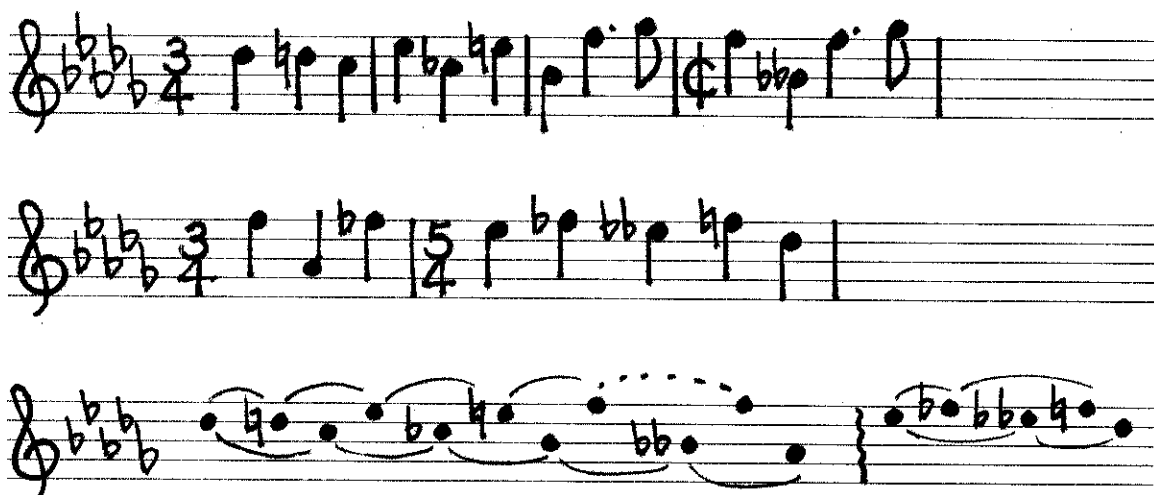
The key sequence in this fugue reflects the first three intervals of the subject, fifth, sixth, and second. The



first six keys, the ones preceding the strettii, demonstrate the interval of the sixth. The first member of each pair of keys is a sixth from the first member of the next key pair. The stretto keys (e^b , D^b , a^b , G^b) are actually two sets of interlocked fifth-related keys (a^b-e^b , G^b-D^b). However, the keys that are paired and presented in stretto combination are a second apart. The final key of e^b is again a sixth from the penultimate key of G^b .

Fugue XV in D^b Major (Four Voices)
3/4, 2/2, 5/4, and 4/4 Meters

The subject of Fugue XV is constructed as a "wedge" theme, ascending chromatically from d^b up to f, with two occurrences of a g^b upper neighbor, and descending chromatically from the d^b to a^b. A second, smaller wedge can be



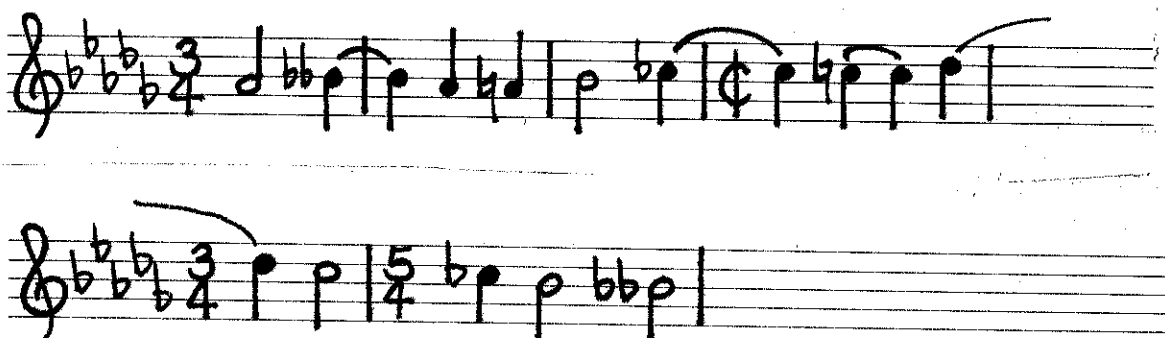
EXAMPLE 66--Fugue XV, subject and wedges

observed in measure six of the subject as it returns chromatically from mediant to tonic. The first eleven of the twenty-one pitches in the subject are non-repetitive. The only chromatic pitch not appearing in the first eleven notes is the dominant (a^b). Dominant appears (m. 5) after a restatement of pitches eight through ten of the subject which comprise the twelfth through fourteenth subject notes. The subject contains all intervals except the major and minor seventh and octave. Its last five intervals are the

same (some enharmonically) as the first five. The subject begins and ends on tonic and its range is a minor seventh. It is twenty-one beats in length. The metric pattern of the subject is 3 + 3 + 3 + 4 + 3 + 5. Through the course of the fugue, some subject pitches are presented enharmonically.

Although the initial occurrence of chromaticism lends a certain atonal context to the subject, it has a definite tonal foundation. This foundation arises from the subject's initialization on, and final return to, tonic as well as the rise to the mediant, with its embellishing upper neighbors, which is reiterated throughout bars 4-5. The lowermost subject pitch is dominant. A real answer is given to the subject.

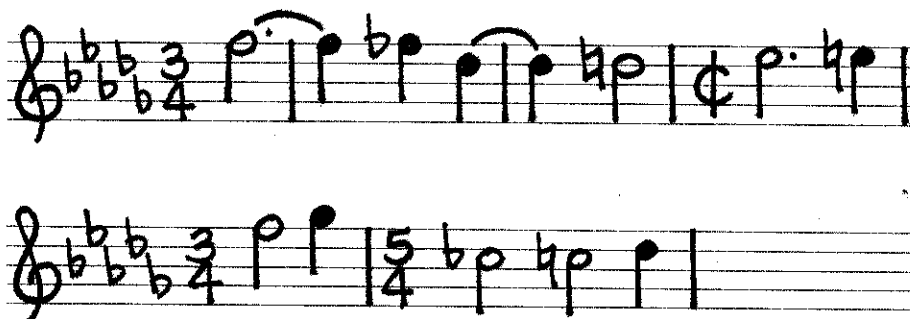
Three countersubjects accompany the subject in the course of the fugue. The first countersubject (CS1) is



EXAMPLE 67--Fugue XV, CS1

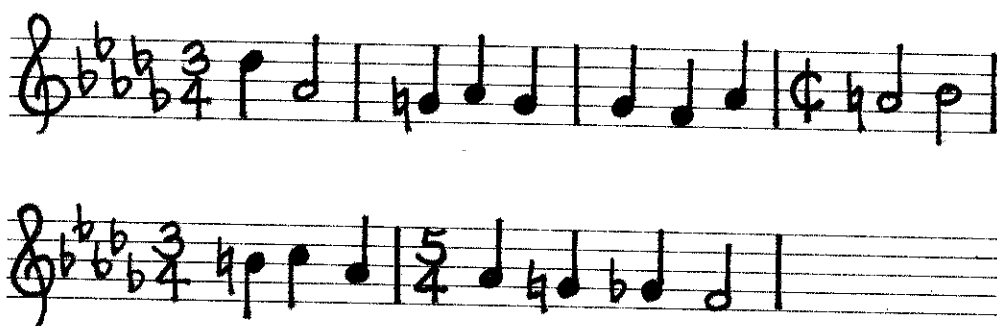
twelve notes, twenty-one beats in length. Beginning on dominant and ending on flat-submediant, its range is a

perfect fourth. It consists almost entirely of half-note values. The second countersubject (CS2) begins on mediant,



EXAMPLE 68--Fugue XV, CS2

ends on tonic, spans twenty-one beats and contains eleven pitches with the range of a diminished fifth. Countersubject three (CS3) contains sixteen notes, twenty-one beats. CS3 begins on tonic, ends on mediant, and has a range of a minor sixth.



EXAMPLE 69--Fugue XV, CS3

The exposition (mm. 1-30) consists of statements of the subject in D^b major (mm. 1-6, voice one), the answer in A^b major (mm. 7-12, voice two) with CS1 (voice one), the subject in D^b major (mm. 19-24, voice three) with CS1 (voice two) and CS2 (voice one), and the answer in A^b major (mm. 25-30, voice four) with CS1 (voice three), CS2 (voice two), and CS3 (voice one).

The answer-codetta (mm. 13-18) is entirely in $3/4$ meter. Two melodies comprise this section. Melody one (voice one) contains two motivic ideas. The first (mm. 13-15) is a half-note-quarter-note rhythm. The second (mm. 15-18) is a quarter-note scale pattern first ascending, then descending, and ascending again. The first quarter note in each bar is tied from the last quarter in the preceding bar. Melody two (voice two) is, like melody one, bimotivic with a change to motive two coinciding with the same change in melody one. Motive one of melody two is the reverse rhythm of motive one in melody one. Motive two is a half note tied to the first of two eighth notes with the final eighth either ascending or descending by step. The opening motives of melodies one and two are from the first measures of CS1 and CS2, respectively.

The episode (mm. 31-35) uses answer-codetta melodies one (voice three) and two (voice four). Both melodies lack their final bars, as this episode is one measure shorter than

the answer-codetta. Two new melodies which are found in later episodic material appear, melody three (voice one) and melody four (voice two).

Three entries of the subject comprise the next exposition section (mm. 36-60). The first entry in b^b minor (mm. 36-41, voice two) appears with CS1 (voice three). Entry two occurs in f minor (mm. 42-47, bottom voice) in conjunction with CS1 (middle voice) and CS2 (top voice). These two entries have their last measures altered from the intervallic pattern $m2$ up, $M2$ down, $A2$ up, $M3$ down to become $m2$ up, $m3$ down, $d4$ up and $m3$ down. The episode (mm. 48-54) employs answer-codetta melodies one (bottom voice) and two (top voice) as well as melody four (middle voice). Melodies two and four exchange voices in bar 50. The next entry in e^b minor (mm. 55-60, voice one) is found with CS1 (voice two), CS2 (voice three) and CS3 (voice four). The fifteenth pitch of this entry is altered to occur an augmented fourth below the fourteenth pitch instead of the usual sixth. The final five pitches employ the altered intervallic pattern from the previous two entries. The episode (mm. 61-67) uses melody one (voice two) and melody two (voice one) from the answer-codetta as well as melody three (voice four) and melody four (voice three) from measures 31-35.

Two subject statements follow (mm. 68-79). The first statement is in A major (mm. 68-73, top voice) and appears

with CS1 (middle voice) and CS2 (bottom voice) which both begin on the second beat of their respective second measures. The answering second statement is in E major (mm. 74-79, middle voice) and is accompanied by CS1 (top voice) and CS3 (bottom voice). The episode (mm. 80-89) contains answer-codetta melody one (top voice), melody two (middle voice), and melody three (bottom voice from bars 31-35). Measures 86-89 are new material in the manner of the preceding bars (mm. 80-85).

An entry of the subject appears (mm. 90-95, bottom voice) in conjunction with a new form of the subject. This new form of the subject presents the first eleven notes of the subject in quarter-note values, each one separated by a quarter rest. This rhythmic pattern gives a hemiola effect to the underlying subject statement by creating a $2/4$ metric effect in the prevailing $3/4$ meter and will, in future references, be referred to as the hemiola subject form. This presentation of the hemiola form of the subject is in F major and is doubled at the octave with an inner voice supplying pitches to fill out the harmonies. The accompanying regular subject statement is in d minor, submediant to F, and is altered in its final five pitches just as the other previous entries in minor keys have been (see mm. 36-41, 42-47, 55-60).

Immediately following (mm. 96-101, top voice) is a subject statement in g minor presented simultaneously with

a hemiola subject in D^b major which is again complete through eleven notes. The g minor subject has the altered ending found in previous minor key statements. A complete statement of the subject using the hemiola form occurs in A^b major (mm. 102-115, bottom voice) doubled at the octave. A subject statement, also in A^b major, presented with all quarter-note values and entirely in $3/4$ meter occurs simultaneously (mm. 102-109, top voice) beginning on beat two of measure 102. Following, and also simultaneous with the complete hemiola form of the subject, is a statement of the subject in A major (mm. 109-114) which is complete through ten pitches. The eighth through tenth pitches are enharmonically $c^\#$ and d-natural to affect the key of A major. This partial statement is also in the hemiola form through its first seven notes and occurs on the alternate beats from the complete hemiola subject statement. The upper voices of bars 116-118 serve as a return from the hemiola effect to a $3/4$ metric setting. The preceding series of entries could be considered a stretto treatment of the hemiola and regular subjects.

A series of stretti of the subject begins with an entry in D^b major (mm. 118-123, bottom voice) followed at the distance of one measure, three beats, by an entry in C major (mm. 119-124, top voice). The metric pattern of the C major subject is altered due to the metric control of the

D^b major entry which retains its original metric associations, thereby causing the C major entry to be stated within its metric pattern. Both subjects are complete and are therefore in canon.

After one measure of connecting material, a subject appears in the key of A^b major (mm. 126-131, beginning in the middle voice and moving to the top voice in m. 128). Two measures, six beats, later an answer in E^b major enters (mm. 128-133, bottom voice) with its tenth and fourteenth pitches doubled in length so that after the end of the A^b major subject, this entry finishes with its original metric associations in the last two measures. The upper voices return to a hemiola accompaniment pattern in the last two measures of the E^b entry.

The episode (mm. 134-143) is comprised of answer-codetta melodies one (mm. 134-138, voice one; mm. 139-143, voice three) and two (mm. 134-138, voice two; mm. 139-143, voice four) as well as melodies three (mm. 134-138, voice four; mm. 139-143, voice two) and four (mm. 134-138, voice three; mm. 139-143, voice one). A subject in G^b major (mm. 144-149, bottom voice) appears with chordal accompaniments in the style of the hemiola form of the subject. A subject in D major appears (mm. 150-155, voice two) with CS1 (top voice) and an irregular augmentation of the first four subject pitches, one per measure, in octaves in the bottom

two voices. Over the last note of the D major subject, enharmonically presented as e^{bb} , a subject in B^{bb} major (mm. 155-160, top voice) enters on its seventh pitch and proceeds to the end, enharmonically written as a-natural. This entry occurs over a g^b pedal.

Two entries in D^b major follow (mm. 162-171). The first (mm. 162-166, bottom voice doubled at the octave) is irregularly punctuated by chords resembling those found with the hemiola subject form. It is only complete through fifteen notes. The second entry (mm. 167-171, bottom voice) is again doubled at the octave and appears with the hemiola subject chord punctuations. Measures 172-176 contain the final five pitches to both previous incomplete subject statements, preceded, separated, and concluded by an authentic cadence in D^b major. Leading to the close of the fugue is a reference to the subject (mm. 176-179, bottom voice) which consists of a steadily expanding series of intervals, alternating directions as in the opening of the subject. Each interval is presented up to and including the major seventh. The upper voices present hemiola rhythm chords as accompaniment. The close of the piece is punctuated by two authentic cadences (mm. 179-181) and two reiterations of the tonic pitch (mm. 181-182).

Quadruple invertible counterpoint is not demonstrated in the fugue. All expositions, after the first, are incomplete.

The key scheme of the fugue is as follows. Every interval class is represented in the key scheme. The only pitch

$D^b A^b b^b f e^b A E \underline{F(h)g} A^b(h) A(inc) D^b C A^b E^b G^b D B^{bb} D^b$
 $d D^b(h)$

h = hemiola subject form
 inc = incomplete

class not represented in the key scheme is B natural, which is enharmonically a minor seventh above the tonic D^b . The range of the subject is a minor seventh.

Fugue XVI in b^b Minor (Three Voices)
 4/4, 5/4, 3/4, and 2/4 Meters

The subject of this fugue is similar to the subject of WTC-I, 5 with its highly ornamented nature. Shostakovich's subject is extremely ornamented throughout, whereas Bach's ornamentation only appears at the outset of his subject. The subject is fifty-six pitches in length and spans eighteen beats. It begins on tonic, ends on the dominant, and has a range of a major ninth. No alterations are made to sixth and seventh scale degrees as they approach tonic, thus the subject is in aeolian mode. In fact, the first thirty-six measures, exactly half of the fugue, contain no chromatic alterations to any pitch. A real answer is employed although the non-alteration of its pitch content makes the mode of the answer phrygian.



EXAMPLE 70--Fugue XVI, subject

Two countersubjects are found throughout the fugue. The first (CS1) contains forty-three notes covering eighteen beats. It begins on tonic and ends on leading tone. Its



EXAMPLE 71--Fugue XVI, CS1

range is an octave. Countersubject two (CS2) is twenty-eight notes, eighteen beats in length. Beginning and ending on the dominant, it has a range of an octave.



EXAMPLE 72--Fugue XVI, CS2

The exposition (mm. 1-15) consists of entries of the subject in b^b aeolian (mm. 1-5, voice one), the answer in f phrygian (mm. 5-9, voice two) with CS1, and the subject (mm. 11-15, voice three) with CS1 (voice two) and CS2 (voice one). The answer-codetta (mm. 9-10) contains two melodic lines found in later episodic sections. Melody one appears in the top voice with melody two in the bottom. The episode (mm. 15-19) uses answer-codetta melodies one (mm. 15-16, voice two) and two (mm. 15-16, voice three) and a new counterpoint, melody three (mm. 15-16, voice one). Bars 17-19 contain new material.

The second exposition section (mm. 20-28) begins with a subject entry in D^b ionian (mm. 20-23, voice three) accompanied by CS1 (voice one) and CS2 (voice two). An entry in A^b mixolydian follows (mm. 24-28, voice one) with CS1 (voice three). The episode (mm. 28-31) employs

answer-codetta melodies one (bottom voice) and two (top voice) in measures 28 and 29. Measures 30 and 31 are new material.

The next exposition section (mm. 32-41) opens with a subject statement in G^b lydian (mm. 32-36, voice two) in conjunction with CS1 (voice three) and CS2 (voice one). After one measure (m. 36) of new material, a subject appears in c phrygian (mm. 37-41, voice three) with CS1 (voice two) and CS2 (voice one). Pitches thirty-four and thirty-five (m. 40) of CS1 occur a second higher than normal. The episodic material (mm. 41-49) begins (mm. 41-42) with melody one (voice two) and melody two (voice three). The new counterpoint, melody three, originally from bars 15-16, reappears in voice one. Measures 43-45 are new material. Three false entries of the subject occur, one each in measures 46, 47, 48. All are in f phrygian and are accompanied by a counterpoint employing motivic material from CS1. Measure 48 (bottom voice) continues the material from bars 46-48 (top voice).

A subject in f phrygian (mm. 49-56, voice two) begins with a five-beat first pitch and has its thirteenth and thirty-eighth pitches lengthened. A stretto entry in b^b aeolian (mm. 50-54, voice one) has its first pitch shortened to two beats and its thirteenth pitch lengthened to three beats to compensate. There is also an extra beat of rest

between pitches thirty-eight and thirty-nine and an eighth-note value of pitch thirty-eight also becomes a rest. An entry of the subject in e^b dorian (mm. 56-62, voice three) begins with a four-beat first pitch and proceeds through a six-beat thirteenth pitch and has its thirty-eighth pitch lengthened by an eighth-note value and an extra eighth rest added following. Pitch forty-two is lengthened by a quarter note and notes fifty-two and fifty-three occur a second higher than usual. A subject statement in g^b lydian (mm. 56-62, voice two), in stretto with the e^b entry, has its first and thirteenth pitches lengthened, the first by an eighth-note and the thirteenth by five and one-half beats.

A third entry (mm. 57-63, voice one), in c locrian, in stretto with the preceding two entries, also includes rhythmic and pitch alterations. Pitch twelve is a second higher than usual. Pitches twenty-two through twenty-four are rhythmically altered to become a triplet. Notes thirty and thirty-two are lengthened in duration. Pitch thirty-eight is shortened to an eighth note followed by a beat and one half of rest. Notes thirty-nine through forty-one are presented, at first, with pitch forty-one quadrupled in duration and followed by an eighth rest. These three pitches are then repeated with normal values and the subject closes after its fifty-second and fifty-third pitches occur a second higher than usual.

The coda (mm. 63-72) begins with new material (mm. 63-65) and abruptly turns to the key of B^b major (mm. 66 to end). Three false entries of the subject occur in B^b . The first two (mm. 66-67, 68-69) consist of the first thirteen notes of the subject, while the third (m. 70) only presents the initial five pitches of the subject. Both CS1 and CS2 accompany (mm. 66-70, top voices) through measures 66-67. The fugue closes with the first thirteen notes of the subject (voice two) a third above their usual pitches.

The first exposition (mm. 1-15) and the stretto exposition (mm. 49-63) are complete. The two others are not, containing only two subject entries each. Triple invertible counterpoint between the subject, CS1 and CS2 is not demonstrated in this fugue.

The key scheme of the fugue is as follows. Shostakovich's primary purpose in the variance of keys seems to be the same

b^b f D^b A^b G^b c f b^b e^b G^b c (B^b)

as that in Fugue I, to present each diatonic mode at least once in the course of the fugue. Two modal centers, other than the primary ones (b^b , f), are repeated in the fugue, g^b and c. It is noteworthy that these are the two pitches, other than b^b , which appear in the first ornamental figure of the fugue, in measure two, pitches five to twelve.

Fugue XVII in A^b Major
(Four Voices) 5/4 Meter

The subject is composed of thirty-seven pitches which span twenty beats. It begins and ends on tonic and has a range of a major tenth. Again, as in previous subjects, the beginning is based on tonic, dominant, and submediant



EXAMPLE 73--Fugue XVII, subject

scale degrees, opening with tonic to dominant with a submediant upper neighbor which returns to the dominant. The sixth pitch of the subject is a raised subdominant scale degree, providing the only chromaticism found in the subject. Due to the initial tonic to dominant motion, the answer is tonal, its first three notes affected.

Three countersubjects are found in the fugue. The first (CS1) contains fifty-one notes in twenty beats, beginning on dominant and ending on tonic. Its range is an octave. The second through fourth pitches occur a second higher with the tonal answer than with the subject.



EXAMPLE 74--Fugue XVII, CS1

The second countersubject (CS2) consists of thirty-nine pitches, twenty beats, and begins and ends on mediant with a range of a major tenth. The last note of the first bar of CS2 is held one half beat into the second bar when



EXAMPLE 75--Fugue XVII, CS2

presented with the answer, and an extra sixteenth note is added at the end of beat nine, a second below the existing note. Countersubject three (CS3) contains thirty-two

itches covering twenty beats. It begins on tonic and ends on submediant and has an octave range.



EXAMPLE 76--Fugue XVII, CS3

The initial exposition (mm. 1-18) consists of an entry of the subject in A^b (mm. 1-4, voice one), an answer statement in E^b (mm. 5-8, voice two) with CS1, a subject statement in A^b (mm. 11-14, voice three) with CS1 (voice two and CS2, and an answer entry in E^b (mm. 15-18, voice four) with CS1 (voice three), CS2 (voice two) and CS3. The answer-codetta (mm. 9-10) consists of two, one-measure patterns which are each repeated immediately a second lower in the next measure. The first pattern (melody one) is rhythmically derived from the first measure of the subject with the rhythm of beats one and two retrograded. Melody one appears in the upper voice. Melody two (bottom voice) resembles the sixteenth-note patterns in measure three of the subject in nature.

The episode (mm. 19-20) contains answer-codetta melodies one (voice three) and two (voice four). Two new counterpoints are also presented in voices one and two, and these will appear again in later episodic material and be labeled melodies three and four, respectively.

The second exposition (mm. 21-28) contains two statements of the subject. A statement in f aeolian (mm. 21-24, voice two) appears with CS1 (voice three) and CS2 (voice four). The sixth pitch from the end of CS2 appears a second higher than normal. Immediately following is a subject statement in c aeolian (mm. 25-28, voice one) appearing with CS1 (voice two), CS2 (voice three), and CS3 (voice four). The seventh and eighth pitches of CS3 appear a second higher than usual. The c aeolian entry is the answering key to the preceding f aeolian subject but the tonal answer is not employed. The episode (mm. 29-32) contains answer-codetta melodies one (mm. 29-30, voice two), two (mm. 29-30, voice one), and melodies three (mm. 29-30, voice four) and four (mm. 29-30, voice three) from the first episode. Melody two has the last beat of its first measure retrograded in its pitch content. Bars 31 and 32 are new material.

The next exposition (mm. 33-40) contains two subject statements. The first statement (mm. 33-36, top voice) is in B major and is presented with CS1 (middle voice) and CS3 (bottom voice). The second through fifth pitches of

CS1 are altered to be a major second, major second, perfect fourth, and major second higher than usual. The penultimate pitch in the third measure of CS3 appears a third lower than the original. The second subject statement (mm. 37-40, bottom voice) is in G major. It appears with CS1 (top voice) and CS2 (middle voice). The episode (mm. 41-42) employs answer-codetta melodies one (bottom voice) and two (top voice).

The next subject statement (mm. 43-46, voice two) begins in d aeolian. From beat four of measure 43 through measure 44, the appearance of e^b in CS1 (voice three) and CS3 (voice four) effects a phrygian mode. Voice one (mm. 43-46) is new material. The penultimate pitch in the third bar of CS3 occurs a third lower than usual.

The next episode (mm. 47-57) is the longest of the fugue. It begins (mm. 47-48) by quoting the new material (mm. 31-32) which was employed in a previous episodic section (mm. 29-32). The top voice is now the bottom voice, middle voice becomes top voice, and bottom voice becomes middle voice. A false entry of the first bar of the answer (m. 49, bottom voice) appears with new accompanying counterpoint, followed by a false entry of an inversion form of the subject (m. 50, bottom voice). An altered presentation of the subject appears in the top voice of measures 51 to 54. It begins with an octave leap up to dominant instead of the usual leap of a fifth. The second measure (m. 52) begins

with dominant on beat one instead of tonic and the next four beats occur a third higher than in the original subject. The third measure (m. 53, top voice) contains a paraphrase of the third bar of the original subject, retaining the same rhythm and basic melodic construction on beats one, two, and four. The fourth bar (m. 54) replaces the usual fourth measure with an unaltered second measure of the subject. This statement begins in A^b major with later mixolydian tendencies due to the g^b pitches found in bars 52 through 54. A false entry of the first measure of the answer appears in the top voice (m. 55). The episode closes (mm. 56-57) with melody one (top voice) and melody two (bottom voice) from the answer-codetta.

The subject returns (mm. 58-61, bottom voice) in the key of A major along with CS1 (middle voice) and CS2 (top voice). Following (mm. 62-65) is a subject entry in D^b major (bottom voice) presented simultaneously with the first two bars of the subject in f phrygian in augmentation (mm. 58-61, top voice). The values of the fourteenth and sixteenth notes are interchanged (m. 65). The subject in f phrygian, which began in augmentation, then finishes its last two measures in regular note values (mm. 66-67, top voice), while an entry in e^b dorian in augmentation appears in the bottom voice (mm. 66-69). Over the third bar of the e^b augmentation, a subject in b^b aeolian (mm. 68-71, top

voice) enters. This statement takes on phrygian qualities when the note c^b is introduced (mm. 69-70) and dorian with c -natural and g -natural (m. 71). Middle voices (mm. 62-71) contain new material.

The e^b subject augmentation ends its first four bars, two of the subject's original four, on an a^b which is held in pedal point (mm. 70-71). The last two measures of the original subject are then presented simultaneously, the third bar in the top voice and the fourth bar in the bottom (m. 72). The third bar is a loose paraphrase in f aeolian, and the fourth bar is intact but in A^b major. Measure 73 is an exact repetition of bar 72. Measures 74 and 75 contain melodies one (top voice) and two (bottom voice) from the answer-codetta. The second measure of each melody appears a second higher than in the original patterns in the answer-codetta. The patterns are slightly modified on the last two beats of each measure. The final entry (mm. 76-79) is an answer in A^b which begins in voice two, switches to voice one (m. 79) and lacks its fourth bar. The final measure employs the pitch content of the last ten notes of CS1 divided between voices two (beat two to first note of beat three) and one (last five notes), respectively.

Quadruple invertible counterpoint is not demonstrated in this fugue as CS1 never appears as the lowest voice in

any texture. No exposition, after the first, is complete. The first two of the three strettii are complete.

The key scheme of subject statements is as follows.

f(aug)-----b^b
 A^b E^b f c B G d A^b D^b e^b(aug) A^b

Fugue XVIII in f Minor
 (Four Voices) 2/4 Meter

The subject of this fugue consists of thirteen pitches spanning fifteen beats. It begins on tonic and ends on dominant and its range is an octave. The answer in this



EXAMPLE 77--Fugue XVIII, subject

fugue is real, although the mode in which it is presented (phrygian) differs from that of the subject (aeolian), because their basic interval patterns are the same.

Three countersubjects are found in the fugue. The consistently found components of countersubject one (CS1)



EXAMPLE 78--Fugue XVIII, CS1

are comprised of thirteen pitches which span thirteen beats, one measure less than the subject. The last two beats of CS1 are so diverse throughout the course of the fugue as to make the inclusion of any specific pattern as a part of CS1 impossible. CS1 begins on tonic and ends on subdominant with a range of a major sixth. The second countersubject (CS2) contains eleven pitches presented over fifteen beats.



EXAMPLE 79--Fugue XVIII, CS2

Like CS1, this countersubject shows much diversity in its last two beats, but there is a trend toward the recurrence of a particular pattern. CS2 has a range of a perfect fifth, begins on tonic, and ends on dominant. The third countersubject (CS3) is thirteen pitches, fifteen beats in length. It begins on mediant and ends on subtonic with a range of a major sixth.



EXAMPLE 80--Fugue XVIII, CS3

The exposition (mm. 1-27) contains entries of the subject in f aeolian (mm. 1-8, voice one), the answer in c phrygian (mm. 8-15, voice two) with CS1 (voice one), the subject in f aeolian (mm. 23-30, voice three) with CS1 (voice two and CS2 (voice one), and the answer in c phrygian (mm. 30-37, voice four) with CS1 (voice three), CS2 (voice two), and CS3 (voice one).

The answer-codetta (mm. 16-22) contains two melodies used later in the fugue's episodic sections. Melody one (top voice) consists of two, three-measure motives, the second sequentially a second higher than the first. Melody two (bottom voice) is similarly constructed. Each melody has one bar of material at its end which is not related to the preceding sequential motives.

The episode (mm. 37-48) begins with answer-codetta melodies one (mm. 38-44, voice three) lacking its final beat and two (mm. 38-44, voice four). Two new melodies appear which recur in later episodes, melody three (voice one) and melody four (voice two). Bars 45 through 48 are new material.

The second exposition section (mm. 49-63) contains two entries of the subject. The first (mm. 49-56, voice two) is in A^b mixolydian and is accompanied by CS1 (voice one) and CS2 (voice three) lacking its opening four notes. The second entry (mm. 56-63, voice three) is an answer in E^b

mixolydian and is found with CS1 (voice two) and CS2 (voice four) again lacking its initial four notes.

The succeeding episode (mm. 64-76) begins with melodies one (middle voice) and two (top voice) from the answer-codetta as well as melody four from an earlier episode. Bars 70 to 76 are new material.

The next series (mm. 77-91) of statements begins with a subject in D^b mixolydian (mm. 77-84, middle voice) with CS1 (bottom voice) and CS2 (top voice) again lacking its first measure and with two extra pitches added to its end. Following is a statement in G^b mixolydian (mm. 84-91, voice four) which appears with CS1 (voice two), CS2 (voice one) with the second pitch of its first measure occurring a second higher than usual and last pitch becoming two pitches occurring a second and third higher than the original. CS3 also appears (voice three) lacking its final pitch.

The next episode (mm. 91-106) begins with melody one (mm. 91-97, voice four) and melody two (mm. 91-97, voice two) both from the answer-codetta as well as melodies three (mm. 91-99, voice three) and four (mm. 91-97, voice one). Bars 99 to 106 are new material.

Another set of subject entries (mm. 107-121) begins with the subject in e aeolian (mm. 107-114, bottom voice) presented with CS1 (top voice) and CS2 (middle voice) which

lacks its first note. An answer in b aeolian (mm. 114-121, voice one after first note in voice two) is accompanied by CS1 (voice two), CS2 (voice four), and CS3 (voice three) with its first quarter-note value presented a third lower than usual.

Episodic material (mm. 122-140) uses both melodies from the answer-codetta and both earlier episodic melodies. The answer-codetta melodies are divided into two segments at their center. The two segments then occur in different voices. The episode employs answer-codetta melody one (mm. 122-125, voice one; mm. 126-129, voice three) and melody two (mm. 122-126, voice two; mm. 126-129, voice four), as well as episode melodies three (mm. 122-125, voice three; mm. 126-129, voice one) and four (mm. 122-126, voice four; mm. 126-129, voice two). Measures 130 through 140 are new material and contain a false entry of the first four notes of the subject (mm. 132-133, voice two).

A series of stretto subject entries begins with an entry in f aeolian (mm. 140-147, bottom voice) followed, two measures later, by a second entry in E^b mixolydian (mm. 142-149, bottom voice) in canon with the first. An episode separates the next set of stretto subjects. It consists of answer-codetta melodies one (mm. 150-155, bottom voice) and two (mm. 151-156, top voice) beginning with its second measure.

A canon consisting of four subject statements (mm. 158-168) begins with a subject in b^b aeolian (mm. 158-165, voice three) followed by e^b dorian (mm. 159-166, voice four), A^b mixolydian (mm. 160-167, voice two) and D^b major (mm. 161-168, voice one). A three-voice canon follows (mm. 169-177) over an f pedal. It consists of statements of the subject in D^b mixolydian (voice two) a^b dorian (voice three) and b^b phrygian (voice one) each at the distance of one beat.

The coda (mm. 178-210) begins with the first half of answer-codetta melody one (mm. 178-180, voice three) and the first part of melody three (mm. 178-182, voice one) and melody four (mm. 178-182, voice two). Measures 182 to 191 are new material. A subject in G^b lydian, the neapolitan region and the only lydian mode used in the fugue, appears (mm. 192-200, voice three) with the rhythmic values of its fourth and fifth notes exchanged and its tenth pitch doubled in duration. Concurrently, motions from f minor to F major occur in the other three voices (mm. 193-195, 197-198, 201-202). Bars 202 and 203 are taken from measures three and four of answer-codetta melody two, the last note of which becomes the first note of the final subject appearance. The subject (mm. 203-210, voice three) is in f aeolian but ends on a F major triad. It lacks its first three pitches. Its fourth note is shortened to an eighth note, and its fifth pitch is lengthened by a half note.

Quadruple invertible counterpoint is not demonstrated in the fugue. All expositions after the first and other than the four voice canon (mm. 158-165) are incomplete. The countersubjects undergo considerable alteration to their beginnings and endings.

The key scheme of the fugue is as follows.

f c A^b E^b D^b G^b e b f E^b b^b e^b A^b D^b d^b a^b b^b G^b f
stretti

Fugue XIX in E^b Major
(Three Voices) 5/4 Meter

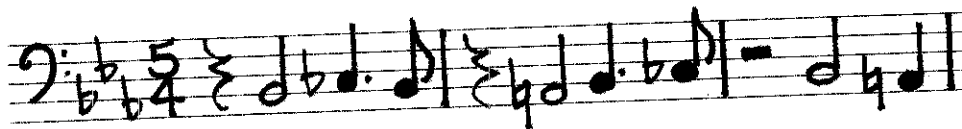
The subject of this fugue is composed of fourteen pitches presented in fifteen beats beginning on tonic and ending on supertonic with a range of a perfect fifth.



EXAMPLE 81--Fugue XIX, subject

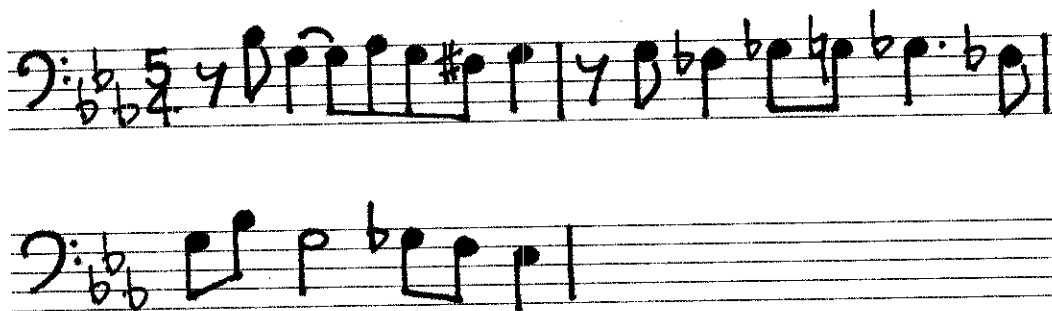
Chromaticism in the subject consists of ^b2 and ^b3 as well as the diatonic supertonic and mediant pitches. A real answer is given to the subject.

Two countersubjects occur with the subject of this fugue. The first (CS1) is eight notes, fourteen beats, in length. Beginning on the dominant and ending on the



EXAMPLE 82--Fugue XIX, CS1

leading tone, its range is a minor third. Countersubject two (CS2) contains eighteen pitches, fourteen and one-half beats, which begin on dominant and tonic with a range of



EXAMPLE 83--Fugue XIX, CS2

a perfect fifth. CS1 contains the chromatic pitches #4 and b_6 , while CS2 contains #2, b_2 , and b_3 as well as diatonic mediant.

The exposition (mm. 1-13) is comprised of an entry of the subject in E^b major (mm. 1-3, voice three), an answer entry in B^b major (mm. 3-5, voice two) with CS1 (voice three), and an entry of the subject (mm. 11-13, voice one) with CS1 (voice three) and CS2 (voice two). The

answer-codetta (mm. 7-10) presents two melodies which return in later episodic sections. Melody one (voice two) is bi-motivic, consisting of one motive (mm. 7, 8) which is derived from an inversion of measure one of the subject and another motive (mm. 9, 10) which is new material. Melody two (voice three) is organized in the same manner as melody one employing one motive (mm. 7, 8) which is an inversion of pitches two through six from CS2, and a second motive (mm. 9, 10) based on a descending minor second and minor third. The answer-codetta melodies carry on the chromaticism initially found in the subject and countersubjects. Due to the extreme chromaticism encountered throughout this fugue, the labeling of a particular mode with a subject statement is not possible. Therefore, subject statements will be denoted as major or minor according to the first presentation of the mediant scale degree.

The episode (mm. 14-18) employs answer-codetta melodies one (mm. 14-17, voice three) and two (mm. 14-17, voice two). Voice one is a new melody (melody three) which will return in later episodes. Measure 18 is new material.

Two subjects follow. The first is in c minor (mm. 19-21, voice three) which is found with CS1 (voice two) and CS2 (voice one). The second statement, an answer, appears in g minor (mm. 22-24, voice two) along with CS2 (voice three). CS2 has its eighth pitch altered to ascend a minor second

from the seventh pitch, which is tied to the sixth pitch in this case, instead of descending an augmented second. The first pitch is omitted and a new note is inserted between notes fifteen and sixteen. The following episode (mm. 25-28) uses melody one (voice two) and melody two (voice three) from the answer-codetta, along with melody three (voice one) from the previous episode (mm. 14-18).

A subject in f minor (mm. 29-31, top voice) appears with CS2 (bottom voice) which again adds a note between pitches fifteen and sixteen. A b^b minor entry (mm. 32-34, voice two) is accompanied by CS1 (voice one) and CS2 (voice three). The fifteenth note of CS2 is tied to the sixteenth which occurs a half step higher than usual. The episode (mm. 35-39) contains answer-codetta melodies one (mm. 35-38, voice two) and two (voice one) and episode melody three (voice three). Measure 39 is new material.

A single subject statement (mm. 40-42, voice one) in E major precedes an ensuing stretto section. It is accompanied by CS1 (voice three) and CS2 (voice one). Particularly noteworthy for its statement as to the extreme chromatic texture of the fugue is the appearance of the pitch f-double sharp (m. 41) just nine measures distant from an e-double flat (m. 32). The episode (mm. 43-45) is not derived from either the answer-codetta melodies or the episode melody three.

A two-voice stretto begins with a subject statement in E^b major (mm. 46-48, voice three) followed, one beat later,

by a false entry in g minor (voice one) of the first three subject notes. Two beats after the initial E^b statement an entry in B^b major (mm. 46-49, voice two) appears and proceeds in canon with the first entry.

The episode (mm. 49-56) begins (mm. 50-53) with answer-codetta melodies one (voice one) and two (voice three) and episode melody three (voice two). The last three measures (mm. 54-56) of the episode are new material.

Another two-voice stretto (mm. 57-60) opens with a subject in A^b major (voice one) which is paired, two beats later, with a subject in D major (voice two). Both subjects are complete, but the D major entry has rhythmic alterations made to its final two notes.

A subject in f minor (mm. 61-63, voice three) appears with two new counterpoints. A subject in E^b major begins on beat two (mm. 64-66, voice one) and shortens its third note by one beat after which it finishes normally. A false entry (m. 68, voice one) leads to the final subject statement in E^b major. It begins in voice one, omits notes four and five and finishes, complete only through note twelve, in voice three.

Triple invertible counterpoint is demonstrated in this fugue. The subject appears as the bottom voice in a three-part texture with CS1 and CS2 in measure 19; CS1 is the lowest voice in measure 40 and CS2 in bar 32.

The key scheme of the fugue is as follows.

E^b B^b c g f b^b E $\underbrace{E^b B^b A^b D}_{\text{stretti}}$ f E^b

Fugue XX in c Minor (Four Voices)
4/4 and 3/2 Meters

The subject of Fugue XX consists of twelve pitches whose first and last pitches are tonic. The subject spans sixteen beats and has a range of a perfect fifth. The answer is



EXAMPLE 84--FUGUE XX, subject

real although its penultimate pitch is flat supertonic giving a phrygian tendency to the end of the answer.

Three regularly-recurring countersubjects appear in the fugue. The first (CS1) is nine pitches long and spans sixteen beats. Its first pitch is mediant and last pitch



EXAMPLE 85--FUGUE XX, CS1

is dominant and it has a range of a perfect fifth. Counter-subject two (CS2) contains eight pitches, sixteen beats, which begin on submediant and end on mediant with a range



EXAMPLE 86--Fugue XX, CS2

of an octave. Countersubject three (CS3) is eight notes, sixteen beats in length. Beginning and ending on tonic, its range is an octave.



EXAMPLE 87--Fugue XX, CS3

The exposition (mm. 1-20) consists of entries of the subject in c aeolian (mm. 1-4, voice three), the answer in g aeolian (mm. 5-8, voice two) with CS1 (voice one), the subject in c aeolian (mm. 13-16, voice one) with CS1 (voice two) and CS2 (voice three), and the answer in g aeolian (mm. 17-20, voice four) with CS1 (voice one) and CS2 (voice three) and CS3 (voice two). The answer-codetta (mm. 9-12) is comprised of alternating measures of 4/4 and 3/2 meters

and contain two melodies used in later episodes. Melody one (top voice) consists of a two-measure melodic pattern which is then sequenced a second higher. Melody two (bottom voice) is organized in the same sequential manner as melody one. The episode (mm. 21-25) employs the answer-codetta melody one (voice four) and melody two (voice one) lacking its third measure.

A subject (mm. 26-29, bottom voice) in E^b major appears with CS1 (middle voice) and CS2 (top voice). This is followed immediately by an answer in B^b major (mm. 30-33, voice three) which is accompanied by CS1 (voice four), CS2 (voice one) and CS3 (voice two). The B^b subject switches abruptly to b^b aeolian in measure 32. The episode (mm. 34-39) includes answer-codetta melody one (mm. 34-37, voice one).

A subject statement (mm. 40-43, top voice) is found in A^b mixolydian, answering key to the following D^b subject, with CS1 (middle voice) and CS2 (bottom voice). Following is a subject (mm. 44-47, voice four) in D^b major with CS1 (voice two), CS2 (voice one) and CS3 (voice three). The episode (mm. 48-55) uses answer-codetta melody one (mm. 48-51, top voice) but its sequential relationship is changed from the second two bars being a second higher to a third higher than the first two bars. Another motive found first in the preceding episode (mm. 35 and 37, voice two) reappears (mm. 49 and 51, voice three and voice four in inversion).

Another pair of subjects occurs (mm. 56-63) beginning with one in a aeolian (mm. 56-59, middle voice) in conjunction with CS1 (top voice) and CS2 (bottom voice). The second of the pair, an answer, is in e aeolian (mm. 60-63, voice four) and occurs with CS1 (voice two), CS2 (voice one), and CS3 (voice three). A lengthy episode (mm. 64-81) follows. It employs answer-codetta melody one (mm. 64-67, voice four; mm. 68-71, voice one). The first occurrence alters the sequential treatment of the third and fourth measures of the melody so that they begin a fourth below the first two bars. Measures 66 and 67 are a paraphrasing of the usual two-measure, answer-codetta motive which comprises melody one. The next presentation of melody one (mm. 68-71) uses a sequence for the third and fourth bars which is a second higher than the first two bars. Measures 72 and 73 contain half of answer-codetta melody one (voice four). Measures 74 to 80 are new material. Bar 81 contains the last measure of the subject.

A subject in c aeolian (mm. 82-85, voice one) begins simultaneously with a subject in f dorian (mm. 82-89, voice two) in augmentation. The bottom voice (mm. 82-85) resembles the answer-codetta melody one. A false entry (m. 86, voice three) of the first three subject pitches is followed (mm. 87-89, voice four) by the first three measures of the subject in c aeolian, which end concurrently with the subject

in augmentation. The episode (mm. 90-93) employs answer-codetta melody one (voice one). This occurrence of melody one presents the second two measures beginning on the same pitch as the first two bars. Measure 92 is altered from its normal appearance in melody one.

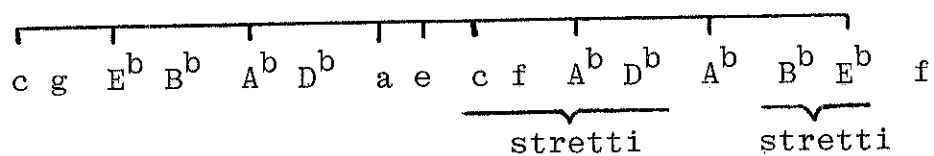
A subject in A^b major (mm. 94-97, voice three) is followed in canon, one bar later, by a subject in D^b major (mm. 95-98, voice one). A subject statement in A^b major (mm. 99-102, voice two) is presented with a repeated first measure (m. 100) in place of the usual second measure. An entry in b^b aeolian (mm. 103-106, bottom voice) is followed, at the distance of one measure, in canon by a subject in E^b mixolydian (mm. 104-107, middle voice).

Answer-codetta melody one appears (mm. 108-111, top voice) with its sequential treatment occurring at the fourth below, and lacking its final two notes.

A subject in f phrygian (mm. 113-116, top voice) appears with two false entries of the first four notes of the subject (mm. 113-114, bottom voice; mm. 114-115, middle voice). Answer-codetta melody one is found (mm. 117-120, top voice) leading to the final three measures of the fugue. A motive consisting of the first four subject pitches is the primary component of these final three bars. It appears four times (mm. 121-122, 122, and 123-124, top voice; mm. 123-124, bottom voice).

Quadruple invertible counterpoint is not demonstrated in this fugue. All expositions, after the first, are incomplete.

The key scheme of the subject entries of the fugue is as follows. At least one member of each pair of keys is in



a third relationship to the original key of c except one, the key of f. This pitch is found as the highest note of the subject. This is also the only key in which the subject occurs in augmentation and it appears with a normal subject in c, a fifth above. The range of the subject is a fifth.

Fugue XXI in B^b Major
(Three Voices) 3/4 Meter

Fugue twenty-one is based on a twenty-three note subject that begins and ends on tonic, has a range of a minor seventh, and spans twenty-four beats. The answer



EXAMPLE 88--Fugue XXI, subject

is real, but is unusual for two reasons. First, it is in aeolian mode, whereas the subject is in B^b major. Second, the answer appears in g aeolian which makes it a submediant answer, the first non-dominant answer seen thus far. The answer's appearance is foreshadowed in the third bar of the subject with a tonal motion toward g.

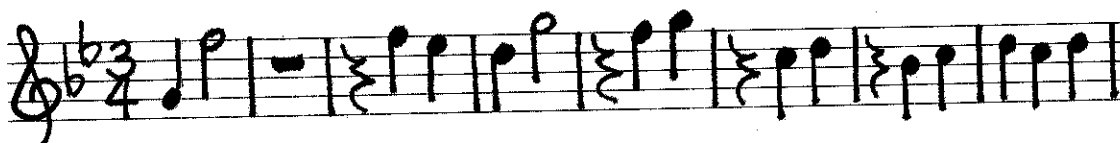
Tonic, dominant, and submediant scale degrees can be observed as prominent members of the subject. The only pitches which occur below tonic in the subject are dominant (mm. 1, 6, 8) and submediant (m. 3).

Two countersubjects appear in the fugue. Countersubject one (CS1) contains twenty-three pitches presented over twenty-one beats. CS1 begins on submediant and ends on



EXAMPLE 89--Fugue XXI, CS1

dominant. Its range is a major sixth. Countersubject two (CS2) begins on submediant and ends on mediant. It contains fifteen notes which span twenty-four beats and has a range of an octave. CS2 begins with the subject and has a second bar of complete rest. CS1 begins with the second bar of



EXAMPLE 90--Fugue XXI, CS2

the subject and its fourth bar is rest. Both countersubjects continue to the end of the subject.

The combination of the subject with CS1 permeates the piece with a quarter-eighth-eighth-quarter-note motive that appears in one or the other melody in every bar of the eight in the subject's length except the second.

The exposition (mm. 1-28) consists of the subject in B^b major (mm. 1-8, voice one), the answer in g aeolian (mm. 9-16, voice two) with CS1 (voice one), and the subject in B^b major (mm. 21-28, voice three) with CS1 (voice two) and CS2 (voice one). The answer-codetta (mm. 17-20) presents two melodies which recur in later episodes. Melody one (top voice) makes use of the previously mentioned quarter-eighth-eighth-quarter motive from the subject and CS1 in each of its four measures. Melody two (bottom voice) begins with the half-note quarter-note rhythm found in bars three and five through seven of the subject. The episode (mm. 29-32) uses answer-codetta melodies one (voice two)

and two (voice three) and introduces a new melody, melody three (voice one), which also reappears later.

The next exposition section (mm. 33-48) contains two subject statements. The first (mm. 33-40, top voice) is in d aeolian with CS1 (bottom voice) accompanying. The second statement of the subject (mm. 41-48, voice one), in F major, is found with both CS1 (voice two) and CS2 (voice three). The episode (mm. 49-57) begins (mm. 49-52) with melody one (voice two) and melody two (voice one), both from the answer-codetta, and melody three (voice three) from the previous episode. Measures 53 to 57 are new material.

Following next (mm. 58-73) are two statements of the subject, the first in a aeolian (mm. 59-65, voice one) accompanied by CS1 (voice three) and CS2 lacking its first measure (voice two). A subject in C major (mm. 66-73, bottom voice) appears with CS1 (top voice). An episode (mm. 74-83) begins with melody one (mm. 74-77, bottom voice) and melody two (mm. 74-77, top voice). Measures 78 through 84 are based on the material from measures 53 to 57 of the preceding episode.

Two more entries of the subject (mm. 84-99) begin with a subject in G major (mm. 84-91, voice one) presented with CS1 (voice two) and CS2 (voice three). Entry two is in e aeolian (mm. 92-99, voice two) and occurs with CS1 (voice

three) and CS2 (voice one). The episode (mm. 100-108) contains answer-codetta melodies one (mm. 100-103, voice one) and two (mm. 100-103, voice two) and melody three (mm. 100-103, voice three). Measures 104 to 108 are again based on the earlier episode material found in bars 53 to 57.

Another set of subject entries (mm. 109-124) opens with a statement in D major (mm. 109-116, top voice) that is accompanied by CS1 (bottom voice). The second subject statement is in b aeolian (mm. 117-124, voice three) and is seen with CS1 (voice one) and CS2 (voice two). The episode (mm. 125-135) is new material except for the appearance of the first measure of answer-codetta melody one (mm. 126, 128, 129, 132, 134, voice three), and the last two beats of that measure which consist of a descending and then ascending perfect fourth (mm. 135-136).

A subject in B^b major (mm. 136-143, voice two) is followed, in canon, at the distance of one measure, by a subject in c aeolian (mm. 137-144, voice one). The first and second measures of CS1 also appear (mm. 141-142, voice three). Bars 145 to 148 employ the first three measures of answer-codetta melody one (bottom voice) and all of melody two (top voice).

An entry of the subject in G major (mm. 148-155, voice three) is followed, in canon, at the distance of one bar, by an entry in a dorian (mm. 149-156, voice one). A

retrograde-inversion of CS1 bar 1 appears (m. 153, voice two) as does the first bar of melody one (m. 154). The episode (mm. 157-164) begins (mm. 157-160) with melodies one (top voice) and two (bottom voice). Measures 161 through 165 are again based on earlier episode material from measures 53 to 57. In fact, measures 161 to 164 are the same as bars 53 to 56 with voices one and three exchanging places in bar 163.

An incomplete three-voice stretto (mm. 166-173) begins with a subject in E^b major (mm. 166-173, voice one) followed one bar later by a subject in f aeolian (mm. 167-173, voice two) and one measure later by a subject in E^b major (mm. 168-171, voice three). The f aeolian subject lacks its final bar, but does finish with the initial E^b entry. Thus this is a complete two-voice stretto but an incomplete three-voice stretto.

Episodic material (mm. 174-185) uses motives derived from earlier episodic material but does not quote any of the previous material exactly. Motives are derived from answer-codetta melody one (mm. 174-175, bottom voice; 176-177, bottom voice) and episode melody three (mm. 174-175, top voices). The fourth measure of the subject also appears as a motive (mm. 176-177, voice one). Measures 178 and 179 are based on the material in an earlier episode (mm. 53-57). Two false entries of the first two measures of the subject

appear (mm. 182-183, 184-185, bottom voice) with its first measure replaced by the **very** similar first bar of answer-codetta melody one.

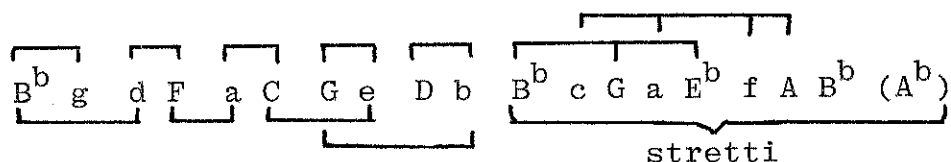
A subject in A major (mm. 186-193, top voice) heralds the expansion to a five-note texture owing to octave doublings of the third through last measures of this subject and the following subject. Trailing the A major entry by one measure is a subject in B^b major (mm. 187-194, bottom voice) which is doubled at the octave until its final two bars (m. 193, middle voice; m. 194, top voice) which change to the enharmonic A[#] major key. The fifth and sixth notes from the end of the B^b(A[#]) entry are an augmented second higher than usual. A false entry of the subject's first measure occurs (m. 191) on c[#]. Over the final two bars of the A major entry and the final three bars of the B^b(A[#]) entry, an incomplete subject enters in A^b. It is only complete through two bars, but last, through the end of the initial A major entry in this group of stretto entries, thus making the stretto complete.

From this point in the fugue, the coda, to the end (mm. 195-218) there is no appearance of the subject. The rest of the fugue consists of motives taken mostly from earlier episodic material. The first measure of answer-codetta melody one, which is the quarter-eighth-eighth-quarter motive earlier mentioned as permeating the subject

and CS1, plays the major organizational role. It appears in measures 195, 197, 199-201, 206-209, 211, and 213. In many cases (mm. 195, 197, 199, 209, 211, and 213) this motive is associated with the last measure of both CS1 and CS2. In bars 197 and 199 the CS1 ending is altered; its first note a third higher than normal. The association of this motive with CS1 and CS2 occurred earlier (mm. 124, 129, 134) and here, in two instances, (mm. 196, 198) it is followed by the same material as in bar 129. Other material comprising these last two dozen measures is taken from measure one of answer-codetta melody two (mm. 206-208), earlier episode measures 53-57 (mm. 202-205) and specifically measure 53 of that episode (mm. 210, 212, 214). An all-quarter note retrograde of the first measure of the subject also appears (mm. 202-203, 204-205).

Triple counterpoint among the subject, CS1 and CS2 is shown by the entries beginning in measures 21 (subject in bottom voice), 41 (CS2 in bottom voice), and 58 (CS1 in bottom voice). The first exposition (mm. 1-28) and one other exposition section (mm. 136-156) are complete.

The key sequence of subject statements in this fugue reflects the minor third relationship between the initial statement of the subject and its answer. In the non-stretto



sections (first ten keys) the major key of each key pair is a third from the minor key in the next key pair, as well as being in a third relationship with the minor key within its pair. In the stretti each member of each pair of stretto entries is a third from one member of the next pair of entries, starting again from the initial key of B^b. In the last stretto where the incomplete subject appears in A^b, the preceding stretto key of f is in a third relationship with both the A^b and A entries.

Fugue XXII in g Minor
(Four Voices) 3/4 Meter

The subject of fugue twenty-two again shows the prominence of tonic, dominant, and submediant scale degrees. Tonic appears as the first and fourth pitch, then immediately



EXAMPLE 91--Fugue XXII, subject

followed by submediant and then dominant. The subject contains a total of thirteen notes spread over fifteen beats. Its first and last pitches are tonic and its range is a minor sixth. A real answer is given to the subject.

No regularly-recurring countersubject appears in this fugue. The counterpoint found with the first statement of

the answer (mm. 6-10) does set the basic eighth-note context in which statements of the subject occur, and that counterpoint does recur briefly in a later setting, but not consistently.

The exposition (mm. 1-24) is composed of the subject in g aeolian (mm. 1-5, voice two), the answer in d aeolian (mm. 6-10, voice one), the subject in g aeolian (mm. 15-19, voice four), and the answer in d aeolian (mm. 20-24, voice three). This last statement of the answer constitutes an internal entry within the initial exposition.

The answer-codetta (mm. 11-14) exhibits material for use in future episodic sections. Melody one (top voice) and melody two (bottom voice) are both new material. The episode (mm. 25-30) contains melody one (mm. 25-28, bottom voice) and melody two (top voice) and a new counterpoint, melody three (middle voice), which reappears in later episodes.

A false stretto (mm. 30-34) is created by a subject in B^b major (bottom voice) followed by a false entry of the first six notes of the subject in B^b major (mm. 31-32, middle voice). The same situation recurs immediately beginning with an answer in F major (mm. 35-39, voice three) and followed by a false entry in F major (mm. 36-37, voice two) of the first seven subject notes. The episode (mm. 40-44) employs the first three measures of melodies one (bottom voice), two (middle voice) and three (top voice).

An entry in E^b major, the answer key to the following A^b entry, (mm. 44-48, middle voice to top voice in m. 45) is followed a measure later by a false entry (mm. 45-46, bottom voice) of the first seven subject notes in E^b; again a false stretto. A pattern of the first four subject pitches in A^b (mm. 47, middle voice) on beats two and three are a precursor of the next false stretto level. A subject enters (mm. 49-53, voice one) in the key of A^b major and is, like the preceding instance, followed a measure later by the first seven pitches of the subject in false stretto.

The episode (mm. 54-62) begins with melody one (voice one) with its second measure a third lower than normal, and the first two bars of melody three (mm. 54-55, voice four). A false entry of notes one to five of the subject is included (m. 60, voice one). The rest of the material contained in this section is new.

The subject returns (mm. 63-67, top voice) in b aeolian and accompanied by the first four bars of the counterpoint, which originally appeared along with the initial statement of the answer (mm. 6-10). Following is a subject in E major (mm. 68-72, bottom voice). The episode (mm. 73-78) is new material and contains two false entries of the first seven notes of the subject (mm. 76-77, voice four; m. 77, voice two).

The first section to contain a true stretto (mm. 78-86) begins with a presentation of the initial eleven notes of

the subject in g aeolian (mm. 78-81, voice three) followed, one measure later, by the first seven notes of the subject in g aeolian (mm. 79-80, voice one). One measure later, the subject appears, again in in g aeolian (mm. 80-85, voice four), but this time it is complete. The first nine notes of the subject follow (mm. 81-82, voice one) with the fifth through ninth notes given new durations. Another complete subject statement occurs (mm. 81-87, voice three) in g aeolian and beginning on beat three instead of beat one. One final false entry of notes one to four of the subject intervenes (m. 83, voice two) before the stretto closes.

A false entry of the first seven subject notes (m. 87, voice two) has its fifth through seventh pitches lowered a second and is stated in eighth notes excepting the last dotted-quarter note. A subject in C major (mm. 88-92, voice four) appears in its entirety. One measure later (mm. 89-90, voice two) notes one to seven of the subject appear in C major. Two beats later (mm. 89-92, voice one) the first ten notes of the subject in C major form a complete two-voice stretto with the first C major entry. Two more false entries of the first five notes of the subject (mm. 90-91, voice three; mm. 91-92, voice three) appear on a and e, respectively.

The episode (mm. 94-103) begins with answer-codetta melodies one (mm. 94-97, voice three) lacking its last two

notes, and two (mm. 94-97, voice one) without its fifth and last four pitches. Melody three also appears (mm. 94-96, voice two) complete through three measures. The fourth through seventh subject notes occur (mm. 98-99, voice three). Measures 101 and 102 bear resemblance in their suspension patterns to earlier measures 74 and 75. A false entry (m. 103, voice three) introduces the next section of subject statements with the first three subject pitches on a^b.

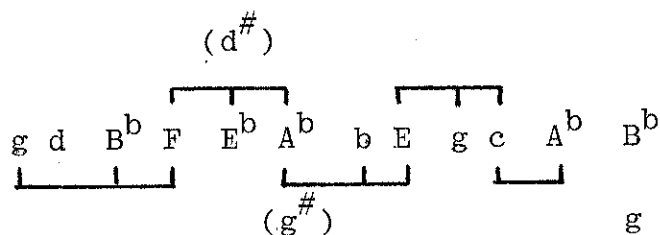
The subject returns (mm. 104-108, voice four) in a^b aeolian with a false entry of the first six notes of a subject in a^b aeolian following one measure later (mm. 105-106, voice three). The short episode (mm. 108-113) is new material but does refer back to the suspension figures from bars 74 and 75 (mm. 108, 111).

A subject statement in g aeolian (mm. 114-118, voice one) is punctuated by a false entry of the first seven subject pitches (mm. 114-116, voice three) of which pitches one and five through seven have new durations given them. This all occurs over a dominant pedal and with an internal tonic pedal (voice two).

The final subject statements begin with a subject in g aeolian (mm. 120-125, voice three) which begins on beat three and has its fifth note lengthened by a quarter-note value. Its eleventh pitch occurs a second higher than

usual. This is followed, one beat later, by a subject in B^b major (mm. 121-125, voice one) that lacks its fourth note, although the pitch g which occurs in voice two at the place where note four is lacking fills the aural gap. Note eleven, like the simultaneous g aeolian entry which catches up with the B^b subject in measure 122 due to its lengthened fifth pitch, is raised a second. A false entry of the first four notes of the subject, on g , begins with the B^b entry (m. 121, voice two). Measures 126 through 128 provide a cadence on a g minor triad.

The key scheme of the fugue's subject statements is as follows. The final presentation of the subject in B^b and g

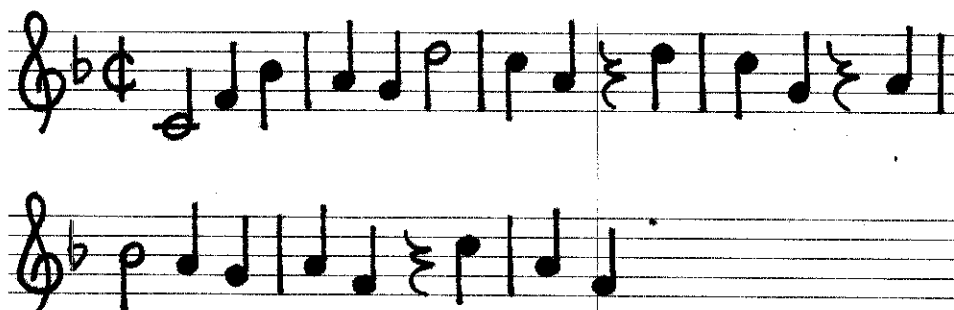


simultaneously appears to be the key to the tonal schema of subject statements in its third relationship. The second member of each key pair is in a third relationship, some enharmonically, to both of the keys in the following key pair; or key in the case of the second A^b area.

Fugue XXIII in F Major
(Three Voices) 2/2 Meter

The subject of fugue twenty-three is twenty notes long. It begins on dominant and ends on tonic. Covering thirteen

beats, its range is a major ninth. Submediant and dominant scale degrees appear as prominent notes of the subject, constituting its high point (mm. 2-4). Due to the opening dominant to tonic motion of the subject, a tonal answer is used. Only the first note of the subject is altered in the tonal answer.



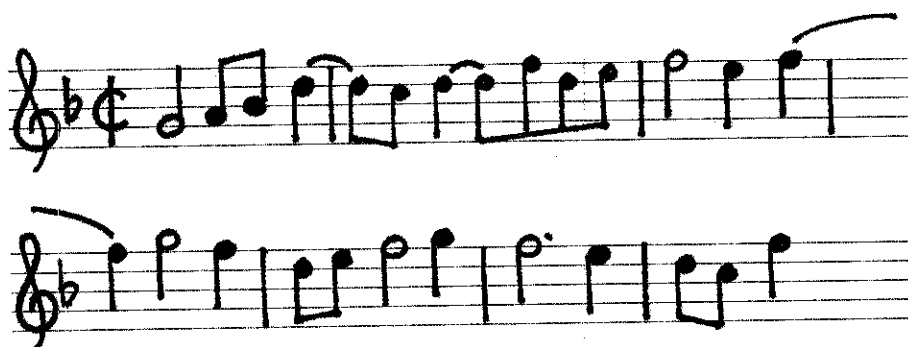
EXAMPLE 92--Fugue XXIII, subject

Two countersubjects appear during the course of the fugue. Countersubject one (CS1) contains forty-five pitches,



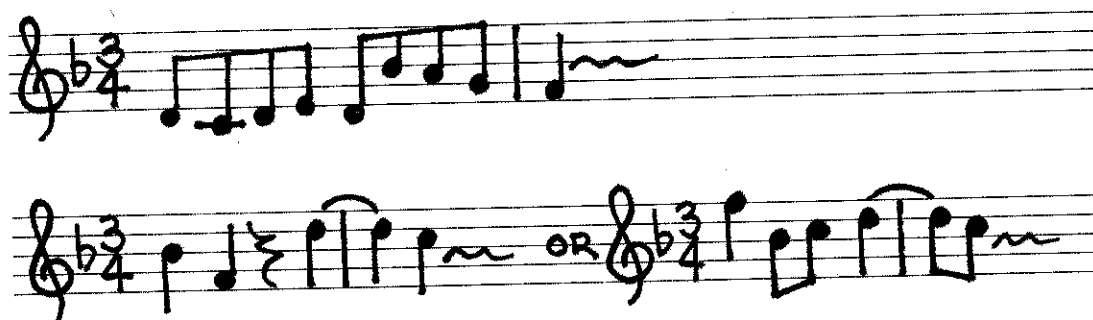
EXAMPLE 93--Fugue XXIII, CS1

which span thirteen beats, begin on leading tone, end on mediant and have a range of an octave. CS1 is bimotivic, consisting of two rhythmic motives. One motive consists of four eighth notes and the second is a quarter note followed by two eighth notes, a rhythmic diminution of the first bar of the subject. Countersubject two (CS2) begins on supertonic and ends on tonic. It is composed of twenty-three notes, thirteen beats, and its range is an



EXAMPLE 94--Fugue XXIII, CS2

octave. To accommodate the tonal answer, CS1 has its initial note lowered a second, its second note lowered a third and a lower neighbor tone inserted between them as an eighth note taking the second half of the first note's original quarter-note value. CS2 replaces its first three notes with either subdominant and tonic quarter-notes followed by a quarter-rest, or with tonic, subdominant and dominant pitches which retain their original rhythmic association.



EXAMPLE 95--Fugue XXIII, CS1 and CS2
tonal answer alterations

The exposition (mm. 1-25) begins with the subject in F major (mm. 1-7, voice one) followed by a two-note link (m. 7). The tonal answer appears (mm. 8-14, voice two) with CS1 (voice one). The subject reappears (mm. 19-25, voice three) with CS1 (voice two) and CS2 (voice one).

The answer-codetta (mm. 14-18) presents two melodies found in later episodes. Melody one (top voice) consists of the same two rhythmic motives which make up CS1. Melody two (bottom voice) is predominately quarter-note values. The episode (mm. 25-31) contains material derived from melodies one (middle voice) and two (bottom voice) as well as a new melody (melody three, top voice).

A subject in d aeolian (mm. 32-38, voice two) is found with CS1 (voice three) and is followed by an answer in a aeolian (mm. 39-45, voice one) with CS1 (voice three) and CS2 (voice two). Both CS1 and CS2 are given the formats

seen when they first accompanied a tonal answer. The episode (mm. 45-51) contains material based upon answer-codetta melodies one (bottom voice) and two (top voice) and episode melody three (middle voice).

Two subjects follow. The first (mm. 52-58, top voice) is in the key of D^b major and is accompanied by CS1 (bottom voice). The second is a statement of the answer in A^b major (mm. 59-65, voice three) which is presented with CS1 (voice one) and CS2 (voice two). The counter-subjects have their beginnings altered to correspond with the alterations in the tonal answer. The episode (mm. 65-72) contains the first three measures of melody one (mm. 65-68, voice one) and the first three and one-half measures of melody two (mm. 65-68, voice three). The rest of the episode is new material and uses the two earlier mentioned motives from CS1 and motives derived from melody one.

A statement of the answer (mm. 73-79, voice three) appears in e aeolian with CS1 (voice one) and CS2 (voice two). CS1 is altered in its normal fashion to coincide with the tonal answer, CS2 acquires a new first beat which omits one of the initial ascending stepwise pitches and expands the fourth pitch, now the third, to a half-note duration. The codetta (mm. 79-82) is new material with the bottom voice patterned after the final three notes of the subject and the other voices based on the quarter-eighth-eighth-note motive observed in CS1 and melody one.

The subject (mm. 83-89, voice two) follows in the key of A major with CS1 (voice three) and CS2 (voice one) which lacks its first beat.

Episodic material (mm. 89-102) employs the beginning of melody three (mm. 89-91, voice one), the fourth through thirteenth notes of melody two (mm. 92-94, voice two) and the entire melody one (mm. 90-95, voice three). The sixth through eleventh notes of melody two and eighteenth through twenty-fifth notes of melody one are reiterated (mm. 95-96, top and bottom voices, respectively). The rest of the episode is new material based on the quarter-eighth-eighth-note motive.

A two-voice canon of the subject occurs (mm. 102-108) beginning with a subject in F major (voice three) and continuing, one beat later, with a second subject also in F major (voice two). The counterpoint in voice one is new material and is constructed of the two rhythmic motives from CS1 and melody one outlined earlier. A second two-voice canon with two subjects in C major occurs (mm. 109-115), again at the distance of one beat, in voices one and two, respectively. Voice three is new, based on the two rhythmic motives from melody one and CS1. The episode (mm. 115-120) opens with the last three notes of the subject used as a motive (mm. 115-118, voice one; m. 116, voice two). The rest of the episode is new material.

A two-voice canon of the subject (mm. 121-127) begins with an entry in b^b minor (voice three), which is followed, a beat later, by a second entry in the same key (voice one). The pitch a -natural, necessary to create a leading tone to b^b , is present in measures 122 through 124. It reverts to an a^b in measures 125 and 126. The entries thus begin in b^b minor.

Measures 127 to 128 of the coda begin with the last three notes of the subject (mm. 127-128, voice three; m. 128, voice one). The entire final section is permeated by the quarter-eighth-eighth-note motive from CS1. Two occurrences of the first two measures of the subject in B^b major appear (mm. 133-134, 135-136, bottom voice).

Triple invertible counterpoint is not demonstrated between the subject, CS1 and CS2. The initial exposition and the exposition of two-voice canons in F and C (mm. 102-115) are both complete.

The keys in which the subject appears are as follows. The stretto entry levels (F, C, b^b) are also the first

F C d a D^b A^b e A $\underbrace{F C b^b}$
stretti

three notes of the subject. Each non-stretto entry pair, after the first two, contains a form of the pitch a , the fourth note of the subject.

Fugue XXIV in d Minor
(Four Voices) 3/4 Meter

Fugue twenty-four is the second double fugue found in the collection, the other being fugue four in e minor. This example of double fugue follows the same pattern of organization as did fugue four. A discrete fugal section is built on each subject, after which the two subjects are combined. The first subject in the fugue begins on the



EXAMPLE 96--Fugue XXIV, subject

dominant and ends on the dominant. It is fourteen pitches, seventeen beats, long. Its range is a perfect fifth. A tonal answer is given to the subject due to its initial dominant to tonic motion, which is answered by tonic to dominant. Only the first pitch is altered to form the tonal answer.

Two regularly-recurring countersubjects appear with subject one (S1) in the first part of the fugue. The first countersubject (CS1) contains twelve pitches which cover sixteen beats. It begins and ends on mediant and its



EXAMPLE 97--Fugue XXIV, CS1

range is a perfect fourth. The second countersubject (CS2) is nine notes, sixteen beats, in length. Its first note is



EXAMPLE 98--Fugue XXIV, CS2

tonic, the last note is subtonic, and its range is a perfect fifth. Both countersubjects begin on the second beat of the subject and end with the subject. The third counterpoint (mm. 23-28, voice four) appears only once, in the initial exposition.



EXAMPLE 99--Fugue XXIV, third counterpoint to S1

The exposition (mm. 1-28) contains entries of the subject in d aeolian (mm. 1-6, voice four), the tonal answer on the dominant in d aeolian (mm. 6-12, voice three) with CS1 (voice four), the subject in d aeolian (mm. 16-22, voice two) with CS1 (voice three) and CS2 (voice four), and the tonal answer on the dominant in d aeolian (mm. 23-28, voice one) with CS1 (voice two) and CS2 (voice three).

The answer-codetta (mm. 13-16) presents two melodies which reappear later. Melody one (top voice) and melody two

(bottom voice) are both new material. The episode (mm. 29-37) begins with answer-codetta melody one (mm. 29-32, voice one; mm. 31-34, voice three; mm. 33-36, voice one), melody two (mm. 29-32, voice two), and the half-note-quarter-note pattern from the first bar of melody two (mm. 31-32, voice four). The rest of the episode is new material.

A subject and tonal answer appear (mm. 37-49) at the same pitch levels as in the exposition. The subject is found in d aeolian (mm. 37-43, middle voice) with CS1 (bottom voice) and CS2 (top voice) with its first note occurring a third higher than usual. The answer appears (mm. 43-49, bottom voice) again on the dominant in d aeolian in conjunction with CS1 (top voice) and CS2 (middle voice).

The following episode (mm. 50-60) is based, in part, on elements from the subject. The fourth through eighth subject pitches appear (mm. 50-52, bottom voice) and pitches four through ten occur (mm. 53-55, top voice). The first five notes of answer-codetta melody two are presented (mm. 52-54, middle voice), as well as the third through eighth notes of melody two (mm. 55-57, bottom voice). A motive taken from the bottom voice of measures 33 to 35 closes the episode (mm. 57-59, bottom voice).

A statement of the subject in F mixolydian, relative to the key of d, appears (mm. 60-66, top voice) with CS1

(bottom voice). Following is the tonal answer in C mixolydian (mm. 66-71, bottom voice) presented with CS1 (top voice) and CS2 (middle voice). The previous presentations of the tonal answer have been stated without any alterations to the diatonic collection of the subject which they followed. Those were labeled "on" the dominant. This answer occurrence is not in the same diatonic collection as the preceding F mixolydian subject and is presented "in" its own diatonic collection. The succeeding episode (mm. 78-80) uses motives derived from melodies one and two from the answer-codetta. The dotted-half note followed by quarter notes is from melody one while the half-note-quarter-note pattern is found in melody two.

A subject entry in B^b mixolydian (mm. 80-86, first note in bottom voice then changing to middle voice) is found with CS1 (top voice) and CS2 (bottom voice). A second statement of the subject follows in E^b mixolydian (mm. 86-92, voice two) with CS1 (voice four) and CS2 (voice three) and CS3 (voice one).

The episodic material which follows (mm. 92-110) leads to the second subject of the double fugue. It contains some new material as well as three occurrences of the second through fifth notes of the subject with the fourth pitch of each appearing a second lower than normal (mm. 99-100, 101-102, 104-105, voice one). Answer-codetta melody one,

notes three through six, appears (mm. 91-93, voice one; mm. 94-97, voice one). Answer-codetta melody two appears (mm. 92-100, bottom voice) in inversion and with altered durations on notes one, two, and eight through ten. Its last note is omitted. CS1 also provides material for the construction of this section. Its first three notes appear in irregular augmentation (mm. 95-98, voice three). Pitches two through five of CS1 also occur (mm. 100-101, voice three) and notes two through four and seven through nine (mm. 102-103, 105-106, voice three). In addition, measures 106 through 110 are taken from bars four and five of CS1. An example of what Nicholas Slonimsky (3) calls displaced tonality, an instant modulation a semitone higher or lower, occurs in measures 111-112 where the solid feeling of an a minor tonality becomes an immediate A^b major tonality to herald the appearance of the second subject of the fugue.

Subject two (S2) contains thirty-six notes, all eighth notes, spanning six measures. It begins on mediant and ends



EXAMPLE 100--Fugue XXIV, subject two

on tonic and its range is a major ninth. The answer is tonal due to a motion near the end of the subject to the relative minor key. This motion is caused by the lack of a dominant to the initial tonic in the last ten notes and scalewise tonicizations of the submediant. The only alteration to the answer is to the first pitch, which occurs a second lower in the tonal answer than in S2, and, thus, begins on the submediant scale degree just tonicized.

A new countersubject (CS) accompanies S2. It is made up of fourteen notes which begin on dominant and end on mediant. CS spans nineteen beats and has a range of a



EXAMPLE 101--Fugue XXIV, subject two, CS to S2

minor seventh. Its initial interval is altered from a seventh to a sixth with the tonal answer by lowering the first note by the interval of a second.

This exposition consists of statements of S2 (mm. 111-116, voice one), the tonal answer (mm. 117-122, voice two) with CS (voice one), S2 (mm. 128-133, voice three) with CS (voice two) and the tonal answer (mm. 134-139, voice four) with CS (voice one). All statements of S2 are in A^b major and modulate to f aeolian at the end. The tonal answers begin in f aeolian and end in the key of E^b major, the dominant.

The answer-codetta (mm. 123-127) contains motives (motive one) derived from the subject's constant eighth note patterns (mm. 123 and 125, bottom voice; mm. 126 and 127, top voice). A second motive (motive two) consists of the interval of a second followed by the interval of a third



EXAMPLE 102--Fugue XXIV, answer-codetta two (mm. 123-127)

or fourth (mm. 124, 125, 126, top voice; mm. 126, 127, bottom voice).

The episode (mm. 140-147) contains the first two measures of S2 (mm. 140-141, top voice). Other material is based on the same concept of constant eighth-note motion as motive one in the answer-codetta of S2. CS provides other material taken from its first bar (mm. 141, 142, middle voice; mm. 144-147, bottom voice).

Following (mm. 148-153, voice three) is a statement of S2 in c phrygian, with an additional flatted fourth scale degree, with CS appearing (voice four) in its tonal answer format. Another S2 statement appears (mm. 154-159, voice one) in g phrygian with chromaticism added by the occurrence

of D^b . The other voices presented simultaneously, which include CS (voice two), are not in the same key as the subject, thus creating bitonality. The bottom voices are in D^b major, and CS again appears with its tonal answer beginning.

The episode (mm. 160-166) is again constructed primarily of subject material throughout. Material in the top voices (mm. 160-164) comes from bars 1, 2, 5, and 6 of CS.

The tonal answer is found in f locrian (mm. 167-172, voice four) with CS (voice one). A second tonal answer occurs in b^b locrian (mm. 173-178, top voice) with CS (bottom voice). The episode (mm. 179-190) is once again created from subject-like motives, similar to motive one in the answer-codetta. Also included are the first two bars of S2 (mm. 179-180, bottom voice; mm. 183-184, top voice).

S2 appears in D^b major (mm. 191-196, voice four) in a texture now expanded to five notes. CS also appears in octaves (voices one and three).

The development-like episode (mm. 197-217) which precedes the third section of the fugue is almost completely constructed of subject-like eighth-note patterns. Every measure contains motivic material of that nature. The half-note-quarter-note rhythm from the beginning of CS is also found (mm. 201-209).

The two subjects of the fugue are presented in combination beginning (mm. 217-223, bottom two voices) with S1 in F major followed one beat later (mm. 218-223, top voice) by S2 with f^\sharp appearing in the tonic position of the subject but functioning more like g minor as its diatonic pitch collection consists of $g a b^b c d e f^\sharp$. S2 lacks its last two notes. Both subjects are doubled at the octave, and with the periodic inclusion of an extra note between the octave doublings, the texture is expanded to six notes.

S1 is found (mm. 223-229, voice one), in its tonal answer format, in D mixolydian with S2 (mm. 224, 229, voice four). The pitch c appears in the place in which tonic usually appears but S2 functions in D mixolydian with S1. S2 has its first note stated a third higher than usual. A short episode (mm. 229-234) consisting of S2-like material intervenes.

S1 reappears (mm. 234-240, top voice) in b aeolian with S2 (mm. 235-240, middle voice) in D major which complements the relative b minor. S2 has its final pitch altered from the d which should appear to an a^b . The episode (mm. 241-254) is constructed of motives from S2 (bottom voice) and material from CS to S2 (top voice).

S1 is stated (mm. 254-260, bottom voice) in octaves in g phrygian along with S2-derived materials (top voice). The twelfth and thirteenth notes of S1 are rhythmically altered

to become two dotted-quarter notes (m. 259). False entries of both S1 (mm. 260-261, bottom voice) and S2 (top voice) precede the next stretto of the two subjects. During these last four bars (mm. 258-261) as many as eight parts can be observed.

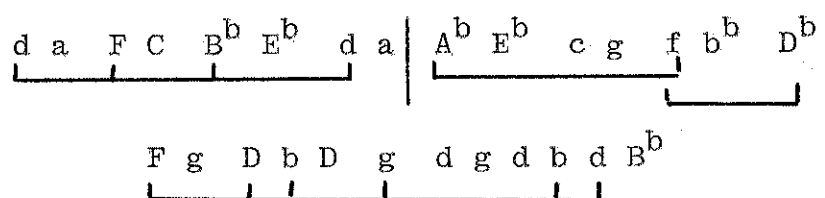
Another presentation of S1 (mm. 262-268, top voice doubled at the octave) in d aeolian and S2 (mm. 263-268, bottom voice) in g harmonic minor occurs and leads to the most complex combination of S1 and S2 in the fugue. S1 begins (mm. 268-274, voice one) in d aeolian followed, in the next measure by S2 derived material, and S1 (mm. 269-275, voice three doubled at the octave) in b aeolian. The first fifteen notes of S2 remain intact, new sixteenth through eighteenth pitches are added, and the last two measures of the pattern are repeated. Over the final two notes of the b aeolian S1, a statement of S1 in d aeolian (mm. 274-280, voice one) enters followed by a second S1 one measure later (mm. 275-281, voice three doubled at the octave) in B^b major with a flatted supertonic (m. 278). The same variant of S2 as above appears (mm. 275-280, voice two), this time with its full three measure pattern repeated.

The coda of the fugue (mm. 282-296) is based on motives drawn from S1 and S2 but no complete statement of either subject occurs. S2 material appears in every measure except the final three. From measure 286 through bar 293

the S2-like eighth-note pattern consists of alternating a and b^b pitches. An incomplete entry of S1 occurs (mm. 282-286, bottom voice), in octaves, complete except for its last three notes. Its second, third, eighth and ninth pitches are altered to be flat supertonic, neapolitan. The first three notes of S1 are repeated three times (mm. 286-289, bottom voice). The fourth repetition of the first three notes of S1 (mm. 289-290) lacks its second pitch. Four more statements of this three-note motive occur (mm. 290-294, bottom voice). The first and third statements are altered to replace tonic with the neapolitan scale degree, as S1 was earlier (mm. 283, 285). The first five notes of S1 provide the cadence. Each of the four voices state these last five notes in a different octave.

Triple invertible counterpoint between S1 and its CS1 and CS2 is demonstrated in the first fugue. S1 (tonal answer) appears in the lowest voice (mm. 43-49) as do CS1 (mm. 37-43) and CS2 (mm. 16-22). Invertible counterpoint between S2 and its CS is also shown (mm. 117-122, tonal answer in bottom voice; mm. 148-153, CS in bottom voice). All expositions after the first one in both the first and second fugue sections are incomplete.

The key sequence of the fugue is as follows.



Third relations are an organizing factor in this key sequence. The first members of each key pair in the first fugue section, after the first pair, are a third above (F) and third below (B^b) the opening and closing keys of d. The second fugue section continues the same pattern. The keys of c and f are a third from the initial key of A^b . The single key of D^b is a third below the preceding third-related key of f. In the third fugue section the third-relation sequence begins on F and follows through D, b, g, g, d; each single key or one member of each key pair being a member of this series of thirds. In addition three of the key pairs are themselves in the relationship of a third to one another; b-D, d-b, and d- B^b . The first and last keys of each of the first two fugue sections (d, a, A^b , D^b) are third-related to the first key of the stretto section (F). Every other entry in the last section, after the first two, is D(d).

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CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of this final chapter is to put the individual fugal analyses into a composite perspective. To this end, the information and conclusions presented in Chapter II concerning The Well-Tempered Clavier, Volume One will be used, where applicable, to provide a background against which the Shostakovich collection can be given a historical and stylistic perspective.

The textural spread of the fugue in Op. 87 is almost identical to WTC-I. Shostakovich writes one less five-voice

TABLE V
NUMBER OF VOICES IN
WTC-I AND OP. 87

Fugues	<u>WTC-I</u>	<u>Op. 87</u>
Two-voice	1	1
Three-voice	11	11
Four-voice	10	11
Five-voice	2	1

fugue than Bach does and makes his distribution of textures symmetrical by writing one more four-voice fugue than Bach.

Aside from this one change of a five-voice fugue to a four-voice fugue, the distribution is exactly the same.

The manner in which Shostakovich organizes the keys of his fugues is not the same as WTC-I. Bach orders his fugues by alternating parallel major and minor keys which ascend chromatically. Shostakovich organizes his fugues in the same manner in which Chopin ordered his Preludes, Op. 28. The fugues which are in major keys, the odd-numbered fugues, follow an ascending series of perfect fifths beginning with C major. Minor key fugues are the relative minor key to the preceding major key fugue.

The meters employed in Op. 87 show slightly more diversity than the meters in WTC-I. Shostakovich employs no greater number of meters than Bach; both employ seven, but three of the Op. 87 fugues are written in changing meters. These fugues are numbers fifteen ($3/4$, $2/2$, $5/4$, $4/4$, $2/4$), sixteen ($4/4$, $5/4$, $3/4$), and twenty ($4/4$, $3/2$, $3/4$). Shostakovich writes nine fugues which begin in $3/4$ meter (numbers 6, 8, 9, 10, 14, 15, 21, 22, 24), five in $2/4$ (numbers 2, 5, 11, 13, 18), three in $5/4$ (numbers 12, 17, 19), three in $2/2$ (numbers 1, 17, 23), three which begin in $4/4$ (numbers 4, 16, 20), and one in $6/8$ (number 3). Bach writes fifteen fugues in $4/4$, three in $3/4$, two in $2/2$, and one each in $3/8$, $6/8$, $9/8$, and $6/4$ meters. Two of the fugues which begin in $4/4$ (numbers 16, 20) and one fugue that begins in $3/4$ (number 15) are the changing meter fugues.

While Bach's favorite meter in WTC-I is 4/4, employed in fifteen fugues, Shostakovich uses 3/4 meter most frequently. Bach uses 3/8, 6/4, and 9/8 meters while Shostakovich does not. Shostakovich employs 2/4, 5/4, and 3/2 meters, which Bach did not use. Shostakovich's 3/2 meter is found in Fugue twenty as one of its meters, but does not begin a fugue. Therefore the fugues of Op. 87 begin in one fewer meter than do the fugues in WTC-I.

A summary of subject characteristics in Op. 87 follows in Table VI. Both WTC-I and Op. 87 contain twenty-six subjects. The Bach contains two extra subjects due to its triple fugue (Fugue four) while the Shostakovich gains its two extra subjects because of its two double fugues (Fugues four and twenty-four).

Twenty of Shostakovich's twenty-six subjects begin on tonic, four begin on dominant, two on mediant. Sixteen subjects end on tonic, seven end on dominant, two end on mediant, and one ends on supertonic. Shostakovich's preference for his subjects' opening and closing pitches is even stronger than Bach's. (see Table VII). Bach's preference for tonic or dominant beginning notes and ending notes of a member of tonic harmony is upheld by Shostakovich, but Bach's slight preference for mediant endings is not seen in Shostakovich, who strongly prefers tonic for both beginning and ending pitches.

TABLE VI
CHARACTERISTICS OF THE SUBJECTS IN OP. 87

Fugue	Initial Pitch	Final Pitch	Length		Range
			Pitches	Beats	
I	Tonic	Mediant	14	16	Perfect 8va
II	Tonic	Tonic	20	9	Diminished 12th
III	Tonic	Dominant	26	9	Major 10th
IV-S1	Tonic	Dominant	12	17	Minor 7th
IV-S2	Tonic	Dominant	25	17	Minor 7th
V	Tonic	Tonic	24	14	Major 6th
VI	Tonic	Dominant	26	19	Minor 10th
VII	Tonic	Tonic	23	8	Perfect 11th
VIII	Mediant	Tonic	39	27	Diminished 7th
IX	Tonic	Tonic	22	9	Major 6th
X	Dominant	Tonic	13	15	Perfect 8va
XI	Tonic	Tonic	23	14	Perfect 12th

TABLE VI--continued

Fugue	Initial Pitch	Final Pitch	Length		Range
			Pitches	Beats	
XII	Tonic	Mediant	22	18	Perfect 11th
XIII	Tonic	Tonic	7	10	Perfect 4th
XIV	Dominant	Tonic	22	37	Perfect 8va
XV	Tonic	Tonic	21	21	Minor 7th
XVI	Tonic	Dominant	56	18	Major 9th
XVII	Tonic	Tonic	37	20	Major 10th
XVIII	Tonic	Dominant	13	15	Perfect 8va
XIX	Tonic	Supertonic	14	15	Perfect 5th
XX	Tonic	Tonic	12	16	Perfect 5th
XXI	Tonic	Tonic	23	24	Minor 7th
XXII	Tonic	Tonic	13	15	Minor 6th

TABLE VI--continued

Fugue	Initial Pitch	Final Pitch	Length		Range
			Pitches	Beats	
XXIII	Dominant	Tonic	20	13	Major 9th
XXIV-S1	Dominant	Dominant	14	17	Perfect 5th
XXIV-S2	Mediant	Tonic	36	18	Major 9th

TABLE VII
 BEGINNING AND ENDING PITCHES OF
 THE SUBJECTS IN WTC-I AND OP. 87

Pitch	<u>WTC-I</u>		<u>Op. 87</u>	
	Begin	End	Begin	End
Tonic	17	8	20	16
Dominant	8	6	4	7
Mediant	0	11	2	2
Supertonic	1	0	0	1
Leading Tone	0	1	0	0

The physical dimensions of Shostakovich's subjects are noticeably larger than those in WTC-I as shown in Table VIII on the following page. Shostakovich's smallest and largest subjects in terms of notes and beats are larger than Bach's, as are Shostakovich's average subject length in notes and beats. The shortest Op. 87 subject is two notes longer than the shortest WTC, while the longest Op. 87 subject is eighteen notes, almost half again longer than the longest WTC subject. The average number of pitches in an Op. 87 subject (22) is six more, one third again, than the average number of notes in a WTC subject. The fewest number of beats in a Shostakovich subject (8) is twice as long as the shortest Bach subject. The greatest number of beats in an Op. 87 subject (37) is almost three times as many as the

TABLE VIII
 DIMENSIONS OF SUBJECTS IN WTC-I AND OP. 87

	<u>WTC-I</u>	<u>Op. 87</u>
Fewest Pitches	5	7
Most Pitches	38	56
Average Number of Pitches	16	22
Fewest Beats	4	8
Most Beats	13	37
Average Number of Beats	8	17
Smallest Range	Diminished 4th	Perfect 4th
Largest Range	Major 10th	Perfect 12th
Average Range	Major 7th	Perfect 8va

longest Bach subject (13). The average number of beats in a Shostakovich subject (17) is more than twice as many as the average number of beats in a Bach subject.

Bach's subjects are smaller in range than those of Shostakovich. Bach's smallest range is a minor second smaller, his largest range is a minor third smaller, and his average subject range is a minor second smaller than Shostakovich's comparable subject range statistics.

During the course of the discussion of WTC-I in Chapter II, the importance of tonic, dominant, and submediant scale degrees as prominent elements of eighteen WTC-I subjects was shown. The same three scale degrees play prominent roles in twelve of the subjects in Op. 87. Six occurrences of this pattern are found at or near the beginning of the subject (fugues 1, 4-S2, 5, 10, 14, 17); three appear in succession somewhere in the subject constituting high or low points in that part of the subject (fugues 4-S1, 22, 23); and three occur, not necessarily in succession, but at pivotal points in the melody (fugues 6, 11, 21). The parallel occurrence of this phenomenon in both Bach and Shostakovich can, at least partially, attest to a similar concept of tonal organization on the part of both composers.

Shostakovich employs fewer than half as many tonal answers as Bach. Only seven subjects in Op. 87 are given tonal answers compared with the fifteen tonal answers found in WTC-I. The same two reasons given for Bach's use of tonal

answer in WTC-I are again valid for Shostakovich. Six of Shostakovich's tonal answers are given because a member of the dominant harmony appeared at or near the beginning of the subject (fugues 5, 10, 14, 17, 23, 24-S1). Other fugues (fugues 1, 4-S2, 7, 21) also contain the requisite dominant harmony member at or near the opening of their subjects but are not given tonal answers.

The other tonal answer (fugue 24-S2) is given for a modulating subject but not in the same manner in which Bach answers his modulating subjects. Whereas Bach alters his tonal answer to modulate back to the tonic at the point where the subject modulated, Shostakovich presents a subject which modulates to the relative minor and begins his answer in that key and ends in the dominant.

The order of entries, exposition lengths, and fugue lengths in Op. 87 follow in Table IX. Bach's shortest and longest expositions are five and twenty-one measures long, respectively, and his average exposition length is eleven bars. Shostakovich's shortest exposition is six bars long, almost the same as Bach, but his longest exposition is forty-five bars in length, more than twice as long as Bach's lengthiest. The average Op. 87 exposition is twenty-three measures long, again just more than twice as long as the WTC-I average exposition.

Bach's fugues range from twenty-seven to one hundred fifteen measures with his average fugue lasting for

TABLE IX
 ORDER OF ENTRIES AND EXPOSITION
 AND FUGUE LENGTHS IN OP. 87

Fugue	Entry Order	Exposition Length (measures)	Fugue Length (measures)
I	4 3 2 1	33	106
II	3 2 1	15	80
III	1 2 3	15	101
IV-S1	3 2 4 1	19	128
IV-S2	1 2 3 4	16	128
V	2 1 3	25	148
VI	4 3 2 1	26	131
VII	1 2 3	14	99
VIII	3 2 1	29	137
IX	1 2	6	66
X	3 1 2 4	25	177
XI	1 2 3	27	138
XII	2 1 4 3	18	122
XIII	4 3 2 1 5	33	163
XIV	1 2 3	45	224
XV	1 2 3 4	30	182
XVI	1 2 3	15	72
XVII	1 2 3 4	18	80

TABLE IX--continued

Fugue	Entry Order	Exposition Length (measures)	Fugue Length (measures)
XVIII	1 2 3 4	27	210
XIX	3 2 1	13	72
XX	3 2 1 4	20	124
XXI	1 2 3	28	218
XXII	2 1 4 3	24	128
XXIII	1 2 3	25	140
XXIV-S1	4 3 2 1	28	296
XXIV-S2	1 2 3 4	29	296

fifty-three measures. Shostakovich's shortest fugue is sixty-six bars in length, again more than twice as long as Bach's shortest. The longest fugue in Op. 87 is two hundred ninety-six measures, two and one-half times the length of Bach's longest. The average Op. 87 fugue is one hundred thirty-nine measures long, about two and one-half times that of Bach's average fugue.

The entry order in the twenty-six expositions listed above shows that, like Bach, Shostakovich utilizes, almost exclusively, adjacent entries. Only nine of the sixty-six entries, after the first in the fugue, are made in voices that are not adjacent to the previous entry voice. In WTC-I the first two entries in each fugue were always in adjacent voices. In Op. 87 all expositions, except the one for subject one in fugue four, use adjacent voices for the first two entries.

Three of Shostakovich's expositions, the same number as Bach, contain non-adjacent entries. These are fugue ten (3 1 2 4) and fugues twelve and twenty-two (2 1 4 3). Bach also employed the same (2 1 4 3) pattern as Shostakovich in two of his three expositions which contain non-adjacent entries.

Bach's most frequently used entry pattern (1 2 3) is also Shostakovich's most often employed pattern. Each composer uses it seven times. The only other three-voice pattern that Bach utilizes (2 1 3) is found in only one Shostakovich fugue

and he employs a new pattern (3 2 1) in three fugues. Where Bach's four-voice entry orders were diverse--he employed none more than twice--Shostakovich shows a preference for a descending pattern (1 2 3 4), using it five of thirteen times. He uses an ascending pattern (4 3 2 1) three times, another pattern (2 1 4 3) twice, and three other orders (3 2 4 1, 3 1 2 4, and 3 2 1 4) once each. Shostakovich's two-voice fugue entry order (1 2) is the same as Bach's two-voice fugue, but the Op. 87 five-voice pattern (4 3 2 1 5) is not the same as either Bach five-voice pattern. Shostakovich's most apparent preference is for top-to-bottom or bottom-to-top entry orders. Nineteen of the twenty-six expositions employ these patterns. Eleven of Bach's twenty-four expositions use those patterns, not as many as in Shostakovich.

Each Shostakovich fugue, like those of Bach, begins with a subject statement in the tonic key or mode. All of the fugues in Op. 87 employ a regular order of entry in their initial expositions of a subject, that is, subjects alternating with answers through the exposition. Four Bach expositions did not use the regular order of subject-answer alteration.

One Bach fugue (fugue 4) presented a non-dominant answer in its initial exposition, in that case a subdominant answer. Likewise, one Shostakovich fugue employs an answer level other than the dominant. Fugue twenty-one in B^b major has its initial exposition answers stated in g aeolian, a submediant answer. The occurrence of submediant answers continues throughout the fugue.

Some Op. 87 subjects bear a resemblance to a particular subject in WTC-I. These similarities were pointed out during the analyses of the individual fugues of Op. 87 in Chapter III. Fugues with subjects which allude to WTC subjects are fugues two, three, nine and sixteen. The Op. 87 fugue most closely modeled after a WTC-I fugue is fugue nine. Its subject is constructed in a similar manner, the tonics are the same, both answers are real, the entry orders are the same, both composers' subjects and counter-subjects are presented as mirror inversions, and both fugues contain sections written in parallel octaves.

Shostakovich makes much less use of the redundant entry than Bach. Only fugue six contains redundant entries in the exposition. Ten WTC fugues have redundant entries immediately following the statements of the four subjects necessary for its exposition. One other Shostakovich fugue, number twenty-four, employs redundant entries in the original keys of the subject and answer after an intervening episode.

As was stated in Chapter II, the answer-codetta "in Bach...commonly sets the general pattern for some or even all of the episodes" (1, p. 84). Throughout the individual analyses of the fugues of Op. 87, it was consistently observed that the answer-codetta in Shostakovich fulfills the same function as it did for Bach. Both composers present the basic materials for some or all of the succeeding

episodes in the answer-codetta. "Shostakovich uses the answer-codetta in every fugue, and in all cases it is the foundation of later episodes" (1, p. 85).

The material contained in the answer-codetta is frequently new (i.e., fugues 2, 10, 17, 20); other times it is derived from either subject or countersubject (i.e., fugues 1, 19). In fugues one through eight and ten, as well as the answer-codetta to S2 in fugue twenty-four, the answer-codetta is constructed and employed in a motivic manner in ensuing episodes, not in its entirety or with the motives in the same order as in their initial presentations. The other fugues have their answer-codettas constructed and used in later episodes in a more melodic manner, with their respective voices intact. The episode following the initial exposition frequently presents additional material which, along with answer-codetta material, accounts for other elements of future episodic content.

Bach's subject variations included augmentation, inversion, and augmented inversion in his fugues in WTC-I. Shostakovich uses augmentation (fugues 11, 15, 17, 20) and inversion (fugue 9) like Bach, but does not use an augmented inversion form of his subject as Bach did. Shostakovich, however, employs subject diminution as a procedure in fugue thirteen, where Bach does not in WTC-I. Another subject form unique to Shostakovich is the hemiola subject

form observed in Fugue Fifteen, a rhythmic alteration to his subject. Other rhythmic alterations occur to the subject in fugue sixteen where duration changes occur throughout the fugue. Shostakovich, in fugue seven, even transforms his subject during the fugue to a new form by the end of the piece.

Twenty-three of the twenty-four fugues, twenty-five of the twenty-six subjects, in Op. 87 employ regularly-recurring countersubjects. The fugue which does not use a regularly-recurring countersubject, number twenty-two, uses a counterpoint which is consistent in its eighth-note motion and sets the context in which future subject statements occur, but does not itself recur melodically intact. Table X shows some characteristics of the regularly-recurring countersubjects in Op. 87. Shostakovich uses fifty-eight countersubjects in twenty-three fugues compared with Bach who presents seventeen countersubjects in thirteen fugues. The longest Op. 87 countersubject is fifty-one notes long, almost twice as long as Bach's longest, twenty-eight notes. Their shortest countersubjects are about the same length-- five notes in Shostakovich, six in Bach. The average countersubject length in Shostakovich is nineteen notes long, which is only one note longer than Bach's eighteen note average length. Bach's shortest and longest countersubjects in beats were five beats and thirteen beats,

TABLE X
COUNTERSUBJECT CHARACTERISTICS IN OP. 87

Fugue	Counter- subject	Length		First Pitch	Last Pitch	Range
		Notes	Beats			
I	CS1	24	16	Submediant	Tonic	Perfect 8va
	CS2	20	16	Supertonic	Submediant	Minor 6th
II	CS1	6	7	Dominant	Submediant	Major 6th
	CS2	13	6	Subdominant	Tonic	Minor 10th
III	CS1	22	9	Mediant	Mediant	Perfect 8va
	CS2	13	9	Dominant	Tonic	Perfect 8va
IV-S1	CS1	13	17	Tonic	Supertonic	Minor 6th
	CS2	17	17	Submediant	Dominant	Minor 6th
IV-S2	CS3	7	17	Tonic	Mediant	Perfect 4th
	CS1	16	17	Subtonic	Tonic	Minor 6th
V	CS2	14	17	Subdominant	Submediant	Minor 6th
	CS1	12	14	Mediant	Subdominant	Minor 6th
	CS2	9	14	Subdominant	Leading Tone	Minor 7th

TABLE X--continued

Fugue	Counter- subject	Length		First Pitch	Last Pitch	Range
		Notes	Beats			
VI	CS1	32	19	Dominant	Submediant	Major 10th
	CS2	20	19	Mediant	Tonic	Minor 10th
	CS3	18	19	Tonic	Submediant	Perfect 8va
VII	CS1	16	8	Mediant	Mediant	Perfect 8va
	CS2	16	8	Tonic	Mediant	Perfect 8va
VIII	CS1	22	26	Flat-supertonic	Dominant	Minor 7th
	CS2	23	25	Flat-dominant	Tonic	Minor 7th
IX	CS	24	9	Mediant	Mediant	Minor 10th
	CS1	12	14	Subdominant	Dominant	Minor 6th
X	CS2	13	15	Tonic	Mediant	Minor 6th
	CS3	17	14	Subdominant	Tonic	Perfect 8va

TABLE X--continued

Fugue	Counter- subject	Length		First Pitch	Last Pitch	Range
		Notes	Beats			
XI	CS1	50	14	Tonic	Dominant	Perfect 8va
	CS2	23	14	Tonic	Tonic	Perfect 11th
XII	CS1	19	19	Subdominant	Dominant	Perfect 8va
	CS2	24	19	Submediant	Mediant	Minor 6th
	CS3	20	19	Subdominant	Tonic	Minor 7th
XIII	CS1	11	11	Subdominant	Dominant	Major 6th
	CS2	12	10	Tonic	Mediant	Major 6th
	CS3	5	10	Submediant	Tonic	Perfect 4th
	CS4	13	11	Dominant	Dominant	Perfect 5th
XIV	CS1	30	37	Dominant	Mediant	Minor 7th
	CS2	22	38	Mediant	Dominant	Minor 7th

TABLE X--continued

Fugue	Counter- subject	Length		First Pitch	Last Pitch	Range
		Notes	Beats			
XV	CS1	12	21	Dominant	Flat-submediant	Perfect 4th
	CS2	11	21	Mediant	Tonic	Diminished 5th
	CS3	16	21	Tonic	Mediant	Minor 6th
XVI	CS1	43	18	Tonic	Leading Tone	Perfect 8va
	CS2	28	18	Dominant	Dominant	Perfect 8va
XVII	CS1	51	20	Dominant	Tonic	Perfect 8va
	CS2	39	20	Mediant	Mediant	Major 9th
	CS3	32	20	Tonic	Submediant	Perfect 8va
XVIII	CS1	13	13	Tonic	Subdominant	Major 6th
	CS2	11	15	Tonic	Dominant	Perfect 5th
	CS3	13	15	Mediant	Subtonic	Major 6th

TABLE X--continued

Fugue	Counter- subject	Length		First Pitch	Last Pitch	Range
		Notes	Beats			
XIX	CS1	8	14	Dominant	Leading Tone	Minor 3rd
	CS2	18	15	Dominant	Tonic	Perfect 5th
XX	CS1	9	16	Mediant	Dominant	Perfect 5th
	CS2	8	16	Submediant	Mediant	Perfect 8va
XXI	CS3	8	16	Tonic	Tonic	Perfect 8va
	CS1	23	21	Submediant	Dominant	Major 6th
XXIII	CS2	15	24	Submediant	Mediant	Perfect 8va
	CS1	45	13	Leading Tone	Mediant	Perfect 8va
XXIV-S1	CS2	23	13	Supertonic	Tonic	Perfect 8va
	CS1	12	16	Mediant	Mediant	Perfect 4th
XXIV-S2	CS2	9	16	Tonic	Subtonic	Perfect 5th
	CS	14	19	Dominant	Mediant	Minor 7th

respectively, compared with Shostakovich's shortest, six beats, and longest, thirty-eight beats. Shostakovich's average countersubject is sixteen and one-half beats in length, about twice Bach's average length in beats and about the same ratio as the average number of beats in each composer's subjects.

Shostakovich's countersubjects are less active than his subjects, containing an average of nineteen notes compared with twenty-two in the average subject. Bach's countersubjects were more active than his subjects. The average Op. 87 countersubject is sixteen and one-half beats in length, whereas the average subject spans seventeen beats showing that, like Bach, Shostakovich writes some of his countersubjects shorter in length than his subjects.

Bach uses the maximum number of possible countersubjects four times in WTC-I (fugues 2, 3, 10, 21). Shostakovich makes a practice of presenting the maximum number of possible countersubjects. He does so with twenty-one of the twenty-six subjects in Op. 87.

Like Bach, the first and last pitches of Shostakovich's countersubjects are more diverse than those of his subjects. Table XI on the following page shows the number of times particular scale degrees fulfill the roles of first and last pitch in Bach and Shostakovich countersubjects.

Shostakovich uses many more varied first and last countersubject pitches than does Bach--three more of each--

TABLE XI
 FIRST AND LAST PITCHES OF COUNTERSUBJECTS
 IN WTC-I AND OP. 87

Pitch	WTC-I		Op. 87	
	First	Last	First	Last
Tonic	4	7	15	15
Supertonic	1	2	2	1
Mediant	1	2	11	16
Subdominant	5	0	8	2
Dominant	4	5	12	12
Submediant	0	0	7	6
Leading Tone	1	1	1	3
Subtonic	1	0	1	2
Flat-supertonic	0	0	1	0
Flat-dominant	0	0	1	0
Flat-submediant	0	0	0	1

but shows a preference for tonic harmony beginnings (38 of 58) and endings (43 of 58). Secondary beginning preferences are for subdominant and submediant. A secondary ending preference is submediant. Bach does not show the preference for mediant which Shostakovich does and uses subdominant most frequently for beginnings along with tonic and dominant. Tonic and dominant pitches are definite favorites for Bach ending notes. Shostakovich's secondary preference for submediant is completely avoided by Bach.

The ranges of WTC-I countersubjects span from a perfect fourth to a minor tenth. Op. 87 countersubjects range from a minor third to a perfect eleventh, both smaller in range than Bach's smallest and larger than his largest countersubjects. The average Bach countersubject range is a minor seventh; the same is true for the average Shostakovich countersubject range. Shostakovich's average countersubject range is smaller than his average subject range by a major second. Bach's average countersubject range is a minor second smaller than his average subject range. Both composers' average countersubject is smaller in range than their average subject.

All of the twenty-four fugues of Op. 87 except one, number twenty-four, present their subjects in stretto, compared with eight of the fugues in WTC-I. Subjects in Op. 87, as in Bach, were seen in complete and incomplete strettos as well as in canon and false strettos. Shostakovich,

like Bach, also presents subjects in stretto with augmented subjects (fugues 11, 17, 20), and with diminutions of the subject (fugue 13) and false stretti of the subject and its inversion (fugue 10). Shostakovich also presents his unique hemiola subject form (fugue 15) in combination with the original subject.

Of the twenty-four fugues in Op. 87 only one, fugue twenty-four, does not employ stretto but does use regularly-recurring countersubjects. One fugue, number twenty-two, does not use a regularly-recurring countersubject but does present its subject in stretto. The trend in WTC-I was for countersubject use and stretto subject treatment to be mutually exclusive occurrences. Of the nineteen fugues in WTC-I which employed a regularly-recurring countersubject or presented their subject in stretto, only two fugues contained both. In Op. 87 just the opposite is true. Only two of the twenty-four fugues do not contain at least one regularly-recurring countersubject as well as stretto presentations of the subject.

The keys of the first subject entry following the initial exposition in Op. 87 are shown in Table XII preceded by the key of the fugue in which they are contained and followed by the relationship between the two keys.

Bach, in WTC-I, used, almost exclusively, closely-related keys. All but four entry keys in the twenty-four fugues

TABLE XII
KEY RELATIONSHIPS IN FUGUES OF OP. 87

Fugue	Fugue Key	Second Entry Key	Relation	Fugue	Fugue Key #	Second Entry Key	Relation
I	C	e	C	XIII	F#	d#	R
II	a	C	R	XIV	e ^b	G ^b	R
III	G	a	C	XV	D ^b	b ^b	R
IV	e	G	R	XVI	b ^b	D ^b	R
IV	b	d	D	XVII	A ^b	f	R
V	D	b	R	XVIII	f	A ^b	R
VI	b	D	R	XIX	E ^b	c	R
VII	A	f#	R	XX	c	E ^b	R
VIII	f#	b ^b	X	XXI	B ^b	d	C
IX	E	c#	R	XXII	g	B ^b	R
X	c#	E	R	XXIII	F	d	R
XI	B	f#	D	XXIV	d	F	R
XII	g#	B	R	XXIV	A ^b	E ^b	C

R = Relative Key; D = Diatonic Key; C = Closely-Related Key; X = No Relationship

were closely-related keys, and those four were mode alterations to diatonic closely-related keys. The same statement cannot be made of Shostakovich's subject entry keys, as can be observed from the individual analyses of the Op. 87 fugues. Shostakovich's keys are often chromatic, distantly-related keys.

In Shostakovich, however, the first entry key following the initial exposition is, in all but one case, a diatonic key to the key of the fugue. Nineteen of these keys are relative major or minor keys to the fugue key. Four others are non-relative, closely-related keys, and two more are mode-altered diatonic keys. The only remaining key pair (fugue 8, $f^{\#}-b^b$) is not related in the key of $f^{\#}$ minor, but b^b is an enharmonic mediant key from the parallel major key. Thus, it is the subject entry key following the fugal exposition which shows Shostakovich's tonal connections to WTC-I.

During the course of the individual analyses of the fugues of Op. 87, a schema for the keys of subject entries in the fugue was presented in all but three cases (fugues 17, 18, 19) where none was apparent. In twenty-one of twenty-four fugues there was an apparent ordering to the key sequence of the piece, generally based on a prominent interval or pitch pattern contained in the subject, showing that Shostakovich's entry keys are not random but ordered according to a pattern derived from some characteristic unique to that

fugue or its subject. Since only three of the fugues did not provide obvious methods by which subject entries were ordered, it is possible that those three are organized according to some pattern which is simply more obscure to the observer.

Throughout the fugues Shostakovich makes use of not only major and minor keys, but also of dorian, phrygian, aeolian, lydian, mixolydian, and even locrian modes. There are no fugues in WTC-I which employ modal subject statements. While many twentieth-century composers have employed the modes in their music, "It is not the historic uses of the modes that interest composers but rather their effectiveness in counteracting restrictive major-minor conditioning" (2, p. 19). "Most twentieth-century modes bear the names given them during the Middle Ages but the resemblance is one of construction not usage" (3, p. 31). Shostakovich's mode use is not of the historical variety. He employs a mode as a distinctive pattern of five whole and two half steps used for its singular effect in contrast to major-minor tonal contexts. Shostakovich often employs lydian and mixolydian modes in place of subjects that would otherwise be major; and dorian, phrygian, aeolian, and locrian appear as substitutes for minor keys. No alterations are made to modal degrees in the historical traditions of tritone avoidance or leading tone creation; they are simply transpositions of thematic material which do not retain their

tone-semitone relation to the original material, but are instead related in their exact replication of scale degrees.

One final similarity between Shostakovich and Bach exists in the monograms of each composer, DSCH (D, E^b, C, B) and Bach (B^b, A, C, B). Although Bach does not employ his in WTC-I, it does appear in another of his works (i.e., The Art of Fugue) and many other composers have incorporated it into their works (e.g., Liszt, Reger, Schoenberg, Dallapiccola). Shostakovich's employment of his monogram in two fugues in Op. 87 (fugues 8 and 13) is further evidence of his connection with Bach.

In conclusion, the fugues of Shostakovich's Op. 37 exhibit some diversities with the fugues of WTC-I in such characteristics as metric complexity and meter use, organization of fugues within the collection, physical dimensions of their subjects and of the fugues themselves, frequency of tonal answer use, countersubject activity in relation to the subject, countersubject and stretto use, and the chromaticism of some of the fugues and subject entry keys. Some of these traits, although different from WTC-I could be considered to be reasonable expansions of fugal style in light of the more than two-hundred-twenty-five years between the composition of the two collections.

Most of Shostakovich's fugues contain the maximum number of countersubjects. In addition, all but one fugue present stretto statements of their subjects.

The similarities between Op. 87 and WTC-I are numerous. Some of the more prominent are the number of fugues which occur in various textures, use of tonic-dominant-submediant pitch patterns as tonality-defining subject elements, reasons for tonal answers, use of adjacent entries, use of regular exposition order, use of the dominant answer, allusions to particular WTC-I subjects or fugal techniques, answer-codetta function, and the use of closely-related keys for the entry following the initial exposition.

The emulation of Bach by Shostakovich in Op. 87 is obvious in more than just the fact that the collection was written for the two-hundredth anniversary of the death of the contrapuntal master. The model for Shostakovich's fugal and contrapuntal techniques was Johann Sebastian Bach.

Indeed, there are numerous diversities between the two fugue-cycles. A great majority seem to arise, or could be rationalized, in view of the timespan between the two collections as well as the stylistic variances arising as a result of this epochal separation and the influences of the age and place in which they lived and worked. Both composers could certainly be classified as perpetuators of traditional ways; Shostakovich had them chosen for him by his government.

The diversities observed in the two collections do not, for the most part, constitute a difference in the composer's basic concept of fugal construction. Three major differences

do exist which constitute dogmatic opposition on the part of Shostakovich. First, the fewer instances of the use of tonal answers, which are, however, used for the same reasons as in Bach. Second, the appearance of the modes in the fugues of Shostakovich, which are employed to replace the Bachian major and minor keys as substitutes for the major and minor sound. Third, Shostakovich uses countersubjects in all but one fugue and stretto in every fugue. Bach is more selective, exploiting the unique aspects of each individual subject, rather than arbitrarily writing each fugue to contain stretto and most to contain countersubjects.

The affinities in fugal methods between the two, however, evince the fact that Op. 87 was written as an emulation of Bach and, more specifically, Bach as observed in WTC-I. The number of fugues in various numbers of voices, which almost exactly parallels WTC-I, the tonic-dominant-submediant scale degrees as prominent subject pitches in both tomes, and especially the actual allusions to thematic material and processes of WTC-I that are observed in Op. 87 demonstrate Shostakovich's use of Bach, in general, and WTC-I, in particular, as the prototype for the fugal method for his own twenty-four fugues of Op. 87.

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