THE DEVELOPMENT OF MUSICAL ABILITY WITH SPECIAL REFERENCE TO AURAL TECHNIQUE AND SIGHT READING

A THESIS
SUBMITTED TO THE
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I N T R O D U C T I O N

From earliest times an air of mystery has surrounded the art and craft of the musician. To say that music has always been associated with primitive religion and magic is simply to repeat the statement, not to explain it. No doubt, what may be called the democratisation of music has in recent years done something to lift the veil and to reveal the mystery, but, nevertheless, man will never cease to regard with awe anything which moves him profoundly, and yet eludes all his efforts at analysis. To Dr Burney's joking remark, "I believe, sir, we shall make a musician of you at last," the Great Cham of literature in all seriousness replied, "Sir, I shall be glad to have a new sense given to me."

The musician himself, throughout the ages, has undoubtedly helped to maintain this tradition of mystery. Mediaeval music was inextricably bound up with mathematics and theology, and the musician proper, the "musicus", was not unworthy of some of his modern descendants in his contempt for self-styled musicians who could reproduce music vocally or instrumentally, but who were ignorant of the science of music. The distinction between the singer, the instrumentalist and the musician proper is nowadays

lost sight of in the generic name "musician". But mediaeval musicians were more careful to preserve the distinction between these three types, as can be ascertained from a perusal of Johannes Tinctor's "Dictionary of Musical Terms."*

Tinctor divides music itself into three classes:

> Musica Armonica est illa quae per vocem practicatur humanam (i.e. Choral Music)
>
> Musica Organica est illa quae fit in instrumentis flatu sonum causantibus (i.e. Music produced by wind instruments like the organ)
>
> Musica Rithmica est illa quae fit per instrumenta tactu sonum reddentia (i.e. Music produced by string and percussion instruments).

The only music that was treated seriously by composers was the first - Musica Armonica.

The vocal tradition in music was the result of a slow evolution subject to the laws of natural selection, and it persisted until fairly recently.

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* "Terminorum Musicae Diffinitorium", printed at Naples about 1474. Several manuscripts of this work have come down to us. We quote here from Coussemaker's edition of Tinctor's Works - "Tractatus de Musica", Lille, Imprimerie Lefebure-Ducrocq, 1875. A reprint of Forkel's Edition of the Dictionary is to be found in the Appendix to "Hamilton's Dictionary of 3,500 Musical Terms, by John Bishop". London, Robert Cocks & Co. 1849. No English translation has yet appeared.

The instrument, when it was first admitted (circa 1600) into the domain of the art of music, began by imitating the voice, and there was little distinction between vocal melody and instrumental melody. But in recent years composers have made more and more demands on the voice, and we may say that the instrument, which set out on its artistic career by following the voice obsequiously, now contrives to "lead the voice a dance". The vocal tradition has completely broken down, with results on the problems of aural training and sight reading, which we shall deal with in the first few chapters of this book.

Tinctor likewise divides musicians into three classes - Cantor, Sonitor, and Musicus. We append here his definitions in the original Latin together with an English translation.

"Cantor est qui cantum voce modulatur"
(A singer is one who produces music through his voice)

"Sonitor est qui instrumento artificiali,
sive organico sive rithmico, musicam exercet."
(An instrumentalist is one who produces music by means of a mechanical instrument, whether wind,"instrumenta flatu sonum causantia", or string and percussion, "instrumenta tactu sonum reddentia").

But lest these should claim the privilege of being regarded

as musicians in the true sense of the word, he elaborates the following definition:

> "Musicus est qui perpensa ratione beneficio speculationis, non operis servitio, canendi officium assumit. Hinc differentiam inter musicum et cantorem quidam sub tali metrorum serie posuit:
>
> Musicorum et cantorum magna est differentia:
> Illi sciunt, ii dicunt quae componit musica.
> Et qui dicit quod non sapit diffinitur bestia."

(A musician is one who, after intense study of the scientific basis of music, takes up the profession of music-making (canendi), not like a slave whose hands are bound to his task, but like a master whose mind is free to follow its own line of thought. This difference between musicians and singers has been expressed in rhyme as follows:

> 'Twixt musician and singer, I think you'll agree,
> A mighty great difference there always will be.
> One understands music, the other does not,
> And who speaks without knowing is truly a sot.)

The following German translation by H. Bellermann of the above passage, with the exception of the words "non operis servitio" which are omitted in the Latin version, is to be found in Chrysander's "Jahrbuch, i. 1863."

> "Ein Musiker ist ein solcher, der nach Überlegung der musikalischen Verhältnisse mit Hülfe der wissenschaftlichen Betrachtung das Geschäft des Singens übernimmt. Daher hat jemand den Unterschied zwischen einem Musiker und einem blossen Sänger in folgender Reihe von Versen gebracht:-
>
> Zwischen Musikern und Sängern herrscht ein grosser Unterschied. Jene wissen und erklären, wie Gesang geschaffen wird, und wer was er nicht versteht sagt, gilt für ein blosses Tier."

We still have all three types of musician with us today:

the singer - musician primarily or solely by virtue of vocal technique,

the instrumentalist - musician primarily or solely by virtue of instrumental technique,

the musician proper - the "musicus", the freeman of music as opposed to the hirelings - cantores et sonitores - one who may or may not have a beautiful singing voice (cf. Beethoven or Schubert), and who may not be able to sing in tune (cf. Joachim) - one who may or may not be an expert instrumentalist (cf. Berlioz or Wagner), but one who is a musician by virtue of his aural technique, a musician by divine right, "qui perpensa ratione beneficio speculationis, non operis servitio canendi officium assumit." Music to him is an affair of the inner ear or the mind, not of the larynx (voce) or of the fingers (tactu). He can "see with the ear" and "hear with the eye."

Browning has spoken for this class in the well-known words from Abt Vogler -

"'Tis we musicians know."

In the world of musical pedagogy the two former classes - cantores et sonitores, singers and "sounders" - are and always will be well provided for by Professors of Voice Production and Professors of Pianoforte etc. The third class, the "ear-minded" - "musici" or musicians proper - are too often regarded as being "born not made". ("You have an ear for music or you haven't!") And, apart from the work of John Curwen and his loyal band of Tonic Sol-fa pioneers, comparatively little investigation has been made into the problem of training children in

the fundamentals of musicianship, the ability to read and write music without the aid of an instrument.

No doubt a great deal of the confusion which exists in musical pedagogy today is due to the fact that the art is encumbered by a vocabulary of technical terms, many of which are capable of bearing quite different meanings.

For example, "sight-reading" may mean singing at sight or playing at sight. And that these involve quite different techniques, dependent on entirely different mental processes, is shown by the high standard of instrumental technique and the extraordinarily low standard of aural technique demanded in Diploma examinations, and by the large number of capable instrumental "readers" (especially pianists) who are more or less musically illiterate when they are away from their instrument. Yet in standard School Music Readers, we find that methods, which may be pedagogically justified in the teaching of sight-playing ("sight-reading can only be taught through sight reading, therefore never play a sight-test twice; even although you make mistakes go on and finish the piece in strict time"), are applied equally to the teaching of sight-singing.

Even the term "sight-singing" is an unfortunate one. In its suggestion of the importance of singing music "prima vista", it carries with it the implication that the only

way to teach sight-singing is to practice nothing but sight-singing - to allow children to read each exercise once and once only, without any kind of help from the teacher. It is not thus that we teach children to read their native language. Even the way to the Latin Unseen - the nearest approach to the sight-singing exercise - is paved by the Scalae Primae and the Latin Readers.

But this is only one of the "idola" of the Singing Class Teacher. For example, a person who cannot read or write music would be certainly set down by an examiner as being deficient in "ear-training". Whereas, a person may have a highly cultivated "ear" and yet not be able to read or write a note of music (cf. the folksong singers at whose feet Cecil Sharp was proud to sit).

In the sister art of language teaching, whether the English Language or a foreign language, the name for the process whereby we translate symbol into sound or sound into symbol is "spelling". In the language lesson the function of spelling is duly recognised. Spelling has an important place in the curriculum, and it is never confused with "listening" or "ear-training". Yet in music teaching the term "spelling" is seldom met with, and would probably not be understood by the average music teacher.

Spelling means the coordination of eye and ear, the correlation of sounds and visual symbols, and, except in

cases where pupils are being trained in "absolute pitch", the musical equivalent of language spelling is simply "sol-faing." The abuse which the latter term suffers from today is the surest index of the confusion of mind of the average music teacher in the face of the psychological and pedagogical problems of the classroom.

It is the purpose of the present writer to analyse the spelling process, the reading process and the writing process, from the point of view of music as a language, to point out the fallacies under which the music teacher of today is labouring, and to expose the false psychology on which his system of aural training and sight-reading is based.

The first two volumes of the book have been given over to a criticism of existing Methods and to an exposition of a new Method of Aural Training based on the Sequence Modulator, and adapted to the needs of the Singing Class Teacher.

In the third volume the writer deals with various other important problems associated with the music reading and music writing processes, which could not be treated in the first part, except in a passing way, without disturbing the unity of the exposition. Thus, to take one example, the consideration of the important question of the order of

difficulty of keys from the visual point of view in sight-singing - a question which is usually dismissed with an emphatic opinion and a shrug of the shoulders - led the writer to plan an objective experiment, which would raise the question once and for all above the realm of opinion, and leave the matter in no doubt. In carrying out this experiment, the isolating of the factors involved in the problem, the planning of the test, the selection of test material, the preliminary practice on such material by the class, the test itself, the correcting of the test papers, and the analysis by approved statistical methods of the scores, demanded many months of labour. And the setting out of this experiment alone occupies 28 pages in this book.

Similarly, other important aspects of music reading, chiefly visual — for example, "Method in relation to Content in the School Music Reader", and "The effect of the formal layout of music type on the reading of music" — have been dealt with at length in the third volume.

Some of this material has been published in Musical Periodicals, some of it is still in the Editors' hands, and some of it has been accepted for publication and then returned as being too "controversial" in character. So long as Musical Journals are published by Music Publishing Houses, so long must the searcher after truth in musical pedagogy bow down to vested interests.

These chapters of the book, written at various times during the period of research, are all complete in themselves, and they have been left as they were written, even at the expense of an occasional overlapping of theme.

In the final chapter, however, the writer has endeavoured to gather together the various threads and to weave them into the texture of the argument in order to show the philosophic basis or the unifying principle underlying all.

In his researches into these subjects, the writer has had the good fortune to be able to consult, as his Supervisors of Studies, Professor W.G. Whittaker of the Music Department and Dr William Boyd of the Education Department of Glasgow University. To both of these leaders of thought in their respective spheres he owes his warmest thanks for their helpful criticism and guidance.

To the Headmaster of North Kelvinside Secondary School, Mr Wm. Cameron, B.Sc.,A.R.C.S., he is grateful for the constant encouragement he received in his research work. And to the Director of Education, Mr R.M.Allardyce, and the Education Committee of the Corporation of Glasgow he is also indebted for permission, cordially granted, to carry out experimental work in schools.

Most of the work is the result of original research and experiment in over thirty Glasgow schools, Infant, Primary and Secondary, and where authorities are quoted reference is made to the source.

M A T E R I A
M U S I C A

A NEW METHOD
OF
AURAL TRAINING
BASED ON
THE SEQUENCE MODULATOR

PART I

THE SEQUENCE MODULATOR

CONTENTS OF VOLUME I

Chapter		Page
I	Aural Training in relation to the Technique of the Voice in Pitch Production	3
II	Mental Effects of the Scale Degrees and Defects of Ordinary Modulator Practice...	20
III	The Sequence Modulator	40
IV	Contextual Problems in Music Spelling and the Relation of Music Spelling and Reading to Language Spelling and Reading..	73
V	Varied Uses of the Sequence Modulator	92
	Longer Sequence Patterns	93
	Rhythmic Variety in Sequence Singing...	97
	Sequences with Anacrusis	101
	Rhythm Spelling through Sequence Singing... ...	104
	Inversion of Sequences..	108
VI	Varied Uses of the Sequence Modulator (Contd.)	
	Modal Sequences	110
	Sequences beginning on other Columns than the first	112
	Rests in Sequence Singing...	113
	Antiphonal Sequence Singing.	118
	Antiphonal Sequence Singing in Contrary Motion.	120
	Mental Singing	121
	Non-Scalic Sequences	123
VII	Varied Uses of the Sequence Modulator (Contd.)	
	Chromatic Sequences.	127
VIII	Varied Uses of the Sequence Modulator (Contd.)	
	Tetrachordal Sequence Singing and Form in Music	145
	Modulatory Sequences	152
	Ear-Tests and Sequence Singing..	154
IX	Varied Uses of the Sequence Modulator (Contd.)	
	Absolute Pitch Sequence Singing.	160
	Staff Reading through Sequence Singing.	163
	Staff Writing through Sequences.	165
	Canonic Sequences	171
X	Recapitulation	172
Appendix A	Tables of Sequence Formulae...	186
" B	Rhythm Tables for Sequence Singing and Rhythm Spelling.	194

C H A P T E R I

AURAL TRAINING IN RELATION TO THE TECHNIQUE OF THE VOICE IN PITCH PRODUCTION

When, just about one hundred years ago, Miss Glover and John Curwen gave to the world the Sol-fa Modulator and the Tonic Sol-fa Letter Notation, they performed a greater service to musical pedagogy than has ever been fully realised. Previous to this, the sol-fa syllables were used only in association with the staff notation - they had no notational existence in themselves.

Some music educationists of today would seem to invite a return to these days by their insistence on the entire abolition from schools of the tonic sol-fa notation (though not the syllables), and by their demand that the Tonic Sol-fa Modulator should be replaced by a Staff Modulator as soon as the children are familiar with the syllables, that is, according to them, in the early stages of school life.

Thus, the late Sir Arthur Somervell, Principal Inspector of Music to the Board of Education and the Scottish Education Department, says, in "The Compleat Teacher", Vol.2 (Boosey & Co. 1932),

> "The Sol-fa syllables should be used in sight reading and ear work; but the Sol-fa Notation, i.e. the written script of Sol-fa, is not only unnecessary; in some ways it is a hindrance. . .
>
> "When, therefore, the reader comes across any mention of Sol-fa in this book, he

"must remember that it refers only to the use of the syllables" (p.6)

"The (Sol-fa) Modulator is often still found in the upper part of the school. If it had been properly taught lower down, it would have been discarded by the time the children are eight or nine years old at the latest.

"As soon as the children have worked for a few weeks on the Sol-fa Modulator they should pass on to the Staff Modulator, from which they will sing just as easily as they did from the other." (ibid p.11)

The chief reason for the entire proscription of the tonic sol-fa notation would seem to be that, since it is so easy for children to read from this concrete notation, they will not take the trouble to learn to read from the more abstract staff notation. This argument might apply to adults under no dire necessity to learn, but it does not apply to children under discipline in school. One might as well argue that, since young children find it so easy to count with the help of concrete objects such as sticks or marbles, they will not take the trouble to learn to count by means of the abstract figures 1 2 3 etc. And the answer to both arguments is that it is the duty of the teacher to see that the children are led gradually from the concrete stage to the more or less abstract stage.

Only one who has had much experience in teaching young children to read from staff notation can realise how

highly abstract, with respect to both relative pitch and relative duration, this notation is. And since, for practically all elementary school children, the staff notation can be approached only through the movable doh system of sol-faing, surely the proper view to take is that one should not dishearten young children in their first efforts in music reading by asking them to read from the highly complicated and ambiguous staff notation, when they can be taught so easily to read from the simple, concrete tonic sol-fa notation, which thus makes an easy stepping-stone to the staff.

> "No system which teaches a child that a certain sign represents a certain sound, either absolutely or relatively, can in its essence be mischievous."
> (C.V. Stanford in "Studies and Memories" London, Archibald Constable & Co.Ltd.1908)

With regard to the substitution of a staff modulator for the sol-fa modulator, the question turns on what is meant by the qualifying phrase, "as soon as the children are familiar with the sol-fa syllables." The general experience is that very few school children or even college students, under present-day methods of teaching, ever reach the stage of perfect familiarity with the sol-fa syllables. They may be familiar with the syllables as they stand in the scale or in the common chordal progressions, and they may be able to sol-fa notes occurring in homely contexts and

sung at a homely speed. But the fact remains that the seven syllables of the diatonic major scale are capable of so many permutations and combinations, and the mental effects of these seven notes are so kaleidoscopic - varied as they are by pitch in relation to the voice, by modulation or harmonic progression, whether present or implied, by speed and by time and accent or rhythm - in short, by their musical context, that one can never be certain when children or adults have passed beyond the perceptive stage of recognition of particular "doh's" and "ray's" and "me's", and reached the general stage of conception of "doh-ness" and "ray-ness" and "me-ness".

A few illustrations will make this point quite clear. Ask any ordinary class to sing

"s_1 l_1 t_1 d r m f s"

to the syllables, and it will probably be found that they will sharpen the penultimate note. The reason for this is obvious: they have sung so many scales beginning on the tonic, and so few beginning on the dominant.

Again, ask a class to sing the following from sol-fa notation:

Key C (a) | d' : m : f | s : t : r' | d'' :- : - || and (b) | s :- : m' | r' : t : s | s :- :- ||

It will be found that they will almost invariably sing "lah" for the "te" in the first example, and "doh " for the "te" in the second. The reason here is that these are

ungrateful or unvocal melodies, which transgress the Laws of Melodic Progression as formulated by theorists in the Vocal Era. Palestrina would never have written such melodies. But this simply means that they are found by beginners to be difficult to sing, and the children simplify them unconsciously.

In the physical world, there is a Law of Inertia which states that any body in a state of rest or motion will continue in the state of rest or of uniform motion in the same straight line, until acted upon by some external force. There seems to be a similar law of inertia in the physiological world, so far as the singing voice is concerned, for, when the voice is moving stepwise up or down the scale, it requires a marked mental effort to make it leap in the same direction, as this inertia of the voice, or tendency to carry on in the same uniform way, has to be overcome. The same applies to stepwise movement in the same direction after certain leaps.

Composers of the Vocal Era realised this and respected these Laws of Melodic Progression which forbade such progressions.

(See "Contrapuntal Technique in the Sixteenth Century" (pp.29 and 30), by R.O.Morris, Oxford University Press, 1922.
Also "Musical Composition" by C.V.Stanford, Macmillan & Co., 1911, (pp.127,128, 147 and 148).

Students of strict counterpoint, however, must still bear these laws in mind in the examination room. And

children of today are constantly proving in the sight-reading lesson that these laws must be based on natural tendencies of the human voice. For, by their mistakes in sight-reading - not of course in pattern singing or song singing, which does not involve any creative act or act of will - they show unmistakably that they themselves are passing through the same stages in the evolution of the vocal art as the race has passed through in the bygone centuries.

Fortunately, this law of inertia in the human voice can be overcome. But we must go about the remedial work in the right way. In the example quoted above from Exercise 2 of "The Progressive Staff Reader", Book B, by Hugh Hunter, Mus.B., and D.C. Walker, L.R.A.M. (Bayley & Ferguson, London & Glasgow)



where the children, although naming the note correctly, sing the sound "lah" instead of "te", it would be quite futile to give practice in singing |s :t :r'|. Children have little difficulty in singing |s :t :r'| by itself. The trouble arises when this chordal progression is preceded by one or more steps in the same direction. And the only way to master the difficulty is to sing the whole progression - m f s t r' - to the sol-fa syllables. Even to sing the whole passage to "lah" or any other vowel will

not help the pupils greatly to meet a similar situation later on, as the writer has proved by numerous experiments, for the syllables themselves exert a tyranny over the voice until they are mastered.

For example, young children, and even older children, will sing the familiar psalm tune "French" or "Dundee"

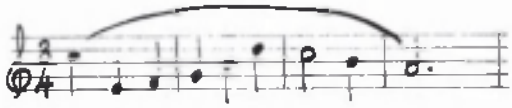


to words or to vowels, and immediately afterwards fail to sing {:d|m :f | s} from the blackboard or the sol-fa modulator. The sounds "doh me" sung to the syllables inevitably call up to the children the sound "soh", because they have had so much practice in spelling or sol-faing d m s, and so little practice in spelling or sol-faing d m f s.

(Dr Somervell also draws attention to this well-known phenomenon in "The Compleat Teacher" Vol.2, p.9, Boosey & Co.,1932)

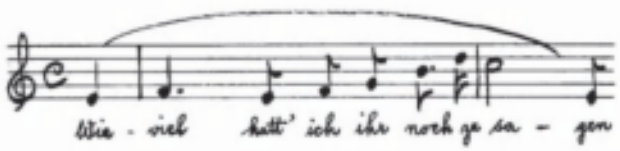
On the other hand, as the result of numerous experiments with various grades of children in over fifty schools, the writer has proved that if children have been trained to spell or sol-fa this psalm tune, they will read d m f s at sight quite readily. The only way, then, to break this tyranny of the sol-fa syllables and to make them one's servants and not one's masters is to keep on sol-faing or singing them in all their contexts.

It is probable, and, in fact, almost certain, that the children have never before sung the syllables s t r' in the particular context quoted above:

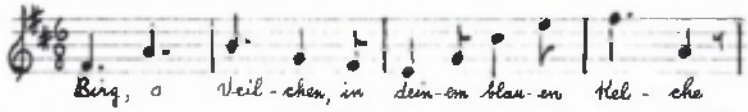


In that case, we may ask, is it right to expect children to conceive mentally with the aid of the syllables and to sing at sight an unvocal passage, the like of which they have never before sol-faed or sung orally to the syllables? And the answer of the educationist is, decidedly, "No! All reading matter should be anticipated beforehand in oral work. The symbol stage should follow a long way after the oral stage."

The modern child, of course, must be prepared in his sight-reading to cope with all kinds of melodic progressions, whether vocal in origin or not. This particular progression, for example, is to be found in a song by Franz Abt:



Again, a well-loved song by Brahms, "An ein Veilchen", begins with this most unvocal phrase:



In this short passage of eleven notes we find four infringements of the Laws of Melodic Progression which guided the composer of vocal music in the days of Palestrina.

(a) The chordal progression E G C♯ E'
containing three leaps in the same direction.
"More than two leaps in the same direction are almost always bad."

(b) The tritone G C♯.
This interval, as its nickname "Diabolus in Musica", implies, was shunned like the Devil himself.

(c) The stepwise interval E' F♯ occurring after three leaps in the same direction.
"Two successive leaps (if taken at all) should be preceded and followed by movement (preferably conjunct) in the opposite direction of the leaps."

(d) The leap of a major sixth, F♯ A.
"The leap of the major sixth is forbidden; exceptions to this rule are rare enough to necessitate its rigid observance."

(See "Contrapuntal Technique in the Sixteenth Century" by R.O.Morris, op.cit. pp.29,30)

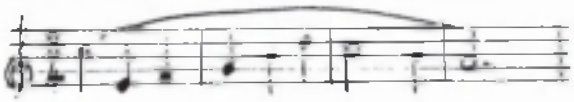
We need not discuss here the reasons for the extension of the melodic idiom from about the year 1600 onwards. These will be found in any history of music. But undoubtedly the main reason is the entry of the musical instrument, especially the keyboard instrument, into the domain of the musical art.

Suffice it to say that we must accept the musical language as we find it and teach children to spell, read and write music in the idiom of today, and not in the idiom of Palestrina and his age.

As teachers, then, our aim must be to produce in our pupils what we may call "Die Wohltemperirte Stimme", that is to say, a voice equally tempered in the sense in which a Toledo blade is equally tempered, able to give and take, to leap or step in any direction and at any point.

However, it is not very satisfactory to wait until difficult pitch problems crop up in sight-reading exercises, and then to master them one by one. This "solvitur ambulando" method of training in staff sight-reading, so common today, is truly a method of despair. For staff sight-singing is a highly complex process, involving, as it does, three distinct spelling abilities, which each require separate drilling until they become more or less automatic.

For example, in singing this passage:



(a) the children must be able to recognise the notes as various scale degrees, and to give them their sol-fa names instantaneously;

(b) they must be able to conceive instantaneously and sing with correct intonation the sounds corresponding to these sol-fa names;

(c) they must give to these sounds the exact time values and accentual values indicated by the notation.

Thus, three separate and distinct abilities are involved, weakness in any of which will result in meaningless meandering instead of meaningful reading. Hence, these three spelling techniques, which may be called (a) visual, (b) aural and (c) rhythmic, must be developed intensively by separate drills.

Of the three techniques involved in the sight-singing process there is no doubt as to which is the most difficult of acquirement.

The first, (a) or visual technique, does not require any distinctive musical ability, any more than the mastery of the typewriter keys requires any distinctive literary ability.

The last, (c) or rhythmic technique, may be acquired by one who fails to develop aural technique, as is proved by the considerable number of pianists who are excellent sight players but poor sight singers.

But the second (b) or aural technique, is manifestly the distinctive mark of the musician qua musician. And it is this technique with which we are mostly concerned in this book, although the other two will be dealt with also.

It will be readily admitted that, for purposes of sight-reading, aural technique must be well in advance of anything required in sight-singing, just as, for purposes of sight-playing, finger technique must be well in advance of anything required in piano sight-playing. Further, it will be admitted that this aural technique can only be acquired apart from sight-singing, just as finger technique can only be acquired apart from sight-playing. Again, some system must be observed so that there may be no redundancy of practice in some aspects and omission of practice in others, and so that all problems may be classified and arranged in order of difficulty. For example, the child may be taught to master this particular melodic figure m f s t. But there are still thirteen other contexts in which this same melodic figure may present itself in the ascending and descending order of the major scale alone. We give all fourteen here.

Ascending ‖ d r m s | r m f l | m f s t | f s l d' | s l t r' | l t d' m' | t d' r' f' ‖

Descending ‖ d' t l f | t l s m | l s f r | s f m d | f m r t, | m r d l, | r d t, s, ‖

How can we be sure of making the children familiar with the sol-fa syllables in association with their sounds in all possible contexts, thus enabling them to cope with them on all occasions, as they occur in ear tests, dictation, or sight tests in either notation? Let us see what has been done in other fields of musical pedagogy.

In every department of instrumental teaching there are approved "Methods" or systems of technique, which all students must master, if they are to gain any degree of proficiency in playing at sight. For example, in piano technique, we have five-finger exercises, scales, arpeggios, octave studies, double thirds and sixths, exercises for contraction and extension, for repeated notes, chords, etc. The idea underlying any such system is that the student should anticipate in the technical exercises any difficulties that may confront him later on in the standard literature of the instrument. Generations of teaching experts have abstracted these technical problems from the current musical literature, and classified them according to their nature and difficulty, until today we have a "Gradus ad Parnassum" system of technique for every instrument, and we can tell from the technical stage, which a student has reached, what piece or type of piece he should be able to attempt.

Now, the human voice is a musical instrument too, but it has a technique peculiar to itself, and differing in an important aspect, the aspect of pitch production, from that of all other musical instruments. The vocal apparatus for producing pitch is hidden from sight and from touch, and for this reason sight-singing offers problems which are not met with in sight-playing. One cannot examine, visually or tactually, the larynx or the technical apparatus for producing pitch, and explain pitch production in spatial terms, as one can do in the case of keyboard instruments, for example, where the apparatus for producing different pitch sounds is one that is based on spatial relationships. Consequently, while the staff notation (which, be it noted, is also based in its pitch aspect on a system of spatial relationships on a stave or series of staves), is an ideal one for instruments, this staff notation is, by itself, not adapted to the human voice. For the technique of pitch production in the voice is based, not on a system of spatial relationships, but on a series of extremely delicate muscular tensions of the vocal chords within the larynx. We cannot place a finger on a certain point and be sure of producing a certain pitch sound.

(From the point of view of pitch production the nearest approach to the human voice in the instrumental world is the French Horn. The Horn player, who cannot read

his score mentally or anticipate in imagination the sounds he must produce on his instrument, will never prove to be a good Horn player. And even the best of Horn players fail often to produce the correct note.)

It is true that a few musicians, in constant contact from early childhood with musical instruments, contrive to cultivate a memory for absolute pitch, but these musicians can be of no assistance to the great majority of people,* for whom a "go-between" must be found to link up the visual musical symbols on the stave with the muscular-articular or kinaesthetic sense, which controls the production of pitch in the vocal chords. And this "go-between" is to be found in the "time-honoured sol-fa syllables" (John Hullah's epithet!)

For these sol-fa syllables with their graded system of consonants and vowel sounds, and especially their acute vowel "ee" at each of the semitonal steps in the major and minor scales ("me" "te" "se"), lend themselves readily to the cementing of a bond between musical sound and syllable, more especially since the articulated or spoken syllable appeals to the same muscular-articular sense which, as we saw, controls pitch production in the larynx. Further, being themselves speech sounds, these syllables can be readily recognised from the letter notation - d r m f s l t - and as readily written down once they have been apprehended as sounds. Thus, the sol-fa syllables give to the

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*See note on page 19.

"airy nothing" of musical sounds in the tonal system "a local habitation and a name." And the question of aural technique is simply one of strengthening through practice this bond of association between the sol-fa syllables and the scale degree sounds.

As we have seen, however, the problem is not so simple as it looks at first sight. There are only seven syllables for the scale degrees of the major scale, but each of these scale degrees varies in mental effect according to the context in which it is found, just as colours vary in their mental effect according to their context in a picture, according to the juxtaposition of other colours in the total composition.

This does not mean, however, that the scale degrees have not a strong individuality or mental effect of their own, by which they may always be recognised. The character of Hamlet, in the play, is seen in many different lights, yet Hamlet remains Hamlet throughout. And so the mental effects of the scale degrees in the tonal system may vary from time to time, just as individuals because of their membership of society vary, reacting differently to different environments - the office, the home, the club, the church. But, like the members of a social system, these scale degrees, or members of a tonal system, retain enough individuality to preserve throughout their ego or their identity.

Of course - and the whole of this argument turns on this point - it requires one who is intimately acquainted with human nature in all its various manifestations to recognise the Hamlet of the play as the same self-contained individual throughout all "life's fitful fever." A child would not understand how the same person could act in such seemingly contradictory fashion. And, in the same way and for the same reason, it requires one who is well acquainted with the nature and behaviour of musical sounds in melodic and rhythmic settings and who is in the habit of calling them by name in these various settings, to recognise the scale degrees when they are heard, and to recreate these scale degrees as sounds from notation when they are seen, no matter in what context they may be found.

Note re Absolute Pitch

"A certain number of highly gifted musicians in every country need no methodical training in sight-singing; possessing a sense of absolute pitch, they seem to pick up the ability to read by some knack of direct association between the sign and the sound. Such persons are generally useless as teachers, as they are incapable of putting themselves in the position of the ordinary pupil. Where they come into positions of official influence they are educationally dangerous on account of their impression that sight-singing is a simple matter of understanding notation (a mere intellectual process), whereas to 99 per cent. of pupils it is primarily a matter of training the ear."
("The Oxford Companion to Music" by Percy A.Scholes, page 867 Section 5. Oxford University Press, London 1938.)

CHAPTER II

MENTAL EFFECTS OF THE SCALE DEGREES AND DEFECTS OF ORDINARY MODULATOR PRACTICE

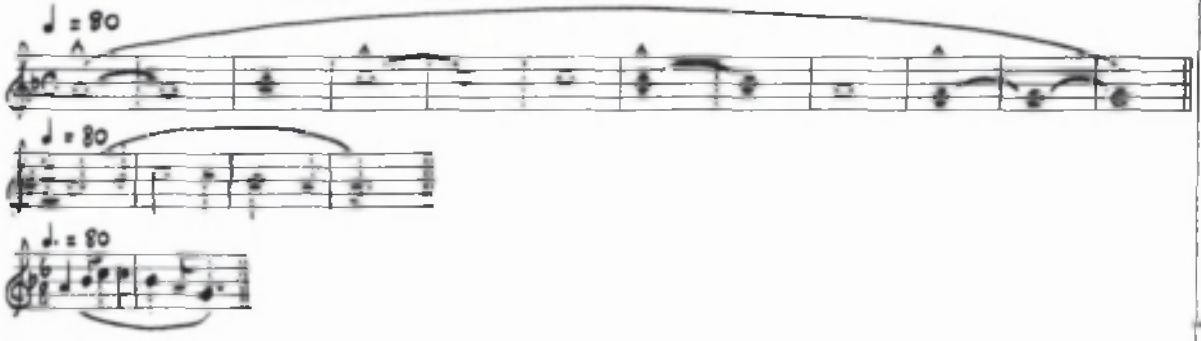
It was pointed out in the last chapter that, in any exhaustive system of aural training, aural problems must be studied and mastered apart from the notation which hedges them round. It was also shown that what are known as the mental effects of the scale degrees, or the distinctive impressions made on the mind by individual musical sounds, whereby these sounds can be apprehended, or separated in consciousness and recognised by name instantaneously, are not the simple unitary sensations that many textbooks and educationists would make them out to be.

If the mental impressions made by the scale degrees were unitary sensations, if "d" were always "firm", "r" always "rousing", "m" always "calm", etc., it would be difficult to see how hundreds of thousands of melodies, each with an individual character unmistakably its own, could have been composed (i.e. literally "put together") from these seven constants represented by the scale degrees; and how, in spite of John Stuart Mill's gloomy prophecy based on arithmetical calculations, the well-spring of melodic invention still shows no sign of exhaustion.

> "I was seriously tormented by the thought of the exhaustibility of musical combinations. The octave consists only of five tones and two semitones, which can be put together in only a limited number of ways, of which but a small proportion are beautiful: most of these, it seemed to me, must have been already discovered, and there could not be room for a long succession of Mozarts and Webers, to strike out, as these had done, entirely new and surpassingly rich veins of musical beauty." (Autobiography, 7th Ed., p.145, London, Longmans, 1882)

But that the mental effects of the scale degrees are not unitary and constant perceptions may be easily demonstrated.

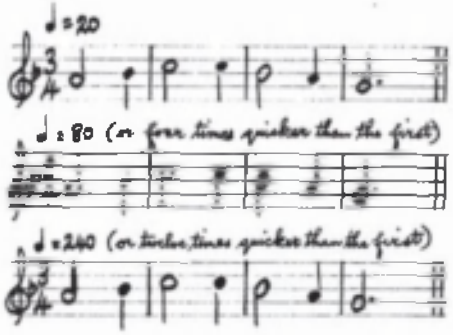
Take the following three phrases and sing them at the metronomic rate indicated.



These phrases are all based on the same succession of notes - *m f s s f m r* - and the same rhythm. Yet the first would be sung at such a slow rate that it would have no more meaning or musical significance for the modern listener, than the old Provencal secular melody, "L'Homme Armé," had for the listeners of the fifteenth or sixteenth century, when they heard it used as a Canto Fermo in one of the various Masses in which it is to be found.

> The second example, on the other hand, when sung at the speed indicated would yield the well-known Chorale Melody, "Jesu, joy of man's desiring".
>
> While the third would produce the popular sea chanty, "Billy Boy".

All three may be written with exactly the same notation, but with different metronome marks, as indicated below.



These three examples, sung at the speed indicated, would sound exactly the same as the three previous examples.

Now suppose we were to listen to this phrase played at the first rate and repeated at gradually increasing rates from ♩ = 20 to ♩ = 240.

From a meaningless succession of notes without apparent connection or design, so far as the listener is concerned, the phrase would gradually acquire values or take on meaning and merge into the familiar chorale melody of the second example; and thence, by means of a new integration of the melodic elements, into the equally familiar sea chanty of the third example. That is to say, at some point in the scale of tempo the succession of isolated sensations integrate or become organised in the mind, and take on the form or meaning which we associate with the chorale. And, at some higher point in the same

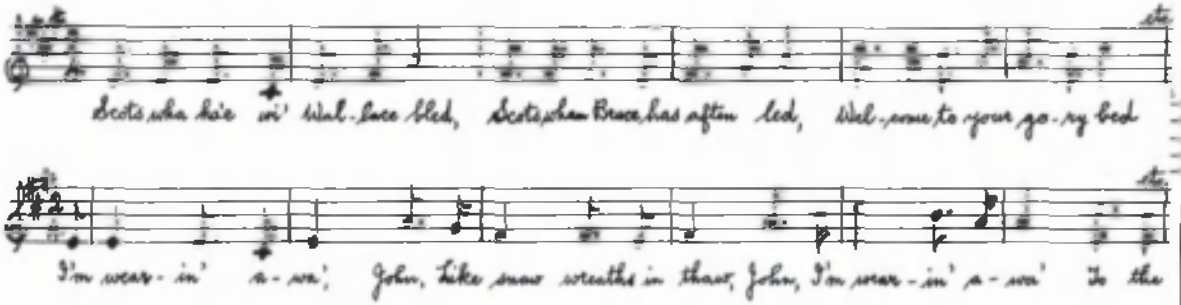
scale, a new integration of the melodic elements takes place in the mind of the listener, and the succession of sounds acquires new values or a new meaning which we associate with the sea chanty.

But, if the mental effects or sensations produced in the mind of the listener by individual notes were constants, independent of tempo, so that "m" was always "calm", "f" "desolate", "s" "bright", etc., then the mental effect or meaning of each phrase, containing notes in the same order and differing only with regard to tempo, would be the resultant of a mere summation of these individual sensations, and such a transformation of unified perceptions or values as we actually experience could not take place.

On the other hand, if the values or meaning of melody depend, not on the summation, but rather on the integration, or organisation by the mind itself, of the melodic elements, then these elements or individual sounds must undergo a change in value according as they are conditioned by various factors in the different musical contexts in which they occur.

A popular illustration of this effect of pace or tempo in music is to be found in the case of the two

well-known Scottish songs, "Scots wha ha'e" and "The Land o' the Leal."



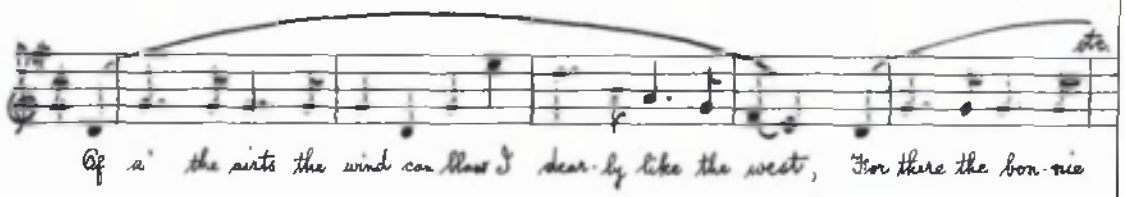
These two tunes are practically identical as regards pitch and rhythm, but differ in tempo and in dynamic effect. Yet this similarity will always be more apparent to the eye than to the ear. While we know that both tunes are practically identical, we do not feel them to be so.

Burns exploited this phenomenon of the effect of the slowing down of tempo in melody for many of his favourite songs. As we learn from his sister, he played the fiddle, but never attained to any considerable degree of technique on the instrument, and had to confine his practice to slow airs.

(See "NOTES ON SCOTTISH SONG BY ROBERT BURNS
Written in an Interleaved Copy of
THE SCOTS MUSICAL MUSEUM" (p.XXIX)
Edited by James C. Dick
London, Henry Frowde, 1908)

No doubt, in playing over quick strathspey tunes, "Commodo", at his own leisurely pace, he saw beauties in the melodic lines that escaped the notice of the dancers in the Edinburgh ballrooms, or even of the composers of

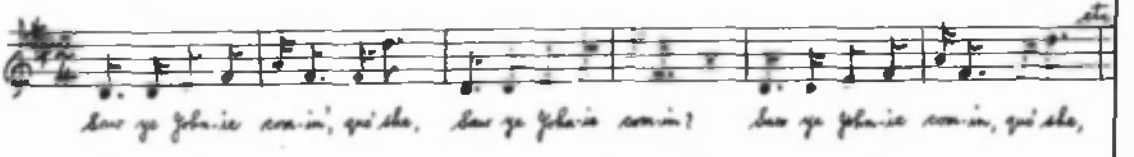
these tunes. For example, the tune for which he wrote the words of "the finest love-letter in the English language"



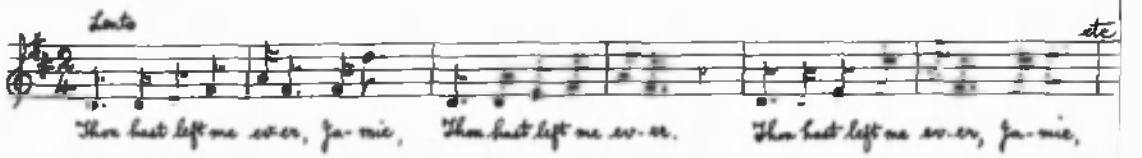
was originally a strathspey tune with the title, "Miss Admiral Gordon's Strathspey".

(Vide "The Songs of Robert Burns with Bibliography and Historical Notes" (pp.70 and 375) by James C. Dick. London, Henry Frowde,1903).

Again, with reference to one of his songs, Burns tells us how he used to listen to the playing of an oboist at Dumfries, Thomas Fraser. He was particularly struck with Fraser's playing of an old Scots tune associated with the ribald words, "Saw ye Johnie comin', quo' she". "When he plays it slow, in fact he makes it the language of despair."



This transformation of the old strathspey tune into the pathetic Lento air is enshrined for ever in one of Burns's saddest songs -



It may be illuminating now to illustrate this aural phenomenon by reference to a similar phenomenon in the visual sphere, as illustrated by the slow motion cinema film. Here, by a simple change of pace or tempo, a ludicrous incident, such, for example, as an old gentleman with a tile hat slipping on a banana skin, may be made to appear on the screen like an exercise in advanced Dalcroze Eurhythmics. While the galloping of a horse - the perfect picture of speed and energy - may be shown as a series of slow rhythmical movements, which make up in beauty and grace what they lose in speed and energy.

Similarly, by resorting to the device of focussing on one small part of an object and then gradually exposing the other parts to view, the cinema lens may transform what seems at first to be a meaningless object, or perhaps a rabbit or a chimney pot, into the well-known figure of Charlie Chaplin.

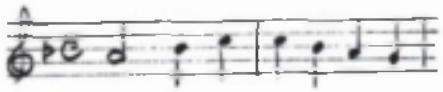
This is a favourite device of cinema technique, especially at the opening of a new sequence or in the introduction to a new situation. In this case, the attention is centred on one part or aspect of the object and gradually led on to other parts or aspects, until, with a shock of surprise which approaches to the aesthetic thrill of recognition felt by the musician or the artist, the whole object is apperceived in its true relations.

This question of pace or tempo is an important one in musical performance - hence the modern custom of indicating precisely the metronomic rate at the beginning of each movement. But this same question of pace in relation to meaning is also of supreme importance in the teaching of sight-reading and has its bearings on the method of teaching sight-reading — a topic which will be dealt with in a later chapter.

We have seen, then, how the metronomic rate affects the mental impressions produced by musical sounds. Change of rhythm affects them even more so. Thus, the same succession of notes -

m f s s f m r

is to be found in the opening of the famous D major choral theme in Beethoven's Ninth Symphony.



It will be admitted that anyone who could associate this theme with the sea chanty and the chorale, because of the same order of pitch elements found in each, must be very deficient, indeed, in the sense of rhythm. But this just amounts to saying that rhythm is a function of melody, and,

therefore, a function of the mental effects of sounds.

And now, let us consider the effects of harmony and modulation, whether present or implied, on the melodic elements. In one context "ray", for example, may be a harmony note; in another it may be a passing note. In one context "ray" may partake, to a greater or less extent, of the character or mental effect of a dominant; in another it may partake of the character or mental effect of a submediant. Indeed, the same notes in the same context may even be regarded from different harmonic aspects or points of view, just as a Cathedral may be drawn from different aspects or points of view. The only condition that must be observed is that the point of view must be consistent as a whole. That is to say, if a notable feature of a Gothic Cathedral cannot be seen from a certain point of vantage it must be omitted from the drawing. And if "ray" is to be harmonized as a submediant in a cadence, the notes immediately preceding it must be regarded in the light of this modulation or change of key centre. Compare Bach's treatment of the old German Chorales - for example, the Passion Chorale in his Passion settings, where the varied harmonizations are made to accord with the general feeling of the moment as revealed in the words.

Harmony students would have to decide, from their reading or interpretation of the behaviour of the melodic elements, what particular function a certain note, e.g."ray" was fulfilling in a particular context and harmonise it accordingly, so as to reinforce and not contradict the implied mental effect of the note. This is the reason why a good tonic sol-faist or Movable Doh staff reader makes a good harmony student.

But the dictation student, too, must endeavour to cultivate a like aural awareness and discrimination, in order to recognise in its various settings what the Staffist calls simply "the Supertonic."

It is the lack of practice in sol-faing notes in all their various contexts, that explains why a child may recognise "ray" in some eartests and not in others. In one eartest the notes fall into a familiar pattern in the child's mind; in another the notes do not integrate to form a familiar pattern, but disintegrate and cause a disturbance or conflict in the mind, so that even easily recognizable elements like an initial "doh" are not apprehended in the general mental confusion that ensues. Thus, the child may have every note correct in the eartest

d r m d

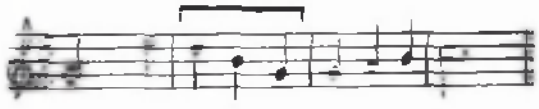
and every note wrong in the eartest

d r m l.

It is, then, not sufficient to practise sol-faing the scale and the common chords, for melodies are not all made up of scale passages and common chords. And, even when a common chord, like "s t r'" and "r' t s", is introduced, the immediate context of stepwise notes in the same direction,



and, in the second case, of a leap to a high note followed by step and skip in the same direction,



may prejudice the issue and cause a child to sing a familiar chordal passage wrong. Thus, as we showed at length in the last chapter, the "t" in "s t" and "r' t" gave particular trouble in some contexts, so that, although the children could sing "s t" and "r' t" perfectly well, in this case they invariably sang "s l" and "r' d'" while calling the notes by their correct names "s t" and "r' t".

With regard to the effect of pitch in relation to the human voice, all that need be said is that when the last example is transposed a fifth lower and sung in Key F



it has been found that it does not present the same degree of difficulty to the class. We have used this one Music Reader exercise as an illustration, but similar illustrations could be found on every page, and almost in every exercise.

In order, then, to teach the mental effects of the scale degrees to children, so that they may never fail to sing or recognise notes in whatever context they find them, we must see that they have abundant practice in sol-faing these scale degrees in all their likely contexts. In other words, the unit of sol-faing practice must be, not the note, but the note-group or phrase; and the limit of sol-faing practice must be the whole range of the child's musical vocabulary as revealed in his singing.

Finally, from the point of view of musical literacy, that is, the reading and writing of music without any mechanical aid from an instrument, it is more or less useless to go on singing exercises or melodies to "laa" or other vowels. This is just what that vast army of illiterate instrumental musicians have been doing all their lives. Certainly, such laa-ing does and will train the "musical ear" in the strict sense of the word, and in so far it does good. But what it certainly does not do is to train the singer to translate accurately from the auditory symbol or musical sound into the visual symbol or sol-fa syllable and staff symbol, and vice versa, i.e. to write and to read music without any external aid.

This long digression on the sol-fa syllables and their mental effects is, we feel, justified. For, only the assumption, based on ignorance of their nature, that the mental effects of the scale degrees are the fixed, simple things that their scale degree names, tonic, supertonic, mediant, etc., would seem to suggest* – only this assumption could lead so far astray the many eminent musicians, dependent probably on absolute pitch memory, who would advocate the total abolition of the tonic sol-fa notation, and the limitation of sol-fa practice from the modulator to the first few years of the child's school life.

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*"It (i.e. tonic sol-fa) brings before the mind a picture of the note; and the mental realisation of that note, in reference to the tonic or key-note, can be achieved after very little practice"
(E. Markham Lee, M.A., Mus.D.Cantab.
"A Music Course for Teacher and Student"
2nd Edition, Revised and Enlarged, (p.27)
Banks & Son, York.)

Defects of Ordinary Modulator Practice

Our problem, then, is to find out a method whereby we may ensure, first, that all classes may cover the same ground in sol-faing or spelling practice, and, second, that the ground covered may be adequate to meet the demands likely to be made in the sight-reading lesson at the various stages of progress.

To a certain extent the ordinary sol-fa modulator may be used for the purpose of strengthening the bond between syllable and sound, and to ensure that children may become familiar with the sol-fa syllables in as many contexts as possible. And, indeed, this modulator will always prove to be a useful tool in the hands of the teacher of aural training.

But it has certain inherent limitations, and, consequently, ordinary modulator practice must always suffer from certain drawbacks.

(I) Even the best of teachers is apt to get into ruts and to move along well-worn melodic grooves. And so, unless the class teacher follows a Method systematically from a textbook, there is bound to be serious redundancy of practice on certain technical points (e.g. d m s and s t r'), and equally serious omission of practice on others (e.g. d' m f and m f s t r').

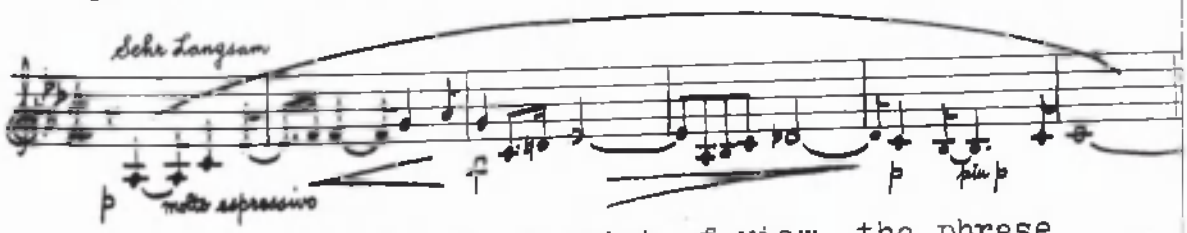
(II) It is quite impossible for the teacher to point, and for the class to follow, modulator exercises beyond a certain very moderate metronomic rate. Yet, in order to do justice to sight-reading material, children may be required to read and sol-fa at two, three, or four times this rate.

Let us not forget that semiquavers, for example, move four times faster than crotchets. And, as the strength of a whole chain depends on the strength of the weakest link in the chain, so the rate of sol-faing of a whole exercise, whether in staff or sol-fa, will depend on the rate of sol-faing of the smallest time unit in that exercise.

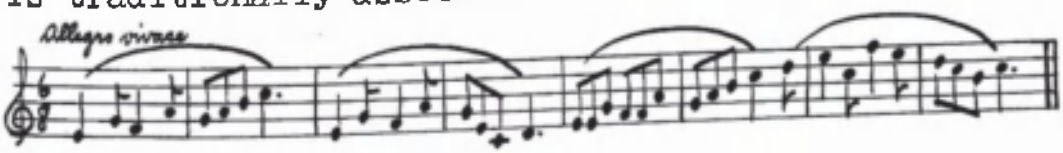
(III) Except in the hands of an expert, modulator exercises, because of their slow tempo, are apt to become unrhythmical and lacking in form, and so they fail to provide adequate motivation for the pupils, and often produce only boredom. The usual modulator voluntary seldom gets beyond the psalm tune type, and sometimes does not aspire even to that. But, in the former case, even although the psalm tune form may stand out quite clear in the mind of the teacher as he improvises and points, who can say that the form is apprehended even dimly by the pupils as they follow after and sing?

This question of the necessity for the apprehension of melodic form on the part of the pupils in all their aural training in the living language of music, is an important one, and it involves the further question of the relation of pulse rate to melodic apprehension.

As we saw, in the musical examples quoted in the previous chapter, there is a metronomic rate or pulse rate, below which the melodic elements fail to coalesce or to integrate in the mind of the listener, so as to produce a connected whole, or what we call a melody. In the case of experienced adults this integration point exists much lower down in the scale of tempo than in the case of inexperienced children.



Compare, from the temporal point of view, the phrase length found in the lively rhythmic type of music which is traditionally associated with childhood.



Yet what could be less musically childlike than the ordinary modulator voluntary or the ordinary (♩ = 60) sight-reading exercise? Children love short phrases and quick-moving tunes as they love short pithy sentences and stories with plenty of action, incident and repetition. (Compare "The Three Bears" and cumulative songs and jingles like "The Twelve Days of Christmas", or "This is the house that Jack built.")

(See..English Folk-Song: Some Conclusions.Pp.99 & 100. By Cecil J. Sharp. London, Novello & Co.1907)

For, if the tempo or pulse rate is too slow, they cannot keep the various elements in solution in their minds till the crystallisation point or integration point is reached and these elements become organised round a central form or meaning, producing thereby the aesthetic thrill. The quicker the pulse, the more boldly the form and meaning stand out.

(IV) The ordinary system of modulator training depends too much on the invention of the teacher, and places too heavy a responsibility on his shoulders. A music supervisor cannot give out an assignment of modulator work to the class teacher and be sure that it will be overtaken by him, unless, indeed, he writes out all the modulator exercises himself. There can thus be no check on the work done, and no means of ensuring that classes of the

same grade cover the same ground in sol-faing from the modulator, with the result that sight-reading is constantly held up by technical difficulties in pitch, which belong to the aural training lesson and not to the sight training or sight reading lesson.
The usual entry in the Record of Work - "Modulator Exercises" - conveys no information, and may mean anything.

(V) Part-singing from the ordinary modulator requires a fair degree of musicianship on the part of the teacher, who, even then, can only point out two-part exercises moving at a slow pace, and, oftener than not, of the "singing seconds" type.

(VI) Finally, it is almost impossible in the circumstances for the teacher to secure and maintain command of the whole class, while at the same time pointing exercises on the modulator.
Genuine class activity is, therefore, at a discount.

This is a strong indictment of ordinary modulator practice, but it has been necessary to make all these points, so that the reader may be in a position to judge for himself how far these difficulties have been overcome in the following Method of sol-faing from the Sequence Modulator.

Taking these six points in order, we claim that:

(I) This method of sol-faing from the Sequence Modulator will prevent the teacher from constantly falling into melodic ruts during the aural training lesson. Thus, both redundancy of practice and omission of practice on technical points will be avoided, and pupils will benefit from the sol-faing of notes or the spelling of musical idioms, in all kinds of contexts, melodic and rhythmic.

(II) It will allow of pupils sol-faing at the rate of about 400 notes per minute, or about four times the rate of sol-faing from the ordinary modulator.

(III) On account of the speed of sol-faing, the strongly rhythmical character of sequence singing, the clear articulation and symmetry of the sequential progression based on the descending and ascending scale, and the necessity for rhythmical breathing, this system will help to inculcate in the pupils the sense of phrase, and the feeling for balance or form in music.

(IV) All sol-faing practice from the Sequence Modulator can be carefully graded as in other Technical Methods for instruments, and all ground covered in the various classes can be accurately entered in Record Books by means of simple numerical formulae, e.g.123, 13, 131, 14, etc.

(V) Canons in two, three or four parts, suitable for equal voices or for mixed voices, and ranging from the simplest of harmonic progressions to the most complex, including chromatic harmonies, can be sung without the aid of notation from sequences learned from the Modulator.

(VI) In sequence singing from this Modulator, no pointing is required at all, so that the teacher can command the whole class all the time.

These points will all be brought out in the following chapters, and other advantages deriving from the system will be demonstrated.

Many Methods depend for their vitality on the personality and driving power of the original founder, but this Method can be adapted to suit the needs of any teacher. It is the result of many years of research and experiment in the classroom with pupils of all ages and all types, and it has been tried out by teachers in different parts of the country, and found to be uniformly successful.

C H A P T E R III

THE SEQUENCE MODULATOR

The aim of this System of Aural Training through Sequence Singing is to develop speed of response in sol-faing or relative pitch spelling, and to give the pupils the opportunity of singing the syllables in all possible contexts, so that they may anticipate in this oral work any combination of notes that they are likely to meet with in ear tests, sight reading and songs.

We have seen that even simple intervals, e.g. a third or a second, may give trouble to children because of their immediate context in a melodic progression, and also that every melodic figure may be found in a similar context on each degree of the scale, both descending and ascending, or fourteen times in all. Further, we have seen that the only way to deal effectively with these contextual problems of pitch is to sol-fa or spell out the notes in each of these individual contexts.

This leads naturally to the conclusion that all melodic progressions or idioms should, as far as possible, be practised sequentially to the syllables on the descending and ascending major scale. Thus, if the melodic figure, d' t s (step followed by leap of a third in the same direction), presents difficulty to young children, the same difficulty will be felt, more or less, when this

figure appears on other scale degrees, or when it appears in inversion. But these cases will all be covered by the complete sequence -

124
d't s | t l f | l s m | s f r | f m d | m r t, | r d l, | d - - || d r f | r m s | m f l | f s t | s l d' | l t r' | t d' m' | d' - - ||

Similarly, the contextual problems offered by the notes in the Music Reader Exercise quoted in the first chapter,



may both be solved aurally by practising the sequence 1235.

1235
d' t l f | t l s m | l s f r | s f m d | f m r t, | m r d l, | r d t, s, | d - - - || d r m s | r m f l | m f s t | f s l d' | s l t r' | l t d' m' | t d' r' f' | d' - - - ||

From the vocal point of view, actually, this plan of extending the children's oral music-spelling vocabulary by means of sequence singing is quite feasible, as sequence singing is grateful to the voice, and as sequences are a fundamental constituent of all melody, and more especially of vocal melody. The only difficulty is to know how to formulate these sequence exercises, and how to present them to the class with a minimum of notation or of intervention on the part of the teacher. To set out in print all the sequences that might be sung by the pupils, would, of course, be out of the question, apart from the fact that such a presentation would be entirely lacking in pictorial appeal.

But it is believed that these difficulties of presentation can all be overcome by the use of the Sequence Modulator, which we shall now endeavour to explain.

THE SEQUENCE MODULATOR

For ordinary sequence singing, the class should begin the sequence on d' at the top of the left-hand side of the Sequence Modulator (see the folder at the end of the book), and repeat the sequence figure on each note of the descending scale on Column 1, finishing on d . The numerical formulae used to indicate the sequences - 123, 13, 131, 14 etc. - refer to the columns so numbered on the Modulator. The ascending sequence would be sung from the columns on the R.H.S. of the Modulator in similar fashion. For example, the sequence 123 would produce the following:-

‖d' t l | t l s | l s f | s f m | f m r | m r d | r d t, | d - - ‖ d r m | r m f | m f s | f s l | s l t | l t d' | t d' r' | d' - - ‖

Other examples are given below.

13

‖d' l | t s | l f | s m | f r | m d | r t, | d - ‖ d m | r f | m s | f l | s t | l d' | t r' | d' - ‖

1231

‖d' t l d' | t l s t | l s f l | s f m s | f m r f | m r d m | r d t, r | d - - - ‖ d r m d | r m f r | m f s m | f s l f | s l t s | l t d' l | t d' r' t | d' - - - ‖

14

‖d' s | t f | l m | s r | f d | m t, | r l, | d - ‖ d f | r s | m l | f t | s d' | l r' | t m' | d' - ‖

143

‖d' s l | t f s | l m f | s r m | f d r | m t, d | r l, t, | d - - ‖ d f m | r s f | m l s | f t l | s d' t | l r' d' | t m' r' | d' - - ‖

|121 321| to the rhythm |𝄞♫♫|

‖d' t d' l t d' | t l t s l t | l s l f s l | s f s m f s | f m f r m f | m r m d r m | r d r t, d r | d — ‖

‖d r d m r d | r m r f m r | m f m s f m | f s f l s f | s l s t l s | l t l d' t l | t d' t r' d' t | d' — ‖

As will be seen from the above, no sequence figure should be sung on the last note of the descending and

ascending sequence (d and d'); but these notes should be held for the time value of the sequence figure. That is, if the sequence figure contains 2, 3 or 4 beats, the final d and d' should be held for 2, 3 or 4 beats respectively. Thus, allowing a whole bar for the sequence figure, the complete sequence, descending and ascending, should occupy exactly 16 bars, divided into two equal parts by the final "d" of the descending series. The whole sequence should be sung in strict time, and the class should be encouraged to memorize, as far as possible, all sequences sung. Since the practice of sequence singing is cumulative in effect, this will be found to be easier for the children than it appears at first sight.

KEYS FOR SEQUENCE SINGING

Suitable keys should be chosen, e.g. C, $D^{\flat}$, D, $E^{\flat}$, E or F, according to the range covered by the sequence figure itself.

For example, sequences not extending beyond Column 3 - 121, 123, 13, 1321, 1213 etc. - may be sung in any key between C and F.

Sequences of fourths - 1234, 14, 141, 1314 etc. - may be sung in keys C, $D^{\flat}$, D or $E^{\flat}$.

Sequences of fifths - 135, 15, 151, 153, 1235 etc. - which extend from s, to f', may be sung in key D or $D^{\flat}$. But,

as this range is too great for young children, the descending sequences on the L.H.S. should be sung first in keys D, E♭, E, F or G♭, and then the ascending sequences on the R.H.S. should be sung in keys B♭, B, C, D♭, or D.

Descending sequences of sixths - 146, 16, 161, 1461, 1641 etc. - should likewise be sung in one key, e.g. E, F or G♭, and the ascending sequences of sixths in a lower key, e.g. B♭, B or C.

The choice of keys for descending sevenths - 1357, 17, 171, 1753 etc. - is further restricted by the wider range, but these may be sung in keys F or G♭, while ascending sevenths may be sung in keys A or B♭.

A plan for singing sequences, whereby this difficulty of the restriction of keys may be overcome, will be explained later on (see page 96).

The following table of keys for sequence singing is given as a suggestion. It should be borne in mind, however, that most of the sequence singing, especially with younger classes, will be confined to thirds and fourths, i.e. to Columns 1, 2, 3 and 4.

TABLE OF KEYS FOR SEQUENCE SINGING

Sequences of 2nds & 3rds, i.e. not extending beyond	Col.3..	C, D♭, D, E♭, E, F.
4ths	Col.4..	C, D♭, D, E♭
5ths	Col.5..	D, D♭
		Desc. D, E♭, E, F, G
		Asc. B♭, B, C, D♭, D
6ths	Col.6..	Desc. E, F, G♭.
		Asc. B♭, B, C.
7ths	Col.7..	Desc. F, G♭.
		Asc. A, B♭.
8ves	Col.8..	Desc. G♭.
		Asc. A♭.

LAY-OUT OF SEQUENCE MODULATOR

The lay-out of the Sequence Modulator, with the black and red columns corresponding to the lines and spaces of the stave, makes it possible for the class to pick out any melodic figure with a minimum of effort, and to repeat this figure sequentially on every degree of the scale, descending and ascending, thus ensuring that the figure will be sung in every possible context.

Further, in singing intervals from the Modulator, the pupil will be conscious of the intervening notes within the interval, since his eye must pass over these to reach the required interval - as, for example, in singing fourths,

that is, 14 {d' :s |t :f |l :m }etc.

1	2	3	4
d'	t	l	s
t	l	s	f
l	s	f	m

This is a most important point in aural training, as the children, while singing bare fourths, will at the same time be conscious of the make-up of each particular fourth with regard to tones and semitones.

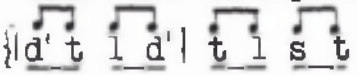
Sequence Formulae

The teacher should always use figures to indicate sequences to the class, thus: "Sing 123....13.... 1231 etc." These figures or sequence formulae will be found useful by the teacher for purposes of recording all work done in class, and for indicating progress and attainment. Besides, since they indicate the size of the interval - 1 to 3 is a 3rd, 1 to 5 is a 5th - they will also serve as an aid in the study of intervals from the numerical point of view.

Observing Expression and Beating Time in Sequence Singing

The pupils should be taught to beat time to the sequence singing, following the lead of the teacher, and individual pupils should be encouraged to conduct the class. The teacher should also vary the expression from time to time, introducing legato, staccato, accelerando, rallentando, crescendo, diminuendo and rubato. Thus, not only the scale sounds but the syllables themselves will become vitalised by the rhythmic and dynamic settings in which they are sung. They will no longer appear as syllables on parade, dressed out in their best "mental effect", but as syllables in action.

Whispering of Sequences

Sequences supply the natural material for exercises in flexibility, and, through the sol-fa syllables with their four open vowels and their seven forward consonants, they are admirably suited for exercises in voice production and diction. Indeed, sequences should always be regarded as voice exercises and treated as such. In this connection, it will be found that the whispering without vocal tone of sequences, e.g.  etc., forms an admirable prelude to the singing of sequences, as whispering necessitates forward production, and thus brings into play the speech organs associated with this. The teacher who has

never tried this will be surprised at the effect that this preliminary practice has on tone production.

Speed in Sequence Singing

In all instrumental technique, speed of performance is recognised as an index of power or mastery over the instrument, and examination syllabuses are based, on the technical side, on a sliding scale of speed attainment. In sol-faing, the importance of this speed factor cannot be over-emphasised. Indeed, speed of response in sol-faing is a prime function of reading ability.

The speed of the sequence singing, then, should be varied to suit the stage of the class, and should be increased gradually, if necessary with the aid of a pocket metronome, until perfect fluency is attained.

In the attainment of this fluency, as has been already mentioned, the eye is aided by the lay-out of the Sequence Modulator, in which the sequence patterns stand out clearly on the black and red columns, much as they do on the lines and spaces of the stave in staff notation. Further, the sequence patterns are read off horizontally and not vertically, as in the case of the ordinary modulator. This is an important point, since the muscles of the eye are adapted primarily for lateral movement.

Thus, a speed of about 400 notes per minute, which would be quite impossible with the ordinary vertical modulator, is well within the compass of a good class reading from the Sequence Modulator.

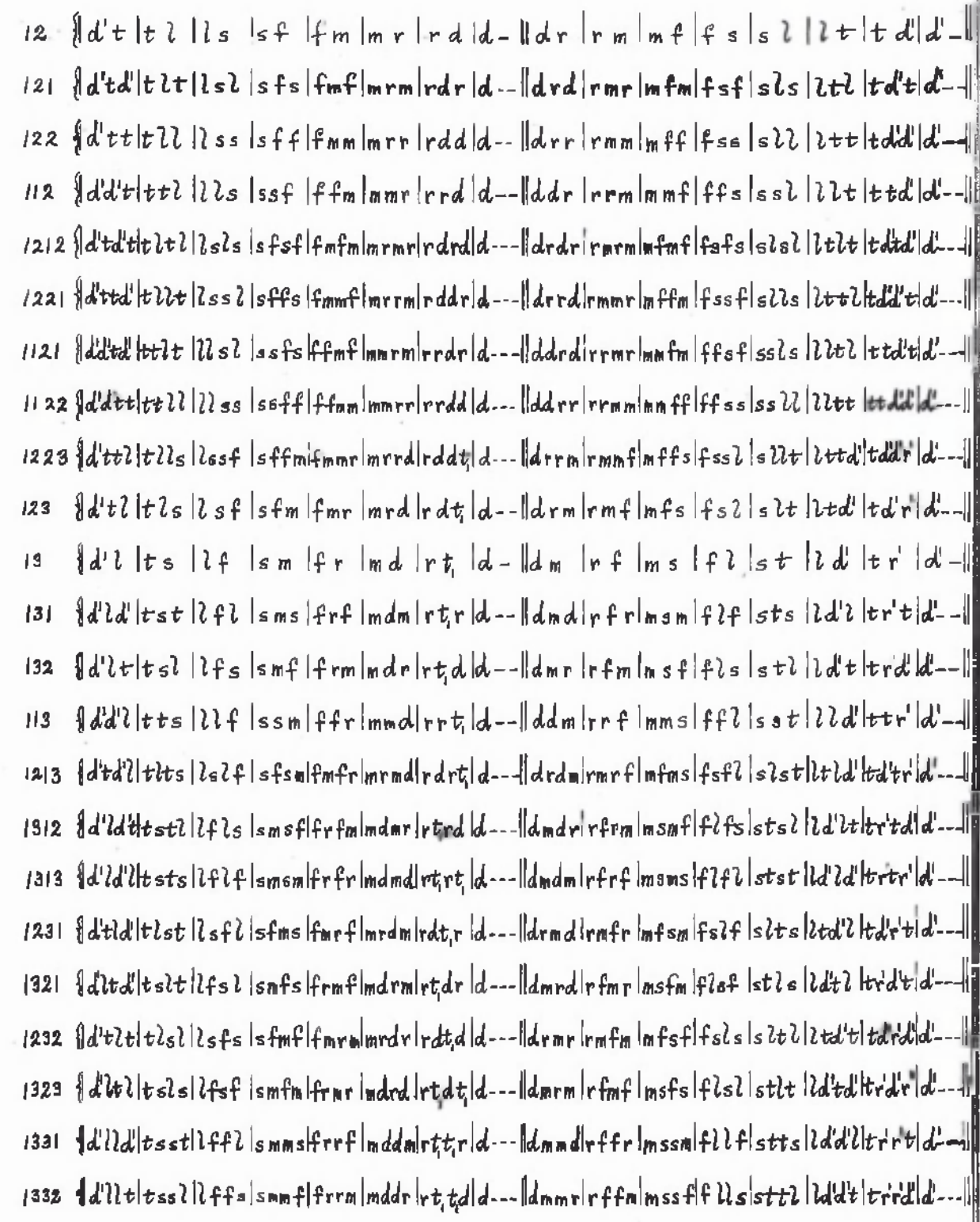
A Vocal Keyboard for the Singing Class

It should be remembered that all sequence singing should be done to the sol-fa syllables from the Sequence Modulator, either the Wall Modulator, published separately, or the Hand Modulator contained in the folder at the end of this book. This modulator will be found to supply a long-felt want in the Aural Training Class. For, while every instrumentalist has his instrument or keyboard to act as a constant reminder that practice makes perfect, the student of Aural Culture has no such visible instrument or vocal keyboard to stimulate him to action. In this sense, the Sequence Modulator may be regarded as a Vocal Keyboard for the Singing Class.

Below will be found a selection of sequences printed in full, with the corresponding sequence formulae at the side. These sequences have been grouped in bars, but, since they may be sung to different rhythms, as will be explained later, no time divisions within the bar have been indicated, and each note may be regarded as equal to one beat. We shall confine ourselves here to sequences containing a maximum of four notes only. The reader should keep open before him the folder containing the Sequence Modulator for reference.

Plain Sequences

Seconds and Thirds



133 ‖d'll|tss|lff|smm|frr|mdd|rt,t,|d--‖dmm|rff|mss|fll|stt|ld'd'|tr'r'|d'-‖

1131 ‖d'd'ld'|ttst|llfl|ssms|ffrf|mmdm|rrt,r|d---‖ddnd|rrfr|mmsm|fflf|ssts|lld'l|ttr't|d'---‖

1132 ‖d'd'lt|ttsl|llfs|ssmf|ffrm|mmdr|rrt,d|d---‖ddmr|rrfm|mmsf|ffls|sstl|lld't|ttrd'|d'---‖

1322 ‖d'ltt|tsll|lfss|smff|frmm|mdrr|rt,dd|d---‖dmrr|rfmm|msff|flss|stll|ld'tt|trd'd'|d'---‖

Fourths

1234 ‖d'tls|tlsf|lsfm|sfmr|fmrd|mrdt,|rdt,l,|d---‖drmf|rmfs|mfsl|fslt|sltd'|ltdr'|tdrm'|d'---‖

14 ‖d's|tf|lm|sr|fd|mt,|rl,|d-‖df|rs|ml|ft|sd'|lr'|tm'|d'-‖

141 ‖d'sd'|tft|lml|srs|fdf|mt,m|rl,r|d--‖dfd|rsr|mlm|ftf|sd's|lr'l|tm't|d'--‖

142 ‖d'st|tfl|lms|srf|fdm|mt,r|rl,d|d--‖dfr|rsm|mlf|fts|sd'l|lr't|tm'd'|d'--‖

143 ‖d'sl|tfs|lmf|srm|fdr|mt,d|rl,t,|d--‖dfm|rsf|mls|ftl|sd't|lr'd'|tm'r'|d'--‖

124 ‖d'ts|tlf|lsm|sfr|fmd|mrt,|rdl,|d--‖drf|rms|mfl|fst|sld'|ltr'|td'm'|d'--‖

134 ‖d'ls|tsf|lfm|smr|frd|mdt,|rt,l,|d--‖dmf|rfs|msl|flt|std'|ld'r'|tr'm'|d'--‖

1214 ‖d'td's|tltf|lslm|sfsr|fmfd|mrmt,|rdrl,|d---‖drdf|rmrs|mfml|fsft|slsd'|ltlr'|td'tm|d'--‖

1412 ‖d'sd't|tftl|lmls|srsf|fdfm|mt,mr|rl,rd|d---‖dfdr|rsrm|mlmf|ftfs|sd'sl|lr'lt|tmtd'|d'--‖

1314 ‖d'ld's|tstf|lflm|smsr|frfd|mdmt,|rt,rl,|d---‖dmdf|rfrs|msml|flft|stmd'|ld'lr'|tr'tm|d'---‖

1413 ‖d'sd'l|tfts|lmlf|srsm|fdfr|mt,md|rl,rt,|d—‖dfdm|rsrf|mlms|ftfl|sd'st|lr'ld'|tm'tr'|d'---‖

1423 ‖d'stl|tfls|lmsf|srfm|fdmr|mt,rd|rl,dt,|d---‖dfrm|rsmf|mlfs|ftsl|sd'lt|lr'td'|tm'd'r'|d'---‖

1434 ‖d'sls|tfsf|lmfm|srmr|fdrd|mt,dt,|rl,t,l,|d---‖dfmf|rsfs|mlsl|ftlt|sd'td'|lr'dr'|tm'rm'|d'---‖

1424 ‖d'sts|tflf|lmsm|srfr|fdmd|mt,rt,|rl,dl,|d---‖dfrf|rsms|mlfl|ftst|sd'ld'|lr'tr'|tm'dm'|d'---‖

1421 ‖d'std'|tflt|lmsl|srfs|fdmf|mt,rm|rl,dr|d---‖dfrd|rsmr|mlfm|ftsf|sd'ls|lr'tl|tm'd't|d'---‖

1431 ‖d'sld'|tfst|lmfl|srms|fdrf|mt,dm|rl,t,r|d---‖dfmd|rsfr|mlsm|ftlf|sd'ts|lr'd'l|tm'r't|d'---‖

1432 ‖d'slt|tfsl|lmfs|srmf|fdrm|mt,dr|rl,t,d|d---‖dfmr|rsfm|mlsf|ftls|sd'tl|lr'd't|tm'rd'|d'---‖

1241 ‖d'tsd'|tlft|lsml|sfrs|fmdf|mrt,m|rdl,r|d---‖drfd|rmsr|mflm|fstf|sld's|ltr'l|td'm't|d'---‖

1242 ‖d'tst|tlfl|lsms|sfrf|fmdm|mrt,r|rdl,d|d---‖drfr|rmsm|mflf|fsts|sld'l|ltr't|td'm'd'|d'---‖

1243 ‖d'tsl|tlfs|lsmf|sfrm|fmdr|mrt,d|rdl,t,|d---‖drfm|rmsf|mfls|fstl|sld't|ltr'd'|td'm'r'|d'---‖

1341 ‖d'lsd'|tsftl|fml|smrs|frdf|mdt,m|rt,l,r|d---‖dmfd|rfsr|mslm|fltf|std's|ld'r'l|tr'm't|d'---‖

1342 ‖d'l s t|t s f l|l f m s|s m r f|f r d m|m d t, r|r t, l, d|d - - ‖d m f r|r f s m|m s l f|f l t s|s t d' l|l d' r' t|t r' m' d'|d' - - ‖

1343 ‖d'l s l|t s f s|l f m f|s m r m|f r d r|m d t, d|r t, l, t,|d - - ‖d m f m|r f s f|m s l s|f l t l|s t d' t|l d' r' d'|t r' m' r'|d' - - ‖

1324 ‖d'l t s|t s l f|l f s m|s m f r|f r m d|m d r t,|r t, d, l,|d - - ‖d m r f|r f m s|m s f l|f l s t|s t l d'|l d' t r'|t r' d' m'|d' - - ‖

Fifths

135 ‖d'l f|t s m|l f r|s m d|f r t,|m d l,|r t, s,|d - - ‖d m s|r f l|m s t|f l d'|l s t r'|l d' m'|t r' f'|d' - - ‖

15 ‖d' f|t m|l r|s d|f t,|m l,|r s,|d -|‖d s|r l|m t|f d'|s r'|l m'|t f'|d' -|‖

151 ‖d' f d'|t m t|l r l|s d s|f t, f|m l, m|r s, r|d - -‖d s d|r l r|m t m|f d' f|s r' s|l m' l|t f' t|d' - -‖

153 ‖d' f l|t m s|l r f|s d m|f t, r|m l, d|r s, t,|d - -‖d s m|r l f|m t s|f d' l|s r' t|l m' d'|t f' r'|d' - -‖

152 ‖d' f t|t m l|l r s|s d f|f t, m|m l, r|r s d|d - -‖d s r|r l m|m t f|f d' s|s r' l|l m' t|t f' d'|d' - -‖

154 ‖d' f s|t m f|l r m|s d r|f t, d|m l, t,|r s, l,|d - -‖d s f|r l s|m t l|f d' t|s r' d'|l m' r'|t f' m'|d' - -‖

125 ‖d' t f|t l m|l s r|s f d|f m t,|m r l,|r d s,|d - -‖d r s|r m l|m f t|f s d'|s l r'|l t m'|t d' f'|d' - -‖

145 ‖d' s f|t f m|l m r|s r d'|f d' t,|m t, l,|r l, s,|d - -‖d f s|r s l|m l t|f t d'|s d' r'|l r' m'|t m' f'|d' - -‖

1235 ‖d' t l f|t l s m|l s f r|s f m d|f m r t,|m r d l,|r d t s,|d - - ‖d r m s|r m f l|m f s t|f s l d'|s l t r'|l t d' m'|t d' r' f'|d' - - ‖

1345 ‖d' l s f|t s f m|l f m r|s m r d|f r d t,|m d t, l,|r t, l, s,|d - - ‖d m f s|r f s l|m s l t|f l t d'|s t d' r'|l d' r' m'|t r' m' f'|d' - - ‖

1551 ‖d' f f d'|t m m t|l r r l|s d d s|f t, t, f|m l, l, m|r s, s, r|d - - ‖d s s d|r l l r|m t t m|f d' d' f|s r' r' s|l m' m' l|t f' f' t|d' - - ‖

1553 ‖d' f f l|t m m s|l r r f|s d d m|f t, t, r|m l, l, d|r s, s, t,|d - - ‖d s s m|r l l f|m t t s|f d' d' l|s r' r' t|l m' m' d'|t f' f' r'|d' - - ‖

1351 ‖d' l f d'|t s m t|l f r l|s m d s|f r t, f|m d l, m|r t, s, n|d - - ‖d m s d|r f l r|m s t m|f l d' f|s t r' s|l d' m' l|t r' f' t|d' - - ‖

1352 ‖d' l f t|t s m l|l f r s|s n d f|f r t, m|m d l, r|r t, s d|d - - ‖d m s r|r f l m|m s t f|f l d' s|s t r' l|l d' m' t|t r' f' d'|d' - - ‖

1353 ‖d' l f l|t s m s|l f r f|s m d n|f r t, r|m d l, d|r t, s t,|d - - ‖d m s m|r f l f|m s t s|f l d' l|s t r' t|l d' m' d'|t r' f' r'|d' - - ‖

1215 ‖d' t d' f|t l t m|l s l r|s f s d|f m f t,|m r m l,|r d r s,|d - - ‖d r d s|r m r l|m f m t|f s f d'|s l s r'|l t l m'|t d' t f'|d' - - ‖

1315 ‖d' l d' f|t s t m|l f l r|s m s d|f r f t,|m d m l,|r t, r s|d - - ‖d m d s|r f r l|m s m t|f l f d'|s t s r'|l d' l m'|t r' t f'|d' - - ‖

1531 ‖d' f l d'|t m s t|l r f l|s d m s|f t, r f|m l, d m|r s, t, r|d - - ‖d s m d|r l f r|m t s m|f d' l f|s r' t s|l m' d' l|t f' r' t|d' - - ‖

1513 ‖d' f d' l|t m t s|l r l f|s d s m|f t, f r|m l, m d|r s, r t,|d - - ‖d s d m|r l r f|m t m s|f d' f l|s r' s t|l m' l d'|t f' t r'|d' - - ‖

1548 ‖d' f s l|t m f s|l r m f|s d r m|f t, d r|m l, t, d|r s, l, t,|d - - ‖d s f m|r l s f|m t l s|f d' t l|s r' d' t|l m' r' d'|t f' m' r'|d' - - ‖

1545 ‖d' f s f|t m f m|l r m r|s d r d|f t, d t,|m l, t, l,|r s, l, s,|d - - ‖d s f s|r l s l|m t l t|f d' t d'|s r' d' r'|l m' r' m'|t f' m' f'|d' - - ‖

1245 ‖d' t s f|t l f m|l s m r|s f r d|f m d t,|m r t, l,|r d l, s,|d - - ‖d r f s|r m s l|m f l t|f s t d'|s l d' r'|l t r' m'|t d' m' f'|d' - - ‖

1454 {d' s f s | t f m f | l m r m | s r d r | f d t, d | m t, l, t, | r l, s, l, | d - - - || d f s f | r s l s | m l t l | f t d' t | s d' r' d' | l r' m' r | t m' f' m | d' - - ||

1514 {d' f d s | t m t f | l r l m | s d s r | f t, f d | m l, m t, | r s, r l, | d - - - || d s d f | r l r s | m t m l | f d' f t | s r' s d' | l m' l' r' | t f' t m' | d' - - ||

1534 {d' f l s | t m s f | l r f m | s d m r | f t, r d | m l, d t, | r s, t l, | d - - - || d s m f | r l f s | m t s l | f d' l t | s r' t d' | l m' d' r' | t f' r' m' | d' - - ||

1451 {d' s f d' | t f m t | l m r l | s r d s | f d t, f | m t, l, m | r l, s, r | d - - - || d f s d | r s l r | m l t m | f t d' f | s d' r' s | l r' m' l' | t m' f' t | d' - - ||

1453 {d' s f l | t f m s | l m r f | s r d m | f d t, r | m t, l, d | r l, s, t, | d - - - || d f s m | r s l f | m l t s | f t d' l | s d' r' t | l r' m' d' | t m' f' r' | d' - - ||

1253 {d' t f l | t l m s | l s r f | s f d m | f m t, r | m r l, d | r d s, t, | d - - - || d r s m | r m l f | m f t s | f s d' l | s l r' t | l t' m' d' | t d' f' r' | d' - - ||

1325 {d' l t f | t s l m | l f s r | s m f d | f r m t, | m d r l, | r t, d s, | d - - - || d m r s | r f m l | m s f t | f l s d' | s t l r' | l d' t' m' | t r' d' f' | d' - - ||

1415 {d s d' f | t f t m | l m l r | s r s d | f d f t, | m t, m l, | r l, r s, | d - - - || d f d s | r s r l | m l m t | f t f d' | s d' s r' | l r' l' m' | t m' t' f' | d' - - ||

1435 {d' s l f | t f s m | l m f r | s r m d | f d r t, | m t, d l, | r l, t, s, | d - - - || d f m s | r s f l | m l s t | f t l d' | s d' t r' | l r' d' m' | t m' r' f' | d' - - ||

1425 {d' s t f | t f l m | l m s r | s r f d | f d m t, | m t, r l, | r l, d s, | d - - - || d f r s | r s m l | m l f t | f t s d' | s d' l r' | l r' t m' | t m' d' f' | d' - - ||

Naturally, as the range of the sequence figure extends, more permutations and combinations of notes become available, and the number of three-note and four-note sequences increases accordingly. Of the seventy odd sequences possible under this heading of three and four-note Sequences of Fifths, we add a few more in formula.

1521	1532	1542	1254
1523	1535	1251	1354
1524	1541	1252	1452

S I X T H S

146 {d' s m | t f r | l m d | s r t, | f d l, | m t, s, | r l, f, | d - - || d f l | r s t | m l d' | f t r' | s d' m' | l r' f' | t m' s' | d' - - ||

16 {d' m | t r | l d | s t, | f l, | m s, | r f, | d - || d l | r t | m d' | f r' | s m' | l f' | t s' | d' - ||

161 {d' m d' | t r t | l d l | s t, s | f l, f | m s, m | r f, r | d - - || d l d | r t r | m d' m | f r' f | s m' s | l f' l | t s' t | d' - - ||

162 {d' m t | t r l | l d s | s t, f | f l, m | m s, r | r f, d | d - - || d l r | r t m | m d' f | f r' s | s m' l | l f' t | t s' d' | d' - - ||

163 {d' m l | t r s | l d f | s t, m | f l, r | m s, d | r f, t, | d - - || d l m | r t f | m d' s | f r' l | s m' t | l f' d' | t s' r' | d' - - ||

164 {d' m s | t r f | l d m | s t, r | f l, d | m s, t, | r f, l, | d - - || d l f | r t s | m d' l | f r' t | s m' d' | l f' r' | t s' m' | d' - - ||

165 {d' m f | t r m | l d r | s t, d | f l, t, | m s, l, | r f, s, | d - - || d l s | r t l | m d' t | f r' d' | s m' r' | l f' m' | t s' f' | d' - - ||

126 | d't m | t l r | l s d | s f t, | f m l, | m r s, | r d f, | d -- || d r l | r m t | m f d' | f s r' | s l m' | l t f' | t d's' | d' -- ||

136 | d' l m | t s r | l f d | s m t, | f r l, | m d s, | r t f, | d -- || d m l | r f t | m s d' | f l r' | s t m' | l d' f' | t r' s' | d' -- ||

156 | d' f m | t m r | l r d | s d t, | f t l, | m l s, | r s f, | d -- || d s l | r l t | m t d' | f d' r' | s r' m' | l m' f' | t f s' | d' -- ||

1464 | d' s m s | t f r f | l m d m | s r t, r | f d l, d | m t, s, t, | r l, f, l, | d --- || d f l f | r s t s | m l d' l | f t r' t | s d' m d' | l r' f' r' | t m s' m | d' -- ||

1461 | d s m d' | t f r t | l m d l | s r t, s | f d l, f | m t, s, m | r l, f, r | d --- || d f l d | r s t r | m l d' m | f t r' f | s d' m s | l r' f' l | t m s' t | d' -- ||

1641 | d' m s d' | t r f t | l d m l | s t, r s | f l, d f | m s, t, m | r f, l, r | d --- || d l f d | r t s r | m d' l m | f r' t f | s m d' s | l f' r' l | t s' m' t | d' -- ||

1462 | d' s m t | t f r l | l m d s | s r t, f | f d l, m | m t, s, r | r l, f, d | d --- || d f l r | r s t m | m l d' f | f t r' s | s d' m l | l r f' t | t m s d' | d' -- ||

1463 | d s m l | t f r s | l m d f | s r t, m | f d l, r | m t, s, d | r l, f, t, | d --- || d f l m | r s t f | m l d' s | f t r' l | s d' n t | l r' f' d' | t m s' r | d' -- ||

1612 | d' m d' | t r t l | l d l s | s t s f | f l, f m | m s, m r | r f, r d | d --- || d l d r | r t r m | m d' m f | f r' f s | s m' s l | l f' l t | t s' t d' | d' -- ||

1642 | d' m s t | t r f l | l d m s | s t, r f | f l, d m | m s, t, r | r f, l, d | d --- || d l f r | r t s m | m d' l f | f r' t s | s m d' l | l f' r' t | t s' m d' | d' -- ||

1246 | d' t s m | t l f r | l s m d | s f r t, | f m d l, | m r t, s, | r d l, f, | d --- || d r f l | r m s t | m f l d' | f s t r' | s l d m' | l t r' f' | t d' m s' | d' -- ||

1643 | d' m s l | t r f s | l d m f | s t, r m | f l, d r | m s, t, d | r f, l, t, | d --- || d l f m | r t s f | m d' l s | f r' t l | s m d' t | l f' r' d' | t m s' r | d' -- ||

1654 | d' m f s | t r m f | l d r m | s t, d r | f l, t, d | m s, l, t, | r f, s, l, | d --- || d l s f | r t l s | m d' t l | f r d' t | s m r d' | l f' m' r' | t s' f m | d' -- ||

1645 | d m s f | t r f m | l d m r | s t, r d | f l, d t, | m s, t, l, | r f, l, s, | d --- || d l f s | r t s l | m d' l t | f r' t d' | s m' d' r | l f' r' m' | t s' m' f | d' -- ||

1646 | d' m s m | t r f r | l d m d | s t, r t, | f l, d l, | m s, t, s, | r f, l, f, | d --- || d l f l | r t s t | m d' l d' | f r' t r' | s m d' m | l f' r' f' | t s' m' s | d' -- ||

1456 | d' s f m | t f m r | l m r d | s r d t, | f d t, l, | m t, l, s, | r l, s, f, | d --- || d f s l | r s l t | m l t d' | f t d r' | s d' r' m | l r' m f' | t m' f' s | d' -- ||

1446 | d' s d' m | t f t r | l m l d | s r s t, | f d f l, | m t, m s, | r l, r f, | d --- || d f d l | r s r t | m l m d' | f t f r' | s d' m' | l r' l f' | t m' t s' | d' -- ||

1651 | d' m f d' | t r m t | l d r l | s t, d s | f l, t, f | m s, l, m | r f, s, r | d --- || d l s d | r t l r | m d' t m | f r' d' f | s m' r' s | l f m' l | t s' f' t | d' -- ||

1653 | d' n f l | t r m s | l d r f | s t, d m | f l, t, r | m s, l, d | r f, s, t, | d --- || d l s m | r t l f | m d' t s | f r' d' l | s m' r' t | l f m' d' | t s' f' r | d' -- ||

1261 | d' t m d' | t l r t | l s d l | s f t, s | f m l, f | m r s, m | r d f, r | d --- || d r l d | r m t r | m f d' m | f s r' f | s l m' s | l t f' l | t d' s' t | d' -- ||

1262 | d' t m t | t l r l | l s d s | s f t, f | f m l, m | m r s, r | r d f, d | d --- || d r l r | r m t m | m f d' f | f s r' s | s l m' l | l t f' t | t d' s' d | d' -- ||

1263 | d' t m l | t l r s | l s d f | s f t, m | f m l, r | m r s, d | r d f, t, | d --- || d r l m | r m t f | m f d' s | f s r' l | s l m' t | l t f' d' | t d' s' r | d' -- ||

1264 | d' t m s | t l r f | l s d m | s f t, r | f m l, d | m r s, t, | r d f, l, | d --- || d r l f | r m t s | m f d' l | f s r' t | s l m' d' | l t f' r' | t d' s' m | d' -- ||

1236 | d' t l m | t l s r | l s f d | s f m t, | f m r l, | m r d s, | r d t, f, | d --- || d r m l | r m f t | m f s d' | f s l r' | s l t m' | l t d' f' | t d' r' s' | d' -- ||

1326 | d' l t m | t s l r | l f s d | s m f t, | f r m l, | m d r s, | r t d f, | d --- || d m r l | r f m t | m s f d' | f l s r' | s t l m' | l d' t f' | t r' d' s' | d' -- ||

1346 | d' l s m | t s f r | l f m d | s m r t, | f r d l, | m d t s, | r t l, f, | d --- || d m f l | r f s t | m s l d' | f l t r' | s t d m' | l d' r f' | t r' m' s' | d' -- ||

1364 ‖d' l m s | t s r f | l f d m | s m t, r | f r l, d | m d s, t, | r t, f, l, | d - - - ‖ d m l f | r f t s | m s d' l | f l r' t | s t m' d' | l d' f' r' | t r' s' m' | d' - - ‖

1634 ‖d' m l s | t r s f | l d f m | s t, m r | f l, r d | m s, d t, | r f, t, l, | d - - - ‖ d l m f | r t f s | m d' s l | f r' l t | s m' t d' | l f' d' r' | t s' r' m' | d' - - ‖

1563 ‖d' f m l | t m r s | l r d f | s d t, m | f t, l, r | m l, s, d | r s, f, t, | d - - - ‖ d s l m | r l t f | m t d' s | f d' r' l | s r' m' t | l m' f' d' | t f' s' r' | d' - - ‖

1256 ‖d' t f m | t l m r | l s r d | s f d t, | f m t, l, | m r l, s, | r d s, f, | d - - - ‖ d r s l | r m l t | m f t d' | f s d' r' | s l r' m' | l t m' f' | t d' f' s' | d' - - ‖

1516 ‖d' f d' m | t m t r | l r l d | s d s t, | f t, f l, | m l, m s, | r s, r f, | d - - - ‖ d s d l | r l r t | m t m d' | f d' f r' | s r' s m' | l m' l f' | t f' t s' | d' - - ‖

1526 ‖d' f t m | t m l r | l r s d | s d f t, | f t, m l, | m l, r s, | r s, d f, | d - - - ‖ d s r l | r l m t | m t f d' | f d' s r' | s r' l m' | l m' t f' | t f' d' s' | d' - - ‖

1536 ‖d' f l m | t m s r | l r f d | s d m t, | f t, r l, | m l, d s, | r s, t, f, | d - - - ‖ d s m l | r l f t | m t s d' | f d' l r' | s r' t m' | l m' d' f' | t f' r' s' | d' - - ‖

We add to the above 40 more sequences in formula.

1613	1663	1336	1216	1426
1614	1664	1631	1265	1436
1615	1665	1632	1316	1465
1624	1621	1635	1361	1564
1625	1622	1226	1362	1565
1626	1623	1652	1363	1561
1636	1556	1656	1365	1546
1662	1446	1661	1356	1562

SEVENTHS

17 ‖d' r | t d | l t, | s l, | f s, | m f, | r m, | d - ‖ d t | r d' | m r' | f m' | s f' | l s' | t l' | d' - ‖

171 ‖d' r d' | t d t | l t, l | s l, s | f s, f | m f, m | r m, r | d - - ‖ d t d | r d' r | m r' m | f m' f | s f' s | l s' l | t l' t | d' - - ‖

172 ‖d' r t | t d l | l t, s | s l, f | f s, m | m f, r | r m, d | d - - ‖ d t r | r d' m | m r' f | f m' s | s f' l | l s' t | t l' d' | d' - - ‖

173 ‖d' r l | t d s | l t, f | s l, m | f s, r | m f, d | r m, t, | d - - ‖ d t m | r d' f | m r' s | f m' l | s f' t | l s' d' | t l' r' | d' - - ‖

174 ‖d' r s | t d f | l t, m | s l, r | f s, d | m f, t, | r m, l, | d - - ‖ d t f | r d' s | m r' l | f m' t | s f' d' | l s' r' | t l' m' | d' - - ‖

175 ‖d' r f | t d m | l t, r | s l, d | f s, t, | m f, l, | r m, s, | d - - ‖ d t s | r d' l | m r' t | f m' d' | s f' r' | l s' m' | t l' f' | d' - - ‖

176 ‖d' r m | t d r | l t, d | s l, t, | f s, l, | m f, s, | r m, f, | d - - ‖ d t l | r d' t | m r' d' | f m' r' | s f' m' | l s' f' | t l' s' | d' - - ‖

127 ‖d' t r | t l d | l s t, | s f l, | f m s, | m r f, | r d m, | d - - ‖ d r t | r m d' | m f r' | f s m' | s l f' | l t s' | t d' l' | d' - - ‖

137 ‖d' l r | t s d | l f t, | s m l, | f r s, | m d f, | r t, m, | d - - ‖ d m t | r f d' | m s r' | f l m' | s t f' | l d' s' | t r' l' | d' - - ‖

147 ‖d' s r | t f d | l m t, | s r l, | f d s, | m t, f, | r l, m, | d - - ‖ d f t | r s d' | m l r' | f t m' | s d' f' | l r' s' | t m' l' | d' - - ‖

157 ‖d' f r | t m d | l r t, | s d l, | f t, s, | m l, f, | r s, m, | d - - ‖ d s t | r l d' | m t r' | f d' m' | s r' f' | l m' s' | t f' l' | d' - - ‖

167 ‖d' m r | t r d | l d t, | s t, l, | f l, s, | m s, f, | r f, m, | d - - ‖ d l t | r t d' | m d' r' | f r' m' | s m' f' | l f' s' | t s' l' | d' - - ‖

1357 |d'lfr|tsmd|lfrt,|smdl,|frt,s|mdl,f|rt,sm|d---||dmst|rfld'|mstr|fldm'|strf'|ldm's|trf'l'|d---||

1753 |d'rfl|tdms|lt,rf|sl,dm|fs,t,r|mf,ld|rm,st|d---||dtsm|rd'lf|mr'ts|fm'd'l|sfr't|lsmd'|tl'f'r|d'---||

1537 |dflr|tmsd|lrft,|sdml,|ft,rs,|ml,df,|rs,t,m|d---||dsmt|rlfd'|mtsr'|fd'lm|sr'tf'|lmds'|tfrl'|d'---||

1573 |d'frl|tmds|lrt,f|sdl,m|ft,s,r|ml,f,d|rs,m,t|d---||dstm|rld'f|mtrs|fd'm'l|srf't|lmsd'|tf'l'r|d'---||

1237 |d'tlr|tlsd|lsft,|sfml,|fmrs,|mrdf,|rdt,m|d---||drmt|rmfd'|mfsr'|fslm'|sltf'|ltds'|tdr'l'|d'---||

1327 |d'lt r|tsld|lfst,|smfl,|frms,|mdrf|rtdm,|d---||dmrt|rfmd'|msfr'|flsm'|stlf'|ldts'|trd'l'|d'---||

1667 |dfmr|tmrd|lrdt,|sdt,l,|ft,l,s|ml,s,f|rs,t,m|d---||dslt|rltd'|mtdr'|fdrm'|srm'f'|lmfs'|tfsl'|d'---||

1657 |d'mfr|trmd|ldrt,|st,dl,|fl,ts,|ms,l,f|rf,sm|d---||dlst|rtld'|md'tr|frdm'|sm'rf'|lfms'|tsf'l'|d'---||

1671 |dmrd'|trdt|ldt,l|st,l,s|fl,s,f|ms,f,m|rf,m,r|d---||dltd|rtd'r|mdrm|frmf'|smfs|lfsl|tsl't|d'---||

1761 |drmd'|tdrt|lt,dl|sl,t,s|fs,l,f|mf,sm|rm,f,r|d---||dtld|rdtr|mrdm|fmrf'|sfms|lsf'l|tlst|d'---||

1571 |d'frd'|tmdt|lrt,l|sdl,s|ft,sf|ml,f,m|rs,m,r|d---||dstd|rld'r|mtrm|fdmf'|erfs|lms'l|tf'lt|d'---||

1751 |d'rfd'|tdmt|lt,rl|sl,ds|fs,t,f|mfl,m|rm,s,r|d---||dtsd|rd'lr|mr'tm|fmdf'|sfr's|lsm'l|tlf't|d'---||

1317 |d'ld'r|tstd|lflt,|smsl,|frfs,|mdmf,|rt,r,m|d---||dmdt|rfrd'|msmr'|flfm'|stsf'|ld'ls'|trtl'|d'---||

1713 |drd'l|tdts|lt,lf|sl,sm|fsfr|mf,md|rm,rt,|d---||dtdm|rd'rf|mr'ms|fmfl|sfst|ls'ld'|tl'tr'|d'---||

1517 |d'fd'r|tmtd|lrlt,|sdsl,|ft,fs,|ml,mf,|rs,rm,|d---||dsdt|rlrd'|mtmr'|fd'fm'|sr'sf'|lm'ls'|tf'tl'|d'---||

1715 |drd'f|tdtm|lt,lr|sl,sd|fs,ft,|mf,ml,|rm,rs,|d---||dtds|rd'rl|mr'mt|fm'fd'|sfsr'|lslm'|tl'tf'|d'---||

1617 |d'nd'r|trtd|ldlt,|st,sl,|fl,fs,|ms,mf,|rf,rm,|d---||dldt|rtrd'|mdmr'|fr'fm'|sn'sf'|lfls'|tstl'|d'---||

1716 |d'rd'm|tdtr|lt,ld|sl,st,|fs,fl,|mf,ms,|rm,rf,|d---||dtdl|rd'rt|mr'md'|fmfr'|sfsm'|lslf'|tl'ts'|d'---||

1627 |d'mtr|trld|ldst|st,fl,|fl,ms,|ms,rf,|rf,dm,|d---||dlrt|rtmd'|mdfr'|fr'sm'|sm'lf'|lfts'|tsdl'|d'---||

1726 |d'rtm|tdlr|lt,sd|sl,ft,|fs,ml,|mf,rs,|rm,df,|d---||dtrl|rd'mt|mrfd'|fm'sr'|sfln'|lstf'|tl'ds'|d'---||

1372 |d'lrt|tsdl|lft,s|sml,f|frs,n|mdf,r|rt,n,d|d---||dmtr|rfd'n|msrf|fln's|stfl|ld's't|tr'ld'|d'---||

1732 |d'rlt|tdsl|lt,fs|sl,mf|fs,rm|mf,dr|rm,td|d---||dtmr|rd'fm|mr'sf|fm'ls|sftl|ls'd't|tl'r'd|d'---||

1375 |d'lrf|tsdm|lft,r|sml,d|fr,t,|mdf,l,|rt,m,s|d---||dmts|rfd'l|msr't|flmd'|stfr'|ld's'm|tr'l'f|d'---||

1267 |d'tmr|tlrd|lsdt,|sft,l,|fm,l,s|mrs,f|rdf,m|d---||drlt|rmtd'|mfdr'|fsrm'|slm'f|ltfs'|tds'l'|d'---||

1672 |d'mrt|trdl|ldt,s|st,lf|fl,sm|ms,fr|rf,md|d---||dltr|rtd'm|md'r'f|fr'm's|sm'f'l|lfst|ts'l'd|d'---||

1467 |d'smr|tfrd|lmdt,|srt,l,|fdl,s,|mt,s,f,|rl,f,m|d---||dflt|rstd'|mld'r|ftrm'|sdm'f'|lrfs|tms'l'|d'---||

1764 {|d'rms|tdrf|lt,dm|sl,t,r|fs,l,d|mf,s,t|rm,f,l,|d---||dtlf|rd'ts|mr'd'l|fm'r't|sf'm'd'|ls'f'r'|tl's'm'|d'---||

1647 {|d'msr|trfd|ldmt,|st,rl,|fl,ds|ms,t,f,|rf,l,m,|d---||dlft|rtsd'|md'lr'|fr'tm'|sm'd'f'|lf'r's'|ts'm'l'|d'---||

A list of 40 more sequences is given below.

1712	1746	1771	1572	1367
1721	1752	1271	1575	1427
1723	1754	1275	1673	1437
1725	1756	1276	1675	1457
1731	1757	1371	1676	1547
1735	1762	1373	1217	1772
1741	1765	1471	1257	1557
1745	1767	1475	1347	1637

OCTAVES

18 {|d'd|tt,|ll,|ss,|ff,|mm,|rr,|d-||dd'|rr'|mm'|ff'|ss'|ll'|tt'|d'-||

181 {|d'dd'|tt,t|ll,l|ss,s|ff,f|mm,m|rr,r|d--||dd'd|rr'r|mm'm|ff'f|ss's|ll'l|tt't|d'--||

182 {|d'dt|tt,l|ll,s|ss,f|ff,m|mm,r|rr,d|d--||dd'r|rr'm|mm'f|ff's|ss'l|ll't|tt'd'|d'--||

183 {|d'dl|tt,s|ll,f|ss,m|ff,r|mm,d|rr,t,|d--||dd'm|rr'f|mm's|ff'l|ss't|ll'd'|tt'r'|d'--||

184 {|d'ds|tt,f|ll,m|ss,r|ff,d|mm,t,|rr,l,|d--||dd'f|rr's|mm'l|ff't|ss'd'|ll'r'|tt'm'|d'--||

186 {|d'dm|tt,r|ll,d|ss,t,|ff,l,|mm,s,|rr,f,|d--||dd'l|rr't|mm'd'|ff'r'|ss'm'|ll'f'|tt's'|d'--||

187 {|d'dr|tt,d|ll,t,|ss,l,|ff,s,|mm,f,|rr,m,|d--||dd't|rr'd'|mm'r'|ff'm'|ss'f'|ll's'|tt'l'|d'--||

138 {|d'ld|tst,|lfl,|sms,|frf,|mdm,|rt,r,|d--||dmd'|rfr'|msm'|flf'|sts'|ld'l'|tr't'|d'--||

148 {|d'sd|tft,|lml,|srs,|fdf,|mt,m,|rl,r,|d--||dfd'|rsr'|mlm'|ftf'|sd's'|lr'l'|tm't'|d'--||

168 {|d'md|trt,|ldl,|st,s,|fl,f,|ms,m,|rf,r,|d--||dld'|rtr'|md'm'|fr'f'|sm's'|lf'l'|ts't'|d'--||

1468 {|d'smd|tfrt,|lmdl,|srt,s,|fdl,f,|mt,s,m,|rl,f,r,|d---||dfld'|rstr'|mldm'|ftr'f'|sd'm's'|lr'f'l'|tm's't'|d'---||

1864 {|d'dms|tt,rf|ll,dm|ss,t,r|ff,l,d|mm,s,t,|rr,f,l,|d---||dd'lf|rr'ts|mm'd'l|ff'r't|ss'm'd'|ll'f'r'|tt's'm'|d'---||

1846 {|d'dsm|tt,fr|ll,md|ss,rt,|ff,dl,|mm,ts,|rr,l,f,|d---||dd'fl|rr'st|mm'ld'|ff'tr'|ss'd'm'|ll'r'f'|tt'm's'|d'---||

1648 {|d'msd|trft,|ldml,|st,rs,|fl,df,|ms,t,m,|rf,l,r,|d---||dlfd'|rtsr'|md'lm'|fr'tf'|sm'ds'|lf'r'l'|ts'm't'|d'---||

1484 {|d'sds|tft,f|lml,m|srs,r|fdf,d|mt,m,t,|rl,r,l,|d---||dfd'f|rsr's|mlm'l|ftf't|sd's'd'|lr'l'r'|tm't'm'|d'---||

1686 {|d'mdm|trt,r|ldl,d|st,s,t,|fl,f,l,|ms,m,s,|rf,r,f,|d---||dld'l|rtr't|md'm'd'|fr'f'r'|sm's'm'|lf'l'f'|ts't's'|d'---||

1681 {|d'mdd'|trt,t|ldl,l|st,s,s|fl,f,f|ms,m,m|rf,r,r|d---||dld'd|rtr'r|md'm'm|fr'f'f|sm's's|lf'l'l|ts't't|d'---||



We add a list of 40 more octave sequences in formula.

1821	1871	1385	1781	1518
1823	1875	1481	1786	1548
1834	1878	1482	1218	1568
1843	1881	1581	1248	1658
1851	1281	1582	1268	1678
1856	1286	1585	1928	1718
1865	1287	1682	1428	1728
1867	1382	1683	1458	1768

NOTES ON THE ABOVE SEQUENCES

It should be noted that all the sequences above have been limited purposely to 4 notes. The result of this limitation of the sequence to four notes is that in sequences of more extended range, e.g., 5ths, 6ths, 7ths and 8^{ves}, more and more disjunct motion or skipping has been made necessary in the sequence figure. However, with the lengthening of the sequence figure from 4 notes to 5, 6, 7, 8 or 9 notes, such skipping can be more and more avoided and conjunct or stepwise motion introduced. This will be illustrated in the next chapter.

The above sequences, then, especially from 5ths upwards, must not be regarded as typical sequences for the Singing Class. They have been given here simply to demonstrate the method and to show what can be done with four-note sequences. Indeed, they do not exhaust the permutations and combinations possible with four notes. Thus, in the 8^{ve} sequences, while we have written 40 sequences, and given other 40 in formula, this number is actually less than half the number of two, three and four-note octave sequences which might have been given in this section.

Tables of Sequences, classified according to the range and number of notes in the sequence figure will be found on pages 186-193.

Octave Marks

The octave marks given here and throughout the book correspond to the octave marks on the Sequence Modulator and not necessarily to the octave marks of the keys in which the sequences may be sung.

Repeated Notes in Sequence Singing

It will be noted that a number of the sequences in the first section (2nds and 3rds) contain repeated notes. These will be found to give more trouble to young children than the others. For example, 1223 is much more difficult than 123. But, as repeated notes are a common feature of melody, especially of childhood tunes, e.g. Nursery Rhymes - where they form about 25% of the total number of all intervals* - it is very necessary to include them in sol-faing or spelling practice.

Stepwise Approach to Intervals

Sequences containing new intervals should be approached first by stepwise motion before being taken by leap.

By various rhythmic devices it is possible to treat the intervening notes as passing notes, so that, when these have been mastered, the passing notes may be omitted and we are left with the bare interval.

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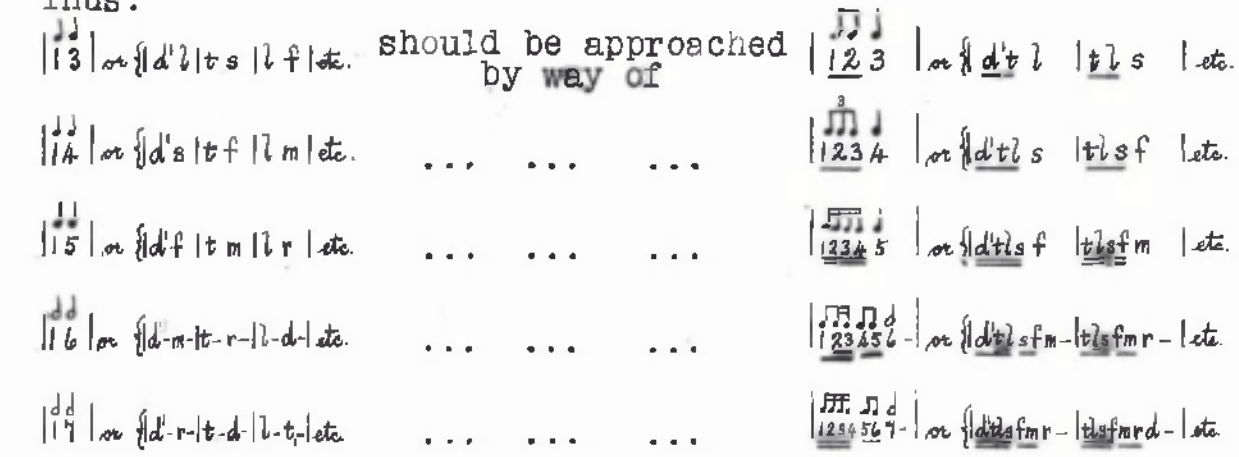
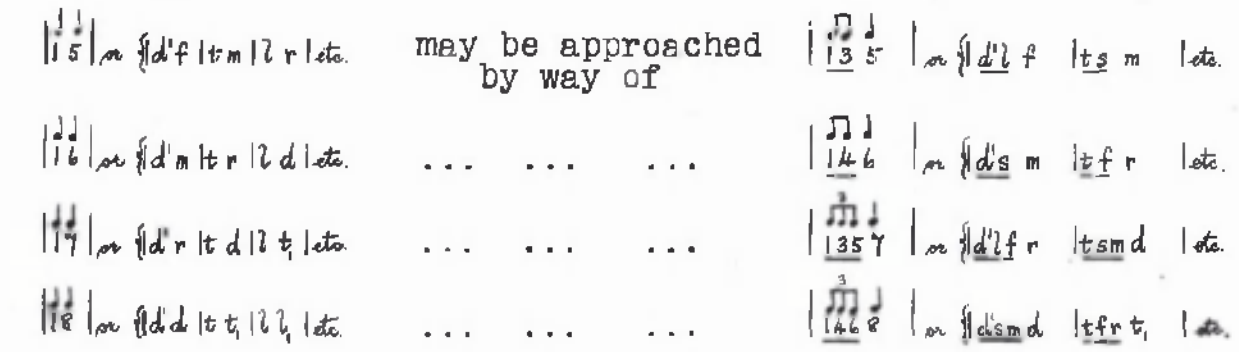
* See Page 639 (Vol. III)

Thus:



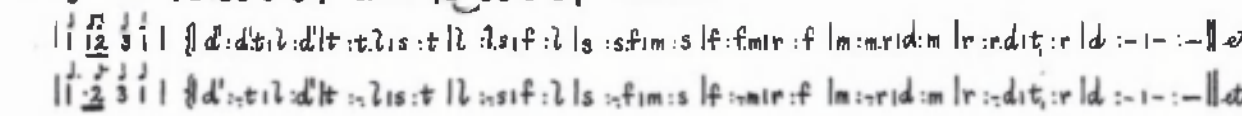
The wider intervals may also be approached by chord or arpeggio. Thus:



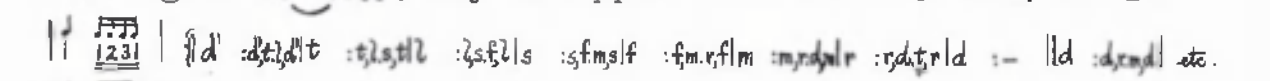
Contrasting Rhythms in Sequence Singing

Rhythmic Variety and Rhythm Spelling in Sequence Singing will be dealt with in a later chapter, but we take this opportunity to show how sequence singing may be used to illustrate new rhythmic patterns or to contrast new rhythmic patterns with old.

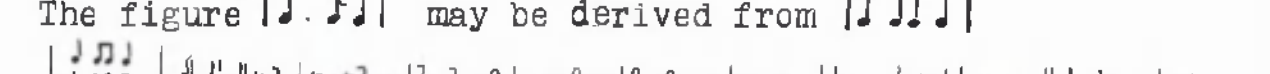
The figure |♩. ♪♩♩| for example may be arrived at by way of |♩ ♫ ♩ ♩| and |♩ ♫ ♩ ♩| thus:



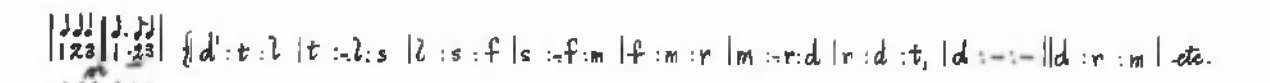
The figure | ♩ ♬ | may be approached from | ♩ ♬ | thus:



The figure | ♩. ♪ ♩ | may be derived from | ♩ ♫ ♩ |



While the rhythmic figures | ♩ ♩ ♩ | and | ♩. ♪ ♩ | may be sung and contrasted in the one sequence, thus:



It is a good plan to ask one half of the class (A) to sing the sequence | 1 2 3 | or | d' : d : t, l | while the other half (B) sing simultaneously the sequence | 1 · 2 3 | or | d' : - : t, l |. Then the order of A and B should be reversed. Thus:



In the same way | ♩. ♪ ♩ | should be deduced from | ♩ ♬ ♩ | and contrasted with it, thus:

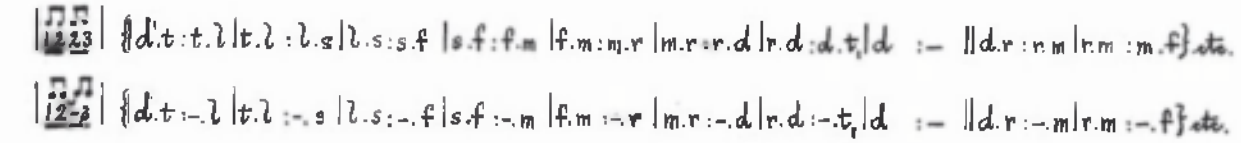




Any new rhythmic figure that gives trouble should be treated in this manner.

Syncopation

The technical problems of syncopation may likewise be demonstrated by means of tied notes in sequences. Thus:



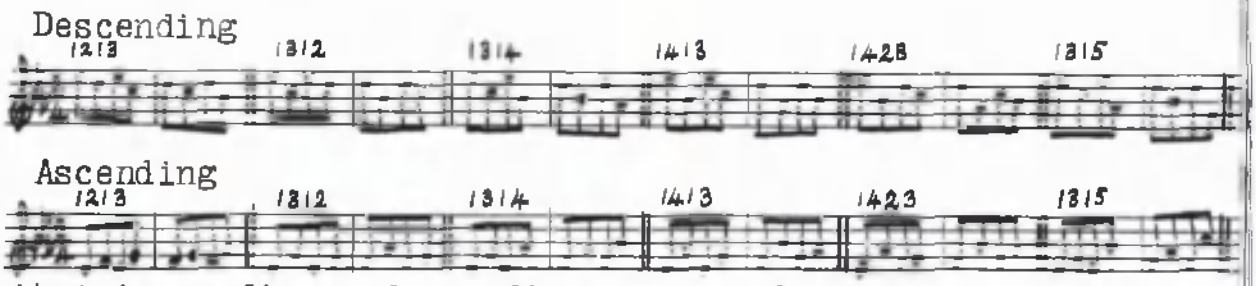
Mental Sequence Singing

The singing of sequences containing wide intervals, e.g., 6ths, 7ths or 8ves, may lend itself to the reproach that such singing may be harmful to young voices. Of course, the teacher who is careless of vocal tone in sequence singing is not likely to be careful of vocal tone in song singing. But it should be pointed out that, once the class have reached a certain stage of advancement, they should be capable of reading or singing sequences mentally, and they should receive every encouragement in this direction. This applies more particularly to the private student. In this case there can be no objection even to octave sequences.

The Technique of the Voice and of the Instrument

We saw that each musical instrument has its own technical problems, and the human voice is no exception to the rule. The teacher will soon find that among the

hardest of sequences to sing are those of the type -

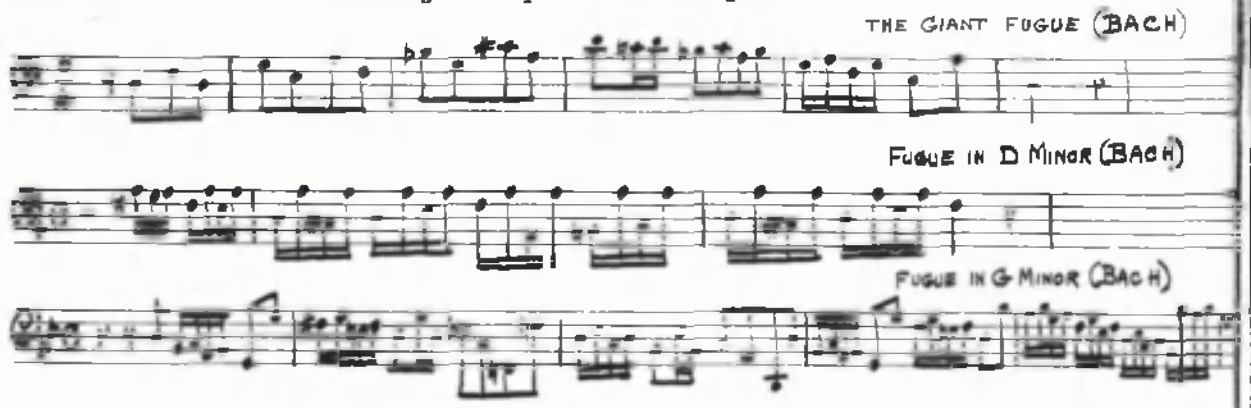


that is, a figure descending or ascending, then returning to the first note or within the leap, and descending or ascending to another note.

It is surprising how difficult pupils of Secondary Schools find the sequences -



if they have never before attempted them. Yet this type of figure is most common in music written for the organ pedals, where it is admirably adapted to a pair of feet.





Where Bach breaks off the fugue subject in a pedal passage as at (a) above - in this case the first and only entry of the subject in the pedals - it is not because he could not have woven the remaining part of the subject into the texture of the work, but simply because even he would have found the remaining part containing a scale passage (b) in semiquavers



very uncomfortable, if not impossible, to play at the required speed on the pedal keyboard. Hence, he breaks off abruptly and resumes the caterpillar motion - involving no crossing of the feet - which is so grateful to the player on the Pedal Board.

All the above are examples of melodies conceived in terms of a keyboard operated by a pair of feet.

Rapid scale passages, on the other hand, which are grateful to the voice and very common in vocal melody, present considerable difficulty on the pedals, and therefore are seldom found in the fugue subjects of Pedal Organ fugues. The famous opening of the Great Prelude and Fugue in D, although rendered practicable by the layout of the pedals in this key, will always hold terrors for the amateur organist.



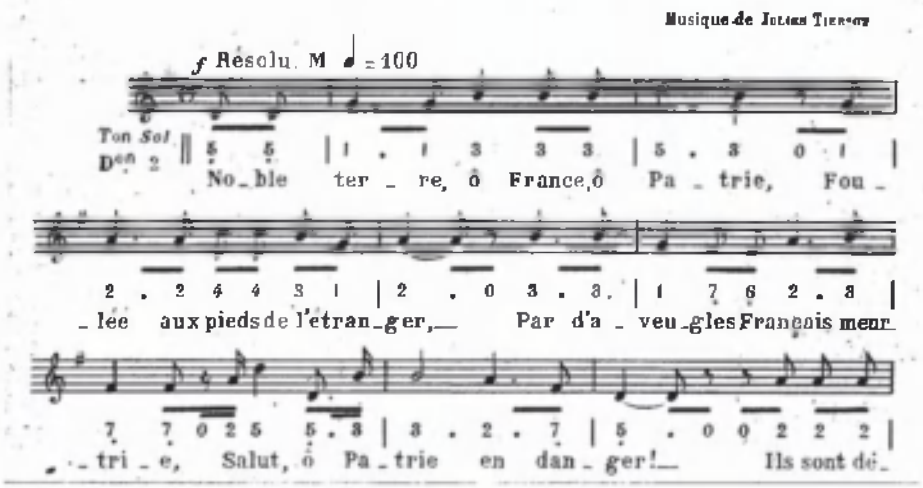
The human voice must, of course, be prepared to adapt itself to all types of melodic progression, whether vocal or instrumental in origin.

NOTE ON TIME NOTATIONS USED IN MOVABLE DOH SYSTEMS

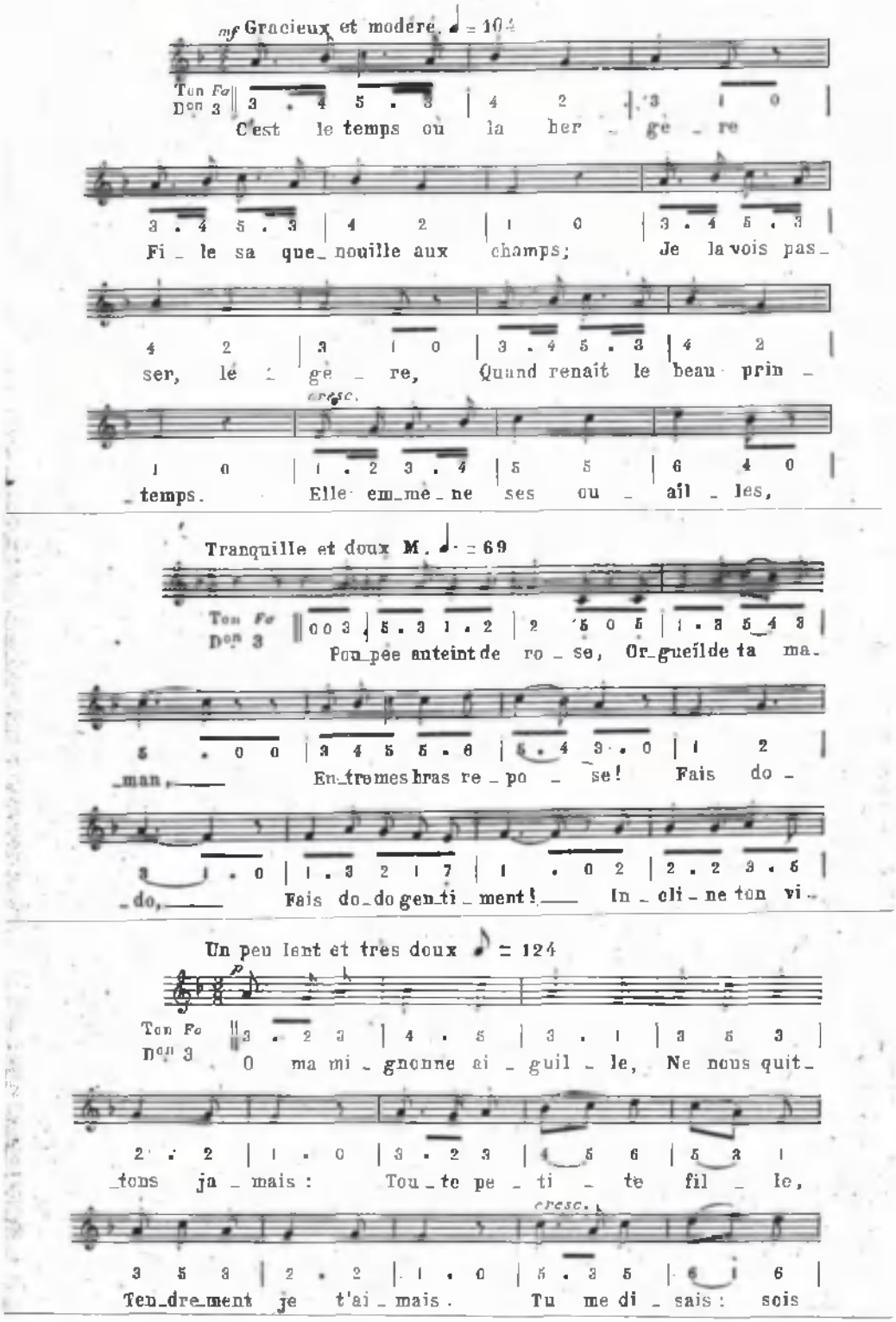
The writer has adopted a time notation for use with the noting of the sequence formulae in this book, and recommends its use for purposes of entering work done in class in the Record of Work.

It is an adaptation of the time notation used in the French Galin-Paris-Chevé System. (See Grove's Dictionary sub "Chevé".) In the Chevé system the numbers 1 2 3 etc. stand for the scale degrees, tonic, supertonic, mediant etc., while dots above or below the figures take the place of the dash (') of the tonic sol-fa system to represent higher or lower octaves. Rests are represented by zero signs (0), and a thick dot is used to show the continuation of the preceding sound. Where two or more notes are sung to one syllable, a curved slur mark is placed over the notes. The following examples (from "Douze Chants Scolaires", G.Michaelis, Paris, Librairie Hachette, 1920) will make this system clear.

QUATRE-VINGT-DOUZE'



Mélodie populaire bretonne.

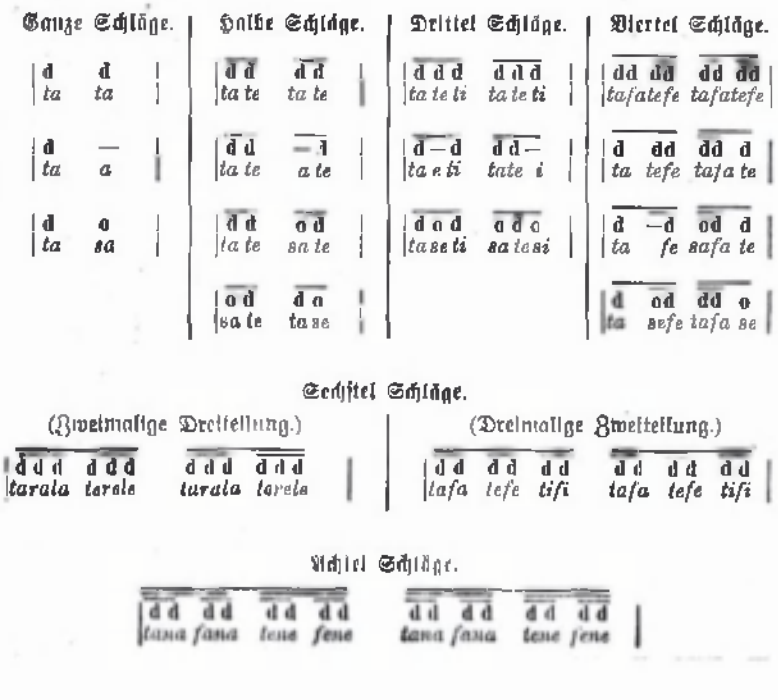


The "Tonika-Do" Method is the German equivalent of Curwen's Tonic Sol-fa Method. Its founder, the late Agnes Hundoegger, attended the Summer School of the Tonic Sol-fa College in London in 1895, and on returning to Hanover she at once commenced pioneer work in tonic sol-fa methods, which led eventually to the founding of the "Tonika-Do Bund". Germany has its John Hullah in the person of Dr Eitz, but, in spite of this, Tonika-Do has a large following there.
(Vide "Sol-fa in Germany" by Ursula Greville, "The Music Teacher", February 1928, Evans Bros.)

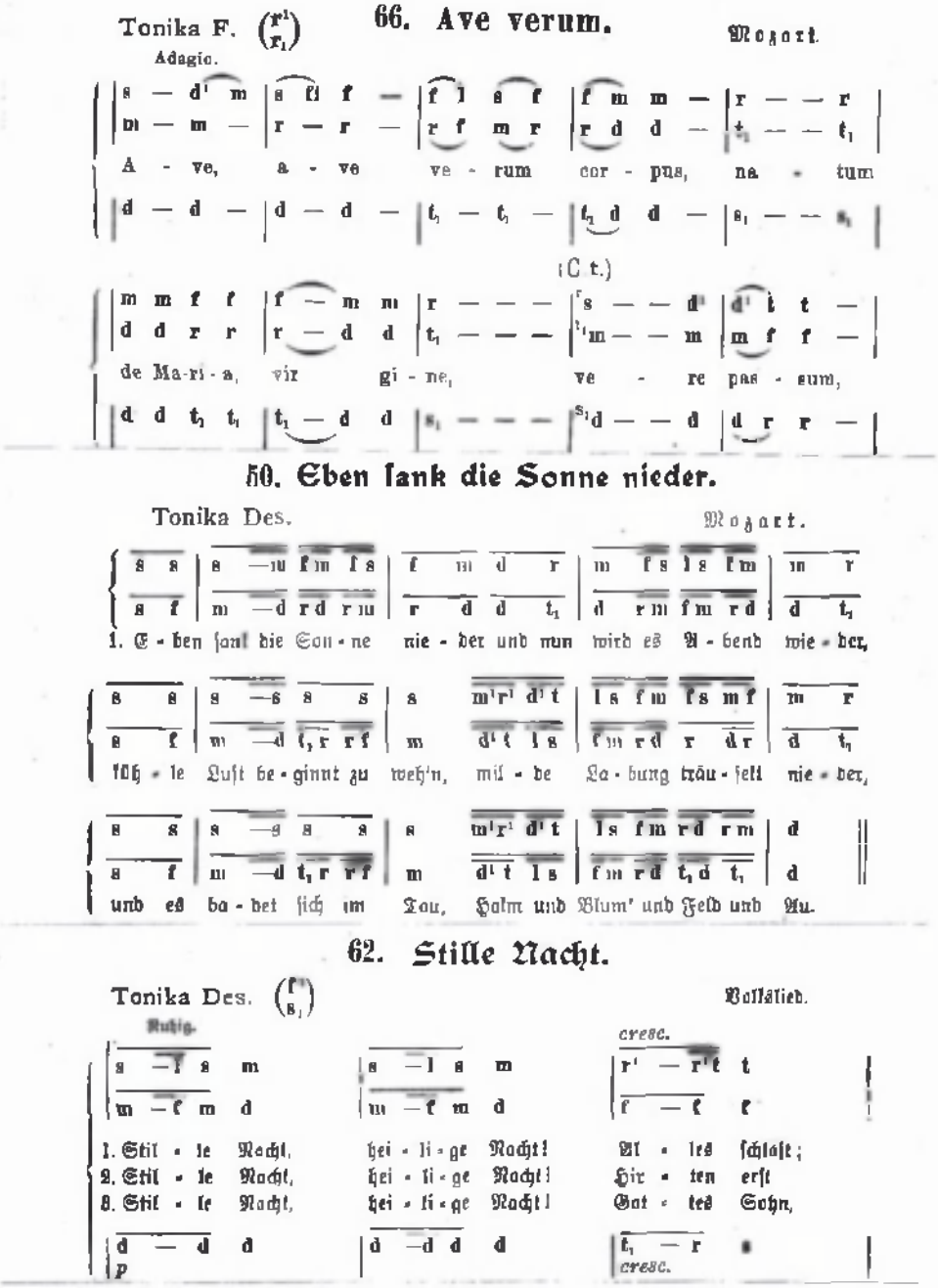
Tonika-Do exponents in Germany have taken over the sol-fa syllables, the Sol-fa Modulator and the transition or modulation system of bridge-notes etc. from Curwen, but they use the Chevé time notation. A Rhythm Table from "Übungsbuch zum Leitfaden der Tonika-Do-Lehre" (Tonika-Do-Verlag, Berlin) is given below.

Übersichtstabelle

der Takt-Schreibart und der rhythmischen Benennungen.

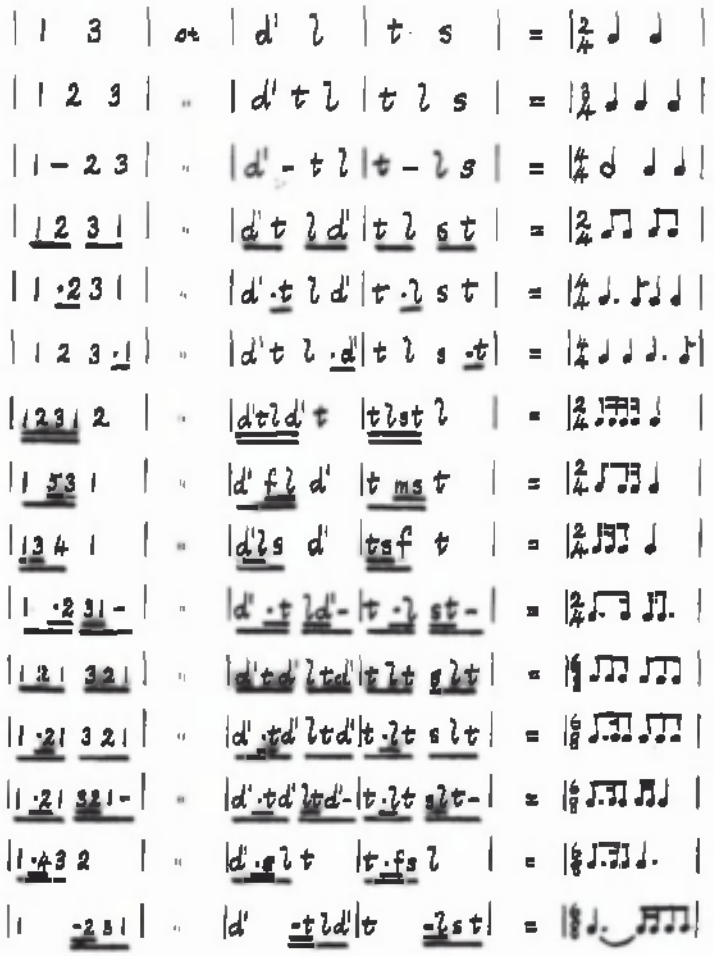


The following musical examples will illustrate all these points.



The notation used in this book for the sequence formulae and the sol-fa examples corresponds closely to the Chevé and the Tonika-Do systems. The figures 1234 etc. refer to the numbered columns on the Sequence Modulator. Figures or syllables standing alone represent one-pulse or one-beat notes, continuations are shown by a dash as in sol-fa time notation, and time notation symbols borrowed from the staff system are placed under the figures or notes. The dot has the same function as in staff.

Thus:



The following examples of Memory Tunes or Spelling Tunes, as used by the writer, will reveal the merits of this type of layout.

1. Slumber Song (Schumann)

Key E flat

s--	m'--	r'--	d'--	lse l	d'tl	s--	f--
m--	s--	f--	m--	rde r	l-l,	d--	t,--
s--	m'--	r'--	d'--	lse l	d'tl	s--	f--
m--	s--	f--	m--	rde r	f-t,	d--	---

Key B flat (r'=s)

s--	d--	d--	t,l,	s, t,	rf	f--	m--
s--	d--	l-r	l-re	mre m	sft,	d--	---

Repeat first four lines(d =s)

2. The Harmonious Blacksmith (Handel)

Key E

d	m	r	s	m	r d	r	s
m	l d	t,	s t,	l,	fe	s	-
d	m	r	s	m	r d	r	s
m	l d	t,	s t,	l,	fe	s	-
s	d' s	l	s	m s	d' s	l	s
m s	d' t	t l	l s	s f	mf s	r	-
s	d	r	d	s m	r d	r t,	d
s	d r	t, f	m r	m	r d	d	-

3. Melody in F (Rubinstein)

s,	fe s,	s,	fe s,	d	t, d	s	-
f	m r	m	r	d	t, l,	t,	l,
s,	fe s,	s,	fe s,	d	t, d	l	s
f	de r	m	r	d	-	-	-

Key C(t = m)

m	t l	s	r m	f s	l t	d'	d
m s	t l	s	r m	f s	l t	d'	.

Key A flat (d'= m)

m	m	s f	m	. m	m	s f	m	.
m,	m,	s, f,	m,	s, f,	m,	s, f,	m,	-

Repeat first four lines (m, = s,)

4. Key F Minuet in G (Beethoven)

m .f	s .fe	s .fe	s .fe	s	-	
l .m	f	-	s .r	m	-	
d .r	m .re	m .re	m .re	m	-	
r d	d t,	t, r	d l,	s,	-	(Repeat)
s d'	d'	t	d'	r'	-	
d'tls	f	m	l .f	m	r	
d .r	m .re	m .re	m .re	m	-	
f .de	r	-	m .t,	d	-	(Repeat)

5. Cradle Song (Brahms) Key F

m m	s	. m	m	s	-
m s	d'	t	. l	l	s
r m	f	r	r m	f	-
r f	t l	s	t	d'	-
d d	d'	-	l f	s	-
m d	f	s	l	m s	-
d d	d'	-	l f	s	-
m d	f sf	m	r	d	-

6. Marche Militaire (Schubert)

Key G

s	f m	r	m r	d	r m	s, .l	s,
s	f m	l	s m	f sf	m fm	r	sltd
r rr	d r	m f	s	r m	f	m r	d
r rr	d r	m f	s	fe s	l .t	s	-
s	f m	r	m r	d	r m	s, .l	s,
s	f m	l	s m	f sf	m fm	r	sltd
r rr	d r	m f	s	r m	f	m r	d
r rr	d r	m f	s	t, d	r .m	d	-

The writer has cyclostyled thousands of copies of sheets containing Spelling-Tunes such as the above, and has not been able to satisfy the demands made by the pupils for such sheets.

This is not the place to discuss the Tonic Sol-fa time notation. It has its merits and its defects. Its merits are to be found chiefly in the type of time divisions used in the early stages of reading. In fact, its greatest defect - its lack of the graphic or pictorial element - is its chief merit from the point of view of the beginner in sight-reading. For the interpretation of graphical or pictorial elements presupposes a knowledge of the things thus graphically or pictorially represented, and makes considerable demands on the mental content of the reader.

The present time system is not put forward in an attempt to oust the Tonic Sol-fa system. But the time symbols used here will be easily understood by one who can read staff notation. In music such as the above, which is already familiar to the class, they serve as a shorthand and graphic method of representing the time divisions, while they also have their use as serving for an introduction to the staff time notation.

C H A P T E R IV

CONTEXTUAL PROBLEMS IN MUSIC SPELLING AND THE RELATION OF MUSIC SPELLING AND READING TO LANGUAGE SPELLING AND READING

So far we have limited ourselves purposely to a sequence figure of 4 notes; but more extended sequences of 5, 6, 7, 8 or 9 notes are possible and should be used. For with the extension of the sequence figure there is a corresponding extension of the immediate context of the various notes of the sequence, and the individual sequence figures approximate more closely to the typical melodic phrase. The extension from 4 to 9 notes also results in a much greater choice of sequences. Thus, confining ourselves to the first three columns only of the modulator, i.e. to sequences of thirds, we find that* while

a 4 note sequence pattern gives a possibility of 27 sequences

. 5 ... ... 81 ...

. 6 ... ...243 ...

. 7 ... ...729 ...

. 8 ... ... 2187 ...

. 9 ... ... 6561 ...

Some of these sequences, of course, contain a high proportion of repeated notes, but so do many of our finest melodies. And, when these sequences are set in a rhythmic framework, they can all be made vital. For example, the

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*See page 189.

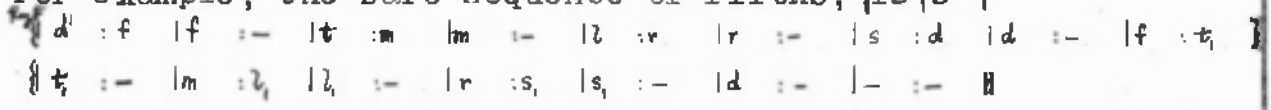
unpromising melodic sequence formula 111131, when united to the rhythmic sequence formula |6/8 ♩♫ ♩♫| , gives the following result:



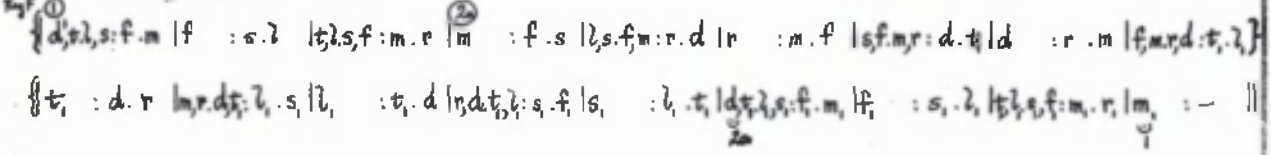
This principle of rhythmic variety as applied to sequence singing will be dealt with in a later chapter. (See page 97)

Again, the extension of the rhythmic figure beyond 4 notes prevents the necessity for frequent leaps, and allows of more conjunct motion or intervals of a second, which intervals comprise from 50% to 70% of the total number of intervals in ordinary vocal melody.

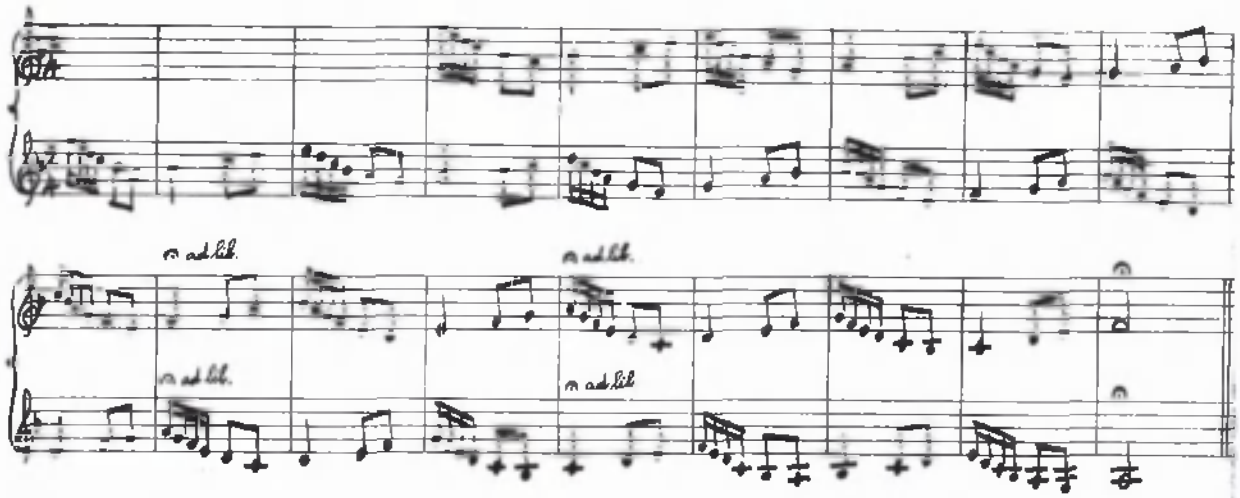
For example, the bare sequence of fifths, |15|5-|



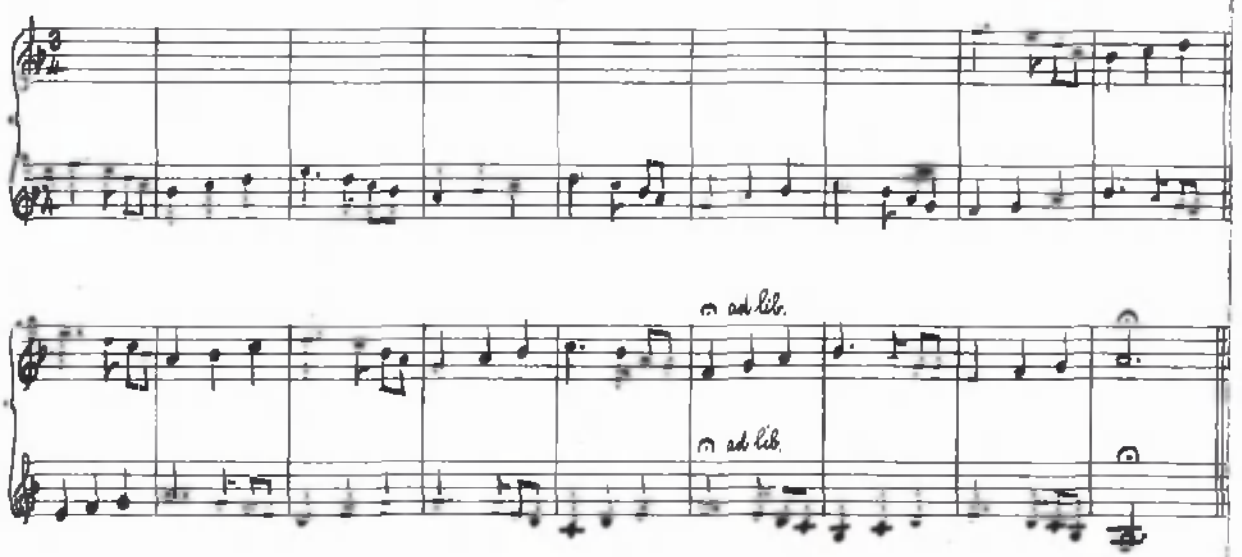
may, with the addition of passing notes and of the rhythmic matrix |2/4 ♬♫|♩ ♫| , be transformed thus: |1 2 3 4 5 6 |5 4 3|



The pauses for the two voices are marked.

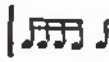


The following is another variation of this sequence of fifths, which may also be sung as a Canon two in one at the unison:



We have said that by the use of the Sequence Modulator we can ensure that pupils will obtain practice in any pitch problem in every possible context. This may be illustrated by the old-fashioned but useful exercise for the Aural Training Class, in which the teacher asks the class to sing down or up the scale from the ordinary modulator, omitting a certain note each time, thus:

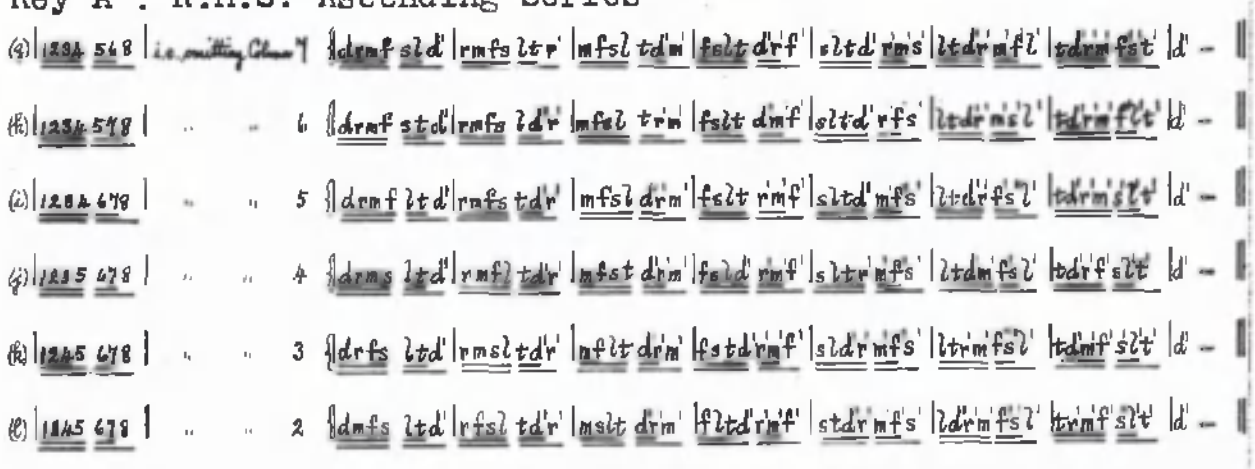
		Descending	Ascending
Omitting	r:	d' t l s f m d	d m f s l t d'
...	m:	d' t l s f r d	d r f s l t d'
...	f:	d' t l s m r d	d r m s l t d'
...	s:	d' t l f m r d	d r m f l t d'
...	l:	d' t s f m r d	d r m f s t d'
...	t:	d' l s f m r d	d r m f s l d'

The reader is asked to compare this with the same idea as applied to the Sequence Modulator, by opening out the Modulator at the end of the book and singing from it the following sequences to the rhythmic figure  .

Key G. L.H.S. Descending Series



Key A♭. R.H.S. Ascending Series



From the above examples it will be seen that each of the scale degrees (d,r,m,f,s,l and t) is omitted once in each of the 12 sequences.

Thus, in

(a) r is omitted from the desc.scale passage beginning on d'

(b) r ... ... t

(c) r l

(d) r ... ... s

(e) r ... ... f

(f) r ... ... m

(g) r ... ... ascending ... ... m

(h) r ... ... f

(i) r ... ... s

(j) r l

(k) r ... ... t

(l) r ... ... d

(*Obviously, of course, r cannot be omitted from the descending or ascending scale passage beginning on r*).

In the same way, each of the 6 other scale degrees d m f s l t is omitted in 12 different scale passages or contexts. That is to say, this technical problem of "skipping" a note in a rapid scale passage has been presented in every possible context, or 84 times in all. Whereas in the examples from the ordinary modulator it was presented only twice each with six of the scale degrees, or 12 times in all, d being omitted altogether.

This shows what was meant when we said that the ordinary modulator system is, even at the best, somewhat haphazard, while the Sequence Modulator System can be made foolproof.

But, even when the children have mastered all these sequences, we may use other rhythmic formulae with the same notes, and in thus altering the rhythmic context, we also alter the pitch problem to some extent, just as in altering the rhythm of a keyboard passage we alter the fingering problem to some extent.

For example, with the rhythmic formula,  , the original sequence



would become



Any class of children by their attempts would soon prove that these two sequences do not present equal difficulty to singers, although they contain the same sequence of notes.

It should be emphasised here that this system is an aural training system in the proper sense of the term; that is to say, it is not concerned with visual symbols. The weakness of many so-called aural training systems is that

they cannot be divorced from notation, with the result that most of the lesson is taken up with the explanation and elucidation of visual symbols, and very little singing or aural training takes place at all. It is as if children were being taught to speak by means of the printed language symbols, A B C D etc., so that their progress in the oral language must be regulated by their ability to comprehend these abstract symbols of the written language.

In this system, however, no notation is required. This will find its due place in the music-reading lesson, where the abstract symbols of the staff notation will then be found to represent not separate sounds but musical idioms or sound-groups, which have already become part and parcel of the music-spelling vocabulary of the children through the aural training lesson.

If it be objected that the sol-fa syllables themselves are visual symbols, it may be claimed that these symbols d r m f s l t are of such a character that, through their association with speech sounds, they set no visual problem for normal children. The real problem is not the association of the visual sol-fa symbols d m s with the speech sounds or syllable-names, "doh" "me" "soh". All the sol-fa syllables are equally recognizable — no child would call d "me", or m "soh". Rather, the real problem

is the association of the sol-fa speech-sounds ("doh" "me" "soh") with the relative pitch sounds (tonic mediant dominant) – and this is pre-eminently an aural problem, which must be solved on the aural plane through sol-faing or music-spelling practice.

At the same time, we must take advantage of any help that may be gained on the visual plane through the graphic presentation of the sequential patterns. Hence, it should be stressed that, although a number of sequences have been written out in full, these sequences should all be sung from the Sequence Modulator. The effect of such sequence singing is cumulative, and it will be found that, by constantly singing from this modulator, the children will come to memorize the sequences which they sing in class. This memorizing of sequences should be encouraged from the very beginning, for the feat of singing sequences without looking at the modulator is comparable to that of playing the piano without looking at the keyboard.

Of course, the individual children of any class will soon be at various stages of attainment in this visualising of the modulator keyboard. Some will have to follow every note, others will fixate only certain notes or columns of the modulator, while others will be satisfied with an occasional glance or no glance at all. The reader will

probably have noticed for himself that, in singing the sequences above from the modulator at speed, say ♩ = 100, or over 300 notes per minute, he does not read each note of the sequence figure – that would be impossible at this speed. Rather he picks out certain groups of notes, or perhaps fixates a single column on the modulator, as, for example, where the skip of a third occurs, and gives only an occasional glance elsewhere. The more experienced the reader is, of course, the fewer these eye movements will be. Thus, the Sequence Modulator will be found to answer the varying needs of each individual in the class – a most important consideration when the children are, as they must be in any class, at various stages of attainment.

Again, as has been pointed out in an earlier chapter, the constant presence of the Sequence Wall Modulator in the classroom acts as a stimulus to the class in their efforts to acquire aural technique, much in the same way as the sight of a keyboard or the feel of the keys under the fingers stimulates the pianist to further efforts in finger technique. And this is not the least of the many merits of the Sequence Modulator. For it is just the lack of such a visible keyboard for Aural Training which makes it very difficult for the student to continue his efforts in Aural Technique outside of lesson hours. Thus it is, that aural

training is too often confined solely to the classroom and the aural training lesson. It is believed, however, that this lack of an Aural Training Keyboard will be found to be supplied to a large extent by the Sequence Modulator, and thus the method while adapted to class-work will also be found suitable for the private music student.

The Relation of Music Spelling and Reading to Language Spelling and Reading

It may be helpful now to state briefly the problem which confronts the music teacher in teaching sight-reading and dictation by the Movable Doh Method.

Omitting in the meantime the rhythmic aspect of music and confining ourselves to the pitch aspect only, we find that:

Reading implies the following sequence:

Visual spelling — Aural spelling

staff symbol → sol-fa syllable → musical sound

Conversely, Writing or Dictation implies the sequence:

musical sound → sol-fa syllable → staff symbol

musical sound → sol-fa syllable → staff symbol

In each case the gap between the visual and the auditory is bridged by the sol-fa syllable, which may be said to belong to both the visual and the auditory plane, inasmuch as it may be recognised aurally and written as a musical symbol or recognised visually and sung as a musical sound. In each case, too, we have a visual spelling process and an aural spelling process, which must both be brought into use for the reading and the writing of music.

Of the two spelling techniques involved, the visual spelling technique, or the translation from staff symbol

into sol-fa syllable and vice versa, has in itself no immediate connection with music-making, and may be developed by one who is virtually tone deaf. This visual spelling is, in fact, what may be called a formal subject, and is, therefore, eminently teachable. For this very reason teachers are often tempted to overemphasise the visual aspect of music, especially in the early stages, and to teach musical notation to the almost entire exclusion of music itself.

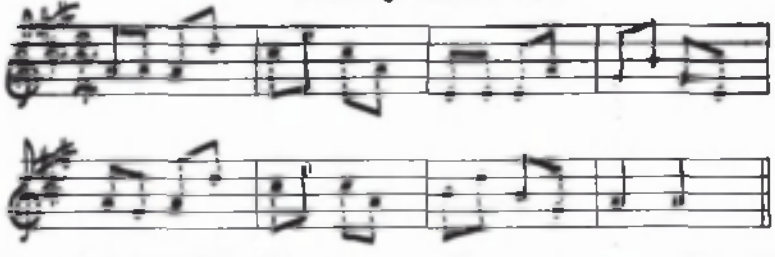
But, while this training in the visual aspect of musical notation can be regarded as a formal subject, it can in no sense be regarded as a formative subject. For, unless the aural aspect of the syllables has been previously developed, and the sol-fa syllables have come to be intimately associated with musical sounds, there can be no incentive or motivation for the cultivation of visual spelling technique, which owes its very raison d'être to aural spelling or sol-faing. It is useless, therefore, to attempt to develop visual technique, i.e. to attempt to develop staff reading, until a good proficiency in aural technique or sol-faing has been assured. For although, logically, in the reading process the visual comes before the aural, i.e. the visual translation of the staff symbol into sol-fa syllable comes before the aural translation of the sol-fa syllable into musical sound,

psychologically, in the approach to the subject of music reading the aural has priority over the visual.

When we come to sol-faing or aural music spelling, on the other hand, we find that we are in immediate contact with music, and at no point are the sol-fa symbols divorced from the musical content.

Not only so, but, unlike language spelling where the spelled word does not even approximate to the spoken word, in music spelling when we spell a tune to the sol-fa syllables we achieve exactly the same resultant as that obtained in reading the tune at sight to the sol-fa syllables, the only difference being that, in sight reading, the effort of the pupils is creative, whereas in music spelling it is more or less imitative or re-creative. Thus, whether the pupils read from staff to the sol-fa syllables the well-known tune

"Bobby Shaftoe"



or learn to spell the tune from memory to the syllables printed on the blackboard,

Key A.

{|d.d:d.f | m.s:m.d | s_1.s_1:s_1.d |t_1.r:t_1.s_1|

{|d.t_1:d.f | m.s:m.d | r.f:r.t_1|d :d |

the resultant in each case is the same, so far as the association of sound and syllable is concerned.

The spelling of the tune reproduces the tune itself and does not destroy it, as, for example, the spelling of the word "cat" (alphabetically, C..A..T, or phonetically, Ki-Ah-Ti) destroys the word-sound "cat".

Spelling practice, therefore (which, of course, must be distinguished from actual spontaneous spelling), may begin with spelling tunes (usually called memory tunes) and sequences in the earliest stages of music training, or as soon as the children are able to recognise the syllable names "doh ray me" etc., from the printed syllable letters "d r m" etc. And, moreover, this music spelling practice should continue alongside visual spelling or staff reading, until continued practice in music spelling has developed the ability to spell music.

As we said in the first chapter, very few children develop their music spelling or sol-faing capacity to any considerable degree.

When we consider that the child's school life begins at the age of five and covers a most impressionable period of from 9 to 13 years, we may well ask why this is so. We cannot blame the children, for the failing is too widespread in schools and colleges throughout the country. The real reason for this state of affairs is, undoubtedly, to be found in the fact that the problem of what is ambiguously called "ear training" or "aural training" has never been

properly envisaged and analysed by the music educationist or the teacher.

Is it not significant that the term "ear training" or "aural training" is quite unknown in the language class, whether it be the English language or a foreign language, although ear training is surely just as important in the spoken language as in the musical language? There, the term "listening" suffices for all practical purposes. And, actually, all one can do to train the ear or to develop aural technique in the language class or the music class is to encourage good listening, by providing a suitable listening environment, by creating situations in class where good listening answers a fundamental need on the part of the pupils.

But, no amount of good listening to language or to music will enable a class to spell the language or the music. The teacher in the language lesson recognises this, and devotes a considerable portion of the lesson to spelling practice and spelling tests, both oral and written. The teacher in the music lesson, on the other hand, because of the misleading terms "ear training", "aural training", "memory tunes" etc., confuses listening and ear training with spelling, with the result that, although much ear training and many spelling tests or ear tests may be given, spelling practice or training has

little or no place in the curriculum. If the teacher will clear up the confusion that exists in his mind over the ambiguous terms "ear training" and "aural training", and will realise the importance of music spelling for both reading and writing, then music spelling or sol-faing will come into its own, and will occupy in the music lesson the place that language spelling occupies in the language lesson.

Music spelling, indeed, is more essential than language spelling for both reading and writing. In language reading, for instance, a child recognises a word from the general shape or contour of the word, not from the separate interpretation of each element in the word. Thus, in the unphonetic English language a child may be able to read words of whose elements he has only a hazy notion, and a bad speller may be a passable or even a good reader. But, in the "phonetic" musical language, where every element in the musical notation means one thing and one thing only, and where any error in the spelling or interpretation of these notational elements must result in a distortion of the meaning of the whole, a bad speller cannot possibly be a good reader.

Again, when we come to language writing, a word may be written incorrectly, but this incorrect spelling need not distort the meaning intended by the writer, or hold up

the teaching and practice of writing and composition in class. While, on the contrary, in music writing, any error in spelling must result in an error in writing which will distort the meaning intended by the writer. Bacon's dictum, "Writing maketh an exact man," is especially applicable to music writing. And the low standard of the Dictation Tests in recognised diploma examinations is evidence of the difficulties that face the average student in this subject, and is at the same time a reflection on the general state of musical pedagogy in the subject.

After this exposition of the different techniques employed in language reading and music reading, it is scarcely necessary to add that whereas, in the ordinary language, reading may be commenced before spelling is attempted, and reading technique will be generally in advance of spelling technique, in the musical language spelling practice must come before reading, and spelling technique must always be well in advance of anything required in sight reading. Indeed, staff reading is quite out of the question until a good spelling technique has been developed.

The reader is asked to regard all this sequence singing from the *Modulator* as music spelling practice, or, more correctly, relative pitch spelling practice. And, lest one should still ask why all this sequence singing is

necessary, let us state as a general proposition that, if a child cannot sol-fa or sing to the syllables a melodic idiom occurring in a sequence (e.g. "f s t" or "m r l,"), he is not likely to be able to sol-fa this idiom at sight from staff notation, when he is confronted with it in the reading lesson. While, on the other hand, if he has mastered the sol-faing of the idiom through his sequence singing, he is likely to be able to recognise it and sol-fa it at sight from staff notation, provided that his visual spelling technique, or ability to translate from staff symbol to sol-fa name, is adequate for the occasion.

As it is, under present conditions in schools, where practice in music spelling is wholly inadequate to meet the demands made on it in reading and writing, one can only lament the number of wrong associations formed between the syllables and sounds, owing to the premature attempts made to force children to respond to dictation, eartests and staff reading, before they have attained mastery over the spelling of the sounds.

C H A P T E R V

VARIED USES OF THE SEQUENCE MODULATOR

In this and the following chapters, we have shown under the Headings 1-20 how the Sequence Modulator may be used in solving the various problems that confront the Singing Class Teacher - problems of aural training, rhythmic training, and visual training or sight-reading.

1. Longer Sequence Patterns.
2. Rhythmic Variety in Sequence Singing.
3. Sequences with Anacrusis.
4. Rhythm Spelling through Sequence Singing
5. Inversion of Sequences.
6. Modal Sequences.
7. Sequences beginning on other Columns than the First.
8. Rests in Sequence Singing.
9. Antiphonal Sequence Singing.
10. Antiphonal Singing in Contrary Motion.
11. Mental Singing.
12. Non-Scalic Sequences.
13. Chromatic Sequences.
14. Tetrachordal Sequence Singing and Form in Music.
15. Modulatory Sequences.
16. Ear-Tests and Sequence Singing.
17. Absolute Pitch Sequence Singing.
18. Staff Reading through Sequence Singing.
19. Staff Writing through Sequences.
20. Canonic Sequences.

I. LONGER SEQUENCE PATTERNS

So far, we have limited ourselves to four-note sequences. But it is very desirable that longer note-patterns should be used in sequence singing, as the extension of the sequence pattern results in an extension of the contextual background and of the melodic idioms involved. To show the possibilities of such sequences we add a number of extended sequences of from five to nine notes, to be sung to various rhythms.

Five-note Sequences to the Rhythmic Pattern |♩♬♩|

| | | |

131 543	d' l d' f s l	t s t m f s	l f l r m f	s m s d r m	f r f t d r	m d m l, t, d	r t, r s, l, t,	d –
	d m d s f m	r f r l s f	m s m t l s	f l f d' t l	s t s r d' t	l d' l m' r d'	t' r' t f m' r'	d' –
	d' s d' m f s	t f t r m f	l m l d r m	s r s t, d r	f d f l, t, d	m t, m s, l, t,	r l, r f s l,	d –
	d f d l s f	r s r t l s	m l m d' t l	f t f r' d' t	s d s m' r d'	l r' l f m' r'	t m' t s' f m'	d' –
	d' l f r f l	t s m d m s	l f r t, r f	s m d l, d m	f r t, s, t, r	m d l, f l, d	r t, s, m, s t,	d –
	d m s t s m	r f l d' l f	m s t r' t s	f l d' m d' l	s t r' f r' t	l d m' s' m d'	t r' f' l' f r'	d' –

Seven-note Sequences to the Rhythmic Pattern | ♩♫ ♬♬ |

121 3213	d' t d' l t d' l	t l t s l t s	l s l f s l f	s f s m f s m	f m f r m f r	m r m d r m d	r d r t, d r t,	d –
	d r d m r d m	r m r f m r f	m f m s f m s	f s f l s f l	s l s t, l s t,	l t, l d' t, l d'	t, d' t, r' d' t, r'	d' –
	d' s l s d' t, l	t f s f t, l s	l m f m l s f	s r m r s f m	f d r d f m r	m t, d t, m r d	r l, t, l, r d t,	d –
	d f m f d r m	r s f s r m f	m l s f m l s	f t, l t, s f l	s d' t, d' s l t,	l r d' r' l t, d'	t m' r' d' t m'	d' –
	d' l s f s l d'	l t s f m f s t	l f m r m f l	s m r d r m s	f r d t, d r f	m d t, l, t, d m	r t, l, s, l, t, r	d –
	d m f s f m d	r f s l s f r	m s l t l s m	f l t d' t l f	s t d' r d' t s	l d' r' m r d' l	t r' m' f m' r' t	d' –
	d' s f m f s d'	l t f m r m f t	l m r d r m l	s r d t, d r s	f d t, l, t, d f	m t, l, s, l, t, m	r l, s f s l, r	d –
	d f s l s f d	r s l t l s r	m l t d' t l m	f t d' r' d' t r'	s d r' m' r' d' s	l r m' f m' r' l	t m' f s' f m' t	d' –
	d' l f r f l d'	l t s m d m s t	l f r t, r f l	s m d l, d m s	f r t, s, t, r f	m d l, f l, d m	r t, s, m, s t, r	d –
	d m s t s m d	r f l d' l f r	m s t r' t s m	f l d' m d' l f	s t r' f r' t s	l d m' s' m d' l	t r' f' l' f r' t	d' –

Eight-note Sequences to the Rhythmic Pattern | ♩♬♬ ♬♬ |

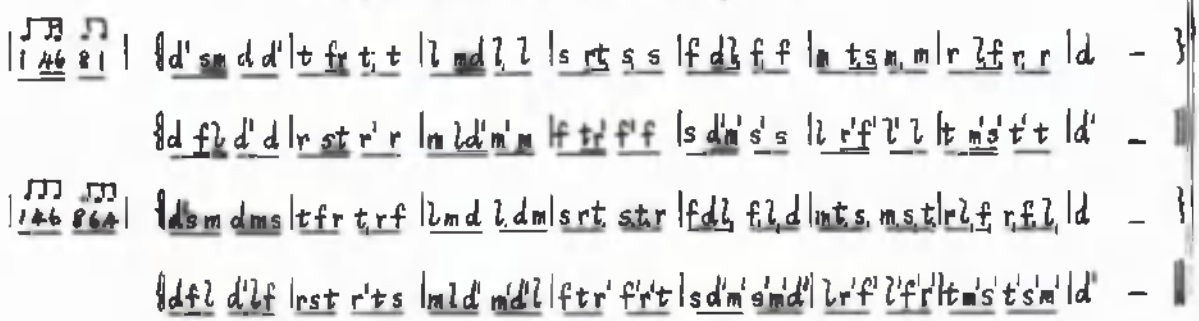
1231 2131	d' t l d' t d' l d'	l t l s t l t s	l s f l s l f l	s f m s f s m s	f m r f m f r f	m r d m r m d m	r d t, r d r t, r	d –
	d r m d r d m d	r m f r m r f r	m f s m f m s m	f s l f s f l f	s l t s l s t s	l t, d' l t, l d' l	t, d' r' t, d' t, r' t	d' –
	d' s l t, d' s l d'	l t f s l t f s t	l m f s l m f l	s r m f s r m s	f d r m f d r f	m t, d r m t, d m	r l, t, d r l, t, r	d –
	d f m r d f m d	r s f m r s f r	m l s f m l s f	s r m f s r m s	f d r m f d r f	m t, d r m t, d m	r l, t, d r l, t, r	d –
	d' l f l d' f s l	t s m s t m f s	l f r f l r m f	s m d m s d r m	f r t, r f t, d r	m d l, d m l, t, d	r t, s, t, r s l, t	d –
	d m s n d s f m	r f l f r l s f	m s t s m t l s	f l d' l f d' t l	s t r' t s r d' t	l d m d' l m' r d'	t r' f' t f m' r'	d' –

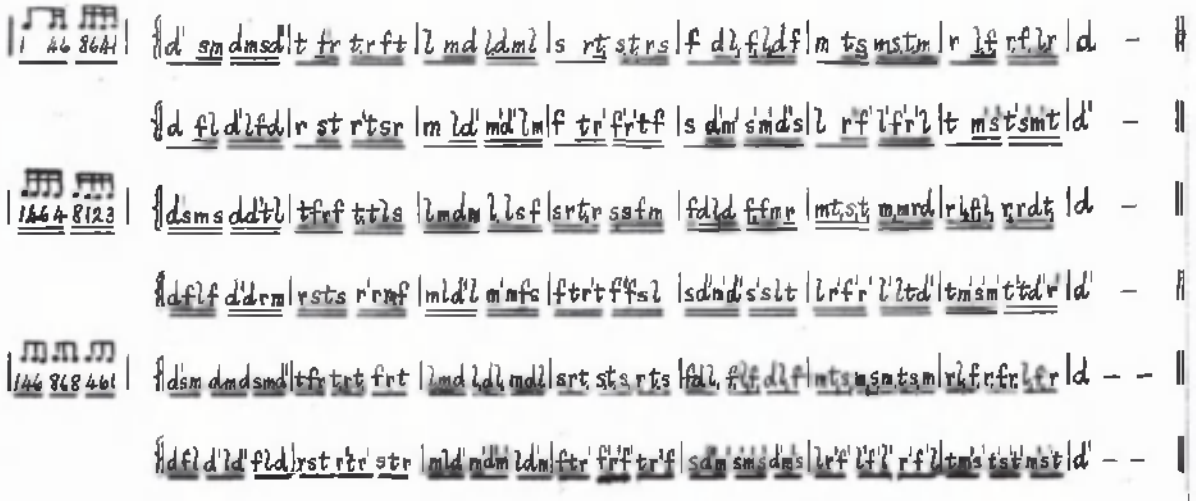


Nine-note Sequences to the Rhythmic Pattern



Octave Sequences in the above Rhythms

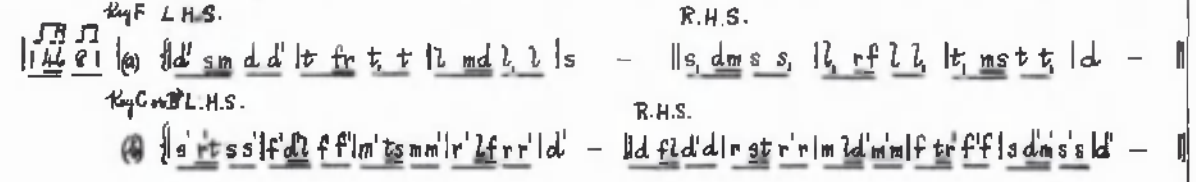




The Singing of the more Extended Sequences

The wider range of the sequences of sevenths and octaves prevents their use in the complete form with young classes. These sequences, however, may be taken, if desired, in two sections:

(a) from d' to s desc. and from s, to d asc. in Key F
and
(b) from s' to d' desc. and from d to s asc. in Key C or B♭



If, however, the present method of aural training has been followed out, the pupils will have been trained in the art of mental singing. And the older pupils should be encouraged to sing these sequences mentally in their complete form.

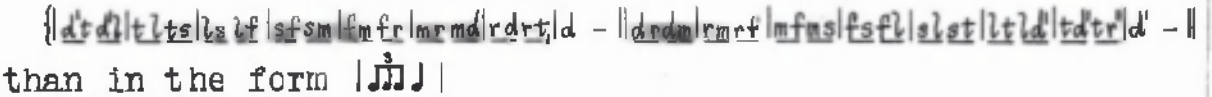
2. RHYTHMIC VARIETY IN SEQUENCE SINGING

When plain melodic sequences have been mastered, these sequences should be sung to various rhythmic patterns. Not only does this help to keep up the interest of the class, but it also ensures the tackling of pitch problems, in so far as they are affected by rhythmic contexts. With regard to the effect of rhythm on pitch, the teacher will soon find that certain sequences are easier to sing in one rhythmic form than in another.

For example, the sequence 1213 is much more difficult in the form |♫♫|



than in the form |♫♩|



But many other rhythmic patterns may be used with this four-note sequence.

For example



All rhythmic sequences should, of course, be sung from pattern, and there should be no attempt at first to teach rhythm names (taatai, etc.) or rhythm reading. Such training in rhythm spelling and rhythm reading should be based on a solid background of rhythm experience, extending over a considerable period of time, and forming the oral stage in rhythm which should precede the symbol stage.

In pitch training we saw that the pedagogical order should be:

(1) Pitch Experience (through song singing)

(2) Pitch Spelling (through sol-faing)

(3) Pitch Reading (through staff notation)

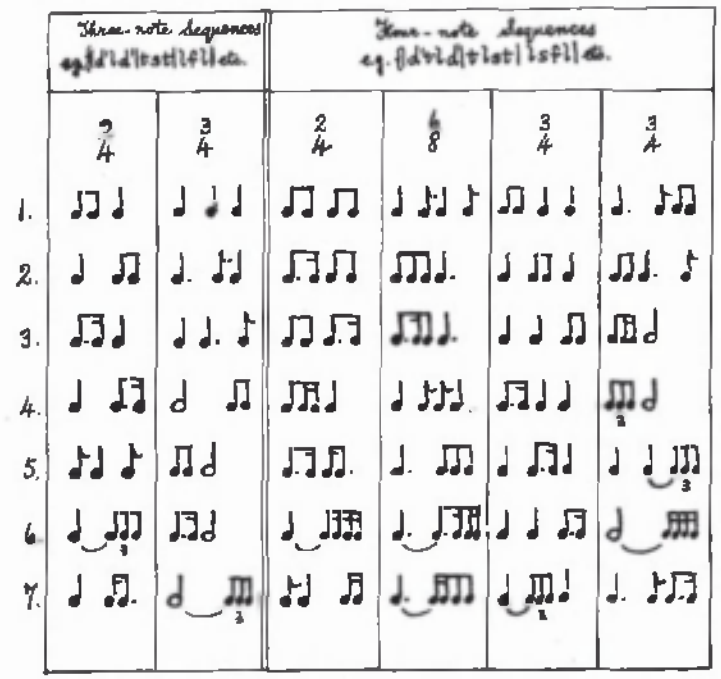
Likewise in rhythm training the pedagogical order should be:

(1) Rhythm Experience (through song singing and sequence singing)

(2) Rhythm Spelling (through taatai-ing)

(3) Rhythm Reading (through staff notation)

We set out below a few rhythmic patterns for use with three-note and four-note sequences, and refer the reader to page 194 for a full list of Rhythm Tables for Sequence Singing, classified according to the number of notes in the bar.



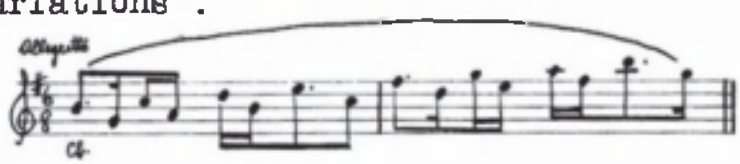
Further variety may be obtained by combining any two patterns in the above groups. Thus, the four-note sequence, 1231, may be sung to any of the following combinations:



With the aid of such simple devices great melodies have often been built. Thus, the first combined rhythm above, added to the sequence 31 ascending on the R.H.S. of the Modulator

m d f r s m l f t s d' l r' t m' d'

produces the theme of the eighth variation of Elgar's "Enigma Variations".



The following Rhythm Reading exercise may be given to more advanced classes.

The pupils should be told to read down one of the columns, e.g. $\frac{2}{4}$ from top to bottom, at the same time sol-faing to these rhythmic patterns a familiar sequence such as 1423. Thus:



The ascending sequence may be read in the same order or in reverse order, i.e. from bottom to top.

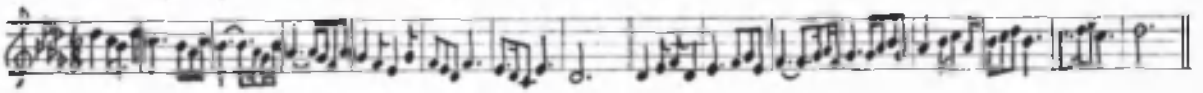
Lest the cycle of rhythmic patterns become too familiar, the order should be changed from time to time.

For example, the class may start at number 6, read down to number 7, and then continue from the top, finishing on d after number 5. The following examples will make this clear.

$\frac{2}{4}$ — 1213 beginning at 3 and ending after 2.



$\frac{6}{8}$ — 1251 beginning at 4 and ending after 3.



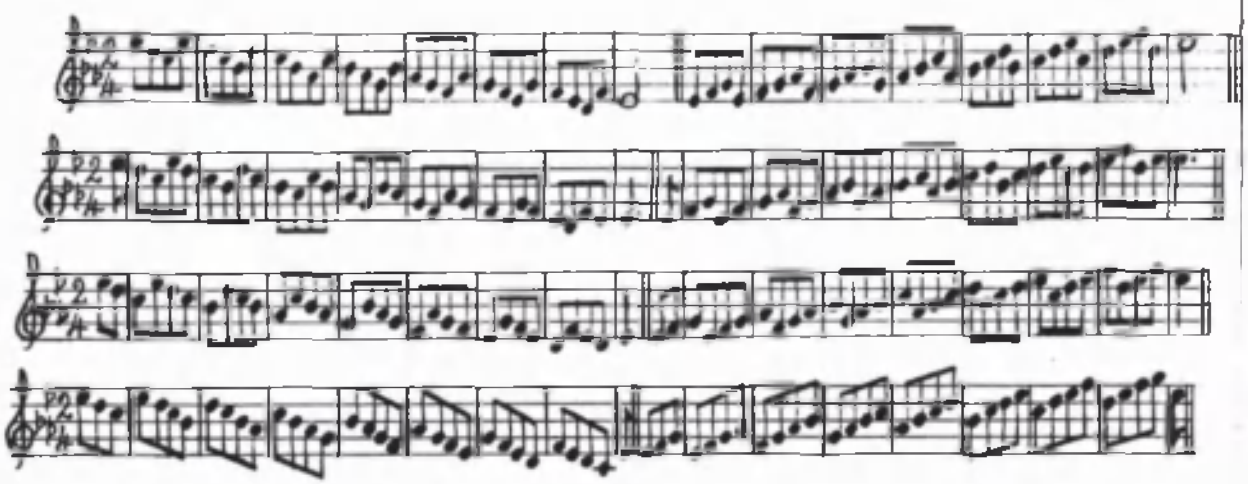
$\frac{3}{4}$ — 1431 beginning at 2 and ending after 1 (first column).



3. SEQUENCES WITH ANACRUSIS

An examination of folk song and national song collections will reveal the fact that in our ordinary songs secondary rhythm is much more common than primary rhythm, just as in poetry iambic measure is much more common than trochaic measure. It is important, then, that in our sol-faing or music-spelling practice, secondary rhythm should not be neglected. Yet, how seldom do we hear sequences sung in secondary rhythm!

It is true that, in sight singing, secondary rhythm presents greater difficulties to the pupils than primary rhythm.



But this is a notational matter which does not enter into oral singing.

Sequences in secondary rhythm can be sung from the Sequence Modulator just as easily as sequences in primary rhythm, and it is very advisable that these should be practised. The only thing to note is that, where a sequence begins before the first beat in the bar, the anacrusis, or notes before the bar line, should be repeated at the 7th and 15th bars, not counting the anacrusis, i.e. on d and d'. By this means the rhythm is preserved throughout. This will be made quite clear by the following examples, where each note may be taken as representing a crotchet or a quaver. The reader will note how the anacrusis changes the character of the original sequence.

(a)

|1 3| {d' l |t s |l f |s m |f r |m d |r t, |d - |d m |r f |m s |f l |s t |l d' |t r' |d' - |

1|3 {d' l t |s l |f s |m f |r m |d r |t, d |d d |m r |f m |s f |l s |t l |d' t |r' d' |d' ‖

(b)

|1 2 3| {d' t l |t l s |l s f |s f m |f m r |m r d |r d t, |d - - |d r m |r m f |m f s |f s l |s l t |l t d |t d' r' |d' - - |

1|2 3 {d' t l t |l s l |s f s |f m f |m r m |r d r |d t, d |d - d |r m r |m f m |f s f |s l s |l t l |t d' t |d' r' d' |d' - ‖

2|3 {d' t |l t l |s l s |f s f |m f m |r m r |d r d |t, d t, |d d r |m r m |f m f |s f s |l s l |t l t |d' t d |r' d' r' |d' ‖

(c)

|1 2 2 1| {d' l t d' |t s l t |l f s l |s m f s |f r m f |m d r m |r t, d r |d - - - |d m r d' |r f m r |m s f m |f l s f |s t l s |l d' t' l |t r' d' t' |d' - - - |

1|3 2 1 {d' l t d' t |s l t l |f s l s |m f s f |r m f m |d r m r |t, d r d |d - - d' |m r d r |f m r m |s f m f |l s f s |t l s l |d' t' l t |r' d' t' d' |d' - - |

1 3|2 1 {d' l |t d' t s |l t l f |s l s m |f s f r |m f m d |r m r t |d r d' l, |d - d m |r d r f |m r m s |f m f l |s f s t |l s l d' |t l t r' |d' t' d' m |d' - |

1 3 2|1 {d' l t |d' t s l |t l f s |l s m f |s f r m |f m d r |m r t, d |r d' l, t |d d m r |d r f m |r m s f |m f l s |f s t l |s l d' t |l t r' d' |t d' m' r |d' ‖

(d)

|1231| {|d't l d'|t l s t|l s f l|s f m s|f m r f|m r d m|r d t,r|d - - -|d r m d|r m f r|m f s m|f s l f|s l t s|l t d' l|t d' r' t|d' - - -|

1|231 {d'|t l d' t|l s t l|s f l s|f m s f|m r f m|r d m r|d t,r d|d - - d|r m d r|m f r m|f s m f|s l f s|l t s l|t d' l t|d' r' t d'|d' - -|

12|31 {d't|l d' t l|s t l s|f l s f|m s f m|r f m r|d m r d|t,r d t,|d - d r|m d r m|f r m f|s m f s|l f s l|t s l t|d' l t d'|r' t d' r'|d' -|

123|1 {d't l|d' t l s|t l s f|l s f m|s f m r|f m r d|m r d t,|r d t,l,|d d r m|d r m f|r m f s|m f s l|f s l t|s l t d'|l t d' r'|t d' r' m'|d'|

(e)

|131| {|d' l d'|t s t|l f l|s m s|f r f|m d m|r t,r|d - -|d m d|r f r|m s m|f l f|s t s|l d' l|t r' t|d' - -|

1|31 {d'|l d' t|s t l|f l s|m s f|r f m|d m r|t,r d|d - d|m d r|f r m|s m f|l f s|t s l|d' l t|r' t d'|d' -|

13|1 {d' l|d' t s|t l f|l s m|s f r|f m d|m r t,|r d l,|d d m|d r f|r m s|m f l|f s t|s l d'|l t r'|t d' m'|d'|

(f)

|1234| {|d' t l s|t l s f|l s f m|s f m r|f m r d|m r d t,|r d t,l,|d - - -|d r m f|r m f s|m f s l|f s l t|s l t d'|l t d' r'|t d' r' m'|d' - - -|

1|234 {d'|t l s t|l s f l|s f m s|f m r f|m r d m|r d t,r|d t,l,d|d - - d|r m f r|m f s m|f s l f|s l t s|l t d' l|t d' r' t|d' r' m' d'|d' - -|

12|34 {d't|l s t l|s f l s|f m s f|m r f m|r d m r|d t,r d|t,l,d t,|d - d r|m f r m|f s m f|s l f s|l t s l|t d' l t|d' r' t d'|r' m' d' r'|d' -|

123|4 {d't l|s t l s|f l s f|m s f m|r f m r|d m r d|t,r d t,|l,d t,l,|d d r m|f r m f|s m f s|l f s l|t s l t|d' l t d'|r' t d' r'|m' d' r' m'|d'|

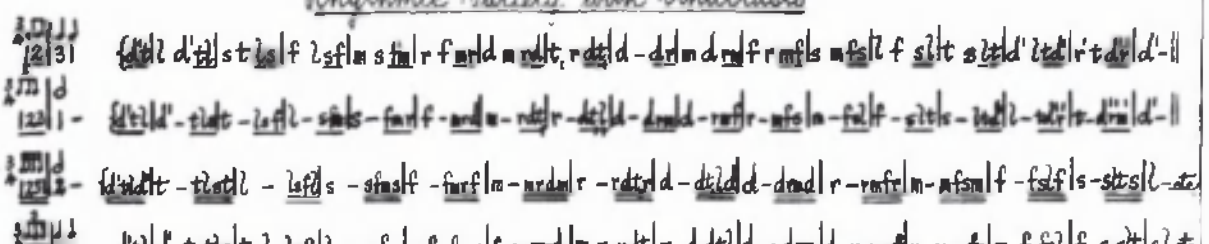
(g)

|135| {|d' l f|t s m|l f r|s m d|f r t,|m d l,|r t,s,|d - -|d m s|r f l|m s t|f l d'|s t r'|l d' m'|t r' f'|d' - -|

1|35 {d'|l f t|s m l|f r s|m d f|r t,m|d l,r|t,s,d|d - d|m s r|f l m|s t f|l d' s|t r' l|d' m' t|r' f' d'|d' -|

13|5 {d' l|f t s|m l f|r s m|d f r|t,m d|l,r t,|s,d l,|d d m|s r f|l m s|t f l|d' s t|r' l d'|m' t r'|f' d' m'|d'|

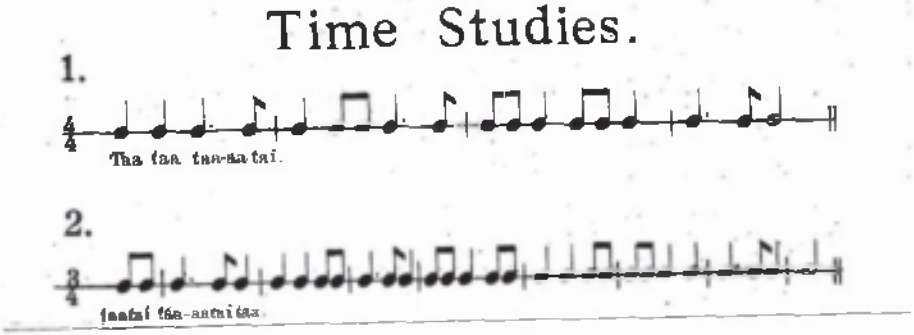
Rhythmic Variety with Anacrusis



4. RHYTHM SPELLING THROUGH SEQUENCE SINGING

The Paris Time Names, or, as they should be called, the Paris Rhythm Names (since by their graded scale of consonants and vowels they indicate relative accent as well as relative duration), are the rhythmic counterpart of the Relative Pitch Names or Sol-fa Syllables. And, just as these syllables are used for pitch-spelling practice, so the rhythm names - "taa taatai" etc. - should be used for rhythm-spelling practice.

We have already discussed the relation of rhythm to pitch in melody, and shown how the mental effects of the pitch elements are affected by duration and accent, or by the rhythmic context. But it is equally true to say that the mental effects of the rhythmic elements are affected by pitch or by the melodic context. For pitch is a function of rhythm, just as rhythm is a function of pitch. And so, the teaching of the rhythm names through the taatai-ing on a monotone of lines of rhythm symbols without form or design, eg.

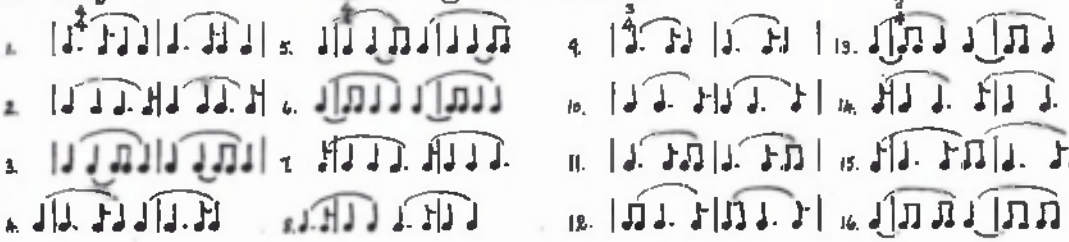


is to be as heartily condemned as the teaching of the pitch symbols through the singing of the sol-fa syllables

without regard to rhythm or form.

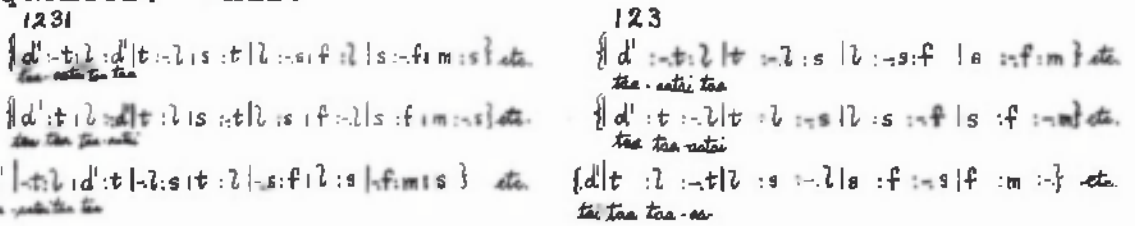
Again, just as the mental effects of the pitch elements are affected considerably by their pitch context, so the mental effects of the rhythmic elements are affected by their rhythmic context. This is not generally appreciated by some music educationists, who seem to think that, when a child has been taught to recognise and render, with or without the Rhythm Syllables, any rhythmic motif, e.g. ♩.♪ or taa-aatai, this one-and-a-half-plus-half-beat problem has been finally solved, and that these rhythmic elements (♩. ♪) will give no more trouble.

But nothing is further from the truth. Rhythmic elements have their rhythmic contexts too. ♩. ♪ may appear in any of the following contexts:



And just as the spelling of the pitch elements must be mastered through sol-faing them in their various contexts, so the spelling of the rhythm elements must be mastered through the taatai-ing of them in their various contexts. It is just as futile to teach ♩.♪ alone, as we saw it was to teach s t r' alone.

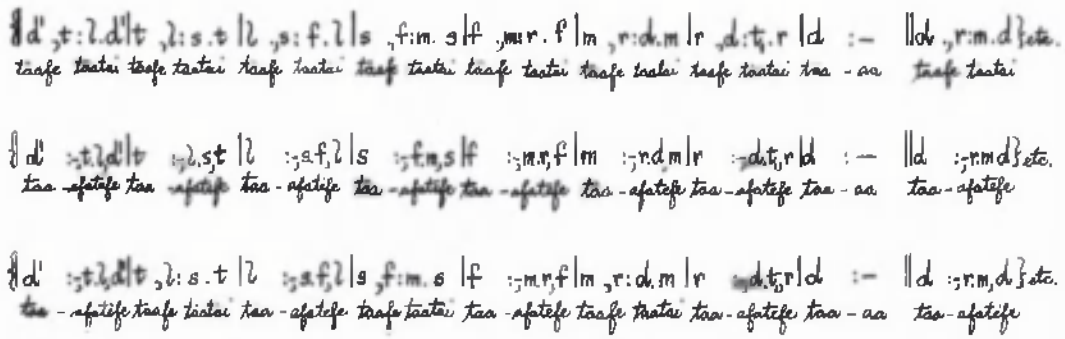
Here again sequences can play a great part. The above three-note and four-note groups can be sung and taatai-ed to the sequences 123 or 1231, or to any other sequences. Thus:



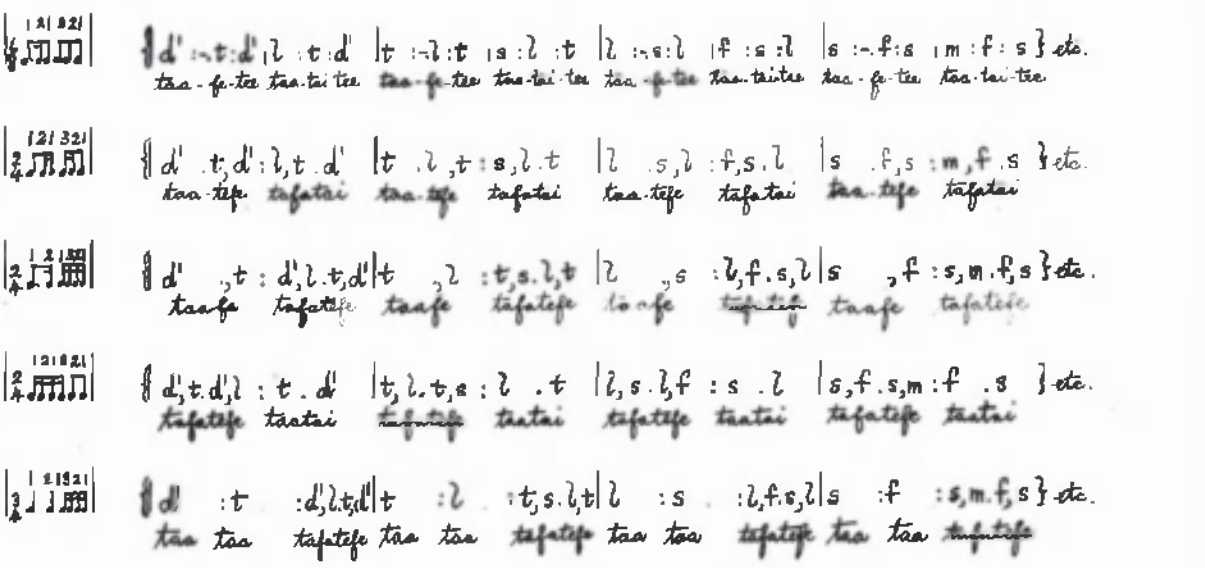
This Rhythm-Spelling Practice (which of course is an entirely different thing from Rhythm Reading or Rhythm Testing) should, like Pitch-Spelling Practice, begin early, and we should aim at a Rhythm-Spelling technique which will be well in advance of anything required in ordinary sight-reading.

As has been indicated in a previous section, the children, before being introduced to the rhythm names, should have had considerable experience of the rhythmic elements. And now this reserve fund of rhythmic experience, gained orally through rhythmic sequence singing, should be used as a basis on which to build up a serviceable rhythm-spelling vocabulary. To do so, all that is required is to substitute the relative time and accent (or rhythm) syllables for the relative pitch (or sol-fa) syllables in the singing of familiar sequences.

Thus, the familiar sequence, 1231, may be sung and taatai-ed to any of the rhythmic patterns tabulated on page 98 under Four-note Sequences, or to any combination of these.

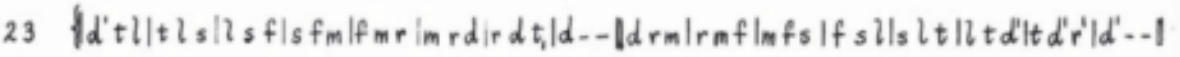


Similarly, the familiar six-note sequence, 121321, may be sung to the rhythm names of the following:



5. INVERSION OF SEQUENCES

In sequence singing it is customary to use a descending figure in descent, and an ascending figure in ascent. Thus:

123 

But this order may be reversed; that is, a rising figure may be used with the descending scale, and a falling figure with the ascending scale. Thus, the above figure, 123, may be sung as follows:

123~ 

Any sequence may be inverted in this manner. In order to carry it out from the Sequence Modulator, all that is required is to begin the descending sequence from d' on the R.H.S. of the Modulator, and to continue the ascending half from d on the L.H.S.

In writing the sequence formulae, 123, 13, etc., we shall add the sign ~ to indicate this inversion of order of descent and ascent.

Below, we print a few sequences, first in their normal form, and then inverted in the manner indicated above.

131 | d' l d' | t s t | l f l | s m s | f r f | m d m | r t, r | d - - || d m d | r f r | m s m | f l f | s t s | l d' l | t r' t | d' - - ||

131 ~ | d' m d' | t r' t | l d' l | s t s | f l f | m s m | r f r | d - - || d l, d | r t, r | m d m | f r f | s m s | l f l | t s t | d' - - ||

132 | d' l t | t s l | l f s | s m f | f r m | m d r | r t, d | d - - || d m r | r f m | m s f | f l s | s t l | l d' t | t r' d | d' - - ||

132 ~ | d' m r' | t r' d' | l d' t | s t l | f l s | m s f | r f m | d - - || d l, t, | r t, d | m d r | f r m | s m f | l f s | t s l | d' - - ||

12 | d' t | t l | l s | s f | f m | m r | r d | d - || d r | r m | m f | f s | s l | l t | t d' | d' - ||

12 ~ | d' r' | t d' | l t | s l | f s | m f | r m | d - || d t, | r d | m r | f m | s f | l s | t l | d' - ||

123 | d' t l d' | t l s t | l s f l | s f m s | f m r f | m r d m | r d t, r | d - - || d r m d | r m f r | m f s m | f s l f | s l t s | l t d' l | t d' r' t | d' - - ||

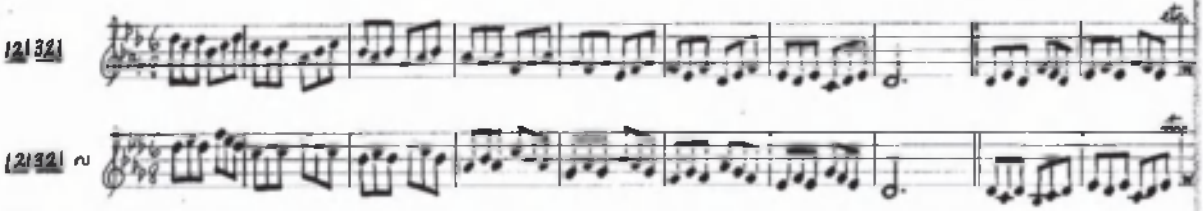
123 ~ | d' r m d' | t d' r t | l t d' l | s l t s | f s l f | m f s m | r m f r | d - - || d t, l, d | r d t, r | m r d m | f m r f | s f m s | l s f l | t l s t | d' - - ||

1234 | d' t l s | t l s f | l s f m | s f m r | f m r d | m r d t, | r d t, l, | d - - || d r m f | r m f s | m f s l | f s l t | s l t d' | l t d' r' | t d' r' m' | d' - - ||

1234 ~ | d' r' m' f' | t d' r' m' | l t d' r' | s l t d' | f s l t | m f s l | r m f s | d - - || d t, l, s, | r d t, l, | m r d t, | f m r d | s f m r | l s f m | t l s f | d' - - ||

142 | d' s t | t f l | l m s | s r f | f d m | m t, r | r l, d | d - - || d f r | r s m | m l f | f t s | s d' l | l r' t | t m' d' | d' - - ||

142 ~ | d' f' r' | t m' d' | l r' t | s d' l | f t s | m l f | r s m | d - - || d s, t, | r l, d | m t, r | f d m | s r f | l m s | t f l | d' - - ||



It will be noted that the inverted sequences make greater demands on technique than the ordinary sequences, and that the total range of the inverted sequence is greater. Where the range is too great, the descending and ascending sequences should be sung separately in different keys.

6. MODAL SEQUENCES

So far, all sequences have begun and ended on "doh". But sequences should also be treated modally; that is to say, they should be sung between 1 and l_1, s and s_1, r' and r, etc. A few examples of this modal treatment of sequences are given below.

123 from l ‖ l s f | s f m | f m r | m r d | r d t_1 | d t_1 l_1 | t_1 l_1 s_1 | l_1 -- ‖ l_1 t_1 d | t_1 d r | d r m | r m f | m f s | f s l | s l t | l -- ‖

" " s ‖ s f m | f m r | m r d | r d t_1 | d t_1 l_1 | t_1 l_1 s_1 | l_1 s_1 f_1 | s_1 -- ‖ s_1 l_1 t_1 | l_1 t_1 d | t_1 d r | d r m | r m f | m f s | f s l | s -- ‖

" " f ‖ f m r | m r d | r d t_1 | d t_1 l_1 | t_1 l_1 s_1 | l_1 s_1 f_1 | s_1 f_1 m | f_1 -- ‖ f_1 s_1 l_1 | s_1 l_1 t_1 | l_1 t_1 d | t_1 d r | d r m | r m f | m f s | f -- ‖

" " m' ‖ m' r' d' | r' d' t | d' t l | t l s | l s f | s f m | f m r | m -- ‖ m f s | f s l | s l t | l t d' | t d' r' | d' r' m' | r' m' f | m' -- ‖

" " r' ‖ r' d' t | d' t l | t l s | l s f | s f m | f m r | m r d | r -- ‖ r m f | m f s | f s l | s l t | l t d' | t d' r' | d' r' m' | r' -- ‖

131 from m' ‖ m' d' m' | r' t r' | d' l d' | t s t | l f l | s m s | f r f | m -- ‖ m s m | f l f | s t s | l d' l | t r' t | d' m' d' | r' f' r' | m' -- ‖

1231 from r' ‖ r' d' t r' | d' t l d' | t l s t | l s f l | s f m s | f m r f | m r d m | r -- ‖ r m f r | m f s m | f s l f | s l t s | l t d' l | t d' r' t | d' r' m' d' | r' -- ‖

143 from l ‖ l m f | s r m | f d r | m t d_1 | r l_1 t_1 | d s_1 l_1 | t_1 f_1 s_1 | l_1 -- ‖ l_1 r d | t_1 m r | d f m | r s f | m l s | f t l | s d' t | l -- ‖

142 from s ‖ s r f | f d m | m t_1 r | r l_1 d | d s_1 t_1 | t_1 f_1 l_1 | l_1 m_1 s_1 | l_1 -- ‖ s_1 d l_1 | l_1 r t_1 | t_1 m d | d f r | r s m | m l f | f t s | s -- ‖

It will be noted that these modal sequences cannot be read from the Sequence Modulator like ordinary sequences from top to bottom, beginning on Column 1. They may be read from other columns, of course.

For example, descending on the L.H.S., 345 would give:

‖ l s f | s f m | f m r | m r d | r d t_1 | d t_1 l_1 | t_1 l_1 s_1 | l_1 -- ‖

And, ascending on the L.H.S., 321 would give:

‖ l_1 t_1 d | t_1 d r | d r m | r m f | m f s | f s l | s l t | l -- ‖

On the R.H.S., 654 and 678 would give similar results.

But perhaps the best way for the pupils to read these modal sequences is to begin on the required note on Column 1, e.g. l, s, f, m or r, and to read down the column as usual. However, when they reach the bottom, they should start to read from the top again, while continuing the sequence with the voice downwards. The ascending sequence would be read in a similar fashion. Such a convention will not disturb pupils who are accustomed to sequence singing.

Modal Sequences should also be sung in various rhythms with and without anacrusis.

For example, |2 3 2| descending and ascending on R.H.S.

|r' :-m:r' |d' :-r':d' |t :-d':t |l :-t:l |s :-l:s |f :-s:f |m :-f:m |r :-:-|| r :-m:r |m :-f:m | etc.

Care should be taken to choose suitable keys for modal sequences. But modal practice in sequence singing makes it possible to sing any sequence in all keys, C, D, E, F, G, A, B, without increasing the actual range of the sequence. This may be shown by the following example:

123



In order to sing the above sequence, 123, modally, i.e. beginning with l, s, f, m or r, all we require to do is to change in imagination the key signature, and then read the notes in the new key. In Key G we have a 123 Lah Mode Sequence, in Key D a 123 Ray Mode Sequence, etc.

7. SEQUENCES BEGINNING ON OTHER COLUMNS THAN THE FIRST

These sequences should be sung like ordinary sequences, the only difference being that they begin on Column 2, 3 or 4, etc. Such sequences are useful, as they introduce new melodic combinations not found in ordinary sequences. A few examples are given below. Note that the finals in the descending and ascending series are d and d' respectively.

321

31

2312

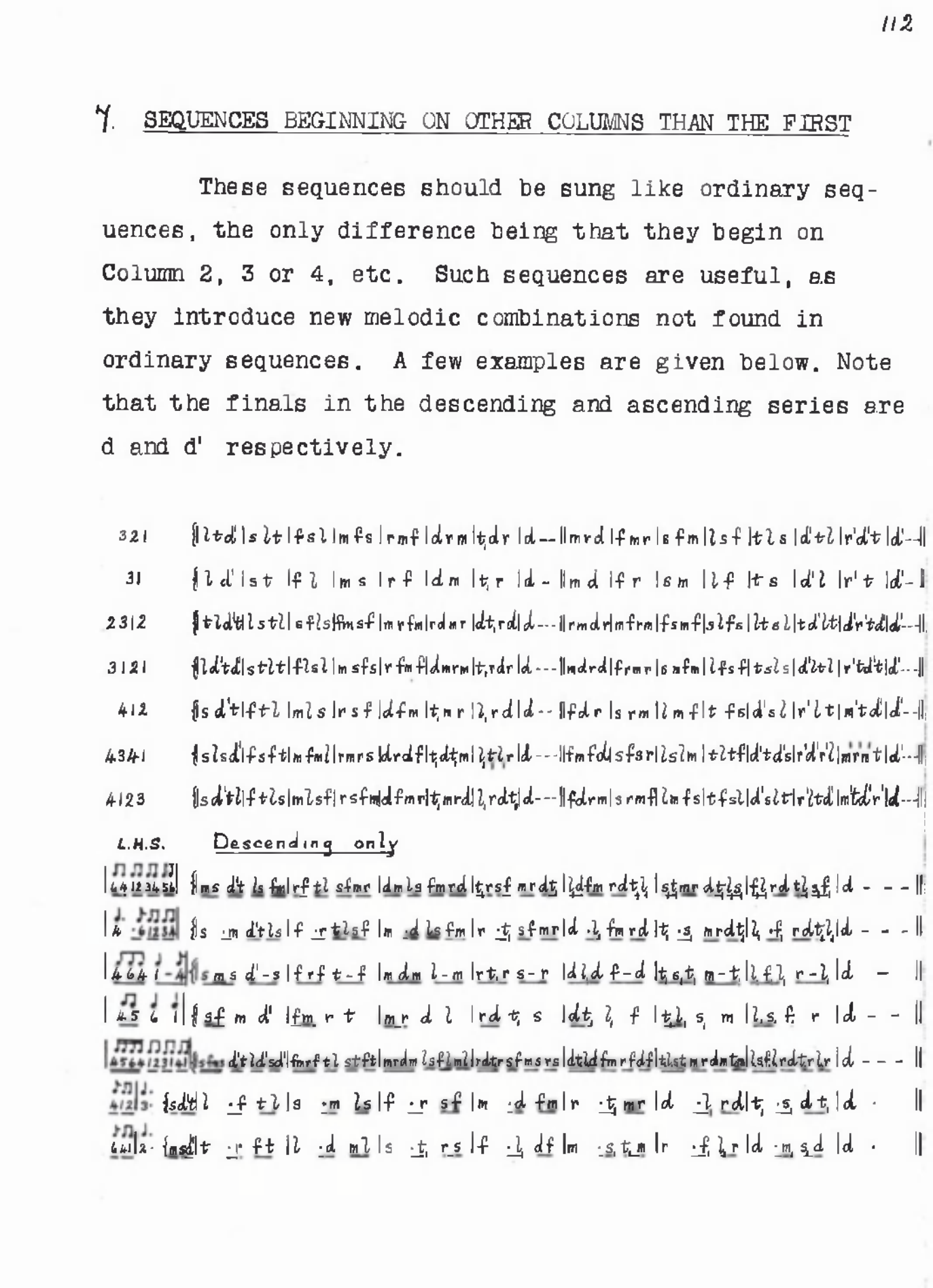
3121

412

4341

4123

L.H.S. Descending only



8. RESTS IN SEQUENCE SINGING

Every teacher knows the difficulty which children and adults experience in observing rests in playing. In singing, the mental and physical strain is much more considerable, especially when these rests occur in the middle of phrases or in the upper range of the voice. It is so much easier to keep the stream of sound flowing along evenly, |♩ ♫♫|♩♫♫|, than to punctuate it periodically with those rests, or "silences implying sound," |♩ 𝄾♪♫|♩ 𝄾♪♫|.

The problem is primarily a physiological one, and should therefore be approached from the physiological side. In this connection, it will be found that the physical effort involved in "singing rests" may well be overcome through introducing rests into familiar sequences. Thus, to take one example only, the sequence 1231, or d't1d', may be sung in a variety of ways in $\frac{3}{4}$ time, using only the four elements, ♩ , ♪, 𝄾 and 𝄿 .

	Primary Rhythm			Secondary Rhythm	
1	♫ ♩ ♪𝄿	8	♫ 𝄾 ♫	15	♪ ♫ ♩ 𝄿
2	♩ ♪𝄿 ♫	9	𝄾 ♫♫	16	♪ ♩ ♫𝄿
3	♩ ♫ ♪𝄿	10	♩ 𝄿 ♪♫	17	♫ ♫ 𝄾
4	♫ ♪𝄿 ♪𝄿	11	♫♩ 𝄿 ♪	18	♫ ♩ ♪𝄿
5	♪𝄿♪𝄿 ♫	12	♫ 𝄿 ♪♩	19	♫ ♪𝄿 ♪𝄿
6	♪𝄿 ♫ ♪𝄿	13	𝄿♪♩ ♫	20	♩ ♫ ♪𝄿
7	♫ ♫ 𝄾	14	𝄿♪♫♩	21	♪♫ ♩ 𝄿

For example, the teacher might sing the sequence to No.8 pattern above, and the class would join in, beating time:

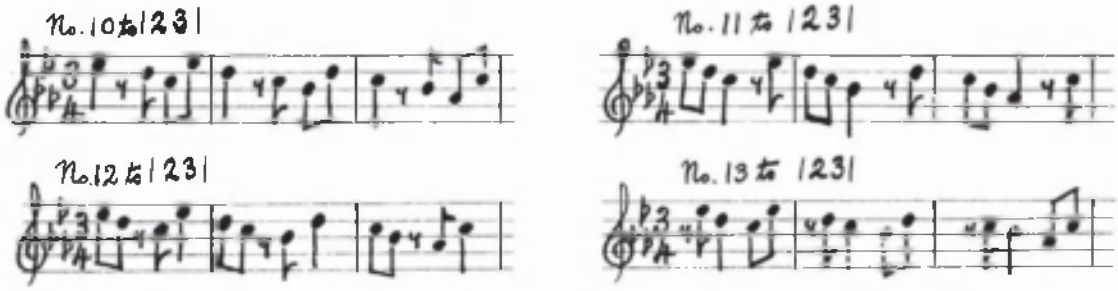
‖d'.t: :l.d'|t.l: :s.t|l.s: :f.l|s.f: :m.s|f.m: :r.f|m.r: :d.m|r.d: :t,.r|d :-.-‖d.r: :m.d|d

As in our dealings with pitch and rhythm, so in our dealings with rests we must see that an extensive oral stage precedes the symbol stage, for, as Keats says,

"Axioms in philosophy are not axioms
till they are proved upon our pulses." *

Also, we must remember that, just as the mental effects of the pitch elements and rhythmic elements are affected by the contexts in which they occur, so the mental effects of the rest elements are affected by the contexts in which they occur. Thus it is not reasonable to teach children to observe the half-beat rest (whether on the beat or after the beat) in one or two contexts, and then expect them to be able to observe the half-beat rest in any other context.

A reference to the Rhythm Table on the previous page will show the reader how different the effect of a half-beat rest (𝄾) may be according to its context.

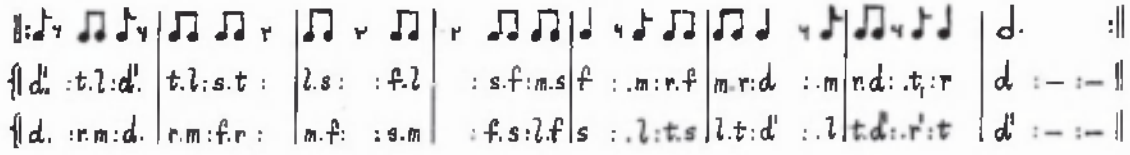


* Letter to J.H.Reynolds, 3rd May 1818 (The Complete Works of John Keats, Vol.IV. Ed.by H.Buxton Forman, Gowans and Gray, Glasgow, 1901)

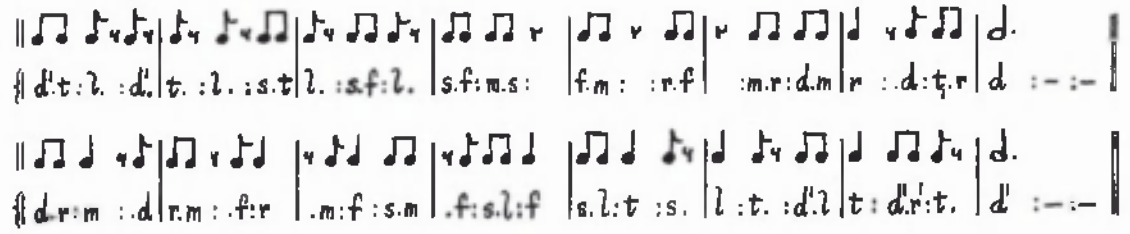
It is very necessary to insist on this extensive oral stage in all our music practice, as there is a strong tendency in many quarters to link up practice with theory, the oral with the symbolic, from the very earliest stages. While we agree that theory and practice should always go hand in hand and that there should be no theory without practice, we cannot allow the inference that practice and theory should always go hand in hand and that there should be no practice without theory. Practice begets theory, but theory does not beget practice. The knowledge that a certain sign (𝄾) means a silence of half-a-beat duration is quite a different thing from the ability to lift the finger momentarily, or to stop the flow of vocal sound momentarily, in obedience to that sign. And knowledge that is not begotten of action is mere mental lumber, but knowledge that is born of action is power. Let the pupils, then, first prove all musical facts "upon their pulses," and they will then welcome a mode of representing these facts by means of the symbolic language of the staff notation.

After the pupils have passed through this oral stage in the observance of rests, the staff symbols for rests may be taught, and the Rhythm Tables above may be used in a variety of ways in conjunction with familiar four-note sequences like d' t l d' . For example, during the singing

of the sequence the rhythmic pattern might be changed at the word of command, or by previous arrangement. Again, upper classes, after practice with the separate rhythmic patterns, might attempt to sing sequences while reading down or up the first two columns, using a new pattern on each scale degree. Seven patterns are required for the descending sequence, e.g. 1-7, 2-8, 3-9, 4-10 etc., and the same patterns may be repeated for the ascending sequence, the final notes in each sequence being held for three beats. Thus, a sequence based on the pitch formula, 1231, and the rhythmic patterns 6-12 would result as follows:

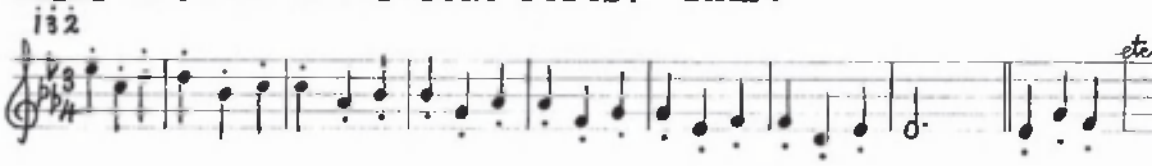


Further variety may be got by using fourteen rhythmic patterns for the complete sequence, beginning at any number and continuing the cycle from No.1 where necessary. The following begins at No.4 and ends at No.3.



Staccato Sequence Singing

The practice of staccato sequence singing will be found to be an invaluable preparation for training in the observance of after-beat rests. Thus:

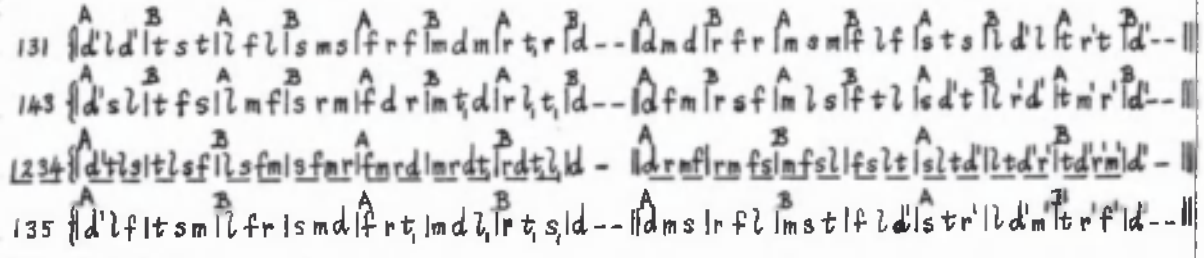


Much more variety, of course, could be got from the same four time elements (♩,♪,𝄽,𝄾) by using $\frac{4}{4}$ time. (See Rhythm Tables for Sequence Singing, page 194.)

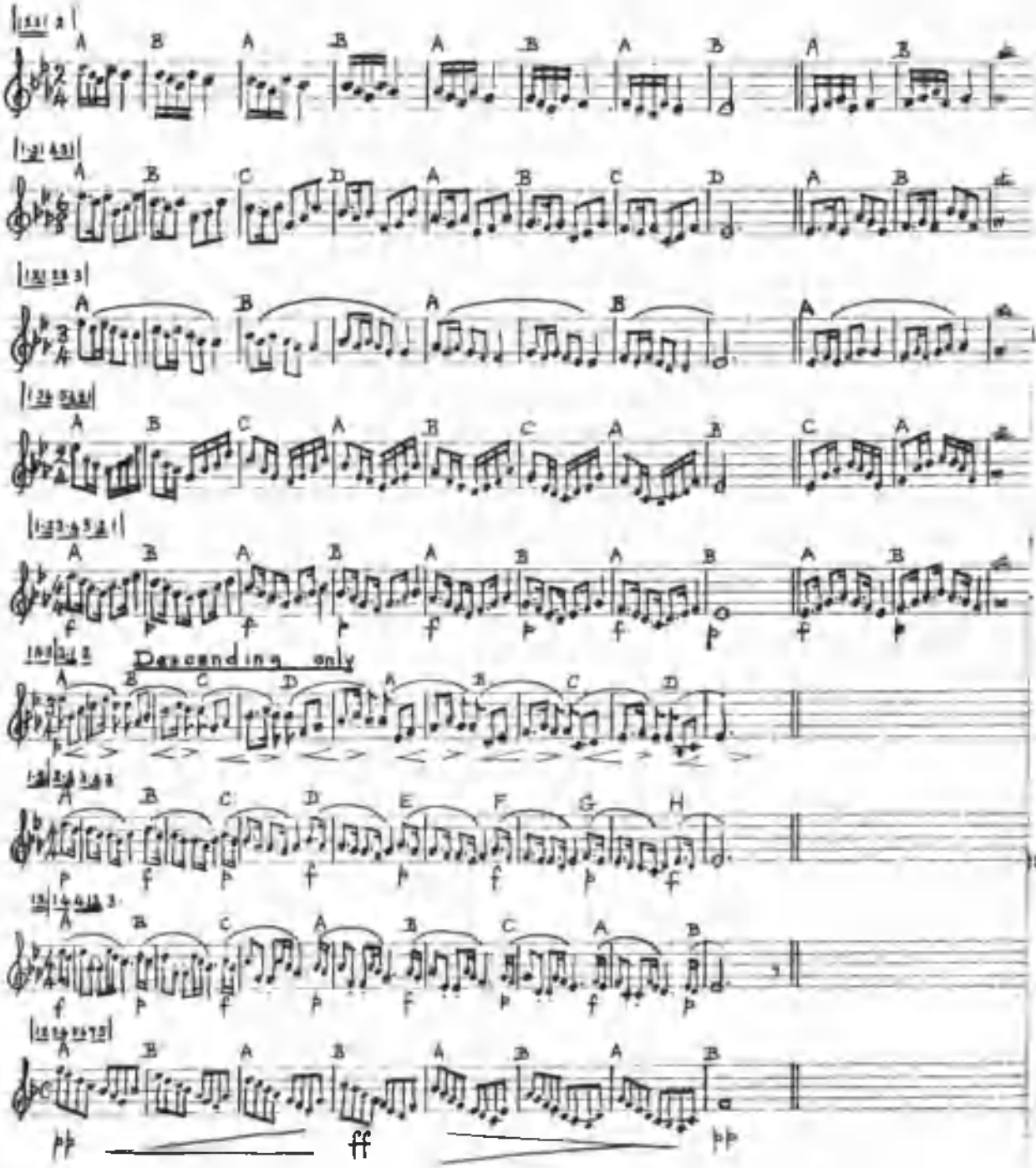
9. ANTIPHONAL SEQUENCE SINGING

Antiphonal singing is not often practised in school, probably on account of the lack of suitable material. Yet it provides a most valuable exercise for the Singing Class.

It encourages good listening and develops the team spirit with its "give and take". But it also provides an excellent opportunity for the cultivation of musical imagery on the part of the pupils. The child who plays at this game must listen actively while the opposite side is singing, and must follow the tune in imagination, or image the notes that he hears sung, in order to be able to pick up the melodic thread and to release it at the correct moment. Sequences are ideal for this purpose of antiphonal singing. All that the teacher requires to do is to divide the class into two sections A and B. These would then sing alternate bars or alternate double bars as in the following sequences.



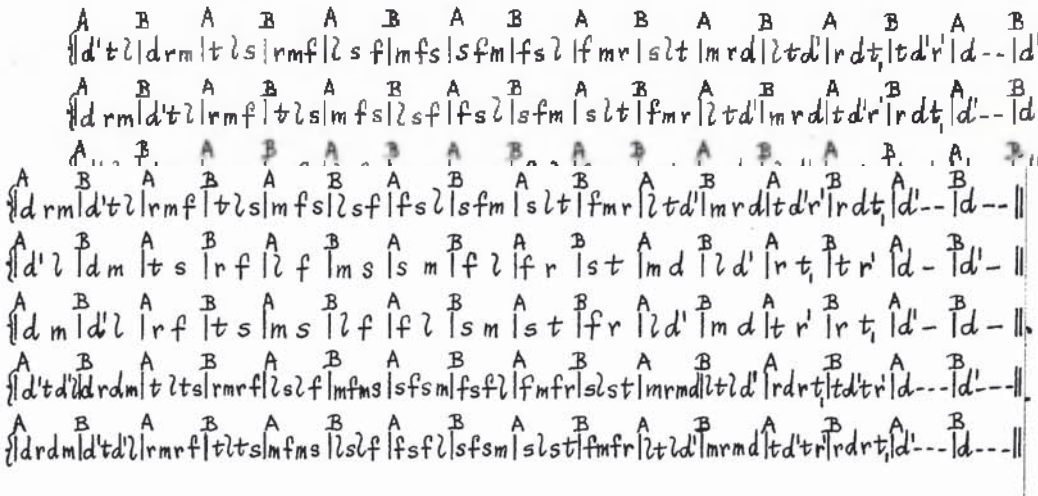
All Antiphonal Sequences such as the above may also be carried out with varied rhythmic patterns and with three or four voices, ABC or ABCD. The sections may also be brought in, in any order, at a sign from the teacher. Thus:



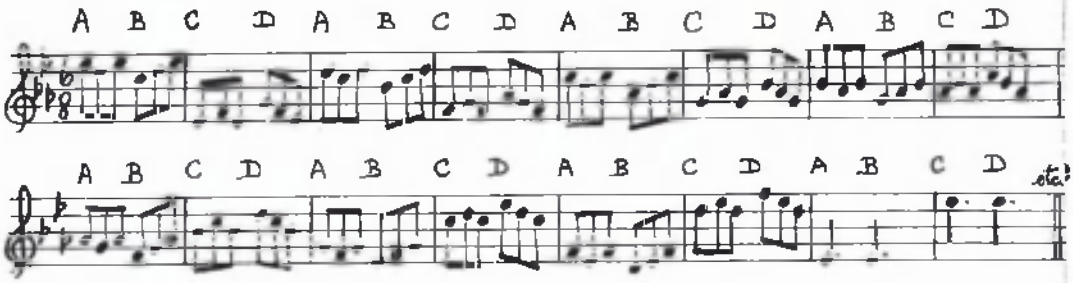
Announcing phrases and responsive phrases may be contrasted, and expression introduced as in the above.

10. ANTIPHONAL SINGING IN CONTRARY MOTION

An exercise that makes greater demands on technique is the singing of sequences antiphonally and by contrary motion. In this case Section A would descend on the L.H.S. and Section B would ascend on the R.H.S. of the Modulator alternately, thus:



This last sequence might be sung by four sections, A, B, C and D, thus:



II. THE CULTIVATION OF MUSICAL IMAGERY THROUGH THE MENTAL SINGING OF SEQUENCES

The main difference between the musical person and the non-musical person is not that the one can perform on a musical instrument and the other cannot. Nor is it that one is able to read music and the other is unable to do so. The main difference between the musical person and the non-musical person is rather that the one is rich in musical imagery, and the other is more or less destitute of musical imagery. While the former can hear "ditties of no tone" with the "inward ear which is the bliss of solitude," the latter can hear music only when it impinges on the outer or physical ear. He cannot create or re-create music spontaneously from within - he cannot think in terms of music, because he is deficient in or destitute of musical imagery.

It is most important, then, that children should be encouraged to cultivate the habit of singing mentally, or of imaging musical sounds. And sequence singing may be used very successfully to further this end.

Thus, a class may begin a sequence, beating time to it, and at a sign from the teacher stop singing; and then, at another sign from the teacher, take up the sequence again from the point reached.

This is illustrated in the following examples, where

the dots indicate silent beats.

123 ‖d'tl|tls|lsf|...|...|...|rdt|d--‖drm|...|...|...|...|...|td'r|d'--‖

131 ‖d'ld'|tst|...|...|..f|mdm|r...|...|...‖...|...|.sm|flf|...|...|...|d'--‖

1231 ‖d'tld'|tlst|...|...s|fmrfm...|...|...‖...|..frmfsmfslf|s...|...|..r't|d'--‖

141 ‖d'sd'|tftl..|...|.dfm..|.lrd--‖dfd|rs.|...|.tf|sd'..|..l|tm't|d'--‖

1431 ‖d'sld'|tfst|lmfl|...|...|...|rltr|d---‖dfmd|rsfr|m...|...|..ts|lrd'l|tmr't|d'--‖

135 ‖d'lf|tsm|...|...|...|...|...|...‖...|rfl|mst|...|...|... |tr'f'|d'--‖

From Allegro to Andante

1234 ‖d'tls|tlsf|...|...|...|...|...|...‖...|...|...|...|...|...|ltdr|tdrm|d'-‖

A further demand on the musical imagery or musical awareness of the class may be made by prohibiting the beating of time, after the first few bars of the sequence have been sung. This means that at a given sign from the teacher both time and tune must be imaged or followed mentally by the class.

Those who have taken part in community singing, and have joined in the singing of "John Brown's Body" after this fashion, omitting a new word at each repetition of the chorus and entering all together on the last line, will realise how exhilarating this exercise can be.

12. NON-SCALIC SEQUENCES

All the sequences given so far have been sung on the descending and ascending scale; but, in actual practice, sequences do not always follow scalewise. And so it is advisable to accustom children to the singing of sequences which follow at other intervals. For this purpose the teacher might point to various notes on Column 1 of the Sequence Modulator, and ask the class to ornament each note with some melodic figure, e.g., 12, 121, 13, 131, 1231, 1321, 14, 141, 143 etc.

	{d'	l	t	m	l	f	s	d ‖
L.H.S.	121	{d' t d' | l s l | t l t | m r m | l s l | f m f | s f s | d - - ‖						
R.H.S.	121	{d' r' d' | l t l | t d' t | m f m | l t l | f s f | s l s | d - - ‖						

However, to avoid formless and unrhythmical singing, it is better to have in mind some basic formula of four or eight bars, which could be pointed on the modulator, or written on the blackboard. After practice in embellishing notes in this manner from the Sequence Modulator, the class should attempt to do so from the blackboard, where they would have no help in gauging the intervals in the melodic ornaments, 131, 143 etc.

We set out below some basic formulae, and show how they appear with various melodic ornaments. Notice that the final note is not ornamented.

Basic Formula

Melodic Figure												
	d'	l	f	t	s	m	l	f	r	d	–	–
L.H.S. 123	d' t l	l s f	f m r	t l s	s f m	m r d	l s f	f m r	r d t,	d	–	–
13	d' l	l f	f r	t s	s m	m d	l f	f r	r t,	d	–	–
131	d' l d'	l f l	f r f	t s t	s m s	m d m	l f l	f r f	r t r	d	–	–
1231	d' t l d'	l s f l	f m r f	t l s t	s f m s	m r d m	l s f l	f m r f	r d t, r	d	–	–
143	d' s l	l m f	f d r	t f s	s r m	m t, d	l m f	f d r	r l, t,	d	–	–

The above are shown as they would appear on the L.H.S. of the Sequence Modulator. We shall now show the same sequences as they would appear if pointed or sung from the R.H.S. of the modulator.

Basic Formula

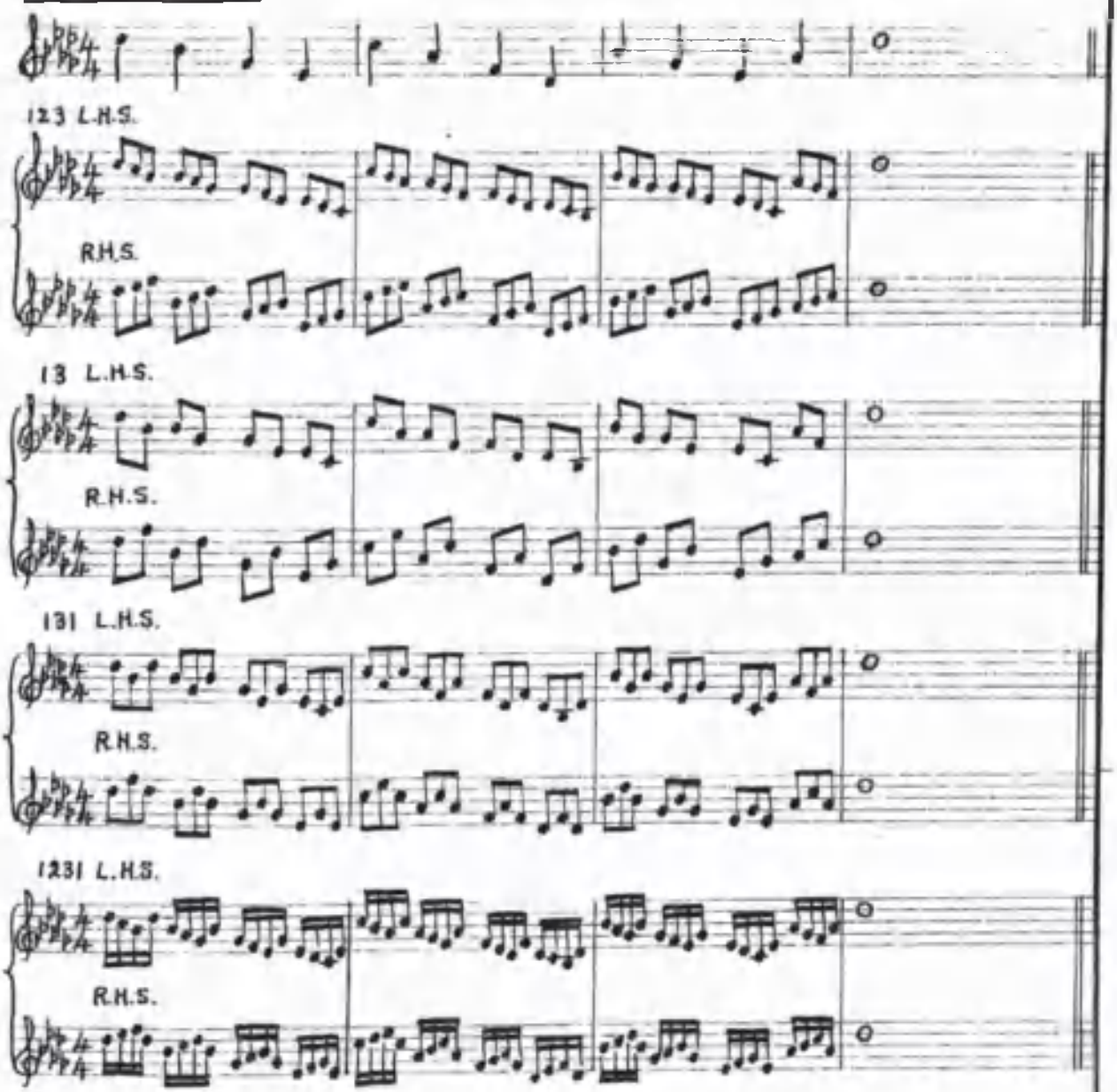
Melodic Figure												
	d'	l	f	t	s	m	l	f	r	d	–	–
R.H.S. 123	d' r' m'	l t, d'	f s l	t, d' r'	s l t	m f s	l t, d'	f s l	r m f	d	–	–
13	d' m'	l d'	f l	t r'	s t	m s	l d'	f l	r f	d	–	–
131	d' m' d'	l d' l	f l f	t r' t	s t s	m s m	l d' l	f l f	r f r	d	–	–
1231	d' r' m' d'	l t, d' l	f s l f	t, d' r' t	s l t s	m f s m	l t, d' l	f s l f	r m f r	d	–	–
143	d' f' m'	l r' d'	f t, l	t, m' r'	s d' t	m l s	l r' d'	f t, l	r s f	d	–	–

Basic Formula

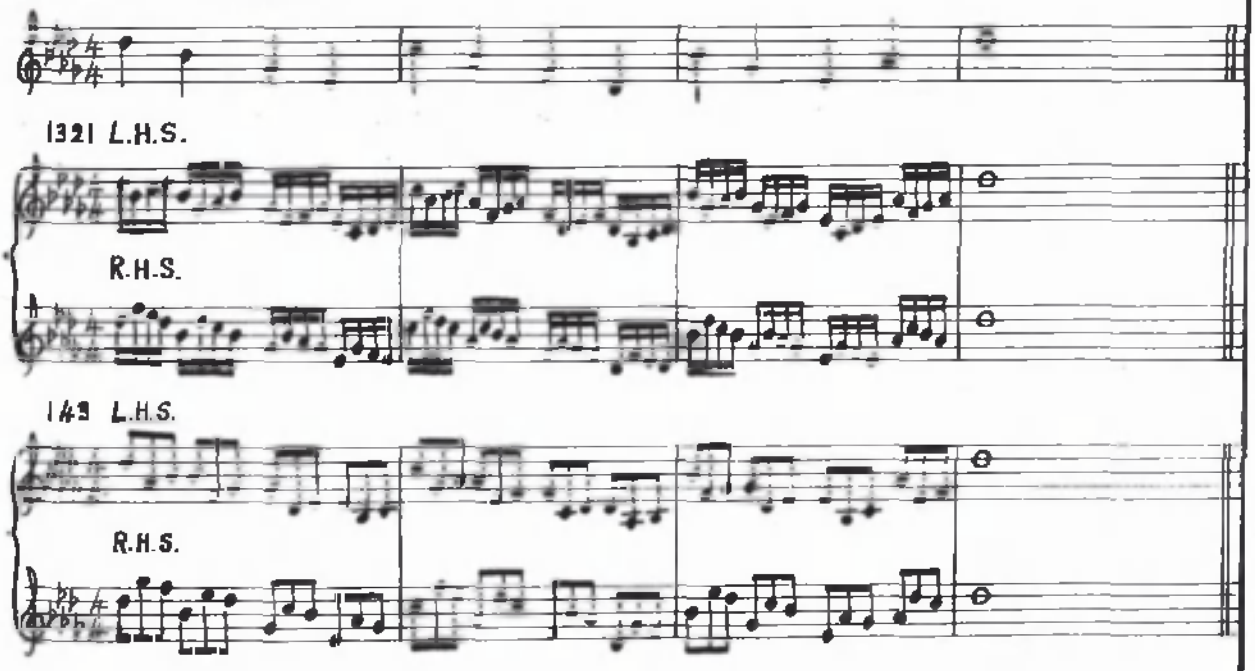
Melodic Figure								
	d'	f	t	m	l	r	s	d
L.H.S. 123	d' t l	f m r	t l s	m r d	l s f	r d t,	s f m	d
131	d' l d'	f r f	t s t	m d m	l f	r t r	s m s	d
2213	d' t d' l	f m f r	t l t s	m r m d	l s l f	r d r t,	s f s m	d
1321	d' l t d'	f r m f	t s l t	m d r m	l f s l	r t, d r	s m f s	d
1231	d' t l d'	f m r f	t l s t	m r d m	l s f l	r d t, r	s f m s	d
2321	d' t d' l t d'	f m f r m f	t l t s l t	m r m d r m	l s l f s l	r d r t, d r	s f s m f s	d –

In order to bring out the contrast between sequences based on the L.H.S. and those based on the R.H.S. of the Sequence Modulator, we shall alternate L.H.S. and R.H.S. sequences in the next example.

Basic Formula



Basic Formula



Other formulae may be used for purposes of melodic embellishment on the lines above. For example, the three formulae just used may be inverted, thus:

d	m	s	r	f	l	m	s	t	d'	-	-
d		s	r		l	m		t	d'	-	
d	m	s	t	r	f	l	d'	m	s	t	s	d'	-	-	-

CHAPTER VII
VARIED USES OF THE SEQUENCE MODULATOR (CONTD.)

13. CHROMATIC SEQUENCES

We hear a great deal nowadays about correlation of subjects and co-ordination of activities. So much so, indeed, that in a subject like music where so many different activities go to make up what we call musicianship, we often find attempts being made to correlate aspects of study and to co-ordinate activities, which in fact cannot be correlated or co-ordinated, because they depend on native powers that mature at different stages of growth.

Thus, a child of five or six may profitably be introduced to music spelling or sol-faing practice - that is, to the study of musical notation from the oral point of view. While engaging the powers of memory, this study depends mostly on imitation or pattern singing, an activity for which the child is peculiarly fitted by nature. Yet, some music educationists, actuated by the doctrine of correlation and not stopping to consider the equally important doctrine of maturation, insist that sol-fa and staff notation should be correlated from the outset. The result is that the ability to sol-fa, which develops at a fairly early stage, is stultified by the attempt to co-ordinate it with the ability to interpret musical symbols from the stave, an ability which depends on visual powers that do not mature in the individual till much later.

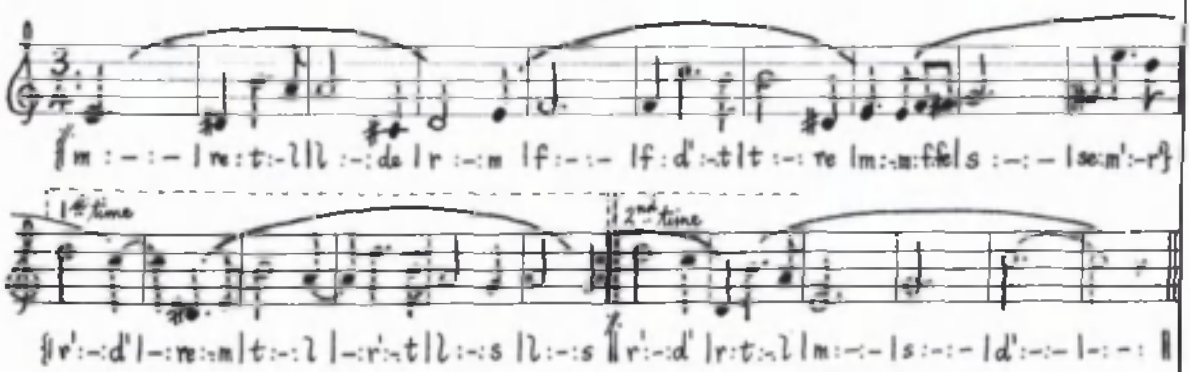
Unfortunately, too, the premature emphasis on notation, or the visual aspect of music, does much to take the "music" out of the "music lesson" in the early stages, where especially it is so necessary that it should be present.

A notable instance of the damage caused by the attempt to correlate all musical activities with staff notation is to be found in the case of chromatic notes. In schools today it is customary to begin the study of chromatic notes by the introduction of "fe" and "ta" at a fairly late stage, when the structure of the scale and the relation of the dominant and subdominant keys to the tonic are under discussion.

But chromatic notes were used for melodic purposes long before they were used for harmonic or modulatory purposes. Indeed, they were used melodically in the old days of Musica Ficta before there were even chromatic signs to represent them on the stave - long before our present scales and key system came into vogue. So, from the point of view of aural training, it is neither necessary nor is it desirable to postpone the introduction of chromatic notes till the question of the structure of the scale and the relation of the dominant and subdominant keys to the tonic forces us to deal with them. There is even no need to delay their introduction until the children

are old enough to be able to interpret them from the staff symbols – × ♯ ♮ ♭ 𝄫.

Young children of today are familiar, through popular music, with the melodic use of practically all chromatic notes, although they may not know their sol-fa names or their visual signs. For example, in the 32 bars of the well-known melody from "The Desert Song" - a melody known to practically all school children –



four out of the five raised chromatic notes occur - de twice, re five times, fe twice and se twice.

If children are already familiar with these chromatic notes as sounds, that is, if these chromatic notes are already part of their oral vocabulary, we must assume that the only reason for the delay in introducing them into the Singing Class is that they are very difficult to explain in terms of staff symbols. The staff chromatic symbols (× , ♯ , ♮ , ♭ , 𝄫) admittedly presuppose an intimate acquaintance

with the musical stave, clefs and key signatures, if not with the structure of the scale or of the keyboard itself.

But the sol-fa chromatic symbols (de, re, fe, se, le, ta, la, ma, ra) presuppose no such notational knowledge. They are psychologically adapted to the function they perform, and, consequently, are self-explanatory. Thus, the names of all the chromatically raised notes are derived from the diatonic syllables by simply changing the vowel sound of the diatonic syllable in each case to the bright vowel "ee" - doh de, ray re, fah fe, soh se, lah le. It should be noted that the two missing notes - me and te - cannot be raised chromatically, because they are already at the distance of a semitone below the nearest diatonic note. But this is already shown in the sol-fa names by the fact that the syllables for these notes, me and te, both contain the same bright vowel "ee." In short, the presence of the acute vowel "ee" in a tonic sol-fa syllable, whether diatonic or chromatic, indicates to the singer that the diatonic note above is at the distance of a semitone.

With regard to the chromatically lowered syllables, these are all derived from the diatonic syllables by changing the vowel sound of the diatonic syllable in each case to the dark vowel "aw" - te taw, lah law, me maw, ray, raw. Thus, the rise (se lah) and the fall (law soh) of the chromatic note to the nearest diatonic note are

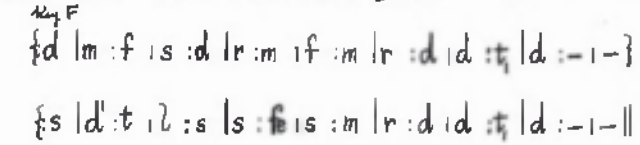
psychologically suggested by the vowel colours of the chromatic syllables.

The main reason why children should be given an early opportunity of sol-faing chromatic notes is, that through spelling out these chromatic notes they become acquainted at first hand with the structure or anatomy of the scale from the point of view of the tonal and semitonal steps. Children who have been early trained in such melodic use of chromatic notes are in a strong position to understand all the intricacies of the music stave with its various clefs, key signatures and accidentals.

Hence, we contend that it is psychologically unsound to attempt to correlate sol-fa and staff, pari passu, throughout the whole curriculum - to hold up, as in this instance, the sol-faing of chromatic notes because children are not old enough to understand the staff symbols for these.

It is as if one were to forbid children to use words orally in the English class, until they had been formally introduced to them in the Reading Lesson! This attitude of logical and piecemeal presentation of subject-matter, which is a very common one among music teachers, may be illustrated by the following incident, which occurred a few years ago when the writer was engaged in superintending the music teaching in elementary schools. He had been

encouraging the various classes to spell, or to sol-fa from memory, familiar hymn tunes and songs from their song books. Among others that he had asked a Teacher to prepare was the well-known psalm tune "French" or "Dundee":

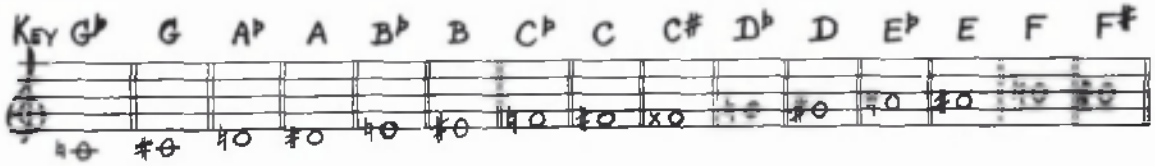


On his next visit he asked the class to sol-fa this psalm tune from memory, and they did so correctly with the exception of one note, namely "fe". When they came to this note "fe", they always sang the correct sound but called the note "fah". The writer drew the attention of the Teacher to this, and she replied that she had told the class to call the note "fah", adding, "You see, they are not supposed to know "fe" at this stage." One might have been pardoned for retorting, "Well, what right have they to sing it at this stage...and sing it so well, too?"

Surely, in music as in language, there is no reason why an oral stage should not co-exist, albeit at a higher level, alongside a symbol stage.

We would propose, then, that chromatic sequence singing should be introduced in class and carried on orally, once the practice of diatonic sequence singing has been established.

It is quite unnecessary to adopt the usual procedure of introducing chromatic notes one at a time, devoting many months to each one. This may be necessary when we are explaining chromatic notes in terms of staff notation. Between Middle C and the octave above, the note "fe", for example, may appear in staff notation in 15 different guises in the Treble Clef alone, i.e., in each of the 7 sharp and 7 flat keys and in the natural key. *



But while musical notation is highly complex, music itself, as John Curwen used to remind his audiences, is very simple. And we are concerned here solely with musical sounds and their names, or with music as an oral language.

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*The above applies to each of the 9 chromatic notes in common use. Thus, within the octave and in the treble clef alone, the staff reader must become acquainted with 135 chromatic notes as against the 9 chromatic syllables of the tonic sol-fa system, viz. de re fe se le and ta la ma ra.

RAISED CHROMATIC NOTES

Raised chromatic notes are much more common in melody than lowered chromatic notes, and these should be introduced first by means of the semitonal mordent figure. In the sequence 121

| d' t d' | t l t | l s l | s f s | f m f | m r m | r d r | d - - ‖

it will be seen that the interval from 1 to 2 is sometimes a tone and sometimes a semitone. If we are to make this interval a semitone throughout, we must change the vowel of the middle syllable, i.e. of column 2, to "ee", except in the case of te and me, which, as the names indicate, are already a semitone below the diatonic note. Hence, the semitonal mordent figure 121 would run thus:

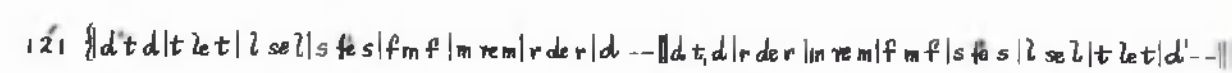
| d' t d' | t le t | l se l | s fe s | f m f | m re m | r de r | d - - ‖

In reading this chromatic sequence from the Sequence Modulator, the class should be told simply to change, where necessary, the vowel sounds in column 2 to "ee". No further explanation is required. It will be found that children will respond readily to these directions, and will master all the raised chromatic notes without much difficulty.

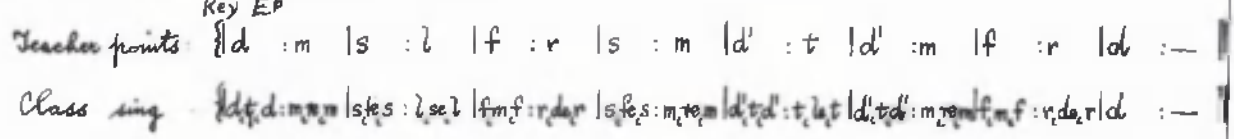
Much practice in the semitonal mordent figure should be given before sequences involving a leap to the chromatic note are attempted. Scales containing the semitonal mordent

may be used.

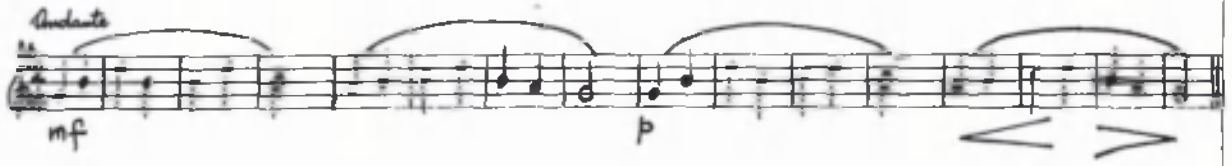
For example: 1$\acute{2}$1 descending and ascending on the L.H.S. of the Modulator.



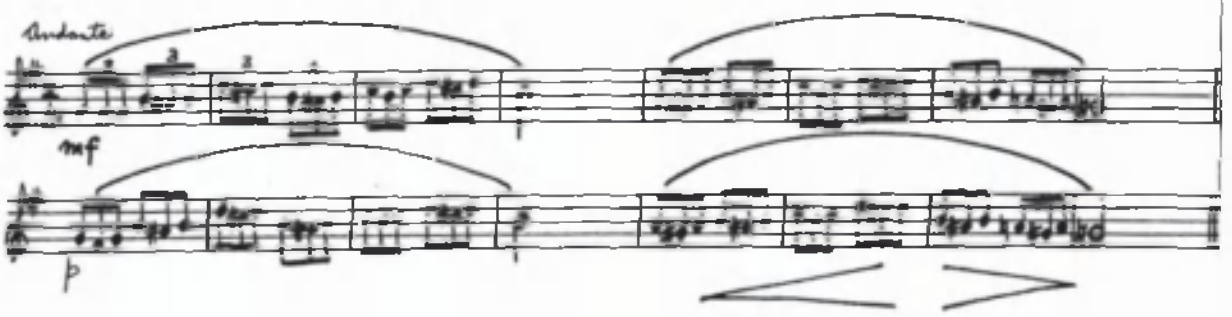
The same principle could be applied to ordinary modulator exercises, containing one-beat notes, the teacher pointing while the class embellished each note with a lower semitonal mordent, thus:



Again, all crotchets in sight-reading exercises, except those at the end of a phrase, might be similarly ornamented. Thus, the following exercise from "The Folk Song Sight Singing Series," Book I (Oxford University Press)

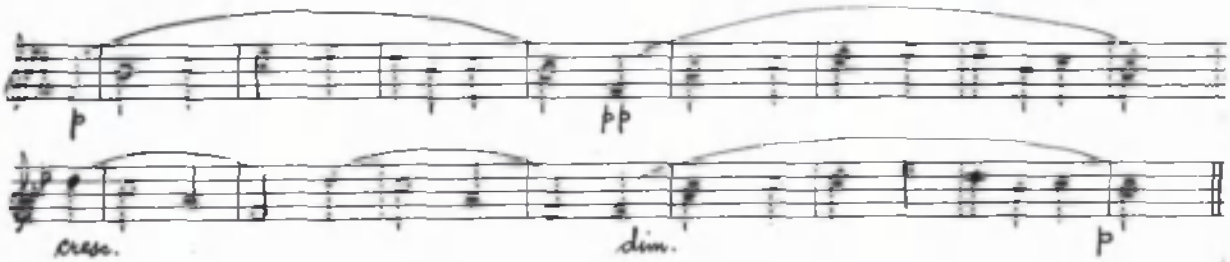


would be sung to the syllables as in the following:

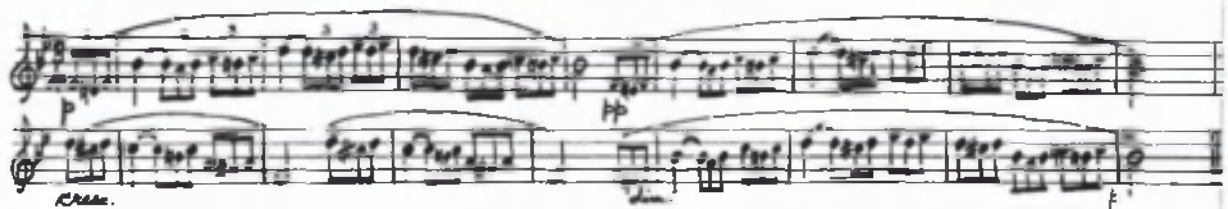


This principle of melodic ornamentation through the use of the lower semitonal mordent figure might also be extended to all minims, except those at the end of a phrase. The minim 𝅗𝅥 would then be transformed thus: 

The following example from the same Sight Reader,



would be sung as in the example below.



We thus arrive at one of the principal types of melodic ornamentation used by composers in the Variation Form from Haydn's day onwards.

The semitonal mordent figure may also be applied to one-beat notes in familiar song and hymn tunes. These would be sol-faed from memory and ornamented thus:

"The Ashgrove"

Key A♭

{:s,fe,s, | d,t,d : m,rem : s,fe,s | m,rem : d,td : d,t,d | n,der : fmf : n,der | t,let : s,fe,s}

{:s,fe,s, | d,t,d : m,rem d,td | l,sel : fmf : l,sel | s,fe,s : d,td : t,let | d :— ‖

RAISED CHROMATIC SEQUENCES

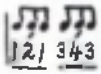
We give below some examples of chromatic sequences. The acute accent over the numbers in the sequence formulae, 1$\acute{2}$1, 12$\acute{3}$2, 13$\acute{4}$3 etc., indicate that the notes and the syllables in these columns of the Modulator should, where necessary, be raised. This device of "accenting" a figure to indicate chromatic alteration will be found useful when it is necessary to keep a record of work done.

In these chromatic sequences, only one side of the Sequence Modulator should be used at a time, the class descending and ascending on the same columns. Except when the letters R.H.S. are used, it will be understood that the Left Hand Side of the Modulator is intended.





1 3 4 3 | {| d' l sel | t s fe s | l f m f | s m rem | f r der | m d t,d | r t, le,t, | d – }
{| d l, se,l, | r t, le,t, | m d t,d | f r der | s m rem | l f m f | t s fe s | d' – ||



1 2 1 3 4 3 | {| d't d' l sel | t let s fe s | l sel f m f | s fe s m rem | f m f r der | m rem d t,d | r der t, le,t, | d – }
{| d t,d l,se,l, | r der t,le,t, | m rem d t,d | f m f r der | s fe s m rem | l sel f m f | t let s fe s | d' – ||



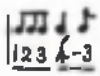
1 2 1 2 | {| d't d' t | t let l | l sel s | s fe s f | f m f m | m rem r | r der d | d – }
{| d t,d t, | r der d | m rem r | f m f m | s fe s f | l sel s | t let l | d' – ||



1 2 3 2 1 | {| d't let d' | t l sel t | l s fe s l | s f m f s | f m rem f | m r der m | r d t,d r | d – – }
{| d t, le,t,d | r d t,d r | m r der m | f m rem f | s f m f s | l s fe s l | t l sel t | d' – – ||



4 1 2 1 | {| s d' t d' | f t let | m l sel | r s fe s | d f m f | t, m rem | l, r der | d – }
{| s,d t,d | l,r der | t, m rem | d f m f | r s fe s | m l se l | f t le t | d' – ||



1 2 3 4 – 3 | {| d't l se-l | t l s fe-s | l s f m-f | s f m re-m | f m r de-r | m r d t,-d | r d t, le,-t, | d – }
{| d t,l, se,-l, | r d t, le,-t, | m r d t,-d | f m r de-r | s f m re-m | l s f m-f | t l s fe-s | d' – ||

Sequences with leap to Chromatic Note



1 3 2 | {| d' le t | t se l | l fe s | s m f | f re m | m de r | r t, d | d – – }
{| d le, t, | r t, d | m de r | f re m | s m f | l fe s | t se l | d' – – ||



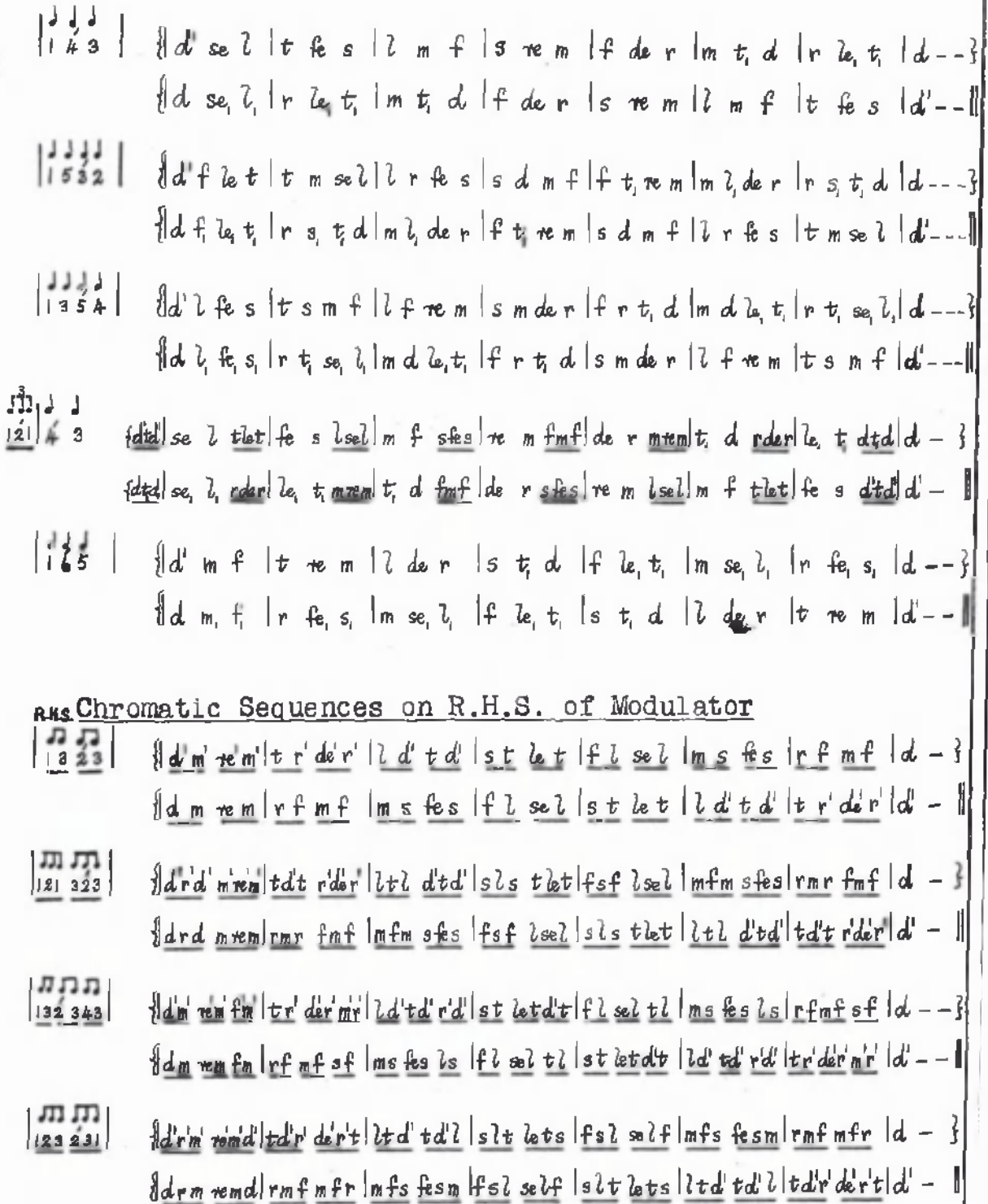
1 4 3 | {| d' se l | t fe s | l m f | s re m | f de r | m t, d | r le, t, | d – – }
{| d se, l, | r le, t, | m t, d | f de r | s re m | l m f | t fe s | d' – – ||



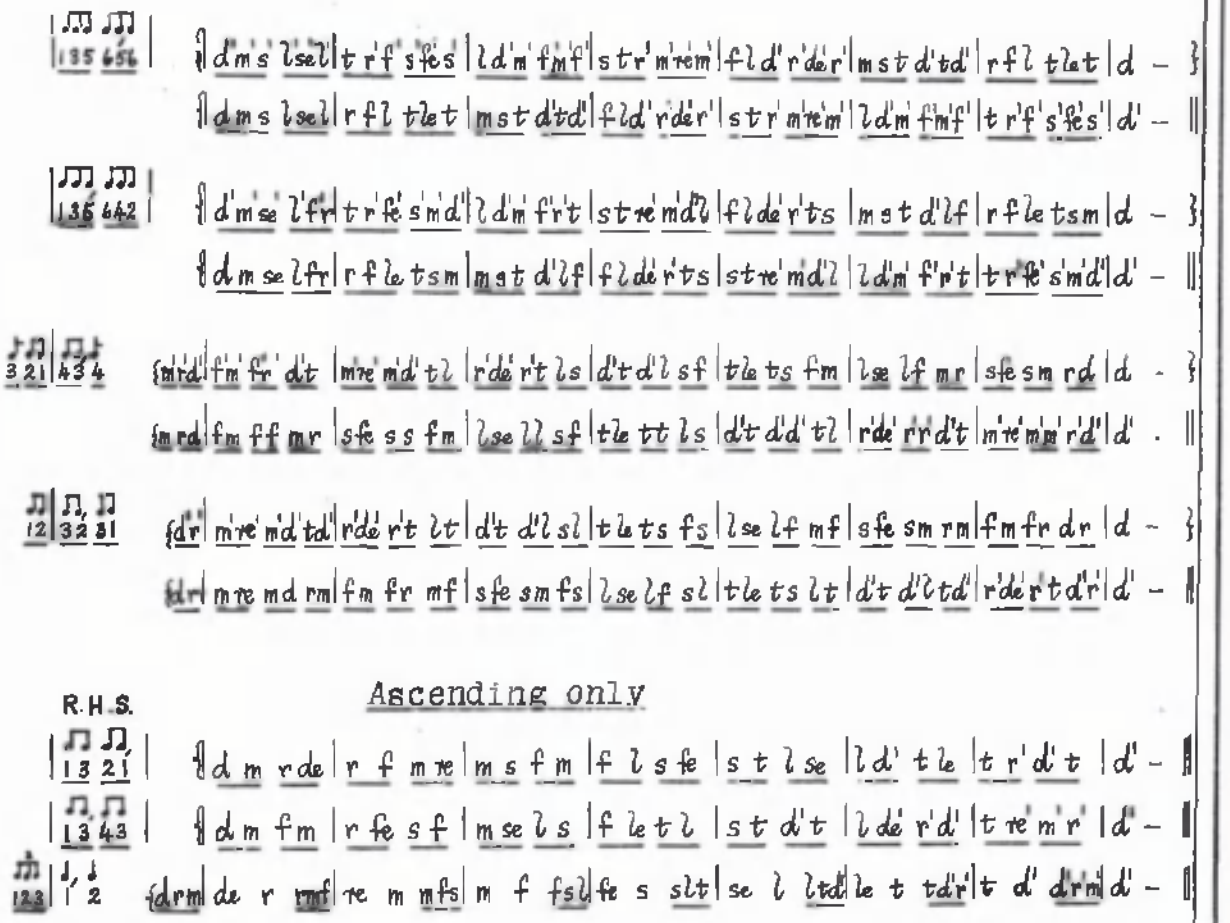
1 2 3 1 | {| d' t le d' | t l se t | l s fe l | s f m s | f m re f | m r de m | r d t, r | d – – – }
{| d t, le, d | r d t, r | m r de m | f m re f | s f m s | l s fe l | t l se t | d' – – – ||



1 2 4 3 | {| d' t se l | t l fe s | l s m f | s f re m | f m de r | m r t, d | r d le, t, | d – – – }
{| d t, se, l, | r d le, t, | m r t, d | f m de r | s f re m | l s m f | t l fe s | d' – – – ||

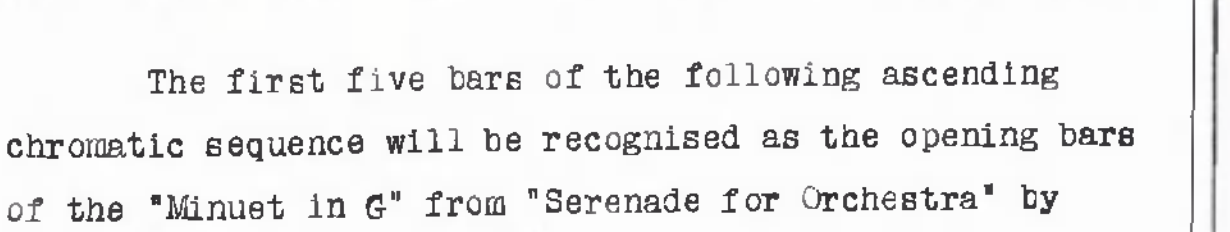


R.H.S. Chromatic Sequences on R.H.S. of Modulator

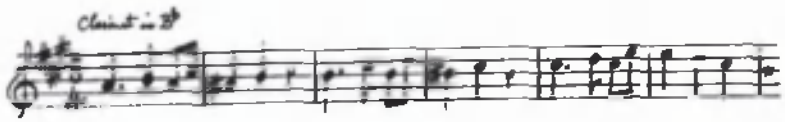


Ascending only

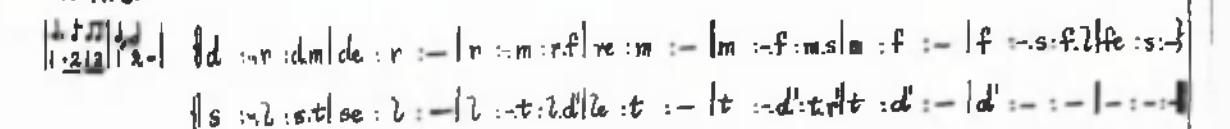
R.H.S.



The first five bars of the following ascending chromatic sequence will be recognised as the opening bars of the "Minuet in G" from "Serenade for Orchestra" by Brahms.



R.H.S.



LOWERED CHROMATIC NOTES IN SEQUENCE SINGING

With regard to flattened or lowered chromatic notes, these are much more awkward to sing and more difficult to introduce into sequence work. However, we may console ourselves with the thought that they are found much less frequently in melody. Of the seven scale degrees, d and f, being the upper notes of the two semitonal steps, are never flattened, and the dominant s is practically never flattened. This leaves only four flattened notes - ta, la, ma and ra (pronounced taw, law, maw and raw) - and of these ra is very rarely used for melodic purposes and may be omitted at first.

We give below a few examples of sequences with lowered chromatic notes. In reading these from the Sequence Modulator, the class will be told to change t to ta, l to la, and m to ma, when these notes occur on the column indicated by the accented figure, e.g. 13̀23.

L.H.S. Lowered Chromatic Sequences

|1 3 2̀ 3|	{d' l ta l | t s la s | l f s f | s m f m | f r ma r | m d r d | r t, d t, | d - - - }
	{d l, ta, l, | r t, d t, | m d r d | f r ma r | s m f m | l f s f | t s la s | d' - - - }
|1 4 3̀ 4|	{d' s la s | t f s f | l m f m | s r ma r | f d r d | m t, d t, | r l, ta, l, | d - - - }
	{d s, la, s, | r l, ta, l, | m t, d t, | f d r d | s r ma r | l m f m | t f s f | d' - - - }
|1 2̀ 3 |	{d' ta l | t la s | l s f | s f m | f ma r | m r d | r d t, | d - - }
	{d ta, l, | r d t, | m r d | f ma r | s f m | l s f | t la s | d' - - }
|♫♫♫ 1 4 3 4 2̀ 3|	{d s l s ta l | t f s f la s | l m f m s f | s r m r f m | f d r d ma r | m t, d t, r d | r l, t, l, d t, | d - - }
	{d s, l, s, ta, l, | r l, t, l, d t, | m t, d t, r d | f d r d ma r | s r m r f m | l m f m s f | t f s f la s | d' - - }

L.H.S. Descending only

1 3 2	d' l d' t	t s ta l	l f la s	s m s f	f r f m	m d ma r	r t, r d	d - - -	
1 3 5 2	d' l f d'	t s m ta	l f r la	s m d s	f r t, f	m d l, ma	r t, s, r	d - - -	
1 3 2	d' l d'	t s ta	l f la	s m s	f r f	m d ma	r t, r	d - -
1 5 3 2	d' f l d'	t m s ta	l r f la	s d m s	f t, r f	m l, d ma	r s, t, r	d - - -

R.H.S. of Modulator

| 1 2 1 | d' r' d' | t d' t | l ta l | s la s | f s f | m f m | r ma r | d - - }
| d r d | r ma r | m f m | f s f | s la s | l ta l | t d' t | d' - - |
| 1 3 2 1 | d' ma' r' d' | t r' d' t | l d' t l | s ta l s | f la s f | m s f m | r f m r | d - - - }
| d ma r d | r f m r | m s f m | f la s f | s ta l s | l d' t l | t r' d' t | d' - - - |
| 1 2 3 2 1 | dr' mar' d' | td' rd' t | lt d't l | sl tal s | fs las f | mf sf m | rm fm r | d - - }
| dr mar d | rm fm r | mf sf m | fs las f | sl tal s | lt d't l | td' rd' t | d' - - |

L.H.S. Raised and lowered chromatics combined

| 1 2 1 3 2 3 | d't d' l ta l | t let s las | l sel f sf | s fes m fm | f mf r mar | m rem d rd | r der t dt | d - }
| dt d l ta l | r der t dt | m rem d rd | f mf r mar | s fes m fm | l sel f sf | t let s las | d' - ||
| 1 3 4 3 2 3 | d' l sel tal | ts fes las | lf mf sf | sm rem fm | fr der mar | md td rd | rt lt dt | d - - }
| dl sel tal | rt lt dt | md td rd | fr der mar | sm rem fm | lf mf sf | ts fes las | d' - - ||

The two examples above may also be sung to the rhythms |♫♫♫| and |♫♫♫| respectively.

MINOR MODE SEQUENCES

It will have been noted that we have made no mention of Sequence Singing in the Minor Mode. Sequences in the Old Minor or Lah Mode will, of course, be found under the section heading "Modal Sequence Singing", and these will form a good introduction to the Modern Minor Mode.

123
{| l s f | s f m | f m r | m r d | r d t₁ | d t₁ l₁ | t₁ l₁ s₁ | l₁ -- || l₁ t₁ d | t₁ d r | d r m | r m f | m f s | f s l | s l t | l -- ||

By simply raising every "s" to "se" in these sequences, after the manner indicated in "Chromatic Sequence Singing", we may use the sequences for practice in the modern Harmonic Minor. Thus:

123
{| l se f | se f m | f m r | m r d | r d t₁ | d t₁ l₁ | t₁ l₁ se₁ | l₁ -- || l₁ t₁ d | t₁ d r | d r m | r m f | m f se | f se l | se l t | l -- ||

13
{| l f | se m | f r | m d | r t₁ | d l₁ | t₁ se₁ | l₁ - || l₁ d | t₁ r | d m | r f | m se | f l | se t | l - ||

132
{| l f se | se m f | f r m | m d r | r t₁ d | d l₁ t₁ | t₁ se₁ l₁ | l₁ -- || l₁ d t₁ | t₁ r d | d m r | r f m | m se f | f l se | se t l | l -- ||

1234
{| l se f m | se f m r | f m r d | m r d t₁ | r d t₁ l₁ | d t₁ l₁ se₁ | t₁ l₁ se₁ f₁ | l₁ --- || l₁ t₁ d r | t₁ d r m | d r m f | r m f se | m f se l | f se l t | se l t d' | l --- ||

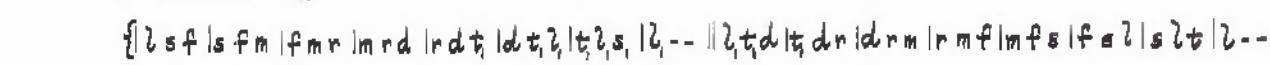
143
{| l m f | se r m | f d r | m t₁ d | r l₁ t₁ | d se₁ l₁ | t₁ f₁ se₁ | l₁ -- || l₁ r d | t₁ m r | d f m | r se f | m l se | f t l | se d' t | l -- ||

Such practice as the above on the Harmonic Minor Scale will bring home to the class, as no amount of explanation on historical grounds will, the necessity for making the rough places smooth if this mode is to be used for melodic purposes.

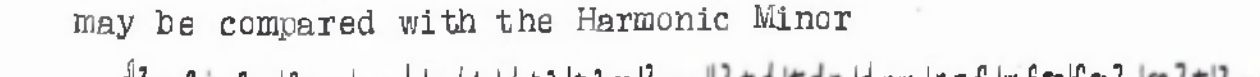
Unfortunately, owing to the arbitrary nature of the 6th and 7th degrees* of the Melodic Minor Scale, it is not easy to adapt the Sequence Modulator to sequence singing in the Melodic Minor. However, we have the consolation of knowing that ascending sequences in the minor mode involving the raised 6th ("ba") are rare in melody, while the remaining part of the ascending melodic minor scale and the whole of the descending melodic minor scale are catered for in the Old Minor or Lah Minor Mode sequences.

Supplementary work in the Melodic Minor Scale, however, may be done from the Blackboard.

For example, the Old Minor



may be compared with the Harmonic Minor



and the Melodic Minor



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* See the "Musical Times" for December, 1934, page 1119, where the writer discusses the different functions performed by the raised 6th when used as a dissonant passing note and as a consonant harmony note, and consequently the necessity of keeping both names, "ba" and "fe" for this one note in the Minor Mode in order to distinguish these functions.

14. TETRACHORDAL SEQUENCE SINGING AND FORM IN MUSIC

We claim that the practice of sequence singing tends to inculcate in the pupils a sense of form in music.

By "a sense of form in music" we do not mean a knowledge of the formal analysis of extended movements of the kind that is so popular in the Appreciation Lesson of today. Many recent books have been devoted to this formal analysis of music, and most examining boards include it in their list of examination subjects. No doubt the reason for its popularity in the book world, the lecture world and the examination room, is to be found in the fact that it is pre-eminently a formal subject, and can therefore be expounded, taught and examined in a formal manner.

But it is a serious reflection on the formative value of this formal subject that pupils, who are capable of analysing a fugue, sonata or symphony, are often found to be equally capable of committing what we would call the "sin against the holy ghost" of music, namely, adding a beat to a phrase or subtracting a beat from a phrase without being aware of the fact that anything abnormal has occurred.

Surely it is not a knowledge of the technique of formal analysis that is important for the beginner in music - rather is it this feeling for or sense of tonal

balance, proportion, symmetry, form, call it what you will - a sense that corresponds closely to the sense of spatial proportion or balance in the visual arts. It is a sense that can not be developed formally, through the eye. But one may develop it in pupils informally, through the ear, by having these pupils observe good form in all their singing, and by giving them abundant practice in simple material, which calls out for good form in the singing. The sense of key and of tonal architecture or design in music is simply the same thing writ large, but this sense of form in the large is a much later development, in the individual as in the race, although it develops naturally from the sense of form in melody.

It is not possible, here, to bring out all that is implied in this "sense of form in music," this ability to hear the whole in the part and the part in the whole. One may demonstrate the elements of melodic form to a class through the eye and on a background of space.

cf. the Folksong Forms:

A A B A A B C B or the Irish A B B A
A A'B A' A B A C A B B'A

But, to gain any real intuition of melodic form, the pupils must apprehend it for themselves through the ear and on a background of time. Hence, an extensive melodic and

rhythmic vocabulary and a keen awareness of and memory for musical patterns are essential to the understanding of music. The retention of announcing phrases and the intelligent anticipation of responsive phrases, the detection of repetitions and the recognition of sequences and imitations, both rhythmic and melodic, all play a part in the unconscious weighing of pros and cons, which goes to the apperception of musical values, or, as it is usually put, to the appreciation of music.

Besides contributing largely towards the formation of such an attitude of musical awareness on the part of the pupils, it is believed that the present system of sequence singing will help also to develop in the pupils the sense of phrase and the feeling for form or for the logic of things in music. For the archetype of all musical symmetry is the Major Scale itself with its two equal tetrachords:

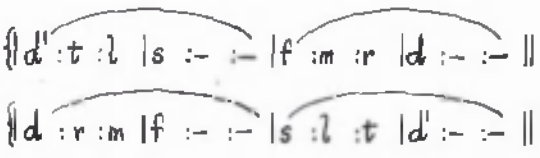
d' t l s f m r d

d r m f s l t d'

And, it may be claimed that in sequence singing this symmetry of the major scale is communicated to the sequential progressions based on the scale.

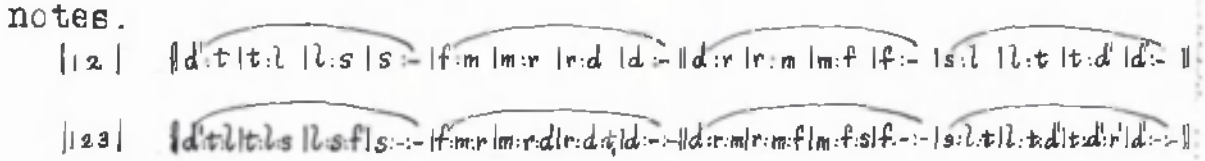
But the feeling for balance or proportion in the scale will be greatly enhanced, if in singing the scale a

pause or a "half close" is made on the final note of each tetrachord:

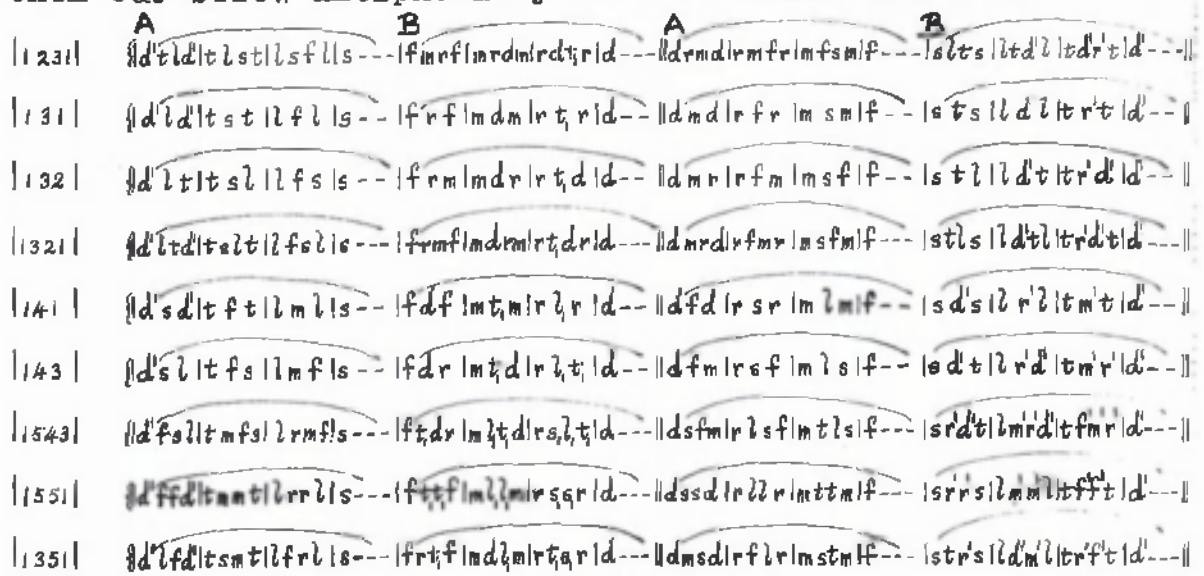


Here we have the prototype of the musical sentence with its announcing and responsive phrases, and its balancing of tonal centres — tonic-dominant-tonic and tonic-sub-dominant-tonic.

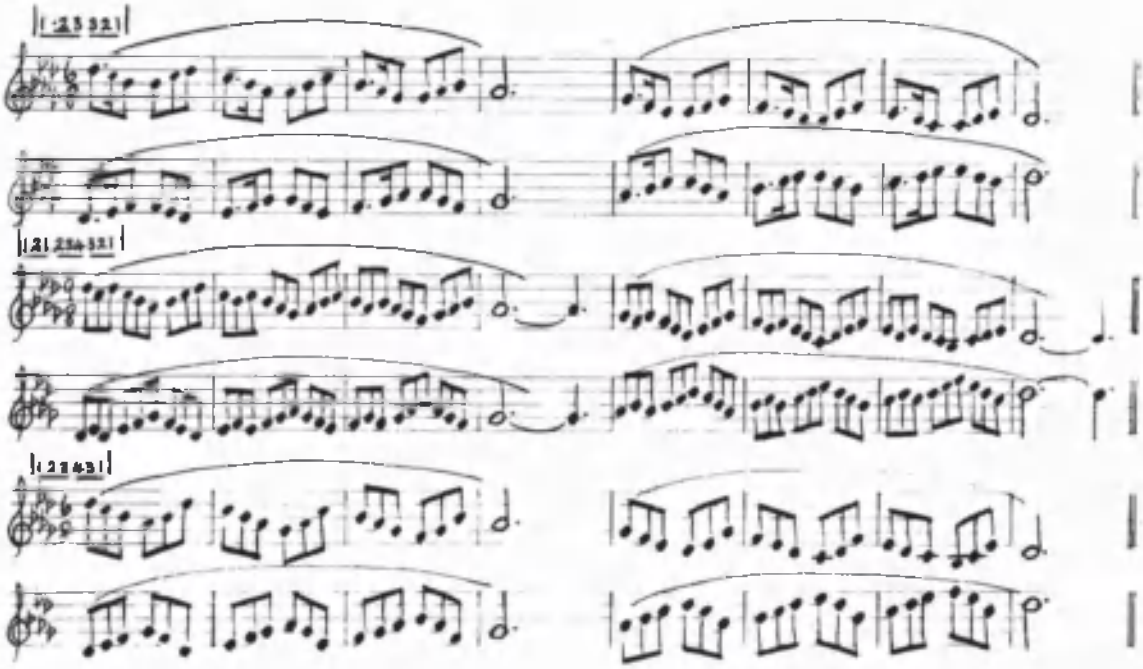
The same effect may be had in sequence singing, if a "half close" is made on the final note of each tetrachord, that is, if no sequential pattern is sung on these notes.



It will be felt that these tetrachordal sequences almost demand antiphonal treatment, and so we have set them out below antiphonally for two voices A and B.



This tetrachordal method of sequence singing has much to commend it. It may, of course, be applied to all sequences, but it is particularly useful when dealing with young classes, or when longer sequential patterns are being used, e.g. -

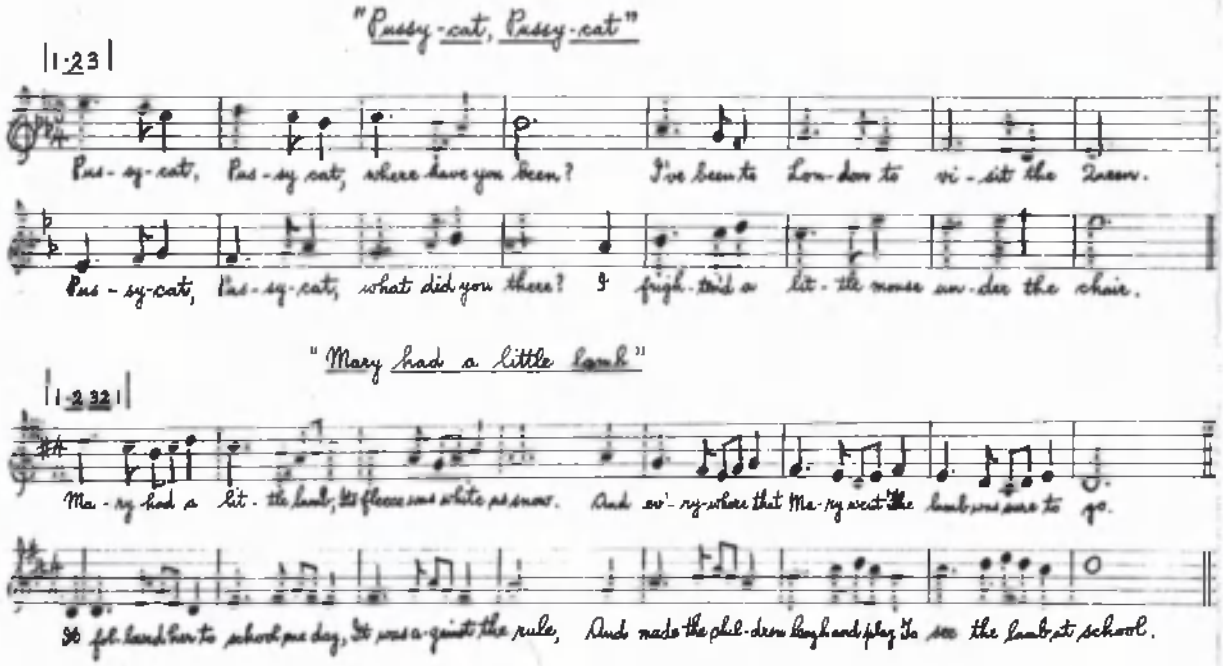


In these tetrachordal sequences, the phrases are clearly articulated, and the symmetry of the sequential progression stands out. Furthermore, the "breathing-space" provided at the end of each phrase tends to develop in the singer the habit of correct phrasing. This is important, for phrasing in music has a physiological as well as a psychological basis. Hence, with beginners there should be much practice with material in which the phrase unit, as in the above, is self-evident; so that the physiological

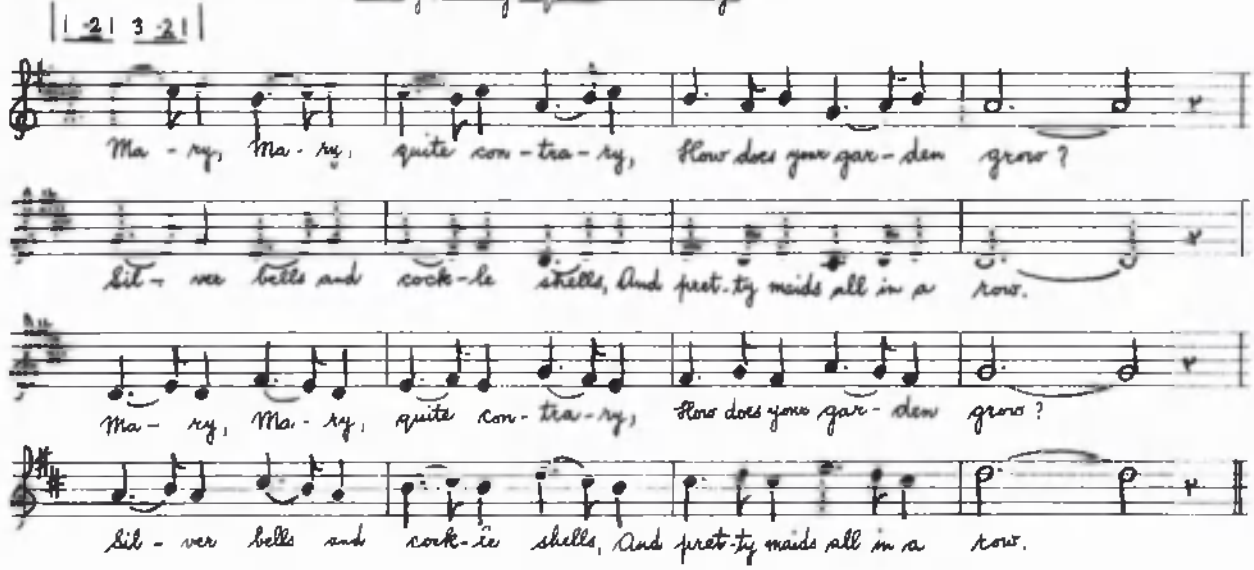
habit of correct phrasing may develop, through time and with practice, into the psychological demand or craving for correct phrasing.

It will be found also that the division into tetrachords of the sequential series helps young children to overcome difficulties of intonation, which are sometimes apparent when the whole scale is used as a basis for sequence singing, especially at the join of the tetrachords in the ascending series.

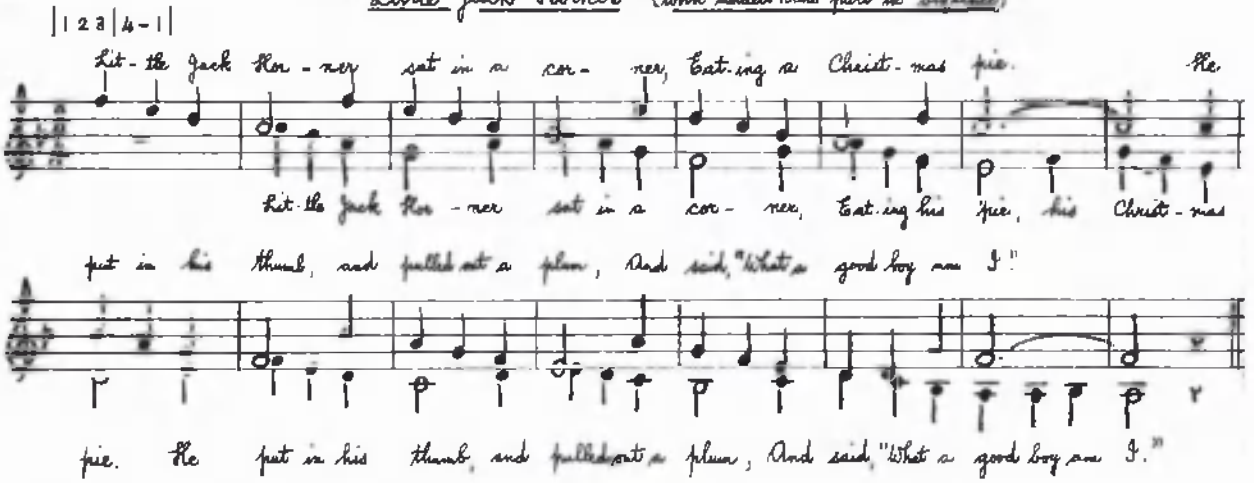
We shall conclude this section with a few examples of rhythmic sequences based on the tetrachords, and, to show how closely we are approaching to traditional song forms, we shall add words to these.



"Mary, Mary, quite contrary."

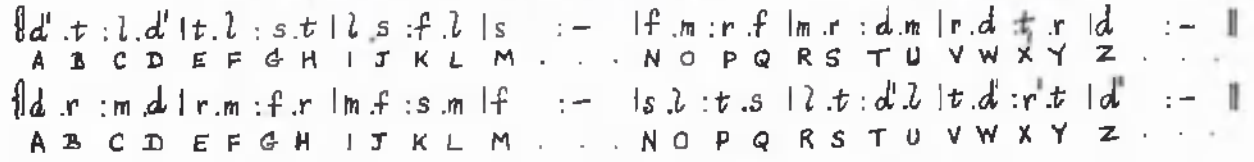


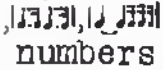
"Little Jack Horner" (with added Alto part in sequence)



An Alphabet Exercise for Lip Training, on the Tetrachordal Sequence |1 2 3 1|

Key D♭



This very useful exercise may also be sung to other four-note sequences (e.g. 1321, 1213 etc.), and to various rhythmic patterns (e.g.  , etc.).

Or it could be sung to numbers, thus:

‖1234|5678|1234|5 - |1234|5678|1234|5 - ‖

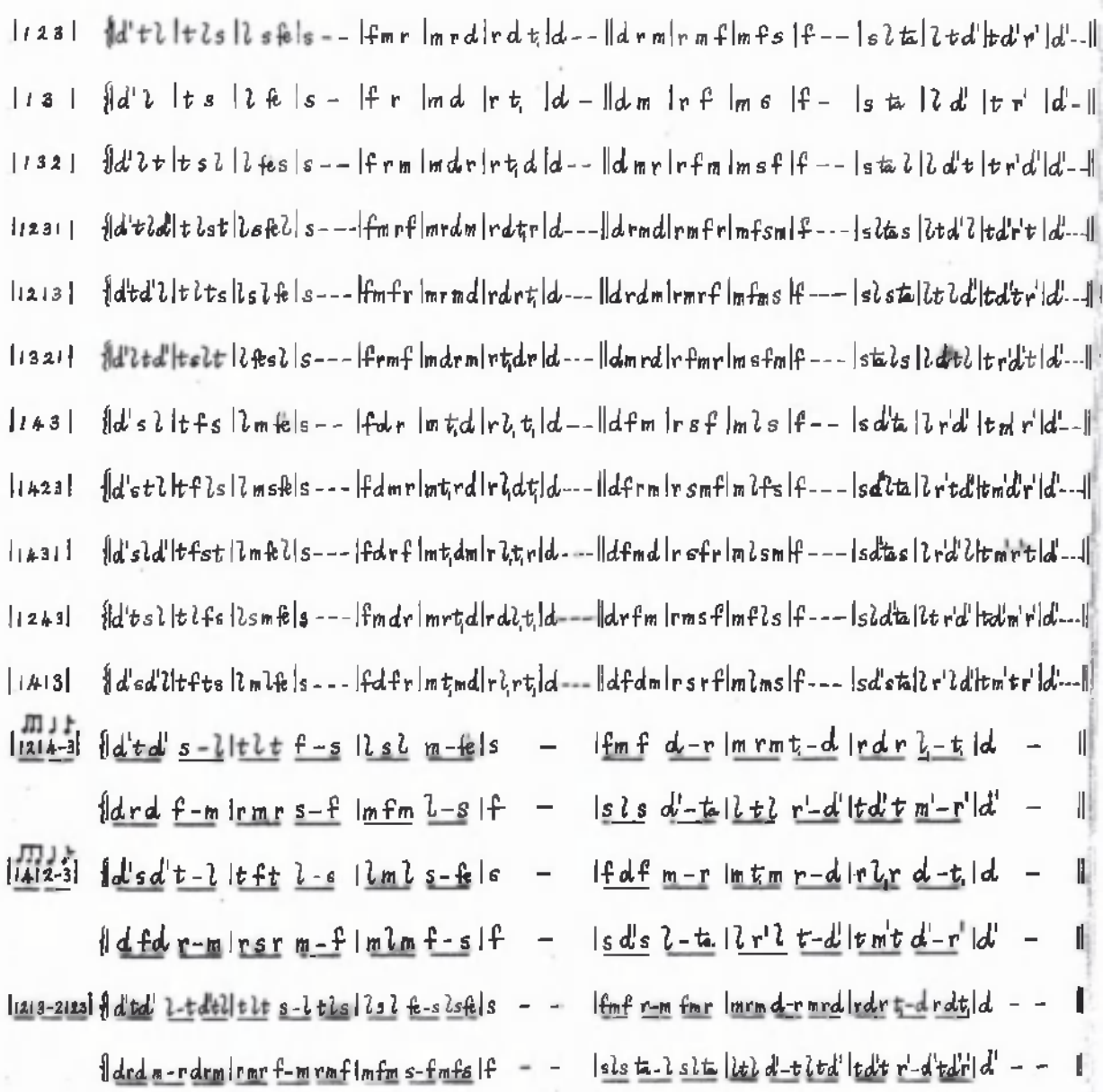
15. MODULATORY SEQUENCES

MODULATORY SEQUENCE				MODULATOR			
1	2	3	4	1	2	3	4
d'	t	l	s	d'	-	-	-
t	l	s	f	t	d'	r'	m'
l	s	fe	m	l	t	d'	r'
s	-	-	-	s	l	ta	d'
f	m	r	d	f	-	-	-
m	r	d	t_1	m	f	s	l
r	d	t_1	l_1	r	m	f	s.
d	-	-	-	d	r	m	f
1	2	3	4	1	2	3	4

It is but a step from the Tetrachordal Sequence to the Modulatory Sequence. In the descending series a modulation to the dominant may be effected by substituting fe for f in Column 3, L.H.S. of the Sequence Modulator. In the ascending series, similarly, a modulation to the subdominant may be effected by substituting ta for t in Column 3, R.H.S.

We have printed a Sequence Modulator with the necessary changes inserted, but any ordinary class, brought up on this method, would experience little difficulty in supplying these changes mentally. It is not possible, of course, to introduce

these modulatory chromatic notes into all sequences, as care must be taken to see that these notes are approached and quitted properly. Some examples are given below.



All the above may be sung to different rhythms. See page 194 for Rhythm Tables classified according to the number of notes in the Sequence Figure.

16. EAR-TESTS AND SEQUENCE SINGING

The Ear-Test is probably the most unsatisfactory feature of the music lesson of today. In the first place, the test material usually consists of a group of three or more disconnected notes, without rhythmic context and without aesthetic content or significance for the children. This test material can hardly be said to belong to the everyday vocabulary of either pupil or teacher - it belongs to a world far separated from the world of actual music. Again, even when the correcting of the written tests is an individual affair, the corrective impulse does not penetrate beyond the papers themselves. "Correcting," here, is synonymous with "marking". There is no attempt at a diagnosis of individual errors, and no attempt to correct these errors in the true sense of the word and in the only quarter where such correction would have a formative value, namely, in the individual pupil's response. Thus, the Ear-Test has neither an individual appeal nor a class appeal, and the attitude of the average teacher is summed up in the words, "You have an ear for music, or you haven't."

Much research has been devoted in recent years to the analogous subject of language spelling and dictation, and it may be helpful at this point to consider what is being done today in this subject. First of all, children

are not expected to be able to spell words which they have never seen before. To ask them to do so would be to encourage guesswork. And wild guessing must be discouraged from the outset at all costs, as wrong associations would thereby be set up, which would be difficult to eradicate.

> "The earlier teaching primarily looked for error, which it promptly assumed to correct, though it performed even this task loosely.... Today teaching in spelling aims to get rid of error by anticipating and preventing it through a watchful supervision of first impressions and associations."
> ("The Teaching of Spelling," page 9, by Henry Suzzallo. Riverside Educational Monographs, Houghton Mifflin Co., New York, 1913)

Spelling lists are therefore made up from words which are already familiar through previous conversational practice in class and through the reading lesson. Even then, these words are presented, as far as possible, in a living context where they cannot fail to have meaning for the child.

> "Many of the present methods of teaching are calculated to enhance the content side of spelling. Supplementing list-spelling with contextual spelling, and the definition of words with actual experiences in the use of words are instances in point. A similar result is accomplished by the recent insistence on conversational and other oral work as an introductory basis for formal spelling."
> (ibid p.40)

When we come to apply these principles to music spelling or ear-testing, we find that the old-fashioned ear-test must be ruled out at once. Instead, the material

for ear-tests must be sought for in music which already forms part of the everyday vocabulary of the child. This material, in fact, is to be found in song books, memory or spelling tunes, reading books and sequences. But, of all these, sequences are perhaps the best material for the purpose, as they provide us with a wide range of material, which can be graded systematically and assigned to the various classes. Suppose, for example, a class has learned to sol-fa the sequence 1231,

‖d'tld'|tlst|lsfl|sfms|fmrf|mrdm|rdtr|d---‖drmd|rmfr|mfsm|fslf|slts|ltd'l|td'r't|d'---‖

The class should be told frankly that ear-tests will be given from this sequence which they have just sung. These tests may be increased in length and in difficulty by passing from single figures to conjunct figures and to disjunct figures with their inversions. This will be seen from the examples below.

1. |drmd‖ 7.|drmd|r---‖ 13.|drmd|rmfr|m---‖ 19.|d'tld'|sfms|fmrf|m---‖

2. |mfsm‖ 8.|sfms|d'---‖ 14.|d'tld'|sfms|d'---‖ 20.|drmd|rdtr|drmd|s---‖

3. |slts‖ 9.|mfsm|d---‖ 15.|sfms|mrdm|d---‖ 21.|mrdm|s-s-|slts|d'---‖

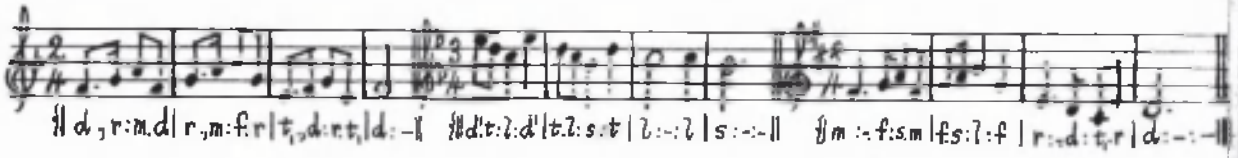
4. |d'tld'‖ 10.|d'tld'|t---‖ 16.|drmd|mfsm|f---‖ 22.|d'tld'|t-s-|lsfl|m---‖

5. |sfms‖ 11.|tlst|d'---‖ 17.|mrdm|rdtr|d---‖ 23.|drmd|mfsm|fslf|d'---‖

6. |mrdm‖ 12.|fmrf|m---‖ 18.|drmd|sfms|d'---‖ 24.|d'tld'|lsfl|fmrf|mrd-‖

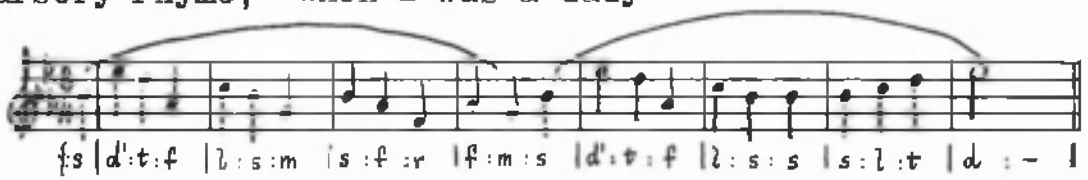
The sequence should be sung frequently by the class during the ear-tests.

These ear-tests may later be given in the various rhythms used in singing the sequences, and thus they would form combined pitch and rhythm tests, which could be written in sol-fa or staff notation, or both, e.g.



Children who can sol-fa from memory the whole of the above sequence, 1231, will, of course, still have difficulty in recognising these extracts or "parts", for it is naturally easier to recognise or to recall the whole than the part.

For example, children will sing difficult intervals with perfect intonation in a song, but will find difficulty in singing these intervals apart from their context in the song. Thus, they will sing with the greatest of ease the nursery rhyme, "When I was a lady" -



But they will find the greatest difficulty in singing the three notes, d' t f, (containing as they do the tritone or "diabolus in musica") immediately after they have sung this tune.

However, with the knowledge that an eartest is taken from the whole sequence, the child will be encouraged to analyse the whole, and to seek for the part in that whole. This ear-testing, then, is in a very real sense ear-training, for the child knows what he wants to get and where it may be found, and he must do the seeking or the analysing for himself. Thus, by providing for the regular and systematic ear-testing of sequences, we safeguard the child from that indiscriminate guesswork of the old-fashioned ear test, which leads to wrong associations of sound and syllable and does incalculable damage in the early stages. And at the same time we afford motivation for the memorising of sequences, and encourage in the pupils the habit of analysing everything that they sing, and as they sing.

> "All progress of mind," says Walter Pater in his essay on 'Style', "consists for the most part in differentiation, in the resolution of an obscure and complex object into its component aspects."
> ("Appreciations," 1889, MacMillan & Co.)

Let us examine this statement in the light of our everyday experience. When we are introduced to a new person, a new scene, a new piece of music, we are left, according to the degree of complexity of the object, with a more or less hazy impression, like that of a lantern slide not properly focussed. But, with further familiarity and

reflection, this vague general impression becomes articulated more and more, like a lantern slide being brought slowly into focus, until all the details, which go to form the picture in our mind, stand out clearly and become detachable at will from the general impression. And it may be claimed that ear-testing, based on material from familiar sequences, encourages this analysis of wholes and recall of parts, this "resolution of a complex object into its component aspects," on which, as Pater says, all true progress of mind depends.

The analytical approach must, of course, be made by the pupil himself, and not anticipated for him by the educationist in these "products of analysis" (d s , s d , etc.) which result from the adult conception of the logical division of subject-matter.* This analytical approach is, indeed, fundamental in all learning situations, and in a book on musical pedagogy the application of this principle to teaching methods cannot be stressed too much, for, as we have had occasion to point out in other chapters, in no other subject in the curriculum is it so much neglected.

---

* "Though he (Pestalozzi) was right in insisting on the necessity for beginning instruction with the elements of experience, he had a wrong idea of what the elements are. In language, for example, he said: 'Begin with sounds and syllables.' But these products of analysis, though simple for the adult, are not simple for the child. The real beginning is with sentences, not with sounds; with wholes, not with parts."
("History of Western Education", by Dr Wm.Boyd, p.347, A.& C. Black, London, 1928)

17. ABSOLUTE PITCH SEQUENCE SINGING

Most teachers, while using the relative pitch sol-fa syllables in all their ear training and staff reading, also endeavour to develop in the pupils a feeling for absolute pitch. To this end, scales are usually practised and memorized to the letter-names, but this scale practice is scarcely sufficient for the purpose.

ABSOLUTE PITCH SEQUENCE MODULATOR

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
C'	B	A	G	F	E	D	C	C	D'	E'	F'	G'	A'	B'	C^2
B	A	G	F	E	D	C	B_1	B	C'	D'	E'	F'	G'	A'	B'
A	G	F	E	D	C	B_1	A_1	A	B	C'	D'	E'	F'	G'	A'
G	F	E	D	C	B_1	A_1	G_1	G	A	B	C'	D'	E'	F'	G'
F	E	D	C	B_1	A_1	G_1	F_1	F	G	A	B	C'	D'	E'	F'
E	D	C	B_1	A_1	G_1	F_1	E_1	E	F	G	A	B	C'	D'	E'
D	C	B_1	A_1	G_1	F_1	E_1	D_1	D	E	F	G	A	B	C'	D'
C	B_1	A_1	G_1	F_1	E_1	D_1	C_1	C	D	E	F	G	A	B	C'
1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8

It will be found, however, that sequences which have been used for practice in relative pitch spelling may profitably be used for practice in absolute pitch spelling.

We have set out above a Sequence Modulator, in which the relative pitch sol-fa names have been replaced by the

absolute pitch letter-names, and we now add a few examples of absolute pitch sequences.

123 |C'BA| BAG| AGF| GFE| FED| EDC| DCB| C--‖
|CDE| DEF| EFG| FGA| GAB| ABC'| BCD'| C'--‖

13 |C' A| B G| A F| G E| F D| E C| D B| C -‖
|C E| D F| E G| F A| G B| A C'| B D'| C' -‖

131 |C'AC'| BGB| AFA| GEG| FDF| ECE| DBD| C--‖
|CEC| DFD| EGE| FAF| GBG| ACA| BDB| C'--‖

14 |C' G| B F| A E| G D| F C| E B| D A| C -‖
|C F| D G| E A| F B| G C'| A D'| B E'| C' -‖

143 |C'GA| BFG| AEF| GDE| FCD| EBC| DAB| C--‖
|CFE| DGF| EAG| FBA| GCB| ADC'| BED'| C'--‖

15 |C' F| B E| A D| G C| F B| E A| D G| C -‖
|C G| D A| E B| F C'| G D'| A E'| B F'| C' -‖

135 |C'AF| BGE| AFD| GEC| FDB| ECA| DBG| C--‖
|CEG| DFA| EGB| FAC'| GBD'| ACE'| BDF'| C'--‖

Naturally, these absolute pitch sequences cannot be transposed to suit the voice like relative pitch sequences, but must be sung at the pitch indicated by the letter names. However, these sequences may be sung between other notes than C' and C, for example F' and F, E' and E, D' and D etc. They may then be sung modally in Key C (see Modal Sequences, page 10), or in other keys.

123 Key C |EDC'| DCB| CBA| BAG| AGF| GFE| FED| E--‖
|EFG| FGA| GAB| ABC'| BCD'| CDE'| DEF'| E'--‖

123 Key C |DCB| CBA| BAG| AGF| GFE| FED| EDC| D--‖
|DEF| EFG| FGA| GAB| ABC'| BCD'| CDE'| D'--‖

123 Key D |BAG| AGF| GFE| FED| EDC| DCB| CBA| B--‖
|BCD| CDE| DEF| EFG| FGA| GAB| ABC'| B'--‖

123 Key F |FED| EDC'| DCB| CBA| BAG| AGF| GFE| F--‖
|FGA| GAB| ABC'| BCD'| CDE'| DEF'| EFG'| F'--‖

Scales and Arpeggios may also be sung in absolute pitch from this Modulator. Octave marks may be disregarded. E.g.

Scales

		L.H.S.	R.H.S.
Key C	Bottom Row:	C' B A G F E D C -	C D E F G A B C'
Key D	Second Row:	D' C' B A G F E D -	D E F G A B C' D'
Key E	Third Row:	E' D' C' B A G F E -	E F G A B C' D' E'
Key F	Fourth Row:	F' E' D' C' B A G F -	F G A B C' D' E' F'
Key G	Fifth Row:	G' F' E' D' C' B A G -	G A B C' D' E' F' G'
Key A	Sixth Row:	A G F E D C B, A, -	A, B, C D E F G A
Key B	SeventhRow:	B A G F E D C B, -	B, C D E F G A B

Arpeggios

		R.H.S.
|135|853|1--|	Key C:	‖C E G|C' G E|C - -‖
	" D:	‖D F A|D' A F|D - -‖
	" E:	‖E G B|E' B G|E - -‖
	" F:	‖F A C'|F' C' A|F - -‖
	" G:	‖G B D'|G' D' B|G - -‖

18. STAFF READING THROUGH SEQUENCE SINGING

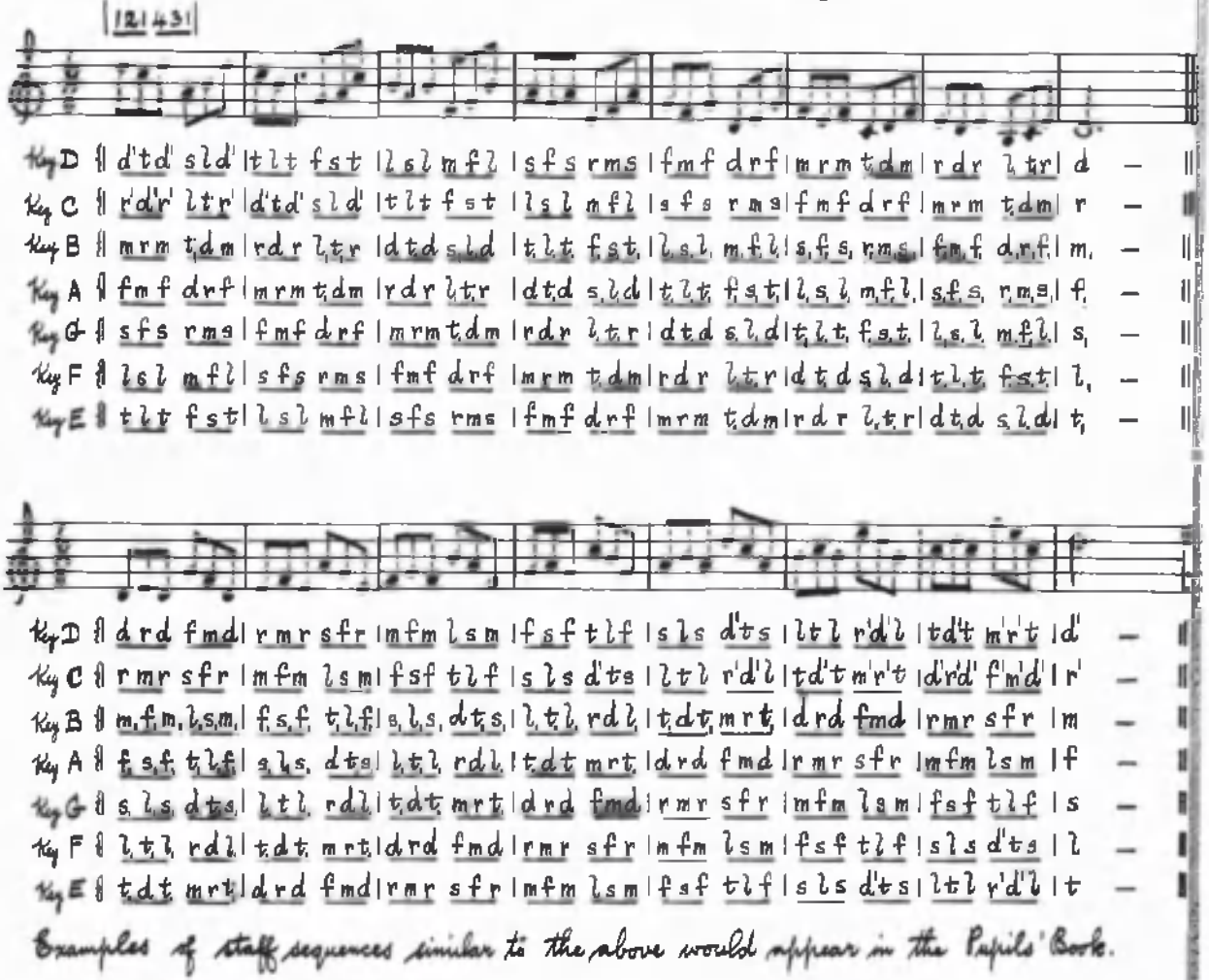
Once the aural problems of notation have been overcome through the aural spelling or sol-faing of sequences from the Modulator, the visual problems of notation may be tackled through the visual spelling or reading of these sequences from the Staff Notation.

The special virtue of the tonic sol-fa system is, undoubtedly, the movable doh. Aural difficulties mastered in one key do not require to be mastered in the fourteen other keys. But it is this same movable doh that is the "bête noire" of the beginner in staff notation. However, although there are fifteen keys in use (7 sharp keys, 7 flat keys and the natural key), the tonic or doh may appear in only seven different positions on the stave - C, D, E, F, G, A and B. From the visual point of view these seven positions of the tonic on the stave are all that concerns the pupils to begin with. For it will surely be conceded that explanations of keys and key signatures may be safely delayed until the pupils are able to sol-fa fluently from the stave with the tonic in any position - until, in fact, they can relate theory to practice.

Well-known sequences, then, written in staff notation but without any key signature, may be used for familiarising the pupils with all the seven positions of the tonic on the stave. The pupils would read these sequences, say, in Key C,

then again in Key D, Key E, Key F etc. Thus, while the notes on the stave would remain fixed or absolute from the visual point of view, their relative values from the aural point of view would change with each alteration in the position of the tonic, or with each change of key. The following example will illustrate this.

Underneath the staff sequence |121 431| are written the sol-fa syllables that would be read and sung by the pupils from the staff notation in the various keys.



Examples of staff sequences similar to the above would appear in the Pupils' Book.

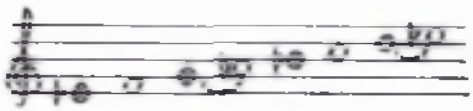
19. STAFF WRITING THROUGH SEQUENCES

In olden days music copying occupied an important place in the apprenticeship, and indeed in the journeymanship of all musicians. This was no doubt due to the fact that music presses were scarce and music printing costly. Most of Bach's masterpieces were not printed in his lifetime. But the result of this lack of printed music was that the earlier musicians had either to compose their own music, or else borrow and copy out the music of other composers. And in so doing they acquired a rare insight into the art.

Nowadays, however, owing to the modern printing press, the necessity for copying music has practically disappeared. This is to be regretted, for from the pedagogical point of view the importance of the practice of music copying is as great as ever. How many musicians today date their first real grasp of music from the day when, like the young John Sebastian, they took up a pen and started laboriously to copy out a favourite vocal or instrumental score!

Most of our music classes are today provided with MS. Music Books, but the problem is to know how to fill them. A glance at the copybooks at the end of the session usually shows that they are crammed with musical definitions, names and dates of composers, notes on history and form -

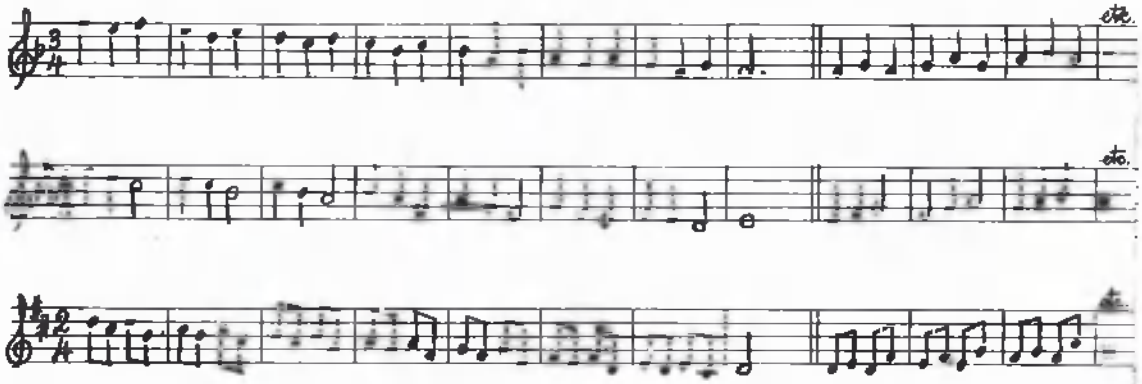
in fact with everything but music itself. The difficulty is that the teacher has no time or space to write models on the blackboard, and the class are not skilled enough to write music on their own initiative. The teaching of music writing, therefore, seldom gets beyond the stage of the copying out of those miserable scales in semibreves with the slurs marking the semitones!



If the present system of sequence singing has been followed out, it will be found to provide abundance of graded material for practice in music writing, suitable for all classes from the youngest to the oldest. This material, as will be seen from the following examples, may vary from the copying of plain sequences, involving the simple repetition of a stepwise pattern, to the solving and writing out of a canon for four voices (S.A.T.B.) in Open or Close Score. Moreover, this material for music writing has the added advantage that writing tasks can be assigned by the teacher to the various classes with the maximum of ease, and afterwards corrected by the teacher with a minimum of effort.

We give some examples of typical exercises.

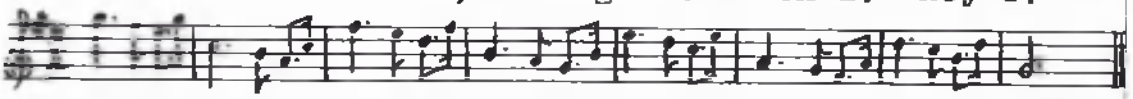
(a) Write out the following sequences, given the first bar only.



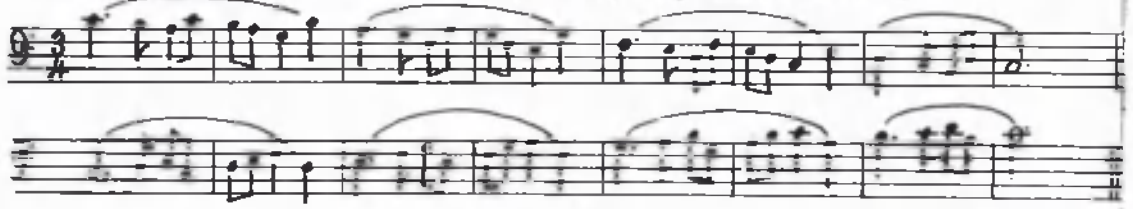
(b) Write out the sequence 1431 to the rhythm |3/4 ♩. ♪♫| in the key of E.



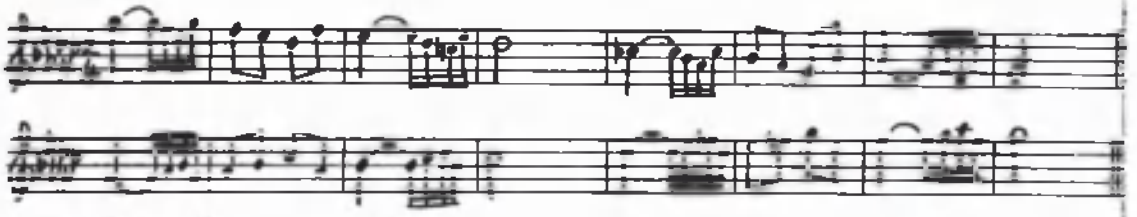
(c) Write out this sequential figure 1231 to |♩. ♪♫| on the following notes -
d' f t m l r s, ending with d. on d. Key G.



(d) Write out the sequence |1 2 3 1|2 3 4 2| to |♩. ♪♫|♫♩♩| on the following notes -
d' l f r descending and d m s t ascending.
End with d. on d and d'. Key C, Bass Clef.



(e) Write out the sequence 1231 to the rhythm |2/4 ♩ ♬|♫♫| on d' l f and r* Write a minim in the fourth bar descending and ascending, i.e. on s and f, and show modulations to the dominant and subdominant. Key G♭.

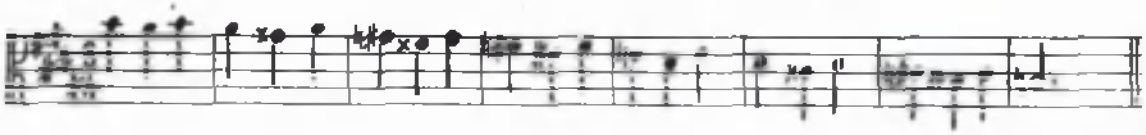


* Ascending on d m s and t.

(f) Write out the following semitonal mordent sequence |121|, descending only. That is, add accidentals to the middle note of the mordent figure where necessary, in order to make the interval a semitone. Contradict these accidentals in the following bar. Key E♭.



(g) Write out the above in the Alto Clef. Key B.



Ditto in other keys and clefs

(h) Write out the following ascending sequence |1323|, making a semitone between 3 and 2 by raising 2 where necessary. Key D♭.

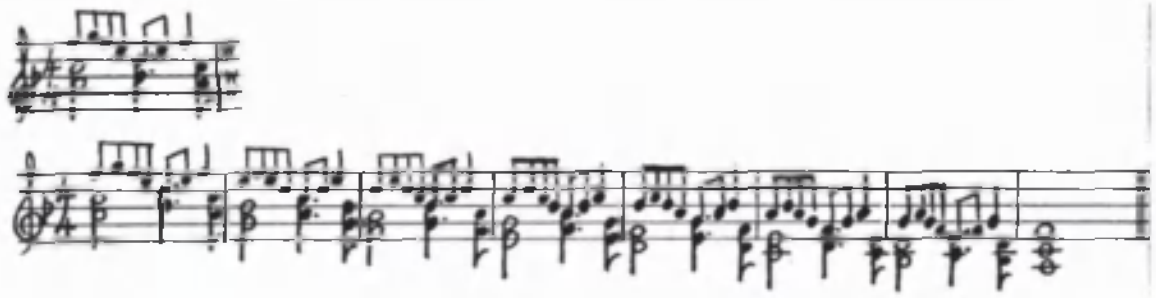


Ditto in other keys and clefs

(i) Write out the following descending sequence |1431|. That is, raise 4 where necessary, so as to make a semitonal step between 4 and 3. Key A♭.

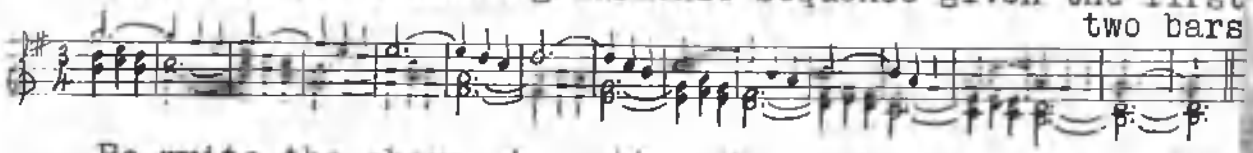


(j) Continue the following as a three-part sequence:

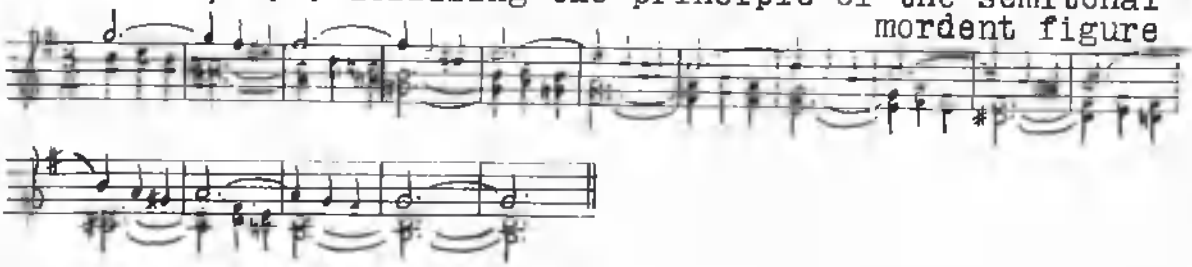


(k) Harmonic Sequences

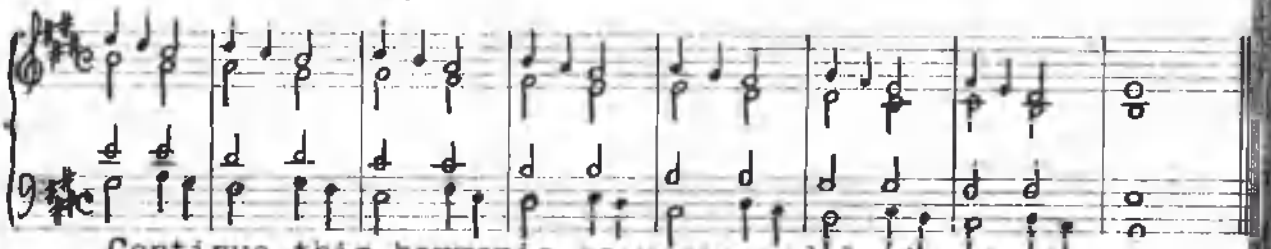
Continue the following harmonic sequence given the first two bars



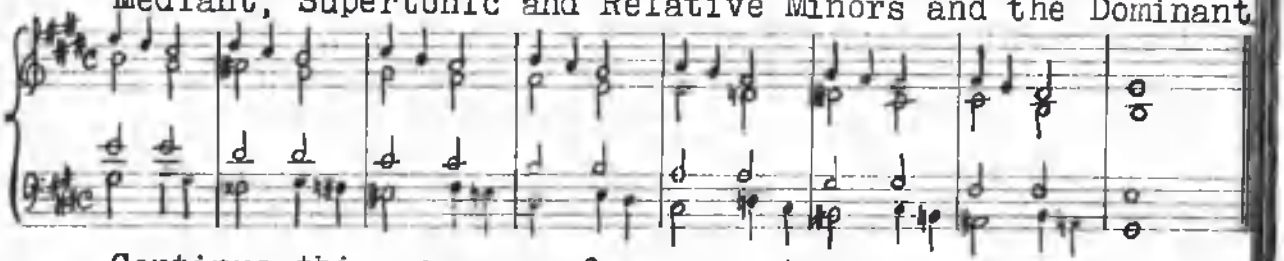
Re-write the above, inserting chromatic notes where possible, i.e. utilising the principle of the semitonal mordent figure



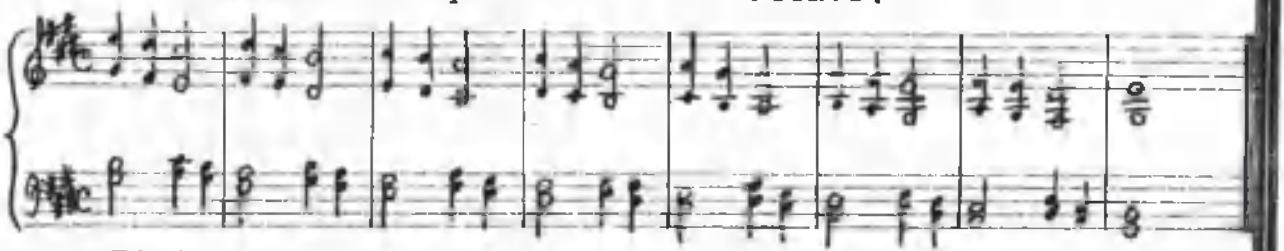
Continue the first two bars of this harmonic sequence for one octave.



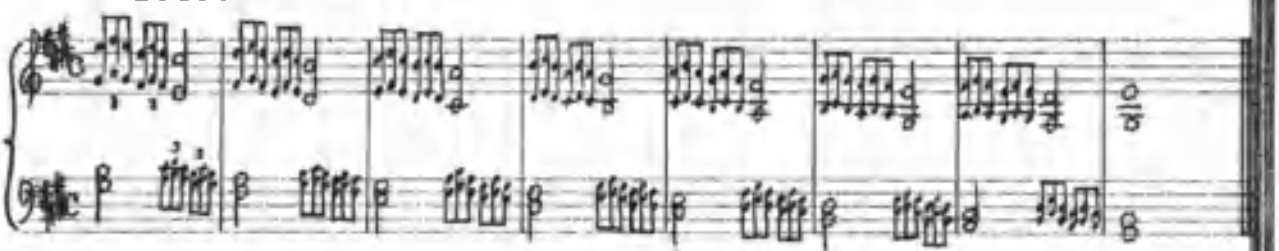
Continue this harmonic sequence modulating to the Mediant, Supertonic and Relative Minors and the Dominant.



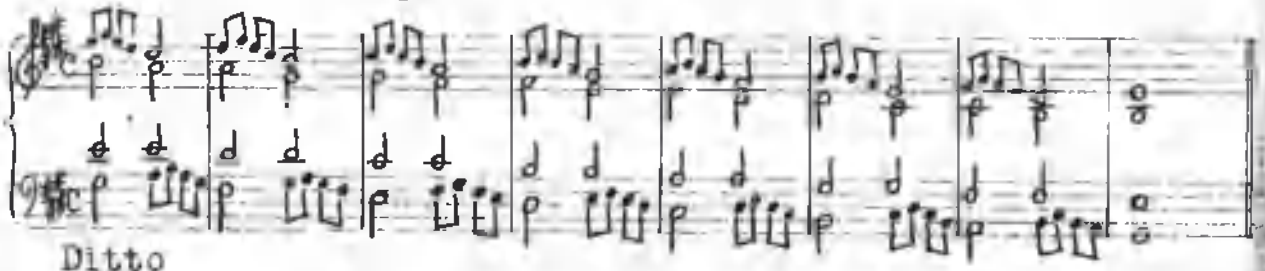
Continue this sequence for one octave.



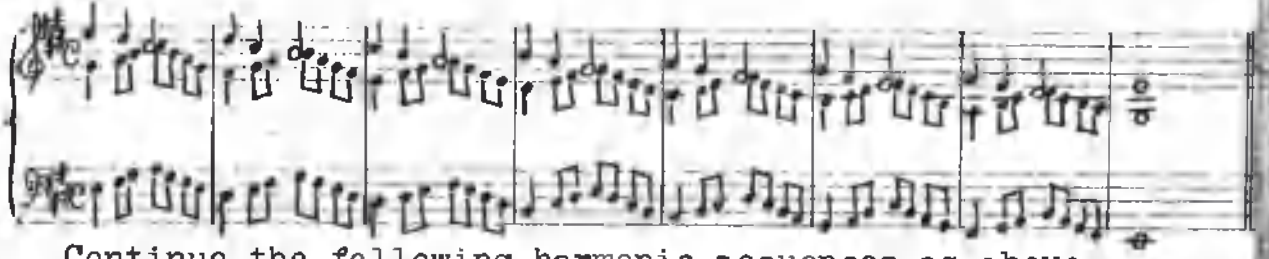
Ditto.



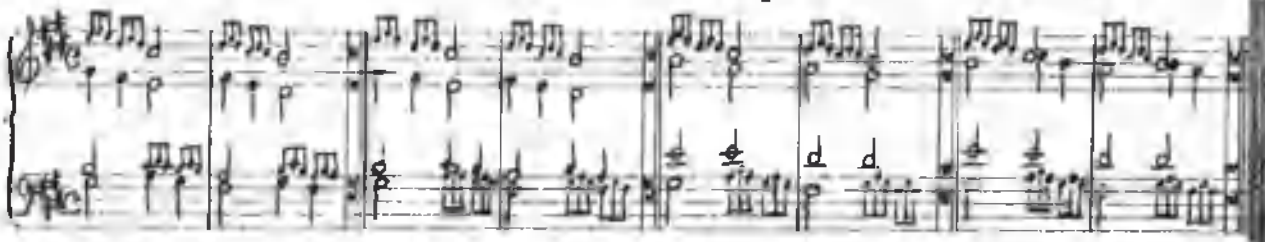
Continue this sequence for one octave.

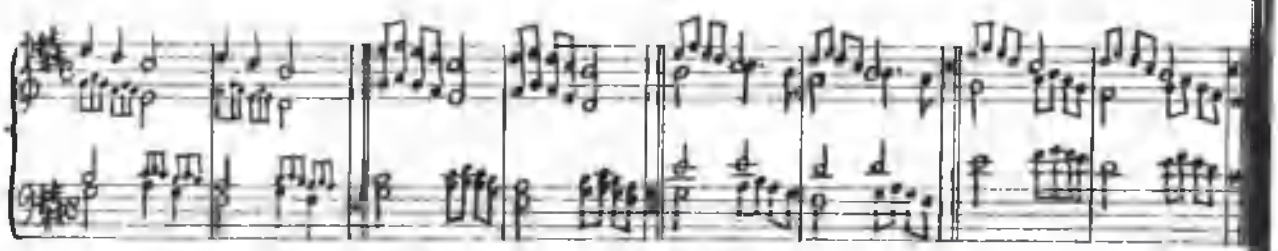


Ditto

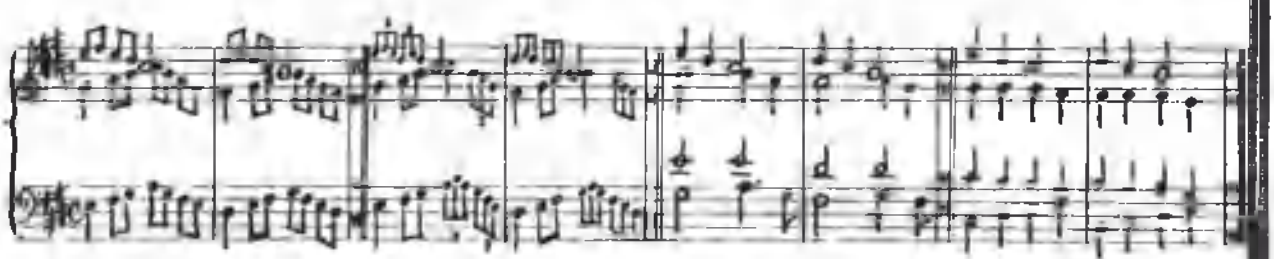


Continue the following harmonic sequences as above.

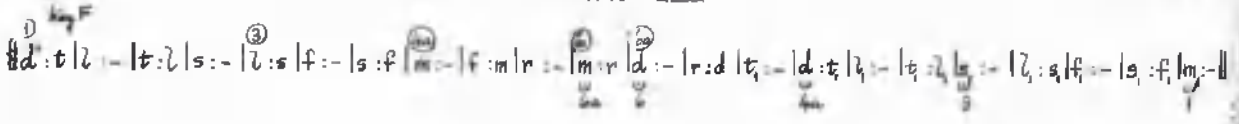




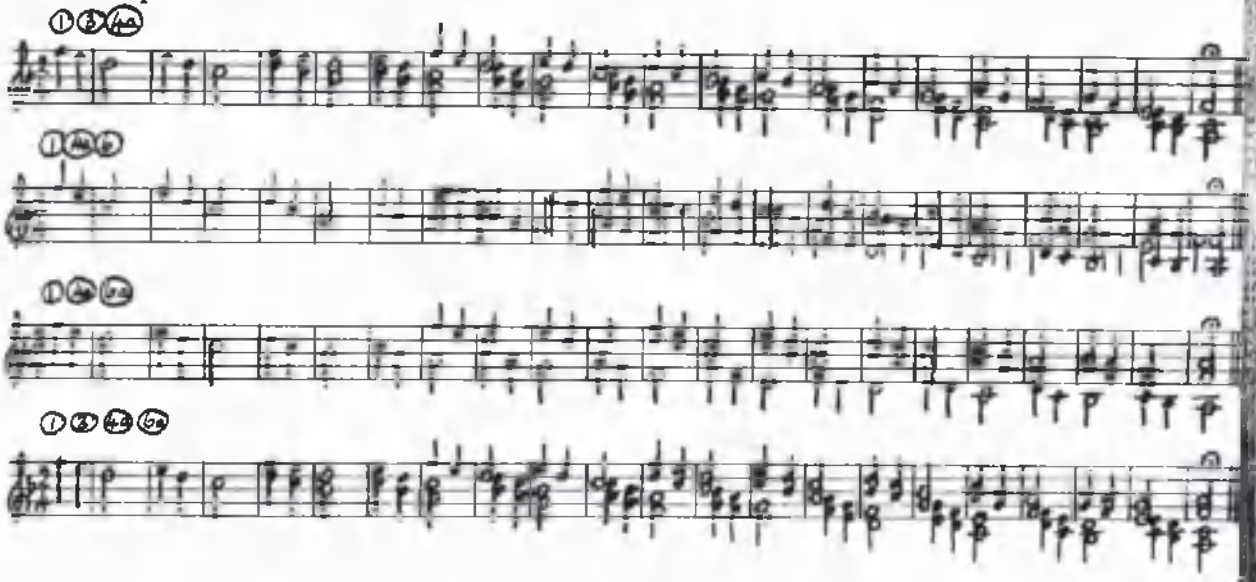




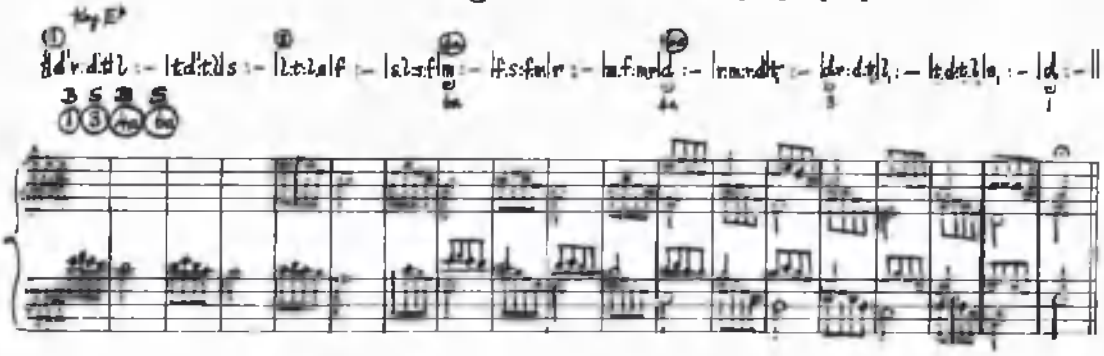
20. CANONIC SEQUENCES *



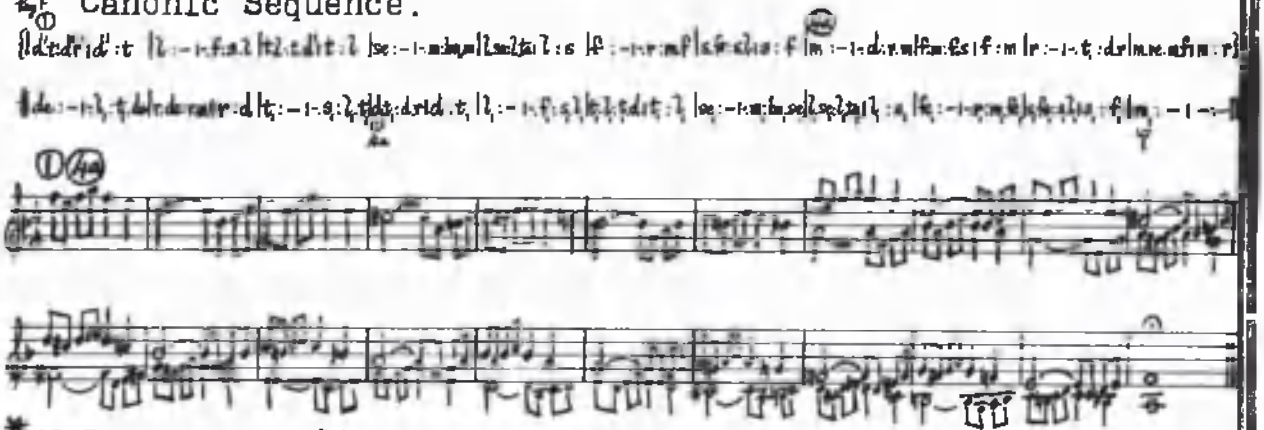
Solve the following canons from the above canonic sequence.



Solve the following canon for S.A.T.B.



Solve the canon ① ④ from the following Modulatory Canonic Sequence.

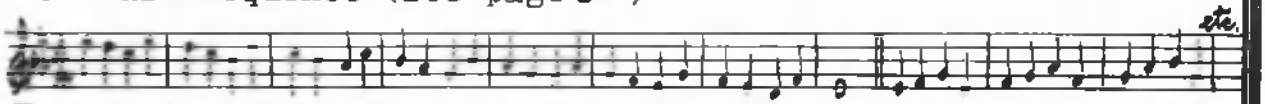


* N.B. See page 211 for the method of solving these canons.

RECAPITULATION

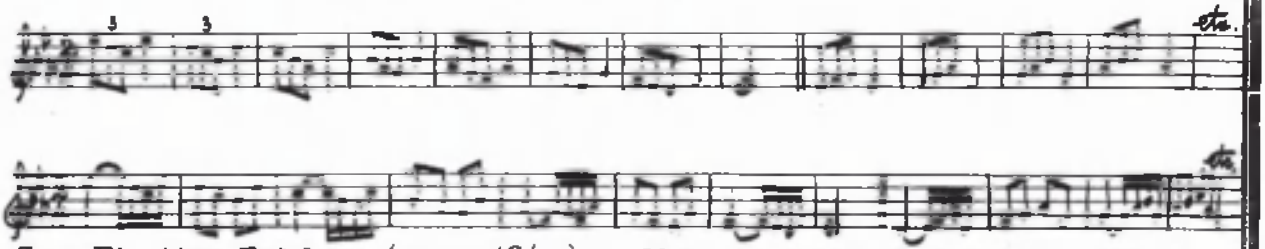
So far we have dealt with the exposition and development of the Sequence Modulator and its application to the Singing Class. Perhaps this is a suitable place for a recapitulation of the subject. We propose, therefore, to take the familiar melodic figure d' t 1 d' and to show how the various devices demonstrated in the 20 sections of the previous chapters may be applied to this simple melodic germ. The numbering here corresponds to the numbering of these sections.

1. Plain Sequence (see page 50)



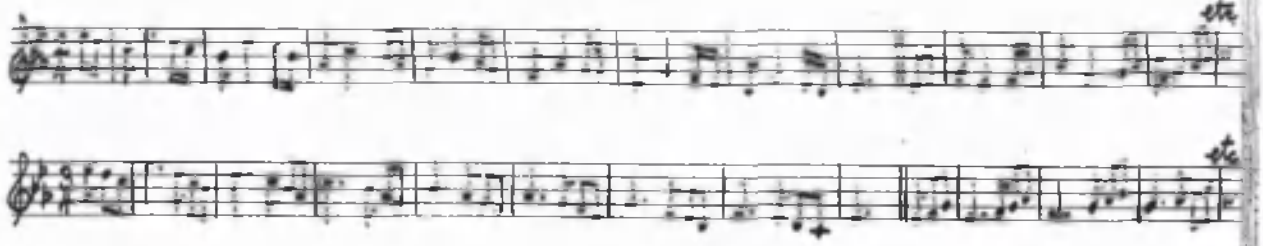
To be sung at various speeds and with varying expression, staccato etc., the class or individual pupils conducting. May be used as whispering exercise.

2. Rhythmic Variety (see page 97)

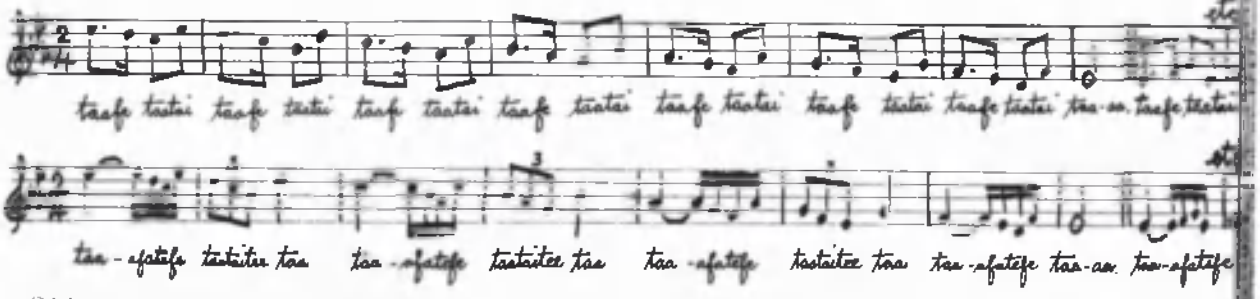


See Rhythm Tables (page 196). May be used for contrasting rhythms, e.g.  and

3. Anacrustic Sequences (see page 101)

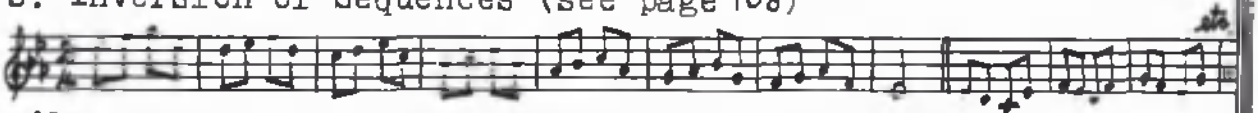


4. Rhythm Spelling (see page 104)



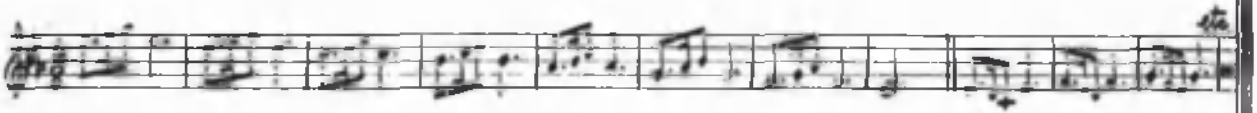
Other rhythmic patterns may be spelled in the same way.

5. Inversion of Sequences (see page 108)

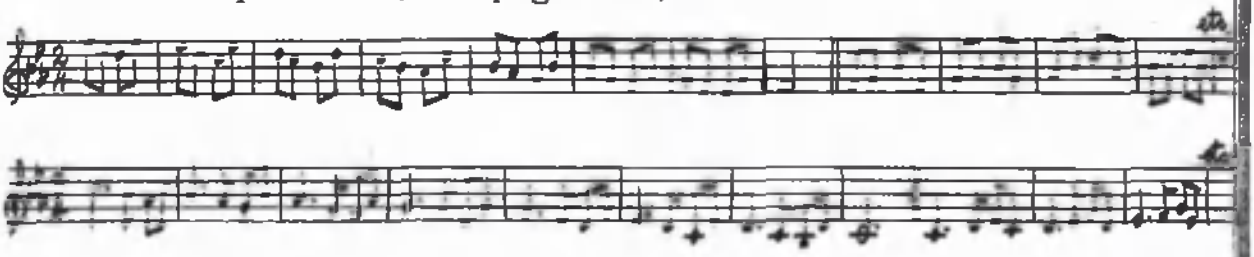


Also with Rhythmic Variety, with or without Anacrusis, Antiphonally etc. For example, to the Rhythmic Pattern,





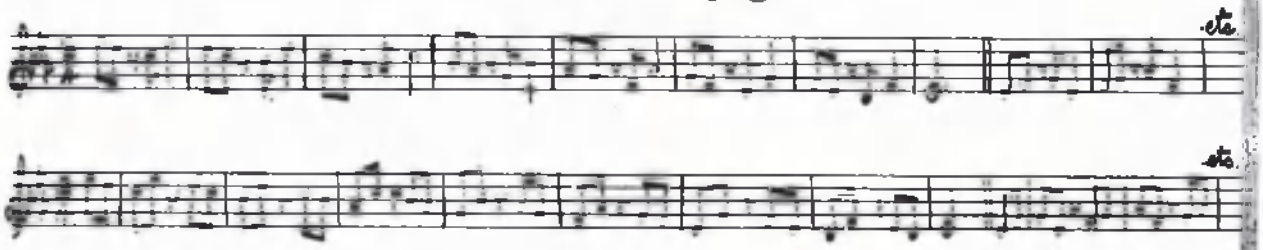
6. Modal Sequences (see page 110)



7. Sequences beginning on other Columns than the first (see page 112)



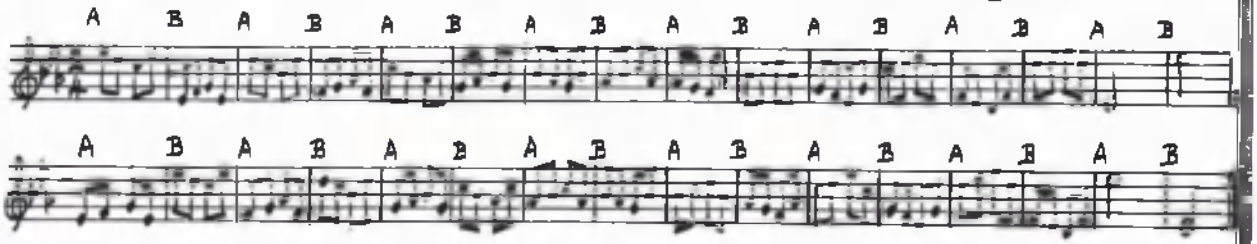
8. Rests in Sequence Singing (see page 113)



9. Antiphonal Sequence Singing (see page 118)



10. Antiphonal Singing by Contrary Motion (see page 120)



Also with Rhythmic Variety and Anacrusis.

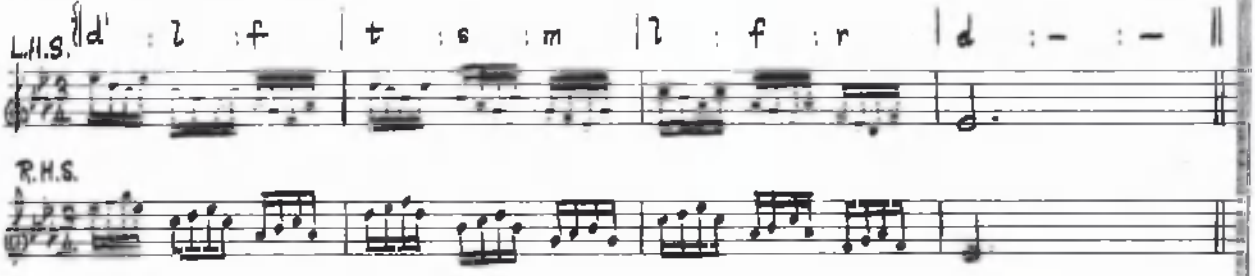
11. Mental Singing (see page 121)



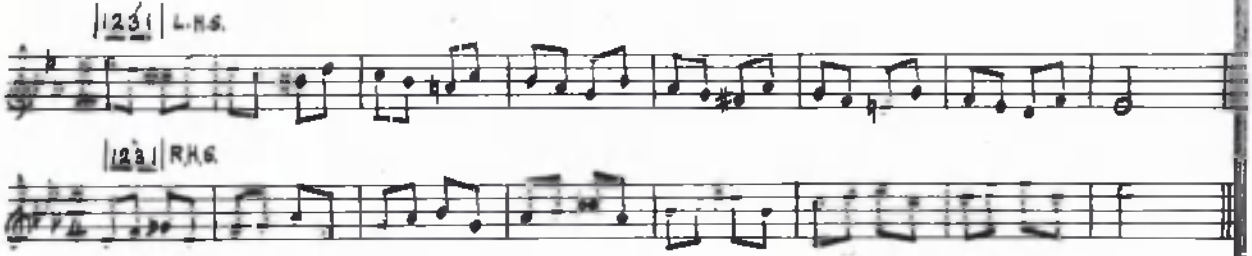
This exercise should be done while the class beats time, and later on without any time-beating.

12. Non-Scalic Sequences (see page 123)

Basic Formula:



13. Chromatic Sequences (see page 127)



Also with Rhythmic Variety, Anacrusis, Antiphonal Singing, etc.

14. Tetrachordal Sequences (see page 145)



Also with varied rhythms. May be used as an Alphabet Exercise for lip-training.

15. Modulatory Sequences (see page 152)



With varied rhythms.

16. Ear Tests from Sequences (see page 154)

(a) | d r m d | r - - - |

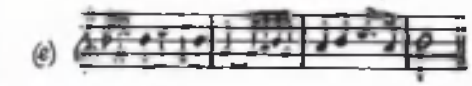
(b) | d t, l, d | m r d m | s - - - |

(c) | d' t l d' | s f m s | r m f r | m - - - |

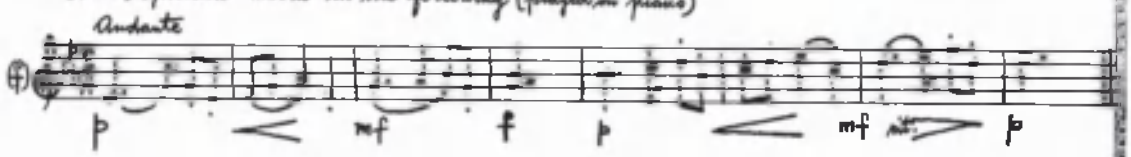
(d)



(e)



Enter expression marks in the following (played on piano)

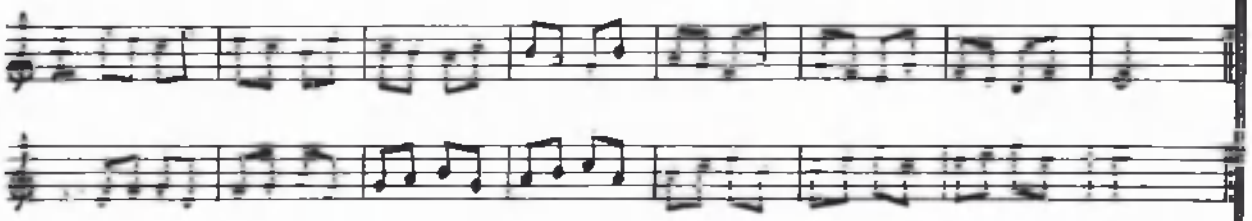


17. Absolute Pitch Sequences (see page 160)

L.H.S. | c' B A c' | B A G B | A G F A | G F E G | F E D F | E D C E | D C B, D | C - - - || C D E C | D E F D | E F G E | F G A F | G A B G | A B c' A | B c' d' B | c' - - -

R.H.S. | c' d' e c' | B c' d' B | A B c' A | G A B G | F G A F | E F G E | D E F D | C - - - || C B, A, C | D C B, D | E D C E | F E D F | G F E G | A G F A | B A G B | C' - - -

18. Staff Reading (see page 163)



The above sequence to be sung to the sol-fa syllables in all keys, e.g.

Key D | r' d' t r' | d' t l d' | t l s t | l s f l | s f m s | f m r f | m r d m | r — etc.

Key C | m' r' d' m' | r' d' t r' | d' t l d' | t l s t | l s f l | s f m s | f m r f | m — etc.

Key B | f m r f | m r d m | r d t, r | d t, l, d | t, l, s, t, | l, s, f, l, | s, f, m, s, | f, — etc.

19. Staff Writing (see page 165)

(a) Write the sequence 1231 in Key D♭ to the rhythm |♩.♪♫|♫♩.𝄽|



Ditto ascending.

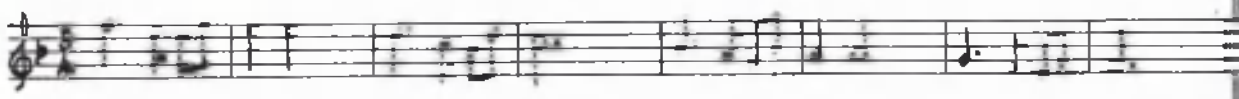
(b) Write the chromatic sequence |1231| in the Tenor Clef, Key E (Descending).



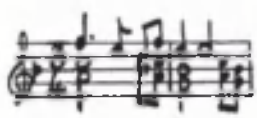
(c) Re-write the above chromatic sequence in the Alto Clef a diminished fifth higher.



(d) In the key of F write an eight-bar melody by repeating this melodic figure |1 2 3 1|2 2 -| to the rhythm |♩. ♪♫|♩ 𝅗𝅥| on d' 1 f and r.
At the fourth and eighth bars write 𝅗𝅥.



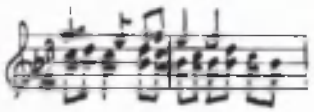
(e) Re-write the above as a harmonic sequence, thus:



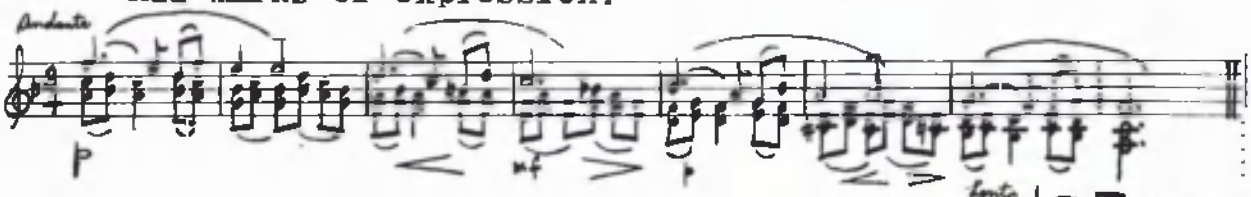
Modulate to the dominant, i.e. introduce "fe", at the third bar.



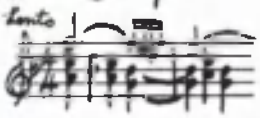
(f) Re-write the above, modulating to the relative minor (by introducing "se") at the sixth bar, and keeping up the quaver movement in one or other of the parts thr oughout, thus:

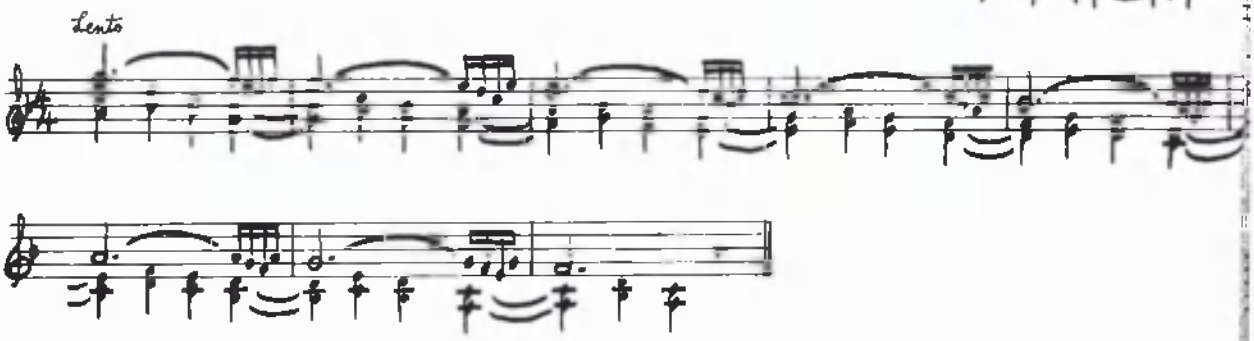


Add marks of expression.

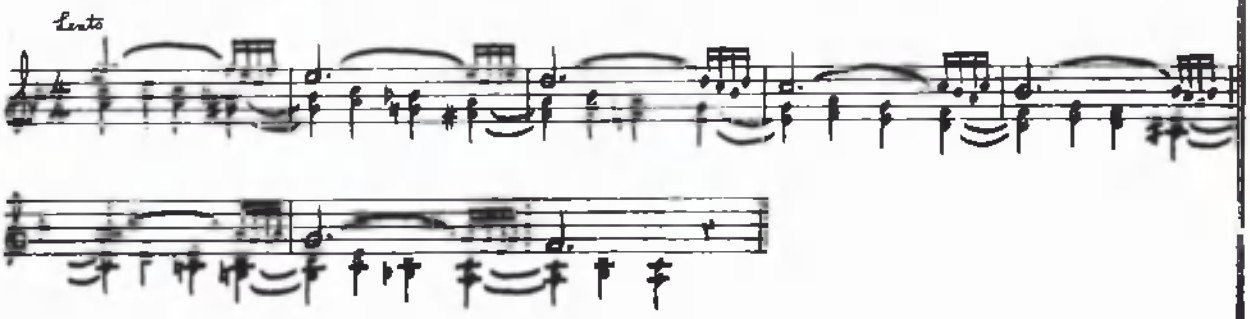


(g) Continue the following harmonic sequence:



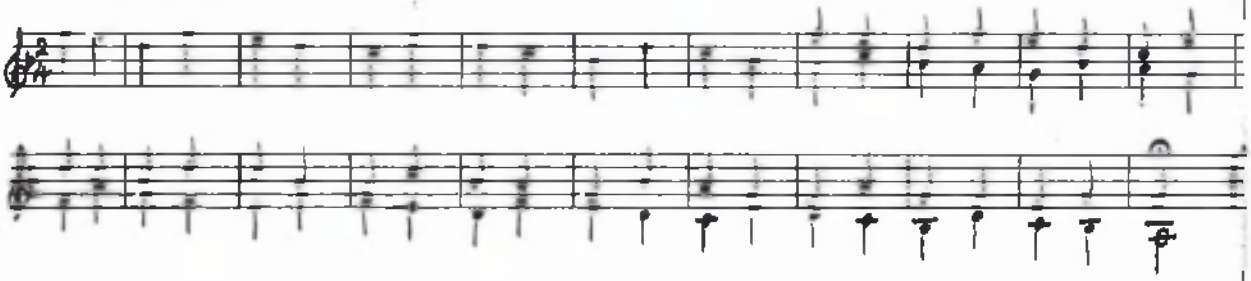


(h) Re-write the above, using accidentals to produce the semitonal mordent figure in the two lower parts where feasible.

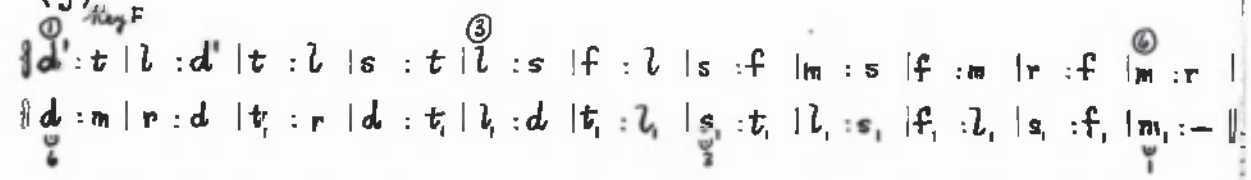


20. Canons on the Sequence 1231 (see page 171)

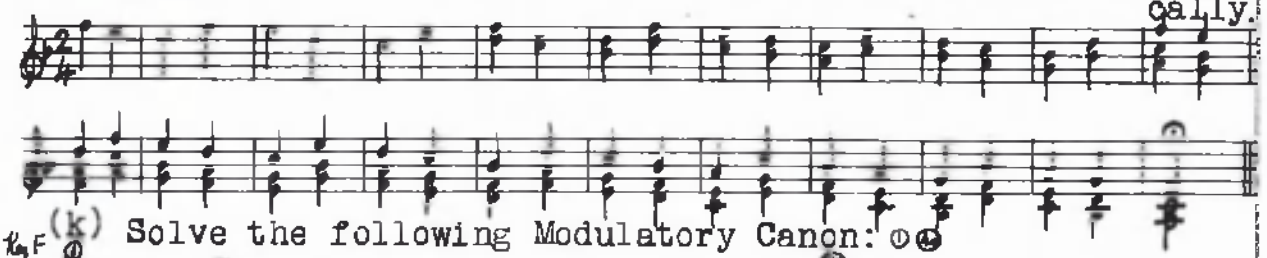
(i) In the key of F write out the sequence |d' :t |l :d' }, finishing on |s, :f, |m, :- ‖ and keeping the stems of the crotchets down throughout. Then, above these notes write the same sequence, stems up, beginning at the eighth bar. The result will be a Canon at the Unison for two voices.



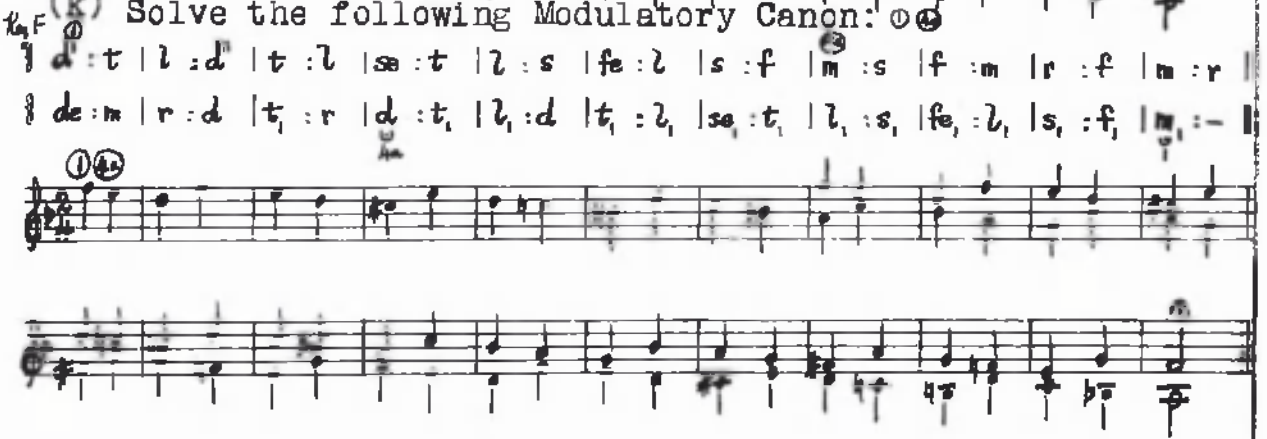
(j) Key F

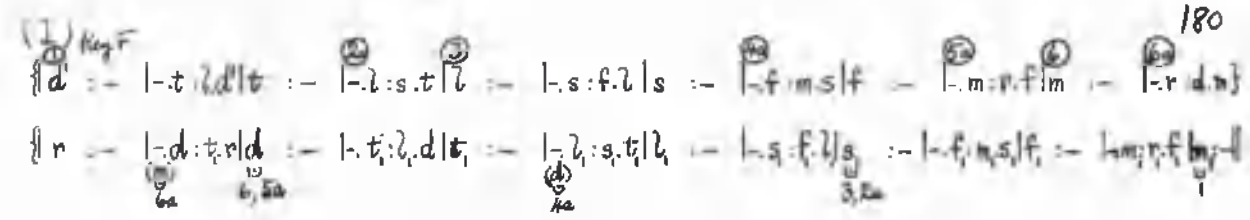


From the above canonic sequence write out the canon ①③⑥ , i.e. a sequence of "six-threes" evolved canonically.



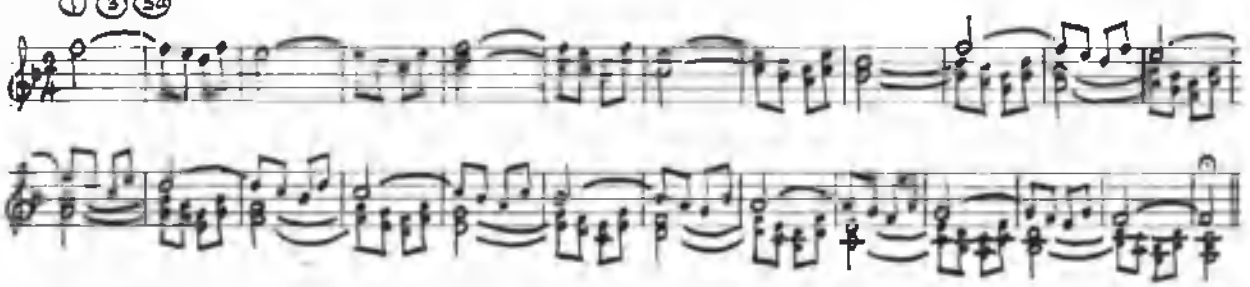
(k) Key F Solve the following Modulatory Canon: ①④



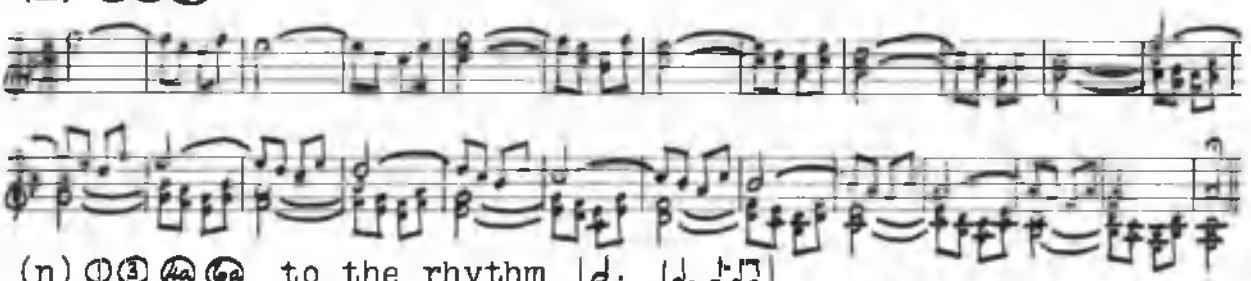


From the above canonic sequence solve the following canons.

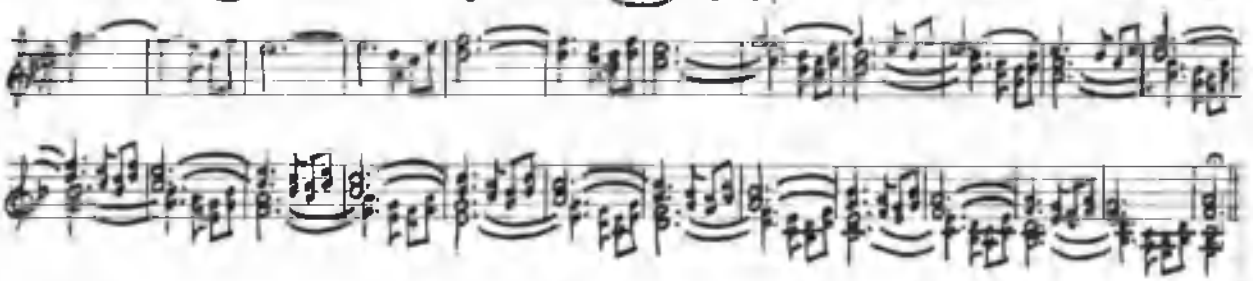
① ③ 5a



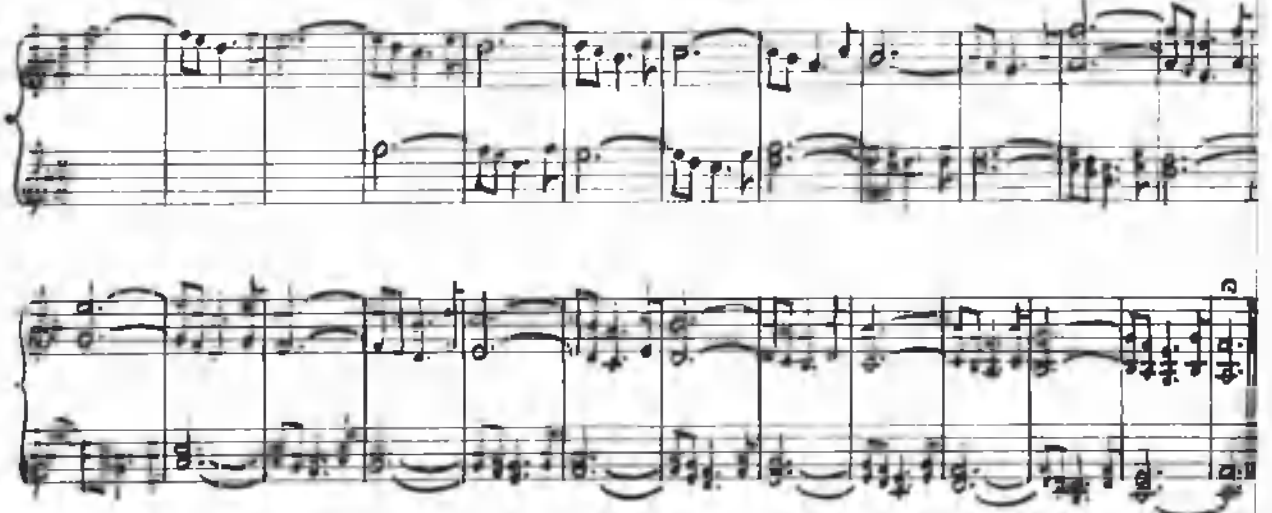
(m) ① ③ 6a



(n) ① ③ 4a 6a to the rhythm |d. |d. ♪♫|



(o) ① 2a 4a 6 to the rhythm |d. |♫ ♩. ♪|



THE MUSIC LESSON AS AN ORGANIC WHOLE

The previous pages do not by any means exhaust the subject-matter that may be obtained from this simple d'tid' germ, as nearly all of the 20 sections could be extended considerably by combination with other sections. But enough has been done to show how sequences may be used in various ways to illustrate or give practice in the different branches of the music lesson. From the one simple sequence and its variations we have derived subject-matter, cumulative in its practice effect, to suit the needs of all classes from the lowest to the highest. The various techniques that are involved in aural work (or the spelling of pitch and rhythm), in visual work (or the reading and writing of pitch and rhythm), and in practical work (or vocal performance), are thus made to centre round and to evolve from this one melodic germ.

This method of evolving subject-matter naturally from within rather than superimposing it mechanically from without is in accordance with modern educational practice. The whole tendency of recent educational thought and practice has been away from the old conception of education as something whose main concern is with the logical division of subject-matter into watertight compartments, each narrowly concerned with its own special devices,

aide-mémoires, knowledges and skills. Indeed, the conception of subject-matter as being capable of logical division at all is a purely adult conception. It is the backward view of one who has travelled along the road of experience, the summing-up, the "novissima verba" of the theorist.

But this adult conception of subject-matter is quite foreign to the child. Such a presentation may be the result of experience and analysis on the part of the teacher, but it does not motivate or generate the desire for experience and analysis on the part of the learner. In fact, it leaves no room at all for that childish imagination and wonder, or for that introspection or analysis, which starts wonderingly from what seems at first only a "big buzzing booming confusion".

By beginning with the steps, doh soh, etc. in the music class we certainly take away the "big buzzing booming confusion," but we also take away much else.

The "resolution of an obscure and complex object into its component aspects" has been done for the child by the doctrinaire in his arm-chair, and all that is left for the child to do is to learn by heart, or memorize as best he can, anatomical fragments, the very dry bones of the art.

The "steps," from Curwen's day onwards, have all been laid out in order for the child, but he cannot see where these "steps" have come from, nor where they lead to. And indeed, he is not encouraged to enquire too curiously into such matters.

Hence, the emphasis in the New Education has been shifted from the logical division of the subject-matter, to the psychological consideration of the learner and the learning situation. And this new conception of education as a process of organic growth from within as opposed to material accretion from without has also permeated the conception of the lesson as an organic whole.

Speaking of "Physical Illiteracy" and the physical education of the future, Dr L.P.Jacks says:

> "Instead of mechanical movements, interrupted and broken, 'physical jerks' as they are called, which exercise the body as though it were a rigid skeleton mechanically jointed, the movement practised will be the unbroken and continuous flow of a living thing falling into cadences and rhythms, orchestrated rather than regimented, moving from start to finish like a piece of music - which is exactly the way in which a well-trained mind goes about its business."
>
> ("The Challenge of Leisure," Edited by Wm.Boyd, New Education Fellowship, London, 1936)

We are all familiar with the old "physical jerks" lesson. But, in musical pedagogy, have we advanced much

beyond the "physical jerks" stage? Do we not still find the singing lesson period timed and divided rigidly into sub-periods, each exclusively devoted to one aspect of the art, e.g.

(a) breathing, without tone production.

(b) voice production, without rhythm or form - "vox et praeterea nihil."

(c) rhythm-spelling practice or taatai-ing, without inflection of voice or pitch (a most important element in rhythm).

(d) pitch-spelling practice or sol-faing and modulator work, without attention to voice production, diction, rhythm, expression, phrasing or form.

(e) formal ear-training or ear-tests, based on a few stereotyped and detached notes without musical context.

(f) formal eye-training or sight-reading, without aesthetic content and, therefore, without adequate motivation - mere note-reading or symbol translation.

(g) song singing, an invaluable practice for extending the oral vocabulary in pitch and rhythm, but one that does not help in cultivating musical literacy or spelling, reading and writing, unless used in conjunction with sol-faing and taatai-ing in tune-spelling.

Surely, if musicianship is made to permeate the whole lesson, there should be no need for this logical division of subject-matter, this vivisection of a living art.

In the preceding pages we have endeavoured to show how the various branches of the art of teaching music may

unfold themselves naturally without at any point losing touch with each other or with music itself. And if, in this process, the chief emphasis has been laid on pitch spelling, we feel that it has been rightly so laid. For it is a heightened consciousness of the qualities or mental effects of musical pitch that distinguishes the musician from the artist in other mediums - from the poet, (Tennyson, Rossetti or Swinburne, for example), who, in spite of a rare sensitiveness to vowel pitch or colour, consonantal values, rhythm, proportion and form, is often more or less tone deaf so far as the qualities of musical pitch are concerned.

APPENDIX A

TABLES OF SEQUENCE FORMULAE

Teachers may select their own formulae for sequence singing from the numbered columns of the Modulator, e.g.

12, 121, 123, 13, 131, 132, 1231, 1321, 1213, 1312

As the number of permutations and combinations possible, especially with the longer sequence patterns of 5, 6, 7, 8 or 9 notes, is very great, we cannot give a full list here. We shall show below, however, the method by which they may be arrived at.

Sequences based on Columns 1 2 3 of the Sequence Modulator

Using the numbers of the first three columns - 1 2 3 - we find that only 3 two-note sequences are possible, namely, 11, 12 and 13. However, for three-note groups, all beginning with Column 1, there are 9 possibilities:

111	122	131
112	123	132
121	113	133

Still keeping to the first three columns, and taking a four-note group, we find that the fourth figure or column in this group may be either 1 2 or 3. This then gives 9 x 3 or 27 permutations and combinations of four-note sequences. It is true that the first one will be shown as

1111, but we shall retain this as it may be used with young classes along with a rhythmic figure for sequence singing in repeated notes, e.g.



Besides, it is necessary to retain this formula 1111 for the sake of the five-note groups in which 2 or 3 may be added to this; thus, 11112, 11113.

The derivation of the four-note formulae from the three-note formulae is shown below.

111 { 1111, 1112, 1113, 1113	122 { 1221, 1222, 1223	131 { 1311, 1312, 1313
112 { 1121, 1122, 1123	123 { 1231, 1232, 1233	132 { 1321, 1322, 1323
121 { 1211, 1212, 1213	113 { 1131, 1132, 1133	133 { 1331, 1332, 1333

This gives a possibility of 27 four-note sequences on columns 1 2 3, i.e. sequences in which the sequence figure does not extend beyond the interval of a third.

Five-note sequence formulae may be obtained in the same manner by adding as the fifth figure used either 1, 2 or 3, thus:

Four-note Sequences	Five-note Sequences	Four-note Sequences	Five-note Sequences	Four-note Sequences	Five-note Sequences
	add		add		add
1111	1, 2 or 3	1221	1, 2 or 3	1311	1, 2 or 3
1112	...	1222	...	1312	...
1113	...	1223	...	1313	...
1121	...	1231	...	1321	...
1122	...	1232	...	1322	...
1123	...	1233	...	1323	...
1211	...	1131	...	1331	...
1212	...	1132	...	1332	...
1213	...	1133	...	1333	...

This makes a total of 81 five-note sequences based on columns 1 2 3 of the Sequence Modulator, i.e. sequences in which the sequence figure does not extend beyond the interval of a third.

To each of these 81 five-note sequences may be added a sixth note, which again may be either 1, 2 or 3, thus making a total of 243 six-note sequences confined to Columns 1 2 3.

Similarly,

729 seven-note sequences may be obtained from Cols.1 2 3

2,187 eight-note sequences may be obtained from Cols.1 2 3

6,561 nine-note sequences may be obtained from Cols.1 2 3

Below, we show schematically how any of these sequences, from the 27 four-note sequences up to the 6,561 nine-note sequences, may be obtained.

Three-note Sequence	4th note may be either	5th note may be either	6th note may be either	7th note may be either	8th note may be either	9th note may be either
111	1 2 or 3	1 2 or 3	1 2 or 3	1 2 or 3	1 2 or 3	1 2 or 3
112	...	...	...	...	...	...
121	...	...	...	...	...	...
122	...	...	...	...	...	...
123	...	...	...	...	...	...
113	...	...	...	...	...	...
131	...	...	...	...	...	...
132	...	...	...	...	...	...
133	...	...	...	...	...	...
Total 9	27	81	243	729	2,187	6,561

Thus, the nine-note sequence 121 232 123 to the rhythmic formula



may be obtained by starting from 1 2 1 and selecting the other six numbers in the above order from the other six columns.

Sequences based on Columns 1 2 3 4 of the Sequence Modulator

Coming to sequences of fourths, we find that we can obtain only one two-note sequence, and seven three-note sequences, viz.:

14	114	134	142	144
	124	141	143	

Four-note sequences on Columns 1 2 3 4 are given below:

1114	1214	1314	1411	1421	1431	1441	1141	1241	1341
1124	1224	1324	1412	1422	1432	1442	1142	1242	1342
1134	1234	1334	1413	1423	1433	1443	1143	1243	1343
1144	1244	1344	1414	1424	1434	1444			

Five, six, seven, eight and nine-note sequences of fourths may be obtained by continuing to add to each of these 37 sequences a fourth note, which may be either 1,2,3 or 4, thus

Four-note Sequence	5th note may be either	6th note may be either	7th note may be either	8th note may be either	9th note may be either
1114	1 2 3 or 4	1 2 3 or 4	1 2 3 or 4	1 2 3 or 4	1 2 3 or 4
1124	...	...	...	...	...
1134	...	...	...	...	...
1144	...	...	...	...	...
1214	...	...	...	...	...
1224	...	...	...	...	...
1234	...	...	...	...	...
1244	...	...	...	...	...
1314	...	...	...	...	...
1324	...	...	...	...	...
1334	...	...	...	...	...
1344	...	...	...	...	...
1411	...	...	...	...	...
1412	...	...	...	...	...
1413	...	...	...	...	...
1414	...	...	...	...	...
1421	...	...	...	...	...
1422	...	...	...	...	...
1423	...	...	...	...	...
1424	...	...	...	...	...
1431	...	...	...	...	...
1432	...	...	...	...	...
1433	...	...	...	...	...
1434	...	...	...	...	...

Contd.

Four-note Sequences	5th note may be either	6th note may be either	7th note may be either	8th note may be either	9th note may be either
1441	1 2 3 or 4	1 2 3 or 4	1 2 3 or 4	1 2 3 or 4	1 2 3 or 4
1442	...	...	...	...	...
1443	...	...	...	...	...
1444	...	...	...	...	...
1141	...	...	...	...	...
1142	...	...	...	...	...
1143	...	...	...	...	...
1241	...	...	...	...	...
1242	...	...	...	...	...
1243	...	...	...	...	...
1341	...	...	...	...	...
1342	...	...	...	...	...
1343	...	...	...	...	...

We thus have a total of -

148 five-note sequences of fourths
592 six-note sequences of fourths
2368 seven-note sequences of fourths
9472 eight-note sequences of fourths
37888 nine-note sequences of fourths

That is to say, using only four notes, for example d' t l s, we may obtain 37,888 nine-note phrases, each beginning with d' and containing at least one s, but in which repetitions may occur - and all differing in respect of the order of the pitch elements, apart altogether from rhythm elements.

But this total does not exhaust the possibilities of sequences of fourths containing up to nine notes. For we obtain a new series of five-note sequences of fourths by adding the figure 4 to the 27 four-note sequences limited to Columns 1 2 3, thus:

11114	12214	13114
11124	12224	13124
11134	12234	13134
11214	12314	13214
11224	12324	13224
11234	12334	13234
12114	11314	13314
12124	11324	13324
12134	11334	13334

For example, the sequence 12314 sung to the rhythmic formula |♫♬♩| would appear as follows:



From these 27 five-note sequences of fourths we may begin a new series by adding 1 2 3 or 4 for the sixth note.

And from these 108 six-note sequences of fourths we may obtain 432 seven-note sequences of fourths by adding to these a seventh note 1 2 3 or 4.

And so on with eight and nine-note sequences of fourths. Even then, we can obtain another series by starting from the 81 five-note sequences on Columns 1 2 3 above and adding 1 2 3 or 4 to obtain six-note sequences of fourths, which would lead to a new series of seven, eight and nine-note sequences.

Similarly, we may begin again from the 243 six-note sequences of thirds, the 729 seven-note sequences of thirds and the 2187 eight-note sequences of thirds.

We have gone fully into the permutations and combinations of notes in sequences up to sequences of fourths for the sake of completeness, and also to show the almost endless possibilities of sequence singing. Yet in many schemes of work sequence singing is limited to a dozen or less sequences!

But if the permutations and combinations of notes in sequence singing are almost endless, so also are the permutations and combinations of notes in the idioms of the musical language.

It would be quite impossible, of course, to practise all these sequences in the Singing Class. It would also be quite unnecessary. A stage is reached when any new combination can be sung from the experience obtained in singing other combinations. But a goodly number should be practised. For if pupils are unable to sing any of these sequences, they are, ipso facto, so much the poorer musicians, and will be so much the poorer sight-readers. What cannot be done from the first-remove sol-fa symbols of the Sequence Modulator is not likely to be done from the second-remove note-symbols of the staff-notation.

Having shown how sequence patterns of fourths of varying lengths may be worked out from first principles, we leave it to the Teacher to work out lists of sequences of fifths, sixths etc., and to select for his various classes the formulae that may be profitably used in relative pitch spelling or sol-faing.

APPENDIX B

RHYTHM TABLES FOR SEQUENCE SINGING AND RHYTHM SPELLING

The Rhythm Tables in the following pages have been arranged according to the number of time elements in the group, e.g. five-note, six-note etc., and also according to the time signature. They are not by any means complete, as the combinations of rhythm elements, like those of the pitch elements, are almost endless.

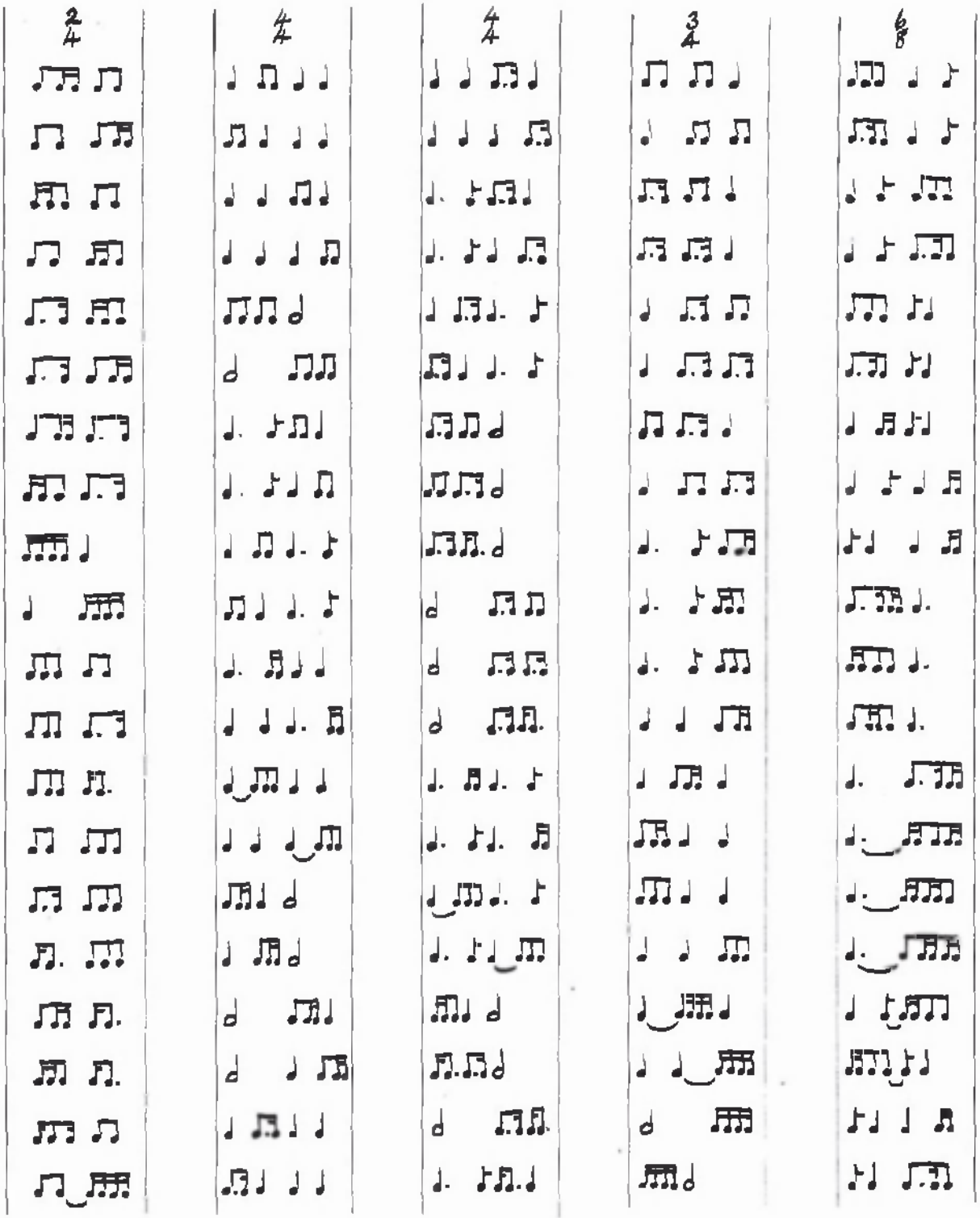
(In some experiments on the use of speech rhythms for training in rhythm reading and writing, the writer has shown that the sentence, "What do you remember?" is capable of being spoken rhythmically in over a thousand ways. And all of these thousand odd speech rhythms, each differing in however slight a degree from the others, may be spelled in rhythm names and represented by rhythm symbols.)

Sequences which have become familiar in one rhythmic setting should be used with other rhythmic settings, with or without anacrusis, the class beating time during the singing. Then these familiar rhythmic sequences should be used for taatai-ing or rhythm spelling to pitch, and also for practice in writing or dictation.

It will be readily seen that by combining the numerical sequence formulae in Appendix A with the rhythm

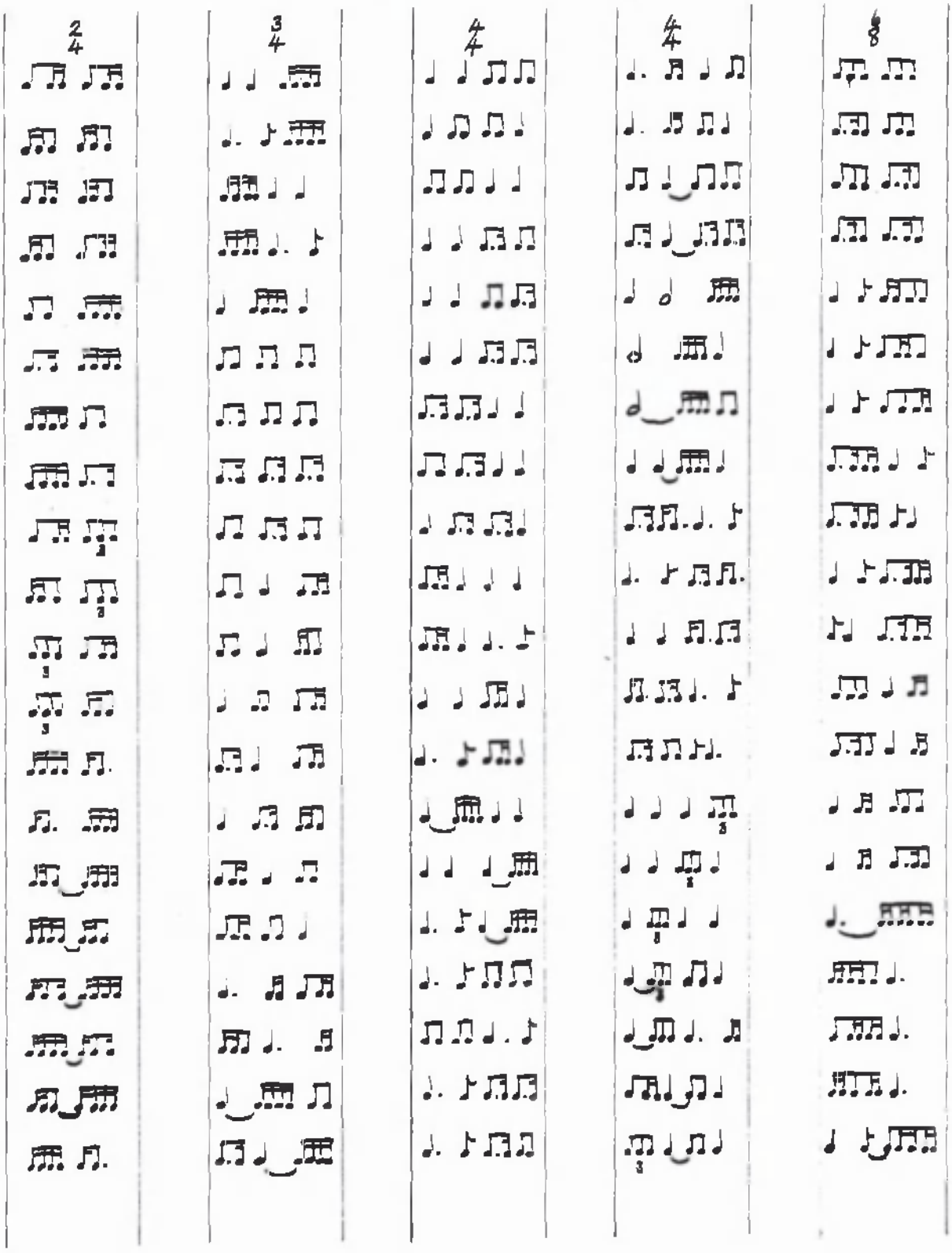
formulae in Appendix B, and by applying the various devices for obtaining variety in sequence singing demonstrated in the preceding 20 Sections, the teacher need never be at a loss to find new Materia Musica for the Singing Class.

Five-note Rhythmic Groups

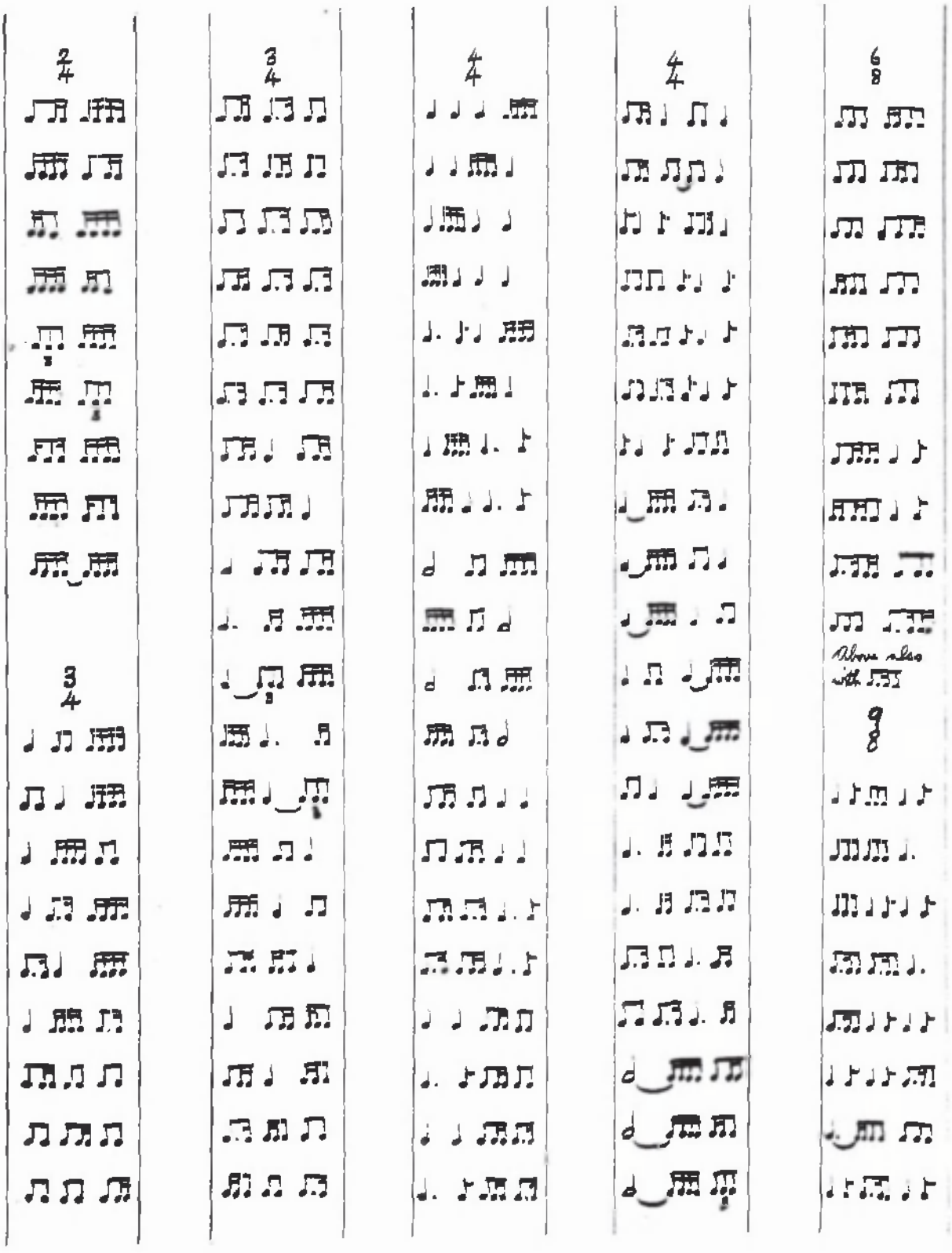


For three-note and four-note Rhythmic Groups see page 98.

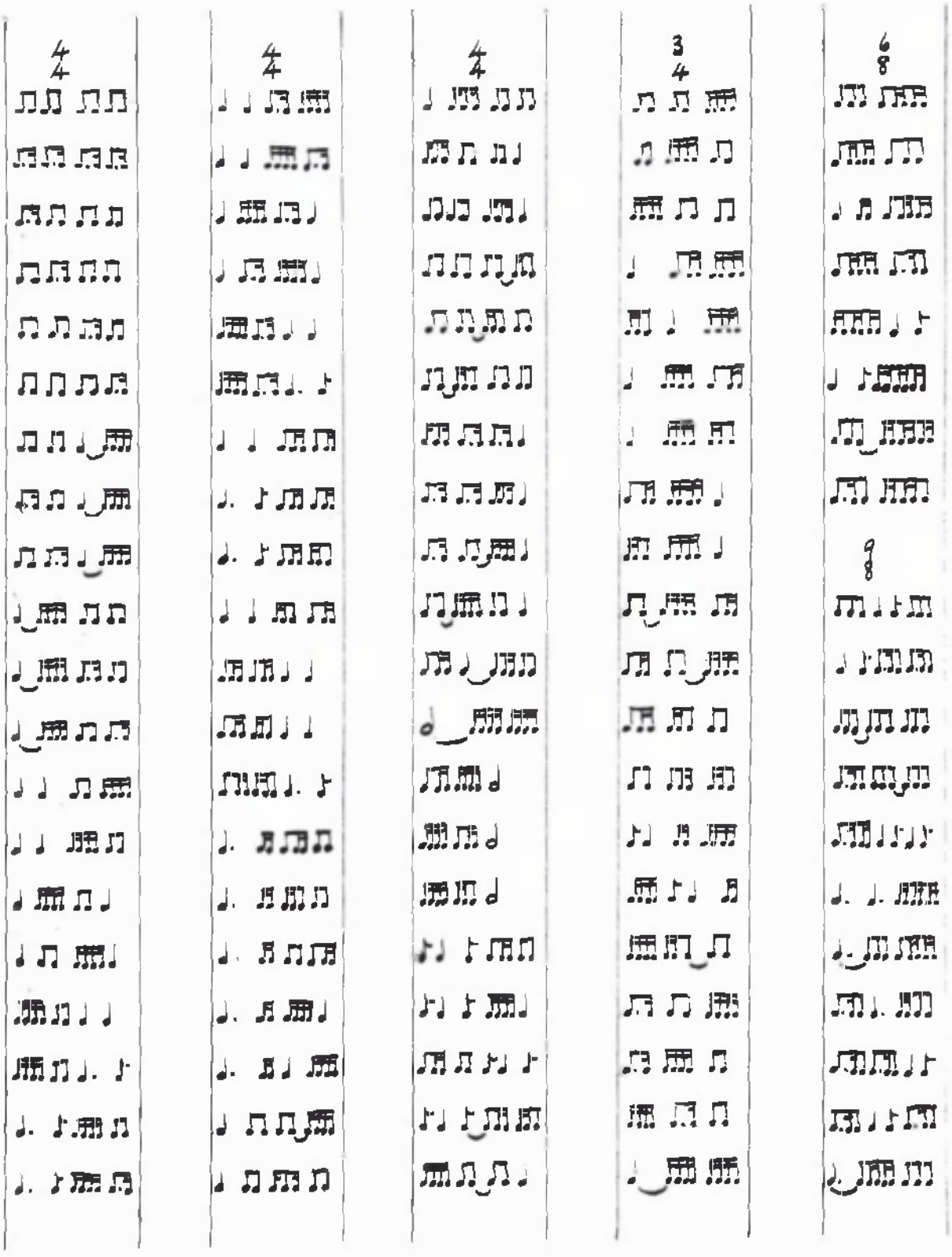
Six-note Rhythmic Groups



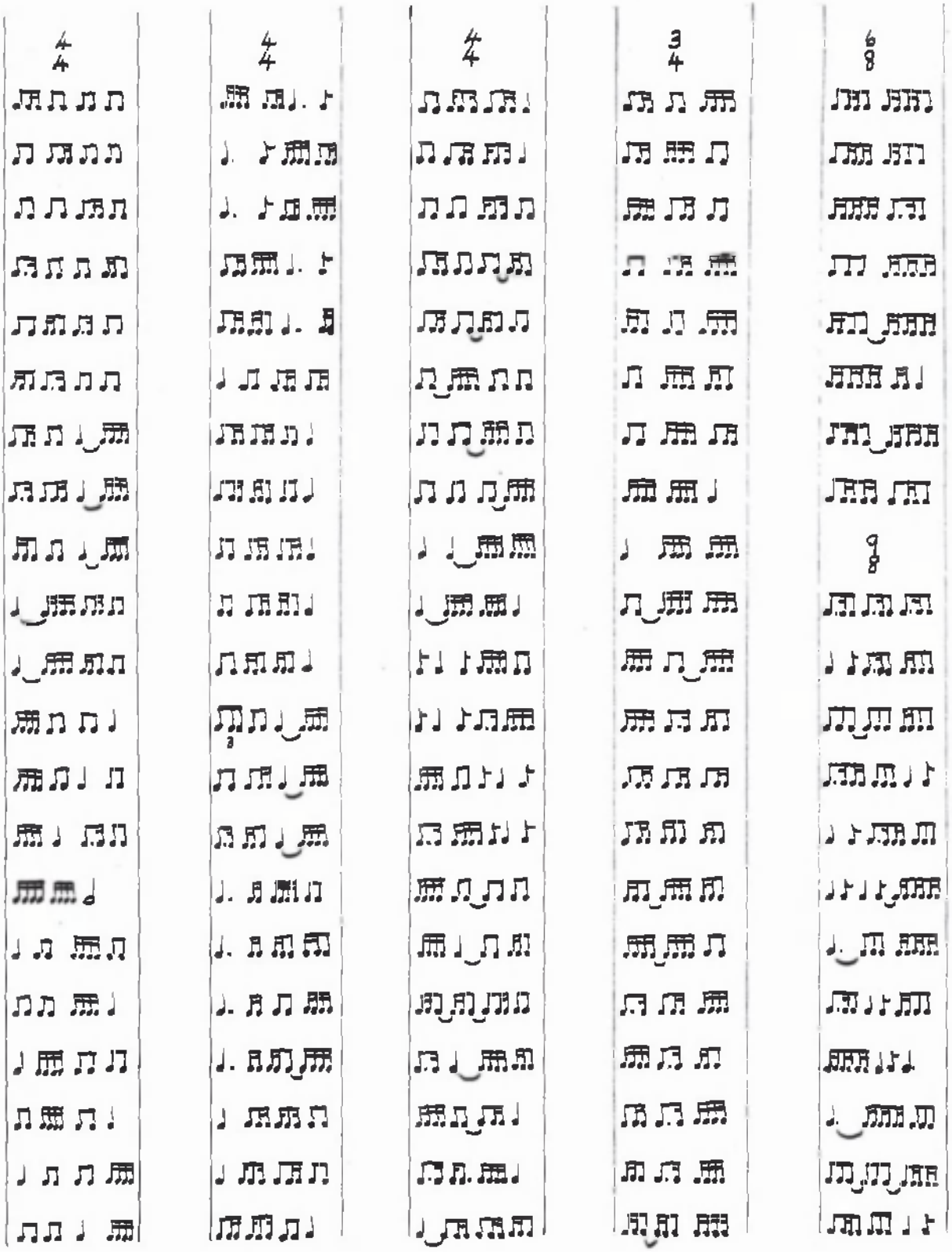
Seven-note Rhythmic Groups



Eight-note Rhythmic Groups

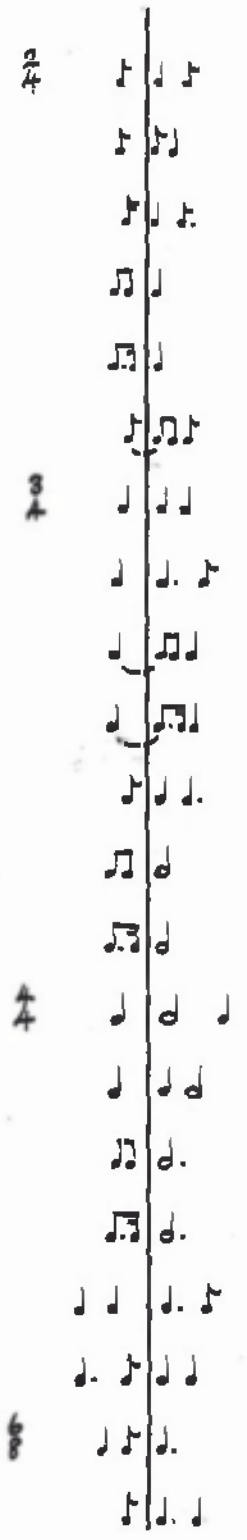


Nine-note Rhythmic Groups

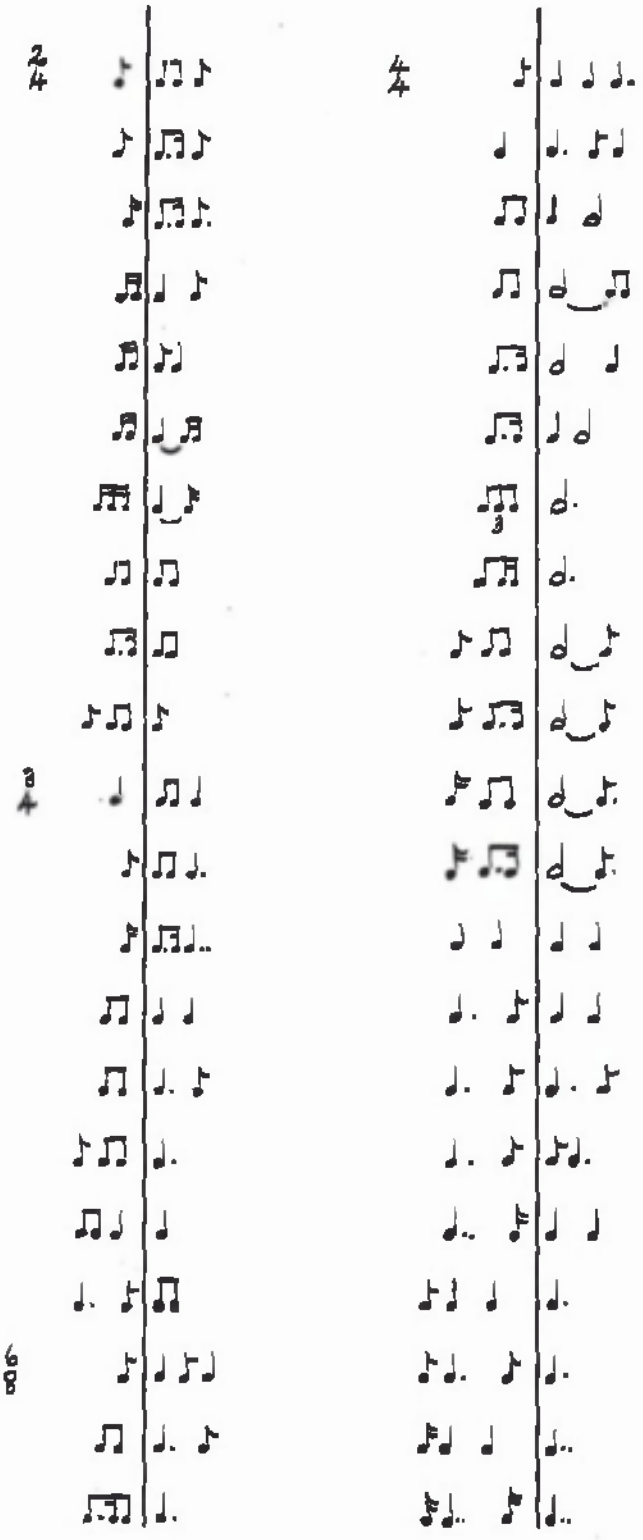


Rhythmic Patterns (with Anacrusis)

Three-note Groups

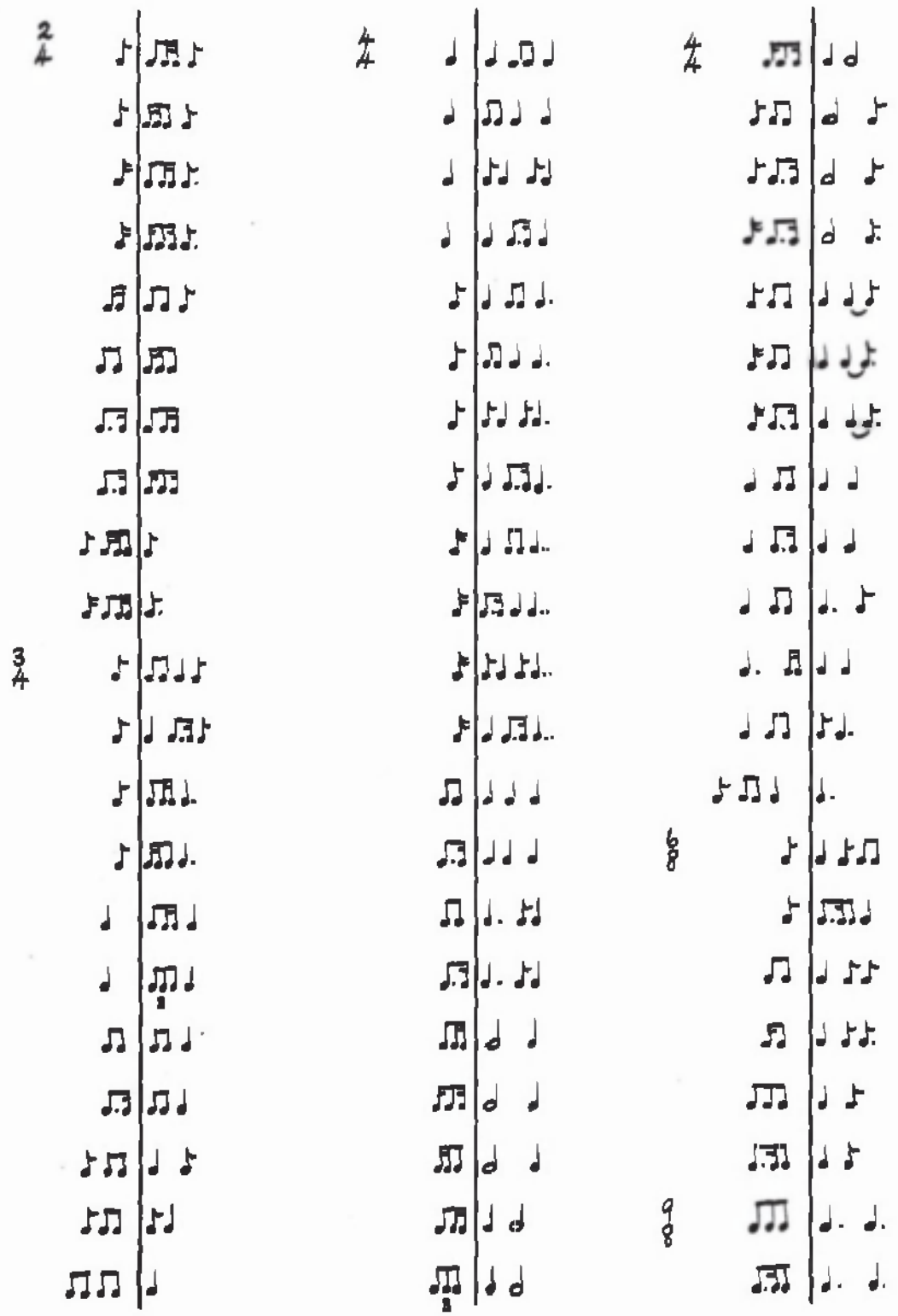


Four-note Groups



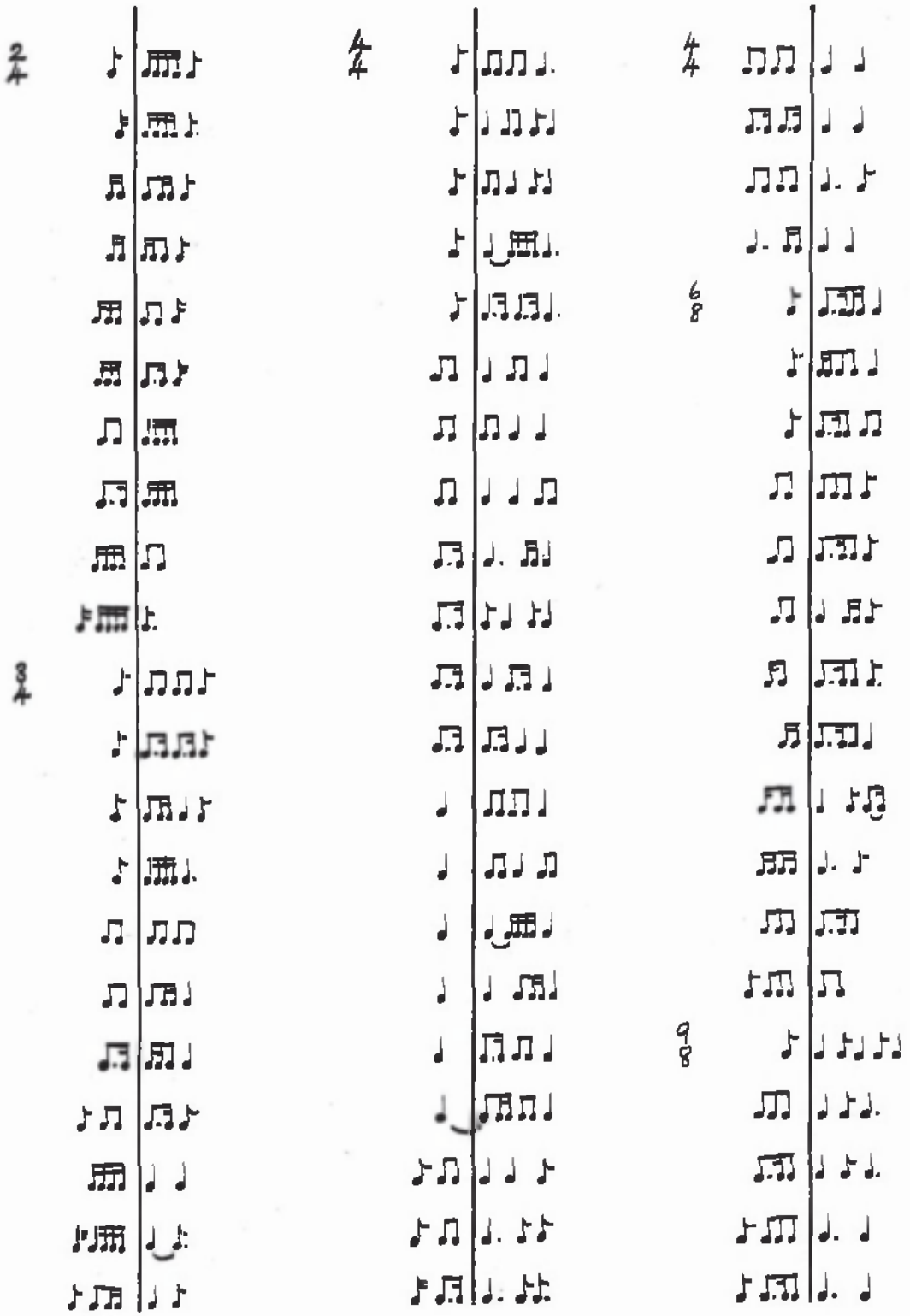
Rhythmic Patterns (with Anacrusis)

Five-note Groups



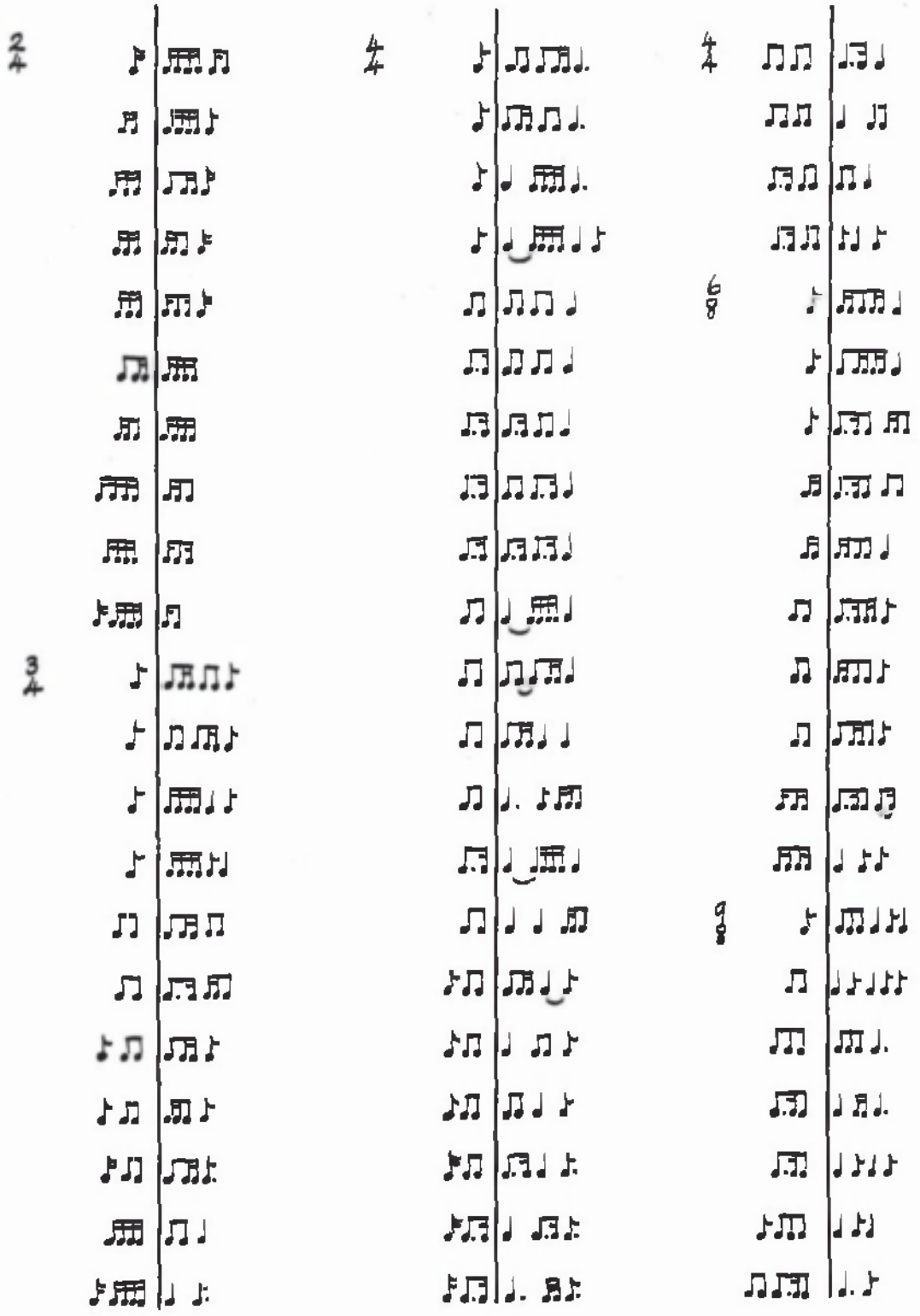
Rhythmic Patterns (with Anacrusis)

Six-note Groups



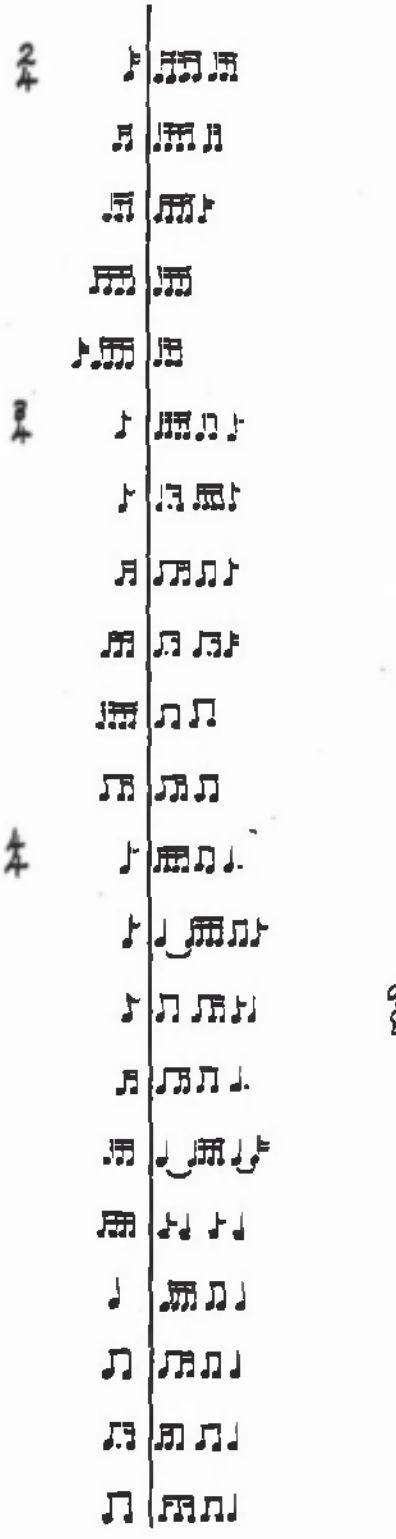
Rhythmic Patterns (with Anacrusis)

Seven-note Groups

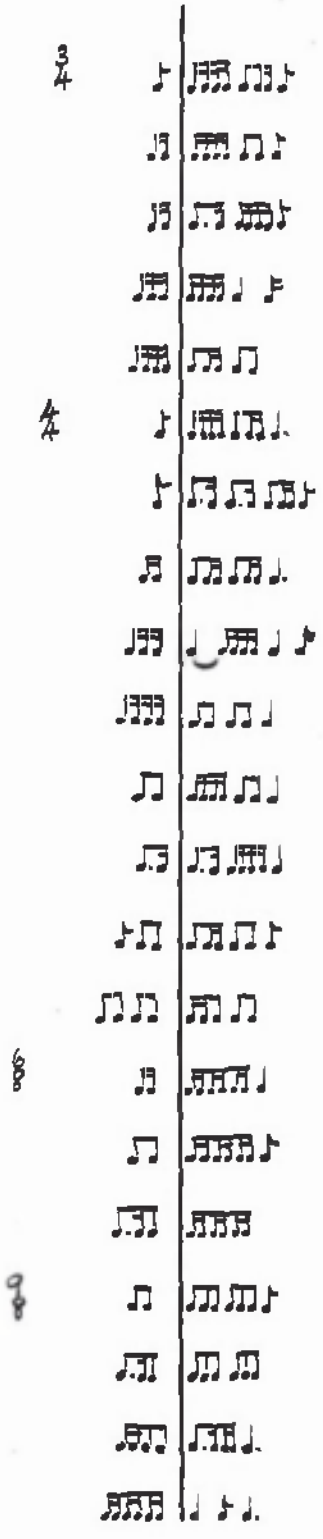


Rhythmic Patterns (with Anacrusis)

Eight-note Groups



Nine-note Groups



THE SEQUENCE MODULATOR

1	2	3	4	5	6	7	8
d'	t	l	s	f	m	r	d
t	l	s	f	m	r	d	t_1
l	s	f	m	r	d	t_1	l_1
s	f	m	r	d	t_1	l_1	s_1
f	m	r	d	t_1	l_1	s_1	f_1
m	r	d	t_1	l_1	s_1	f_1	m_1
r	d	t_1	l_1	s_1	f_1	m_1	r_1
d	t_1	l_1	s_1	f_1	m_1	r_1	d_1
1	2	3	4	5	6	7	8

1	2	3	4	5	6	7	8
d'	r'	m'	f'	s'	l'	t'	d^2
t	d'	r'	m'	f'	s'	l'	t'
l	t	d'	r'	m'	f'	s'	l'
s	l	t	d'	r'	m'	f'	s'
f	s	l	t	d'	r'	m'	f'
m	f	s	l	t	d'	r'	m'
r	m	f	s	l	t	d'	r'
d	r	m	f	s	l	t	d'
1	2	3	4	5	6	7	8

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THE DEVELOPMENT OF MUSICAL ABILITY WITH SPECIAL REFERENCE TO AURAL TECHNIQUE AND SIGHT READING

A THESIS
SUBMITTED TO THE
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1940

VOLUME II

PART II

PART SINGING

BY MEANS OF

CANONIC SEQUENCES

CONTENTS OF VOLUME II

Chapter		Page
XI	Part Singing and Canonic Sequences	206
XII	The Influence of Melodic Ornamentation on the Contrapuntal Texture. ...	227
XIII	Canons based on a Sequence of Descending Thirds...	239
XIV	Canons based on a Sequence of Descending Thirds (Contd.)	281
XV	Canons based on a Sequence of Descending Thirds (Contd.)	299
XVI	Canons on Chromatic Sequences	314
XVII	Canons based on Scales and Scale Passages..	331
XVIII	Canons based on Sequences descending Stepwise.. ...	350
XIX	Canons on Sequences of Descending and Ascending Fourths and Fifths... ...	371
XX	The Teaching of Harmony	395

CHAPTER XI
CANONIC SEQUENCES

PART SINGING

We have now shown how sequences may be used in practically all branches of the Class Singing Lesson:

(a) for practice in pitch spelling
(b) for practice in rhythm spelling
(c) for breathing, voice production, flexibility and diction
(d) for training in expression
(e) for training in the observance of rests
(f) for modal singing
(g) for antiphonal singing
(h) for the cultivation of musical imagery or mental singing.
(i) for conducting
(j) for the introduction of chromatic notes, both melodic and harmonic
(k) for developing a sense of phrase and form
(l) for ear-tests
(m) for absolute pitch spelling
(n) for visual spelling or staff reading
(o) for staff writing.

It may seem to be asking much of a teacher to expect him to touch on all these points in the ordinary singing class. But it should be remembered that the effect of such sequence practice is cumulative, and that, while the emphasis is being laid on one particular branch of musicianship, other aspects of musicianship enumerated above are probably being touched on incidentally in the process. The whole of the training, it will be observed, is made to centre round the Sequence Modulator, and thus the Method itself may be regarded as a concentric method.

We now come to a very important branch of musicianship, a branch, moreover, which has received but scant attention from the music educationist, and which, as a rule,

is allowed to be introduced to classes in any fashion whatever, namely, part-singing.

It will be agreed that part-singing provides a mental discipline that is entirely lacking in all unison singing. In a real sense, the singers of under-parts must create their own melodic line, often against the natural inclination of the voice and in the face of much physical opposition from parts above. For, in ordinary harmonic writing, under-parts are often dictated by harmonic and not by melodic necessity. Hence, part-singing inculcates independence and initiative in singers. "Altos are always the best readers!"

But the arguments against ordinary part-singing for young children are strong. First of all, it confines the voice too much to the lower register; and, secondly, the inherent difficulty of holding an under-part is apt to lead to a harsh, self-assertive tone. And both of these may do considerable damage to children's voices.

In recent years, a way out of these difficulties has been sought by reverting to the ancient practice of descant singing. The advantage of this form of part-singing for equal voices is that the lower (on the whole) of the two parts has the comparatively easy task of holding the melody, while the upper part sings a subsidiary melody, both parts covering more or less the same range. Thus, in

a well-written descant, and not simply a part-song with the alto part transposed an octave higher, the descant voice, as the name implies, sings a "whole" tune or "cantus", and not just a series of incoherent, and therefore difficult, and uninteresting "parts".

In all learning situations, modern psychology tells us, wholes are more easily grasped than parts. And so, in introducing children to part-singing, it is well to adopt what we may call the "wholesome" method of approach, which also turns out to be the historical method of approach to the subject. That is to say, we should approach part-singing by way of counterpoint or melodic wholes, rather than by way of harmony or unmelodic parts.

Further, as in all primitive art and in all child art the emphasis is found to be laid on the side of the unity in the art-work, so in introducing the art of polyphony to children the unitary aspect of the contrapuntal melodies should be stressed. And this suggests at once that the approach to part-singing should be by way of canon singing.

In this connection it is interesting to note that, in the evolution of the polyphonic art, canon was one of the earliest devices used by composers.

> "Strict canon, in which the voices imitate each other exactly and for long stretches, is an older device than free imitation of a fragmentary kind."
> (E.J.Dent in "The Listener", June 10, 1936)

However, ordinary canons are not always suitable for beginners. Some are too long and intricate, while the crossing of the voice parts - a necessity in all canons at the unison - often gives great trouble to beginners. Indeed, the transition from unison singing to even simple canon singing and round singing is never felt to be quite natural with young children. It is as if a stage between unison reading and part reading were missing.

Actually, in every subject an extensive concrete stage or oral stage should precede the symbol stage. Much practice in oral speech should come before language reading. Much practice in oral singing should come before sight singing or music reading. But what do we have in the Singing Lesson to bridge the gulf between reading music in unison and reading music in parts? Is it not true that the great difficulty that children experience, when they first try to sing in parts, is due to the fact that they are attempting to do from symbols something that they have never before attempted without symbols, that is, orally?

Unison singing can be done very easily by imitation, but not so part-singing. How then can we contrive to have an oral stage in part-singing, corresponding to the oral stage in unison singing - a stage in which children may benefit from the experience of extensive singing in parts without being under the necessity of reading or interpreting

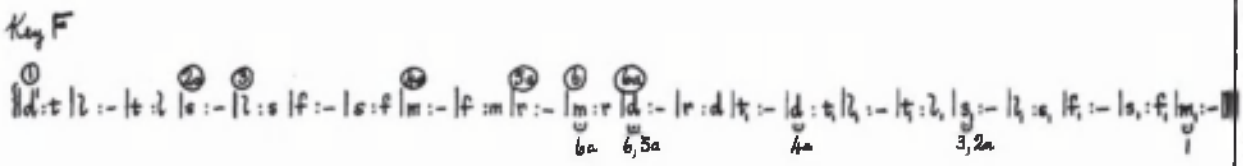
these parts from notation? The answer to this problem, it is believed, will be found in Canonic Sequence Singing. So far as the writer is aware, no one has yet developed the idea of using sequences for training children in contrapuntal singing. And yet, sequences in the form of canons lend themselves readily to this purpose.

As will be seen from the examples given below, the sequence figure, on which the canons are based, is only two bars in length, and may contain even as few as two or three notes. Moreover, the notes themselves move chiefly in stepwise fashion, and they can be easily followed from the Sequence Modulator. Again, in these sequence canons there is no crossing of the voice parts, and quite a large variety of harmonic and contrapuntal progression is obtainable, as compared with the ordinary type of canon, which, besides involving the crossing of the voice parts, often does no more than ring the changes on tonic and dominant harmonies.

It may be said, too, that the notational problem, from the point of view of both pitch and rhythm, does not exist, as the sequences will probably have already been learned by heart from the Sequence Modulator. So that we have, in this canonic sequence singing, an approximation to a real oral stage in part-singing. This will become clear as the method of canonic sequence singing is unfolded.

CANONIC SEQUENCES

The following Canonic Sequence should be examined carefully.

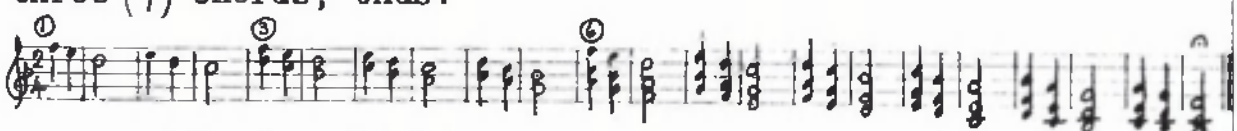


It will be noted that the sequence figure |d' :t |l :- | is two bars in length, and that plain numbers, ① ③ and ⑥ and lettered numbers, ②a ④a and ⑥a , are placed over certain bars. These numbers indicate the point of entry of the various voices when the sequence is treated as a canon. Thus:

voice ① would always begin first;
voice ③ would begin when voice ① reaches the point marked ③
voice ④a would begin when voice ① reaches the point marked ④a

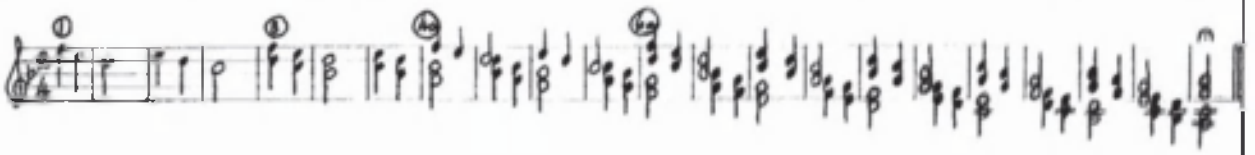
It will be further noted that the plain numbers ③ and ⑥ occur at the beginning of the 3rd and 6th repetitions of the sequence figure.

Thus, voices entering when voice ① reached ③ and ⑥ would produce with the first voice consecutive thirds and sixths respectively, and all three voices, ① ③ and ⑥, would produce a sequence of consecutive or parallel six-three $\left(\frac{6}{3}\right)$ chords, thus:



The formula for this canon would be ①③⑥.

On the other hand, it will be seen that the lettered numbers, ⑵ⓐ ⑷ⓐ and ⑹ⓐ, occur at the middle of the second, fourth and sixth repetitions of the sequence figure. This means that a voice entering at these points would not produce parallel motion with the plain-numbered voices ① ③ and ⑥, but would establish a kind of cross rhythm with these voices, which would lead to oblique and contrary motion, the only kinds of motion allowable, in fact, at these distances. Thus, from the plain-numbered voices ③ and ⑥ we derive parallel motion in thirds and sixths, the only kind of parallel motion allowed; while from the letter-numbered voices ⑵ⓐ ⑷ⓐ and ⑹ⓐ we derive contrary motion and oblique motion, with the familiar features of such motion - passing-notes, suspensions, appoggiaturas and anticipations.



The formula for this canon would be ① ③ ⑷ⓐ ⑹ⓐ.

It will be noted, too, in the sol-fa notation lay-out, that under certain notes there are pauses and numbers. These indicate the points where the various voices pause to bring the canon to a proper conclusion on the tonic chord. There is no break in any of the voices.

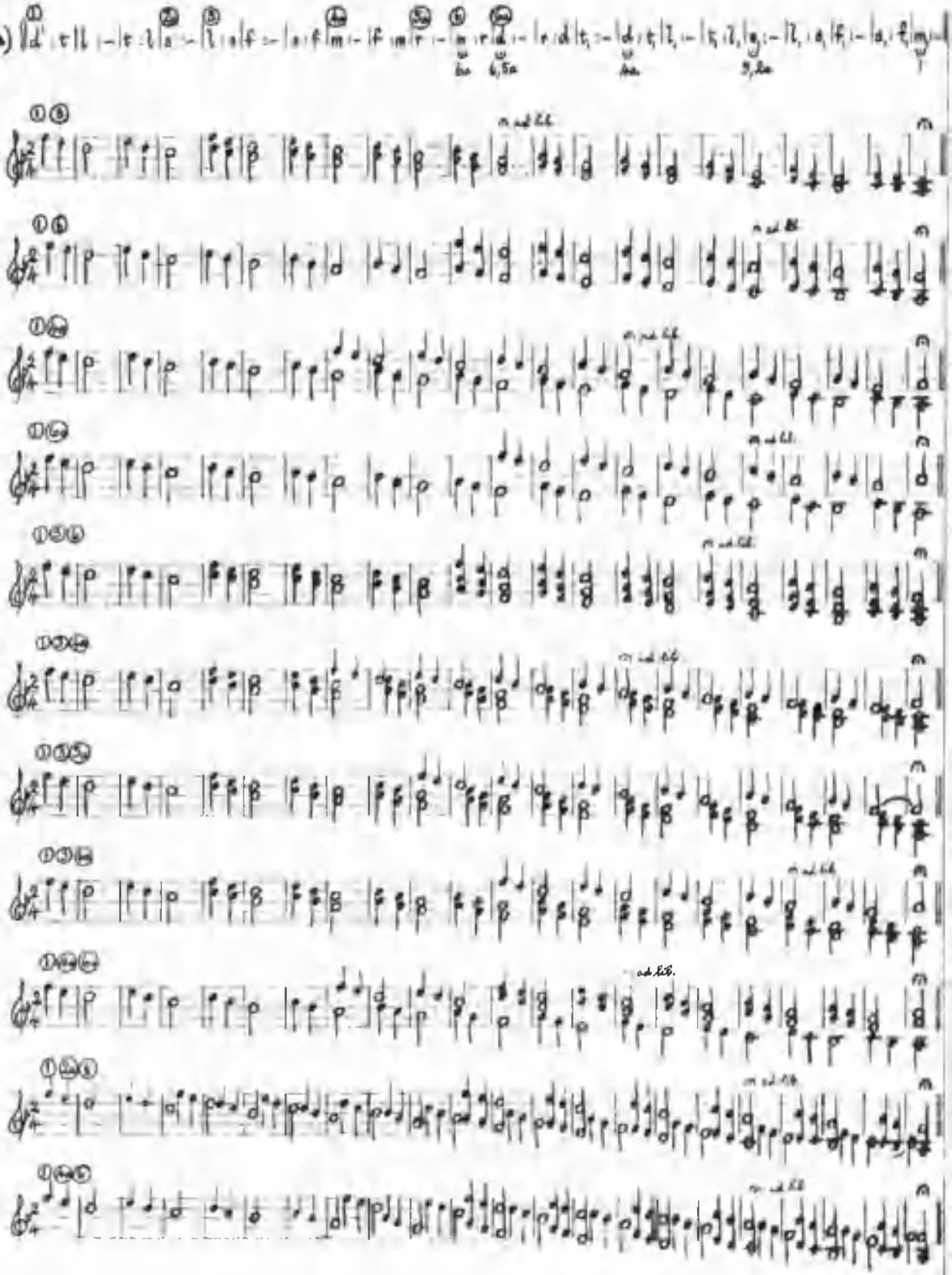
Below, various examples of canons based on this sequence will be found written out in full, with the formulae, ①③, ①④, ①③④, ①③④⑥ etc., indicating the points of entry of the voices used in each case.

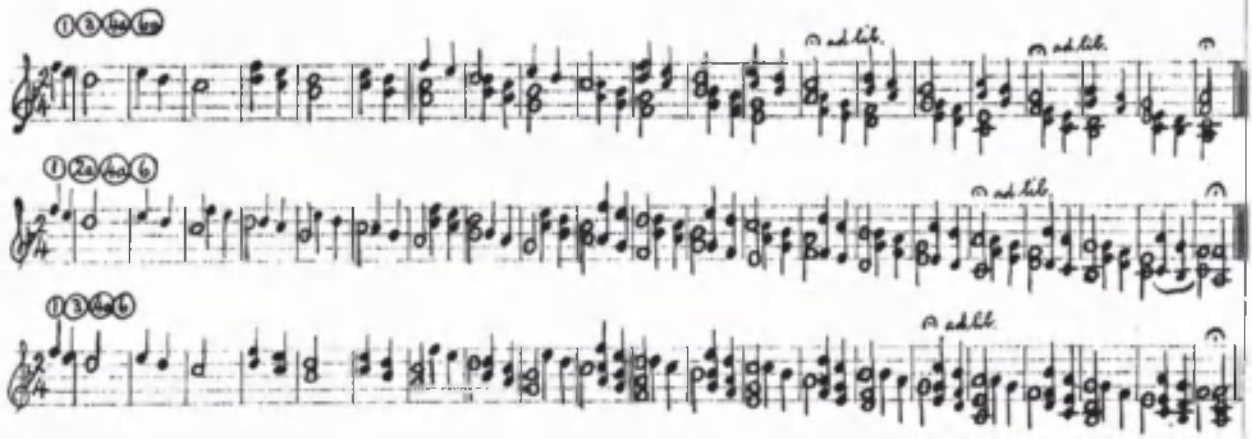
In trying out these canons with a class, all that the teacher need remember is that:

voice ① starts at the beginning and continues to the end
voice ②a ... ... when voice ① has reached ②a
voice ③ ... ... ① ... ... ③
voice ④a ... ... ① ... ... ④a
voice ⑥ ... ... ① ... ... ⑥
voice ⑥a ... ... ① ... ... ⑥a

The teacher should therefore follow the course of voice ①, and bring in the other voices at their respective points of entry. All voices will pause when they reach their respective pause marks, i.e., when voice ① reaches the final note.

Ex uno disce omnes.



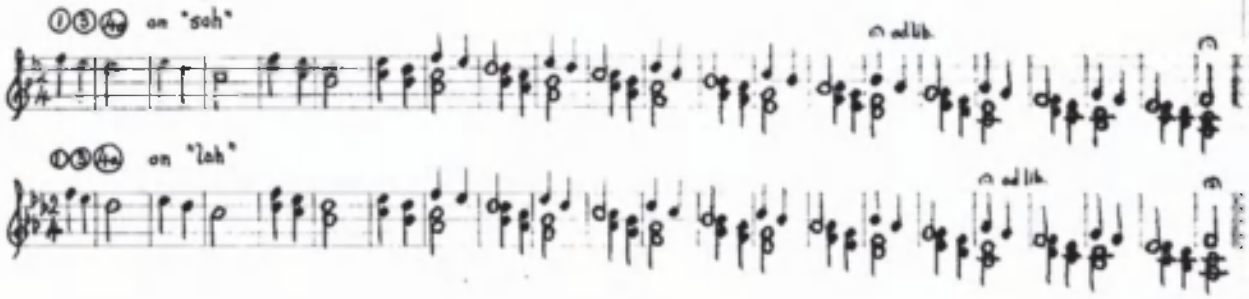


It will be noted that, in order to carry the harmonic sequence or canon through the whole octave, a range of an octave and a sixth is necessary. This is quite within the compass of older children. But with younger classes, if desired, the canon may be brought to a close before the end.

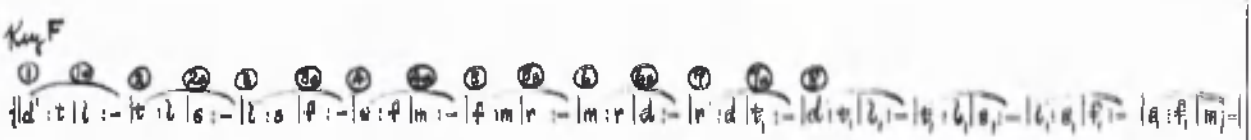
Modal Canon Singing

Again, all canons, like all sequences, may be sung modally, i.e., they may be sung beginning on other scale degrees than the tonic, e.g. on r, m, f, s and l. To appreciate what is implied by this modal treatment, all that one need do is to read the fourteen canons in Key F above as if they were written out in other keys. Thus, by imagining four flats in the Key Signature, we get the key of $A^{\flat}$, and the canons would then all begin on "l".

Similarly, by imagining two flats in the key signature, we would get the key of B♭, and the canons then would all begin on "s". With the natural key (C) the first note would be "f"; with five flats (Key D♭) it would be "m", and with three flats (Key E♭) it would be "r".

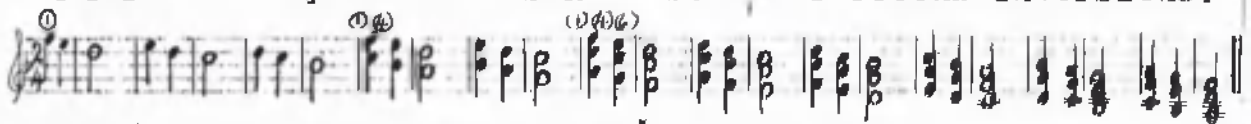


The teacher will soon become expert at bringing in the voices at the various points, ③, ④a etc. No matter what note the canon starts on - d, r, m, f, s or l - the relative distances of the points ①②a ③ ④a ⑥ etc., remain the same. They may be easily ascertained, since the plain numbers, ① ② ③ etc., would occur at the first, second, third etc., appearance of the sequential figure, while the lettered numbers ①a ②a ③a etc., would occur at the mid-point of the sequential figure, that is, exactly between the plain numbers.

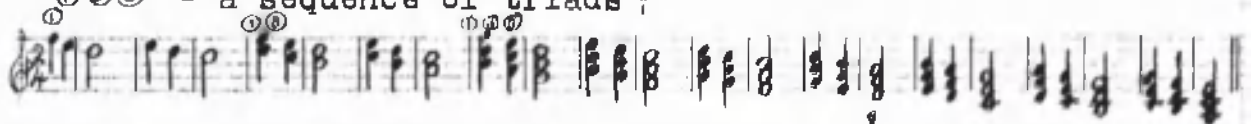


We give below some extreme examples in order to familiarise the reader with this idea of singing canons from ordinary sequences.

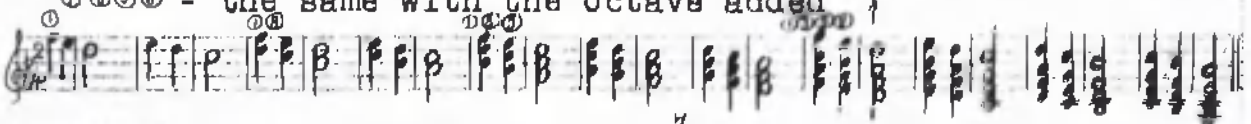
①④⑥ - a sequence of "six fours" or second inversions.



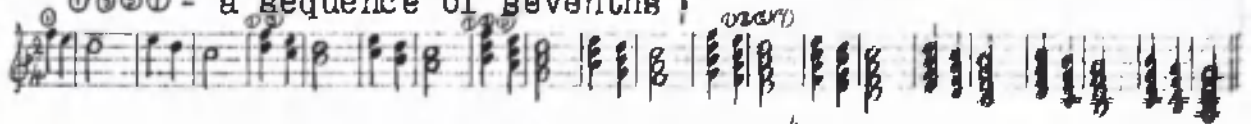
①③⑤ - a sequence of triads



①③⑤⑧ - the same with the octave added



①③⑤⑦ - a sequence of sevenths



①③④⑥ - a sequence of "four-threes"



The voice entries at ④ ⑤ ⑦ and ⑧ would not normally be used, as these would produce with voice ① consecutive 4ths, 5ths, 7ths and 8^{ves}. They have been added here for the sake of completeness. Such consecutives, however, are to be found more and more in modern music, and in this canonic sequence form they will be readily tackled by children.

CANONS FOR MIXED VOICES

The same sequence ‖ d' :t | 1 :-| may be used in classes with mixed voices. Care must be taken, however, to see whether the various entries are for Treble or Bass voices. These voices are distinguished in the canon formulae by means of the letters S and B placed over the entry numbers, S standing for Treble, and B for Bass, e.g. $\overset{S}{①}\overset{B}{②}\overset{B}{④}\overset{S}{⑤}$.

With classes of equal voices it is suggested that the canons for mixed voices may also be used. For example, the teacher where possible may sing the Bass part, or where a piano is available the Bass parts may be played while the voices sing the Treble parts. This, of course, would apply also to Equal Voice Canons in three or four parts, where the teacher or piano may fill in any part.

The same sequence is used for Equal Voice Canons and for Mixed Voice Canons. The former are grouped under the canonic layout marked (a), the latter under those marked (b) and (c). In the Mixed Voice Canons the sequence has been shortened slightly. Otherwise it remains unchanged. There are no breaks in any of the voices, and the final pauses for the various voices are marked. These pauses occur where the first voice① reaches the last note.

All that the teacher requires to do, then, is to follow the course of voice ① and to bring in the various voices ③④a⑥⑥a etc. at the various points of entry marked in the canonic layout.

A class of bass voices may, of course, use the Equal Voices layout (a), bringing the canon to an earlier close. While the (c) layout for mixed voices may also be used by equal voices for canons ①④a, ①③④a or ①③④a⑥a in order to lessen the range of the canon by bringing it to a close at the 19th bar.

Thus:

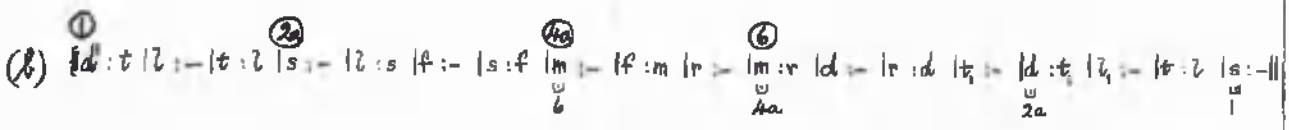
(c) ① d':t|l:-|t:l|s:-| ③ l:s|f:-|s:f| ④a m:-|f:m|r:-|m:r|d:-|r:d|t,:-|d:t,|l,:-|t,:l,|s,:-|d:-||

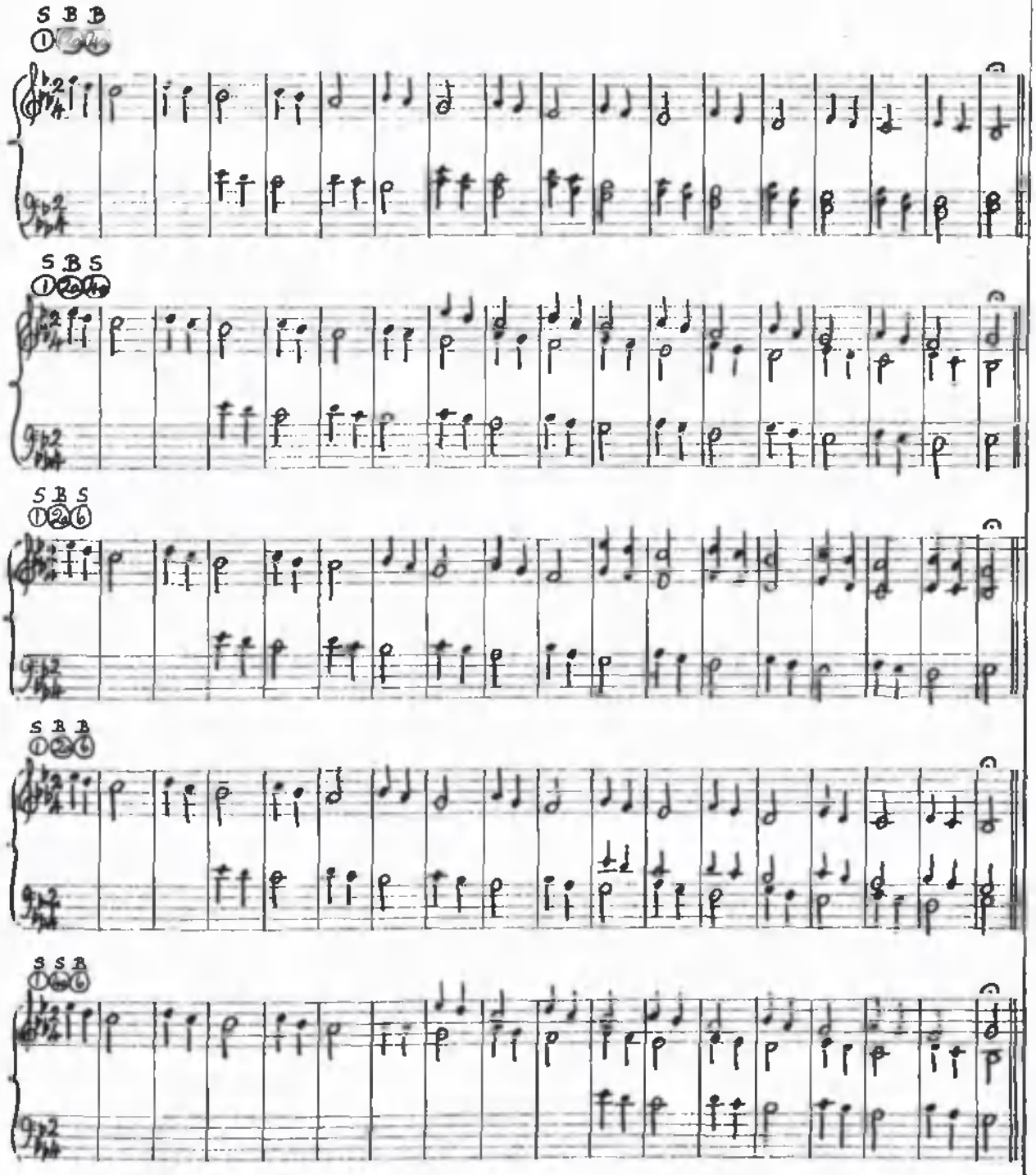


All these canons may be sung modally, that is, the voices may all begin from l or s, etc.

The canonic formulae ①③④a etc. will be found useful for entering work done in the Teacher's Record of Work, thus:

|1 2|3 -| or |d':t|l:-| to ①④a, ①③④a, ①③④a⑥a etc.





(b) contd.

① ② ④a ⑥

{d':t |l :- |t :l |s :- |l :s |f :- |s :f |m :- |f :m |r :- |m :r |d :- |r :d |t₁ :- |d :t₁ |l₁ :- |t₁ :l₁ |s₁ :-||

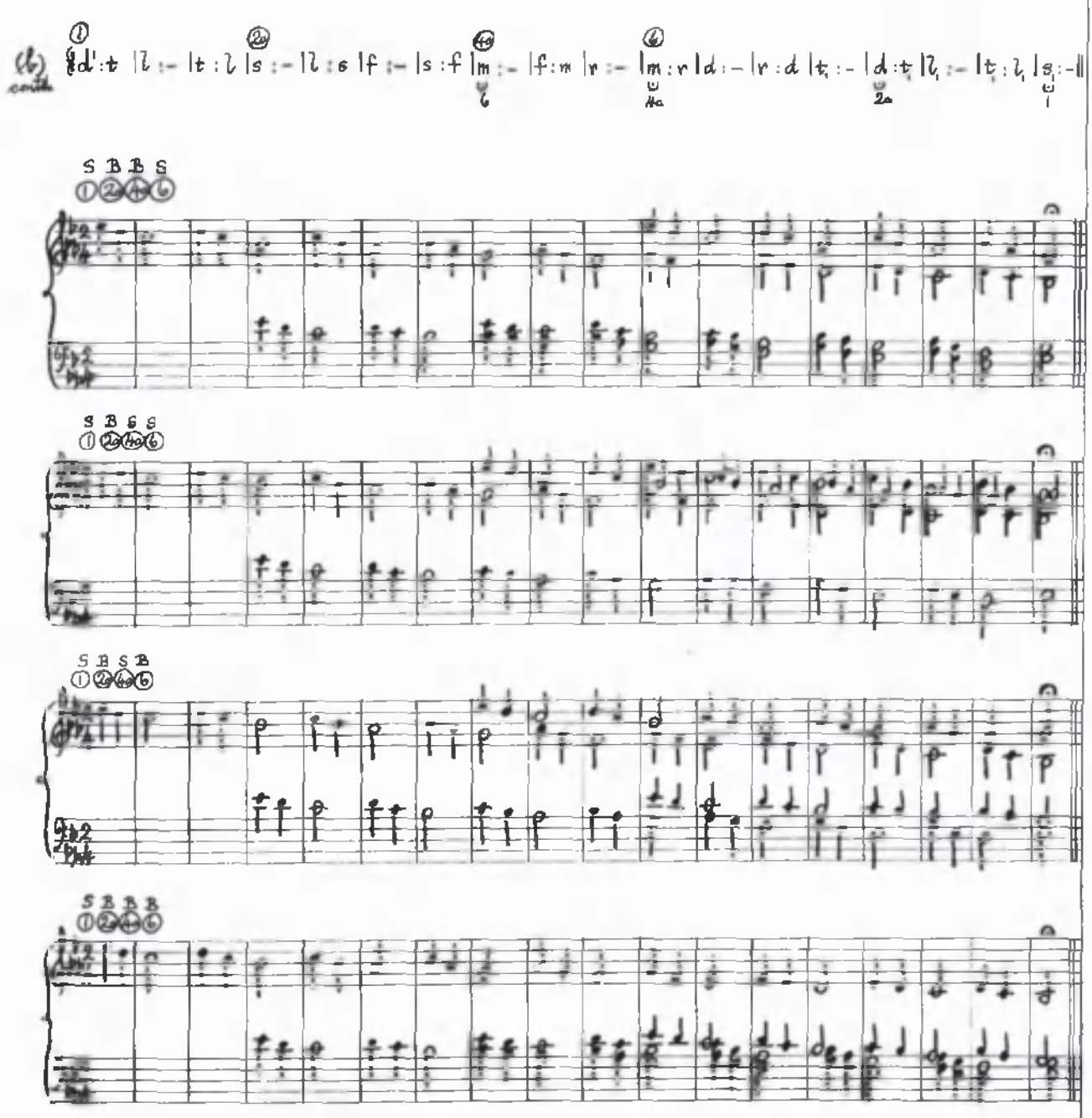
6 4a 2a 1

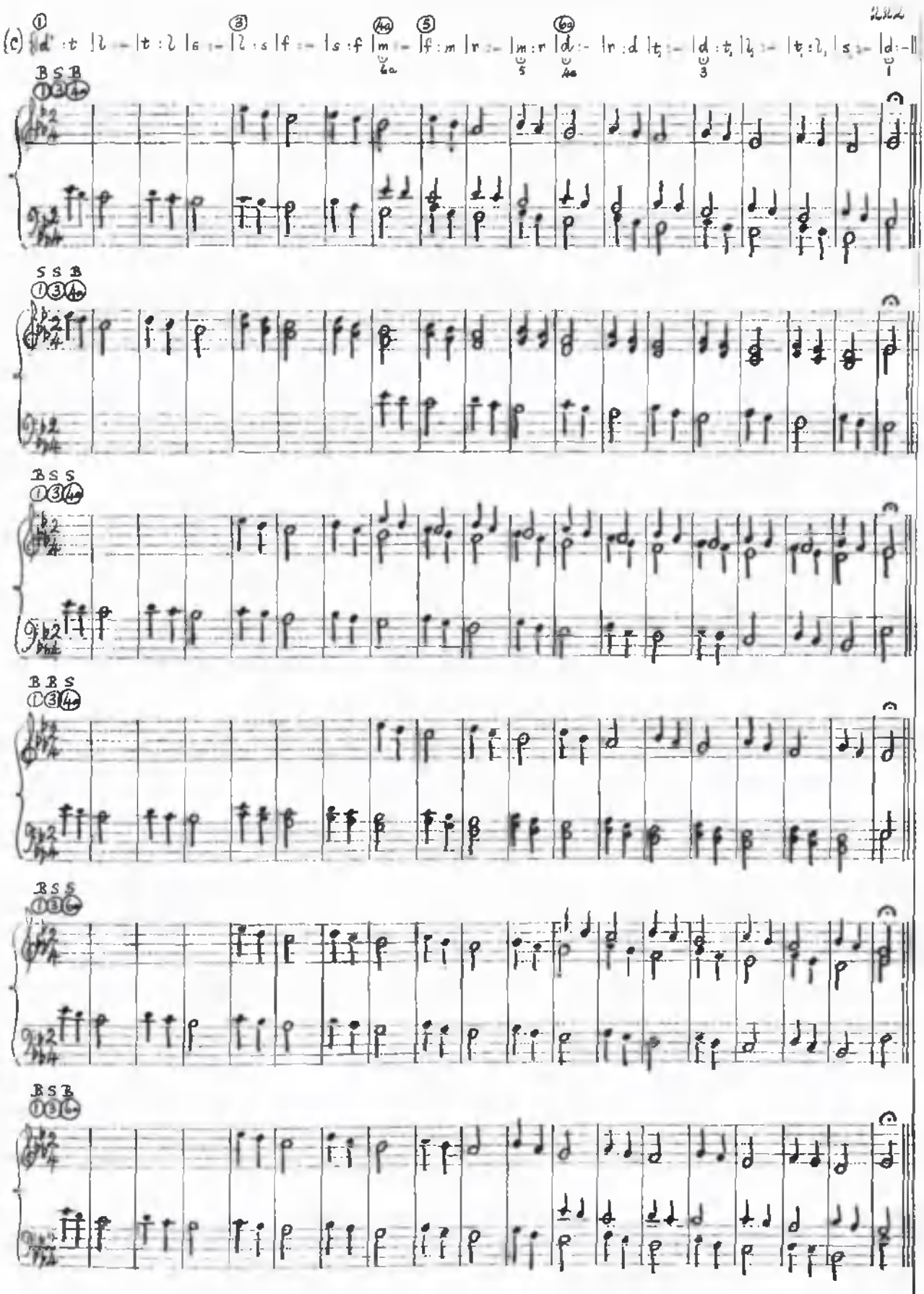
S B B S
① ② ④a ⑥

S B S S
① ② ④a ⑥

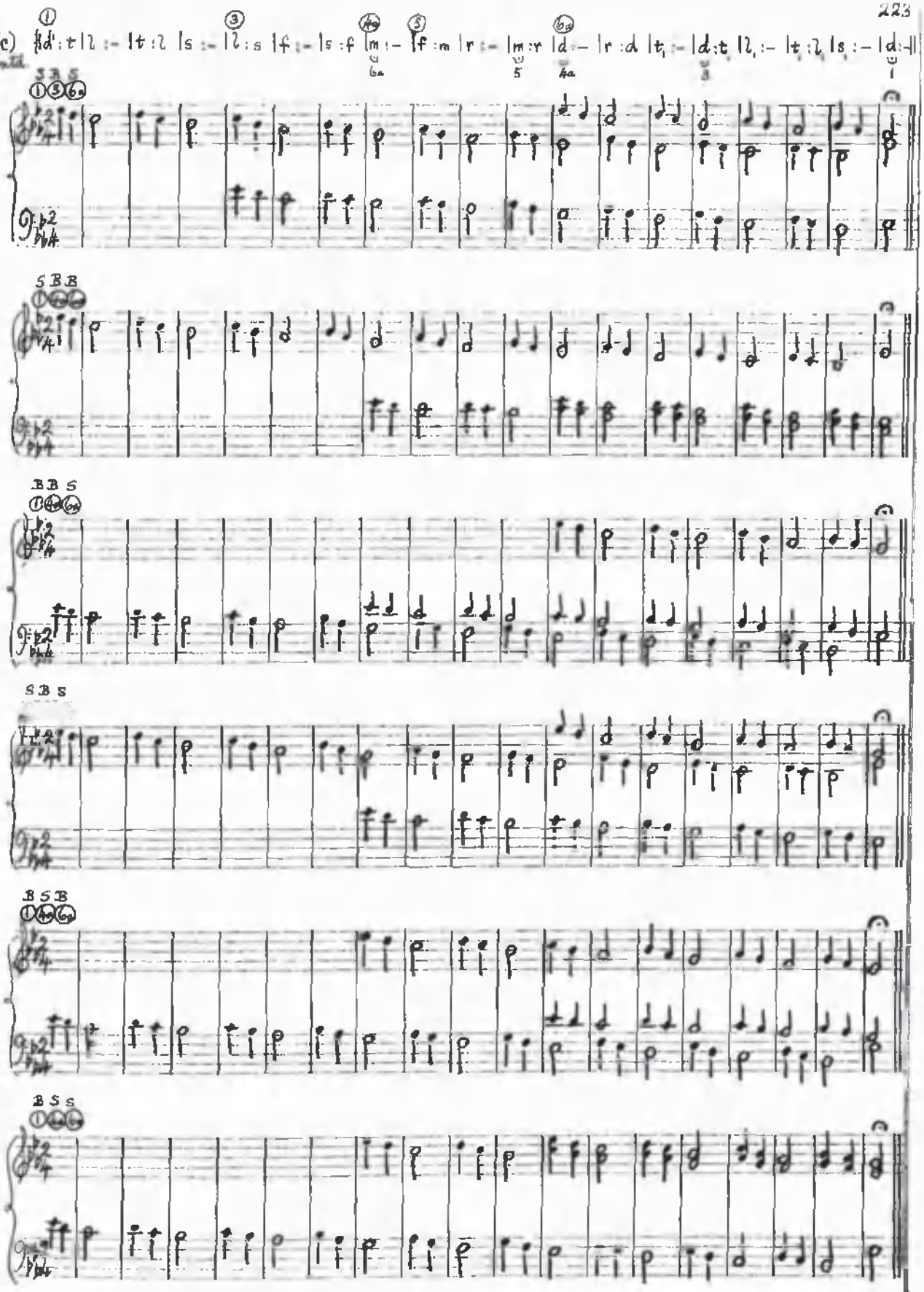
S B S B
① ② ④a ⑥

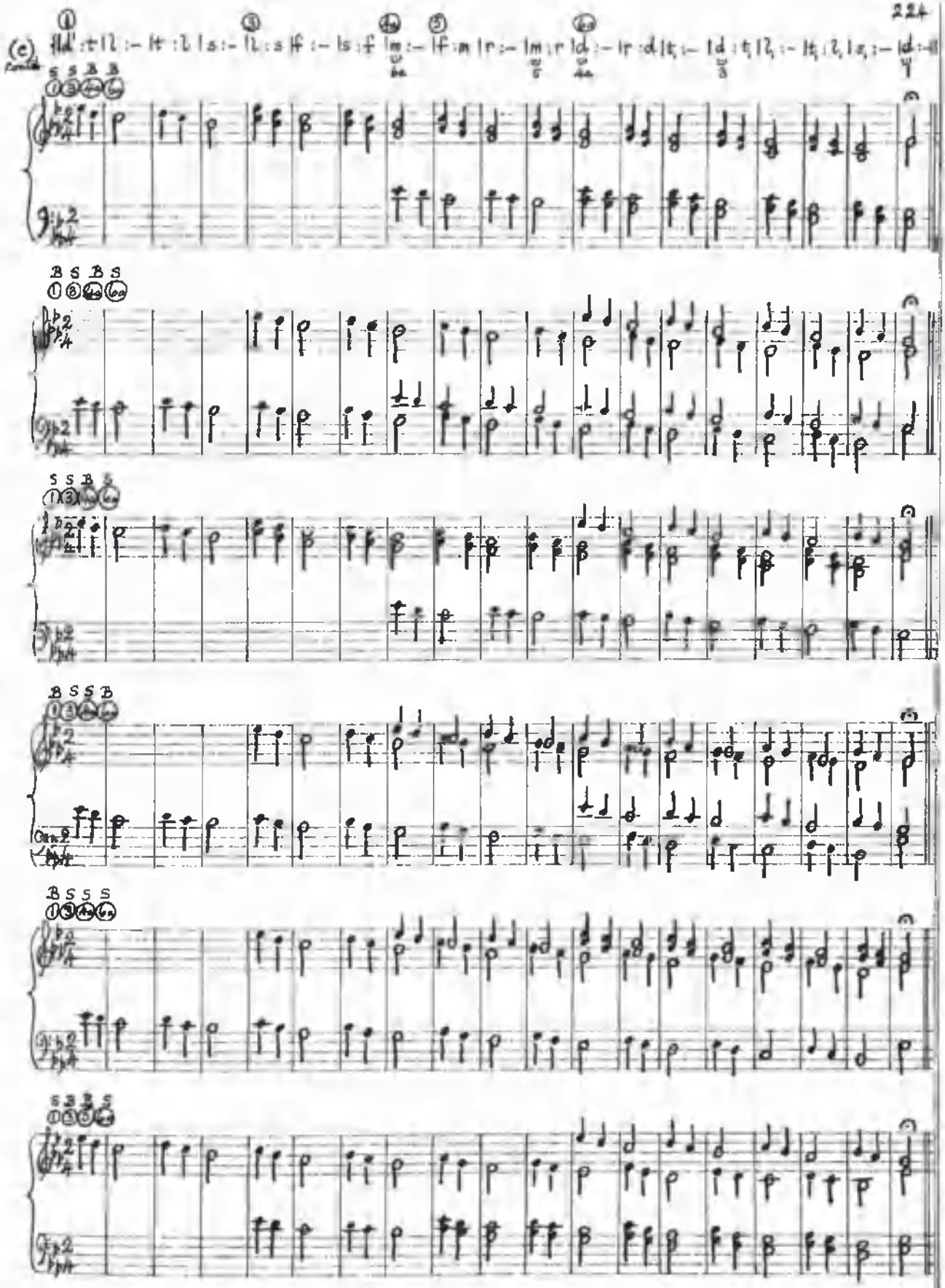
S B B B
① ② ④a ⑥





(c) contd.





We have now shown 41 canons -

(a) 14 two, three and four-part canons for equal voices
(b) 10 four-part canons for mixed voices
(c) 17 three-part canons for mixed voices,

which may be sung from the one melodic sequence {d' :t |l :-} etc. These canons all differ, either in respect of harmonic progression, or of the number and disposition of the parts or voices. It should be emphasised here that, although the printing of all 41 canons involves a considerable amount of musical notation, in actual practice no notation at all is required if the canons are sung from the Sequence Modulator. And, at the most, all that is required in the Pupil's Book is the sol-fa canonic layout together with the canonic formulae.

Again, as the same canonic formulae apply to the 30 canonic sequences that follow in this book (all based on the sequence of descending thirds {d' :- |l :- |t :- |s :-} etc.), these formulae need only be given once at the beginning of this section of canonic sequences in the Pupil's Book.

On the next page we shall give the canonic layout for this {d' :t |l :-} canonic sequence together with the canonic formulae for all 41 canons derived from it.

The Canonic Sequence {| d' :t | l :-}

Canons for Equal Voices

(a) {| d' :t | l :- | t :l | s :- | l :s | f :- | s :f | m :- | f :m | r :- | m :r | d :- | r :d | t, :- | d :t, | l, :- | t, :l, | s, :- | l, :s, | f, :- | s, :f, | m, :-||

① ③ ① ③ ⑥ ① ④ ⑥ ① ③ ④ ⑥

① ⑥ ① ③ ④ ① ④ ⑥ ① ② ④ ⑥

① ④ ① ③ ⑤ ① ② ⑥ ① ③ ④ ⑥

① ⑥ ① ③ ⑥

Canons for Mixed Voices
Three and Four-Part

(b) {| d' :t | l :- | t :l | s :- | l :s | f :- | s :f | m :- | f :m | r :- | m :r | d :- | r :d | t, :- | d :t, | l, :- | t, :l, | s, :-||

S B B ① ② ④ S B S ① ② ⑥ S S B ① ④ ⑥ S B B S ① ② ④ ⑥ S B S B ① ② ④ ⑥

S B S ① ② ④ S B B ① ② ⑥ S B S S ① ② ④ ⑥ S B B B ① ② ④ ⑥

Canons for Mixed Voices
Three and Four-Part

(c) {| d' :t | l :- | t :l | s :- | l :s | f :- | s :f | m :- | f :m | r :- | m :r | d :- | r :d | t, :- | d :t, | l, :- | t, :l, | s, :- | d :-||

B S B ① ③ ④ B S S ① ③ ⑥ B B S ① ④ ⑥ S S B B ① ③ ④ ⑥ B S S S ① ③ ④ ⑥

S S B ① ③ ④ B S B ① ③ ⑥ S B S ① ④ ⑥ B S B S ① ③ ④ ⑥ S B B S ① ③ ⑤ ⑥

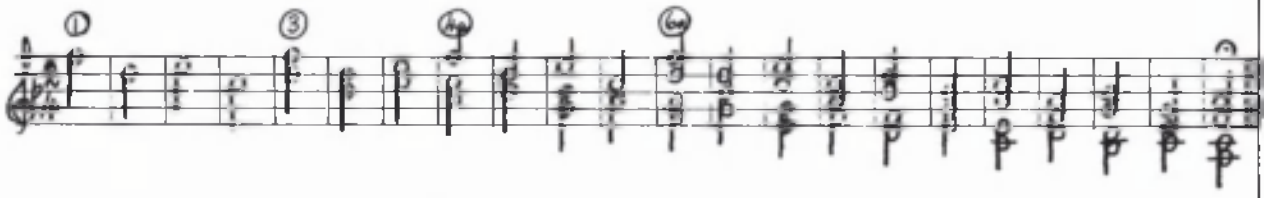
B S S ① ③ ④ S B S ① ③ ⑥ B S S ① ④ ⑥ S S B S ① ③ ④ ⑥

B B S ① ③ ④ S B B ① ④ ⑥ B S S B ① ③ ④ ⑥

C H A P T E R XII

THE INFLUENCE OF MELODIC ORNAMENTION ON THE CONTRAPUNTAL TEXTURE

All the canons in the previous chapter are based on the one sequence {d' :t |1 :-}, but this sequence itself is derived from the plain sequence of descending thirds {d' :- |1 :- |t :- |s :- } , which may also be treated in canon form.



The greater variety obtained in the former set of canons is due simply to the introduction of a passing note in the first limb of the sequential figure {d' :t |1 :-} .

It will be seen that this slight horizontal or melodic ornamentation of the plain sequence leads to new vertical or harmonic combinations, when the theme is treated in canon. One limb of the sequential figure is played off against the other; motion is opposed to rest.

Thus, to the two kinds of contrapuntal motion exhibited in the canonic treatment of the plain sequence of descending thirds,



viz. similar motion and contrary motion, is added the third and, from the contrapuntal point of view, the more vital

kind of motion, namely, oblique motion.



It has been by such adventures in melodic ornamentation that the harmonic texture has been enriched in the evolution of the contrapuntal art.

Dr George Dyson, in his article on "Harmony" in Grove's Dictionary, traces at length this "influence of melodic devices on the growth of harmonic variety." He enumerates four of these devices which have "helped to expand these harmonic formulae", namely, passing notes, suspensions, appoggiaturas and anticipations, "terms used to describe a melodic component which is, with respect to its environment, ornamented, or delayed, or inflected, or advanced, as the case may be."

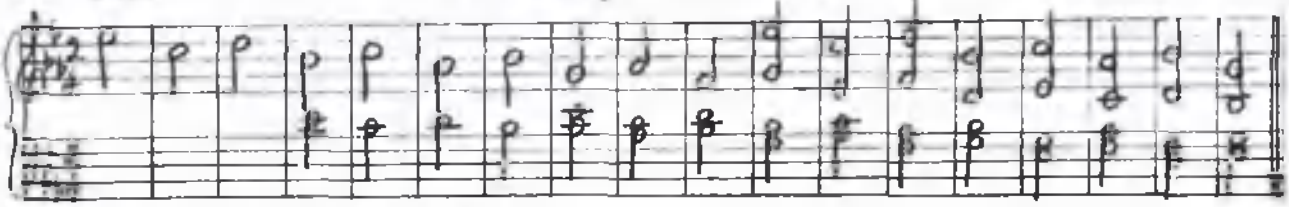
(See also "A Short History of Harmony"
by Charles Macpherson, page 50,
London, Kegan Paul, Trench.)

Following this historical approach to the subject of polyphonic writing, and adopting as a working hypothesis

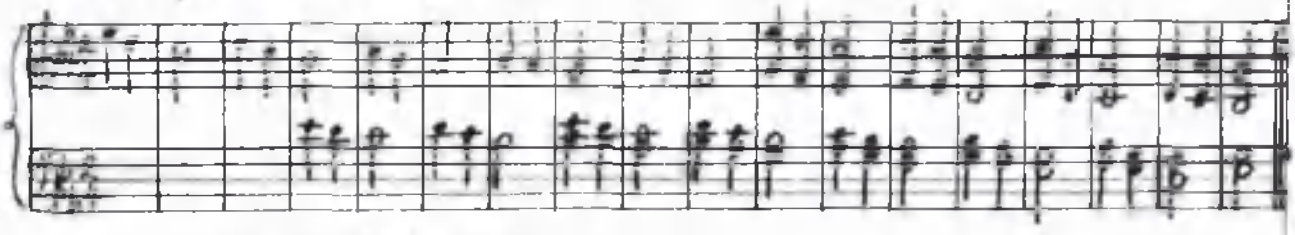
the theory of the growth of harmonic complexity through experiments in melodic ornamentation, let us now take the basic canonic sequence of descending thirds, {d' :- |l :- |t :- |s :-}, apply the various types of melodic ornamentation to this melodic germ, and note the resultant harmonic complexity that this leads to, when the melodic sequence is treated in canon form.

We shall use for our principal illustrations the four-part canon for mixed voices based on the formula ⑤①③②④④③⑤⑥.

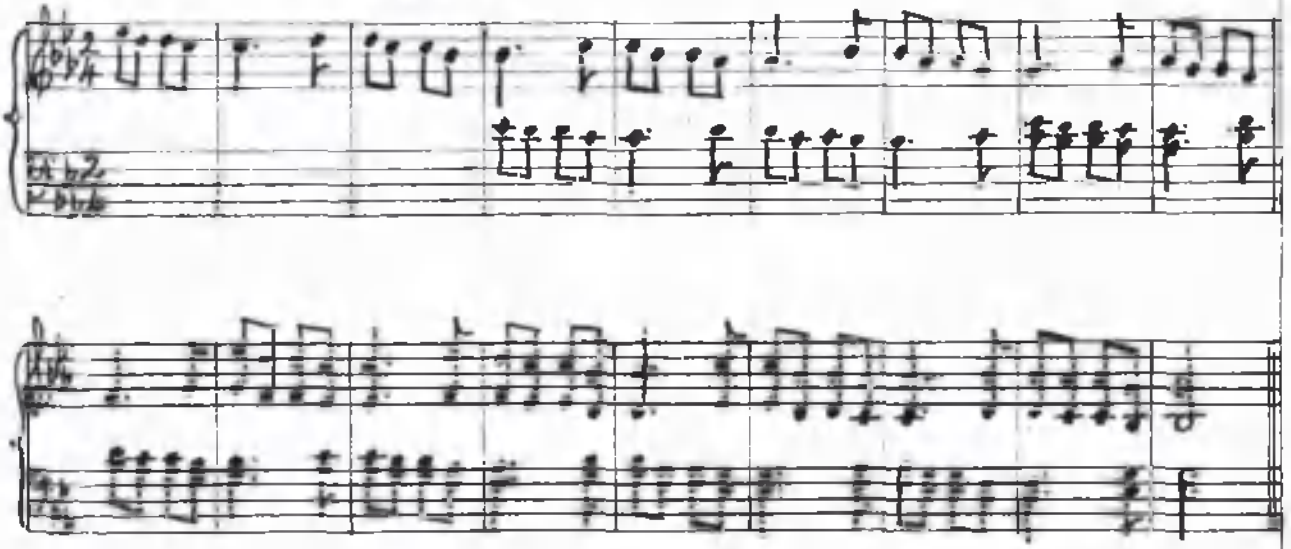
Plain Basic Sequence of Descending Thirds ① (2a)(4a)(6)



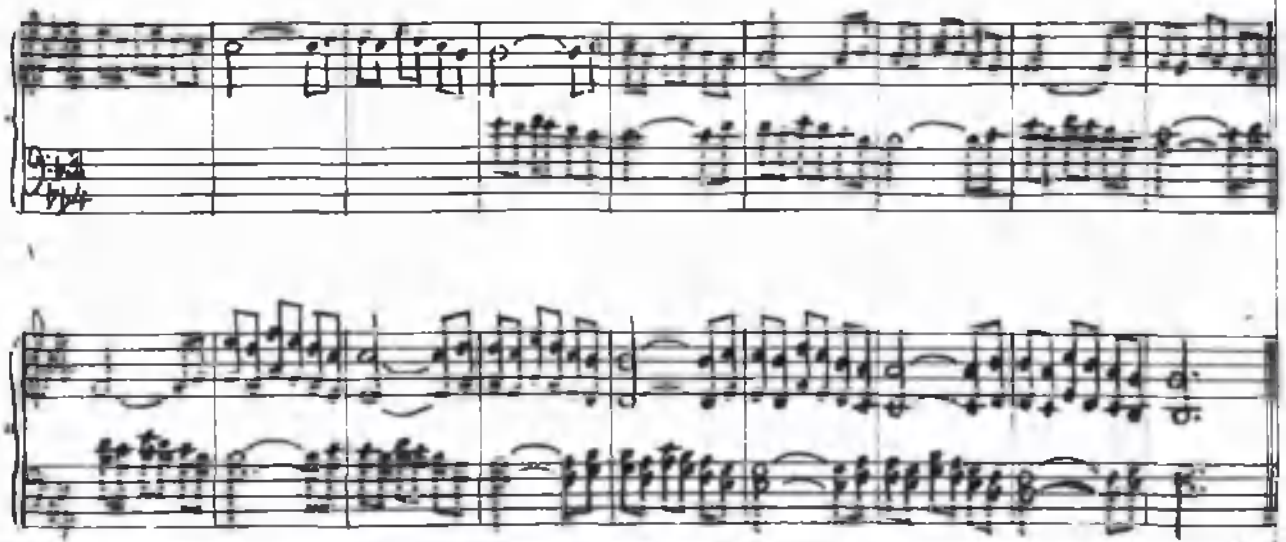
Passing Notes S a a S ① (2a)(4a)(5)



Anticipations S a a S ① (2a)(4a)(5)

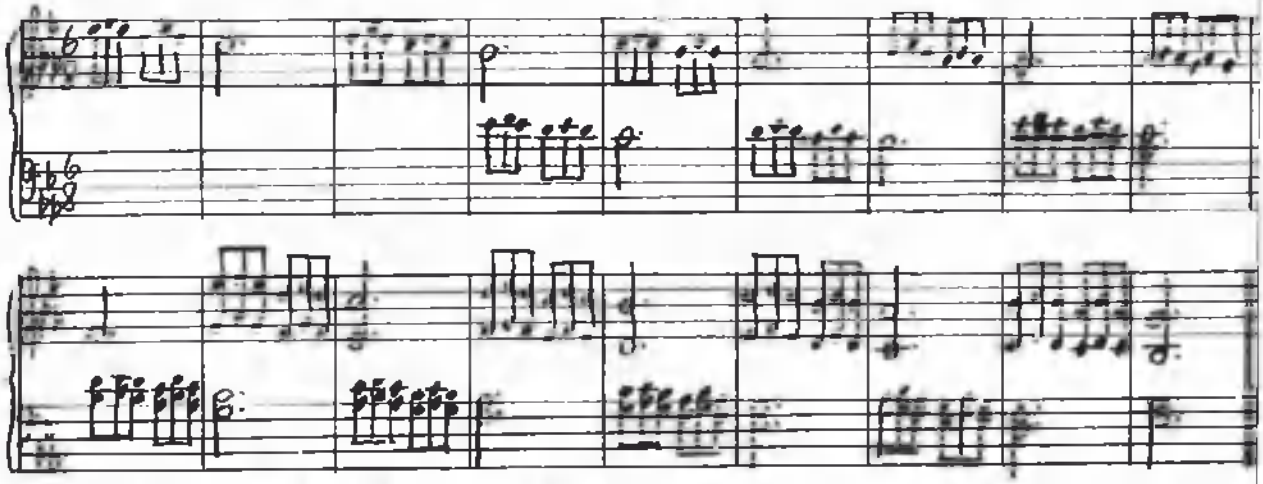


Appoggiaturas S a a S ①



Mordents

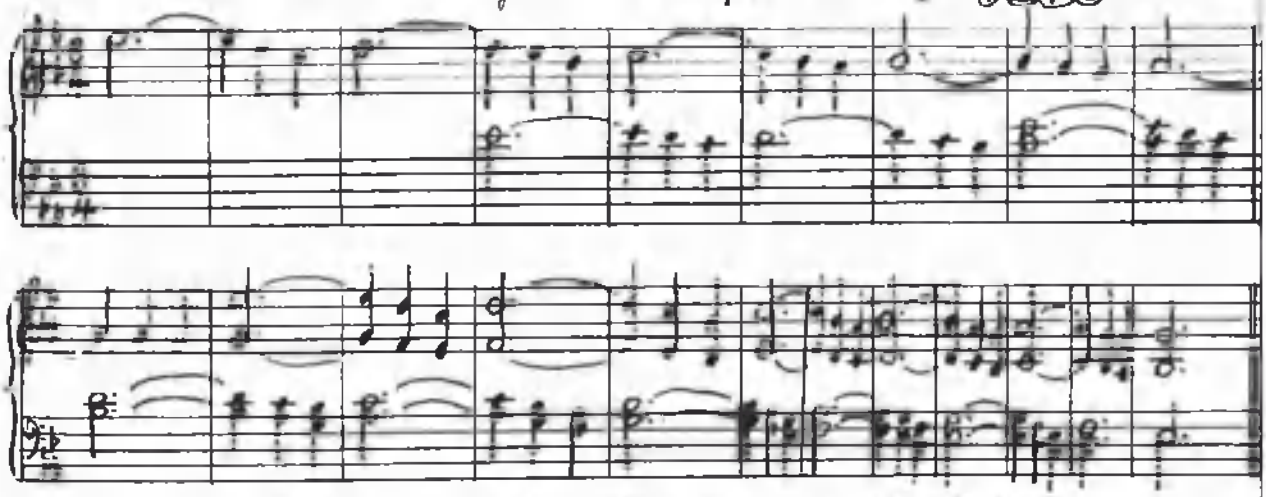
S B B S
① ②a ④a ⑥



Suspensions

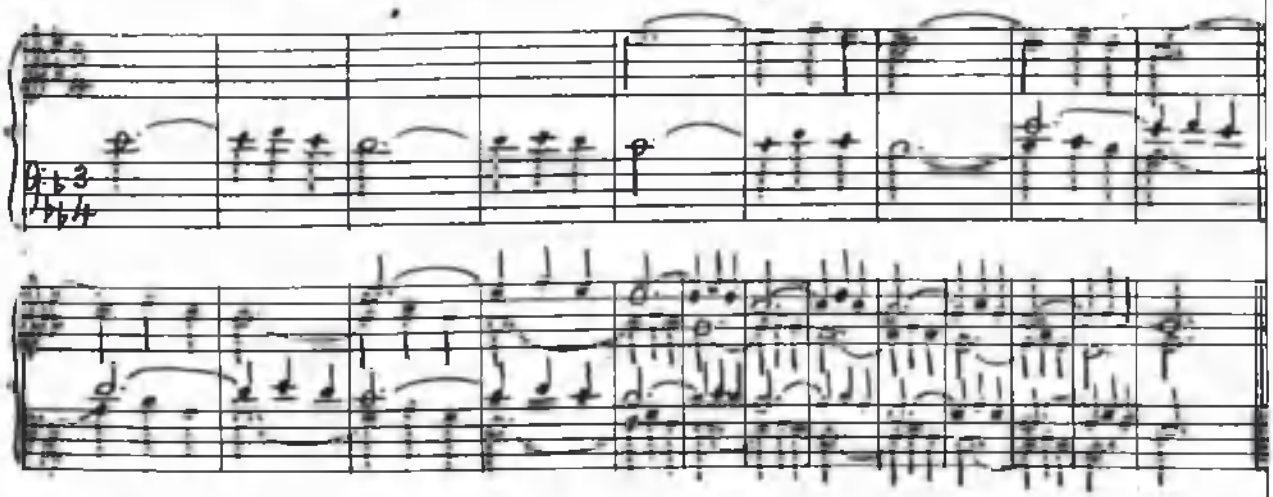
(N.B. In this, as in all chains of suspensions, a break in the sequence is necessary in order to bring it to a close)

S B B S
① ②a ④a ⑥

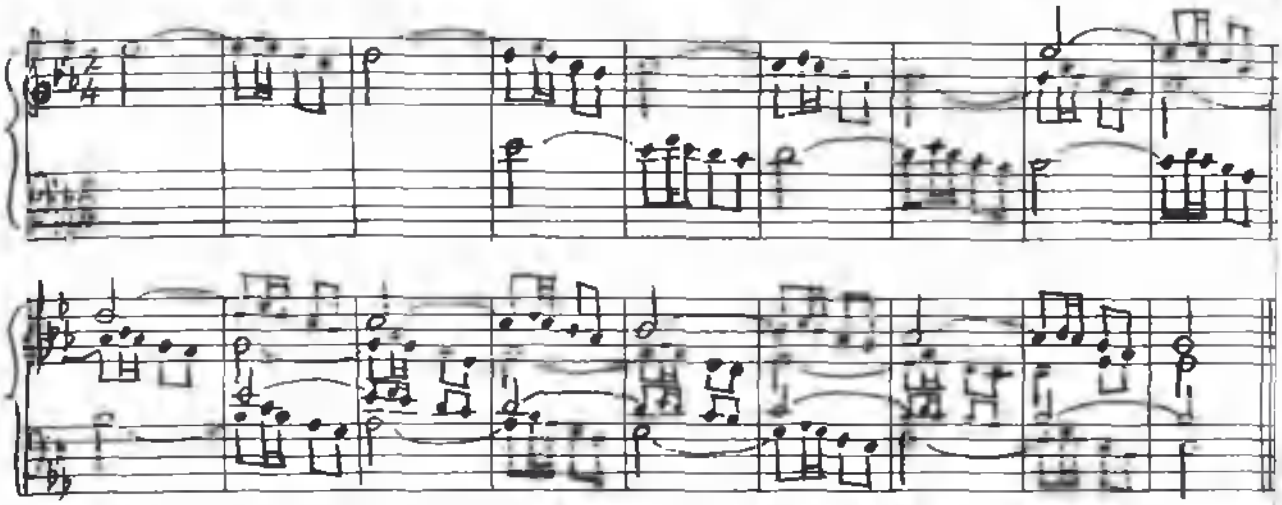


Suspensions with Ornamental Resolution on the formula

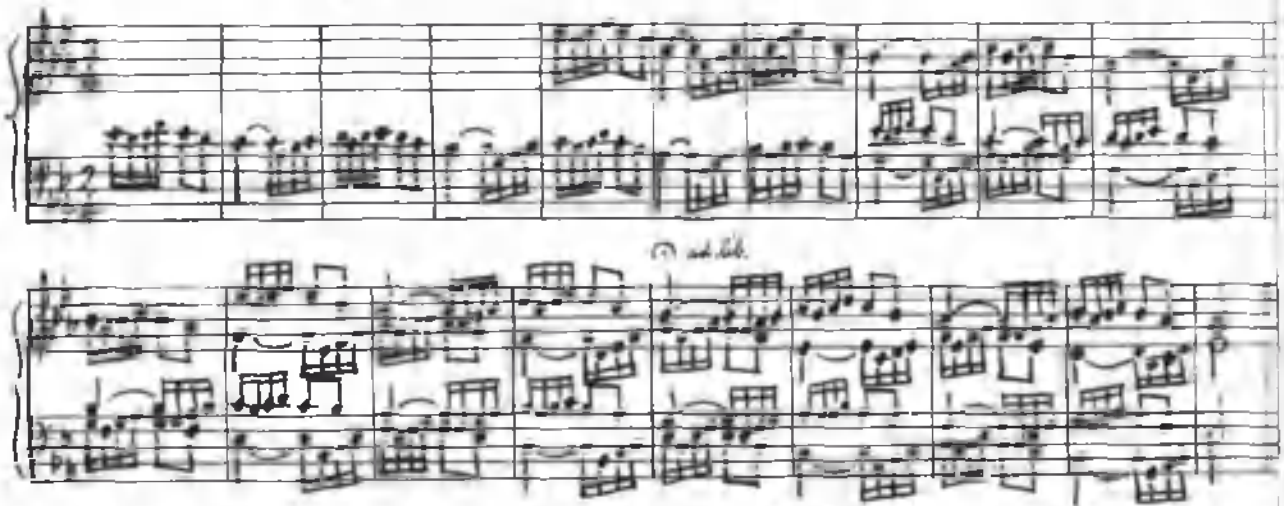
B S B S
① ③ ④a ⑥a



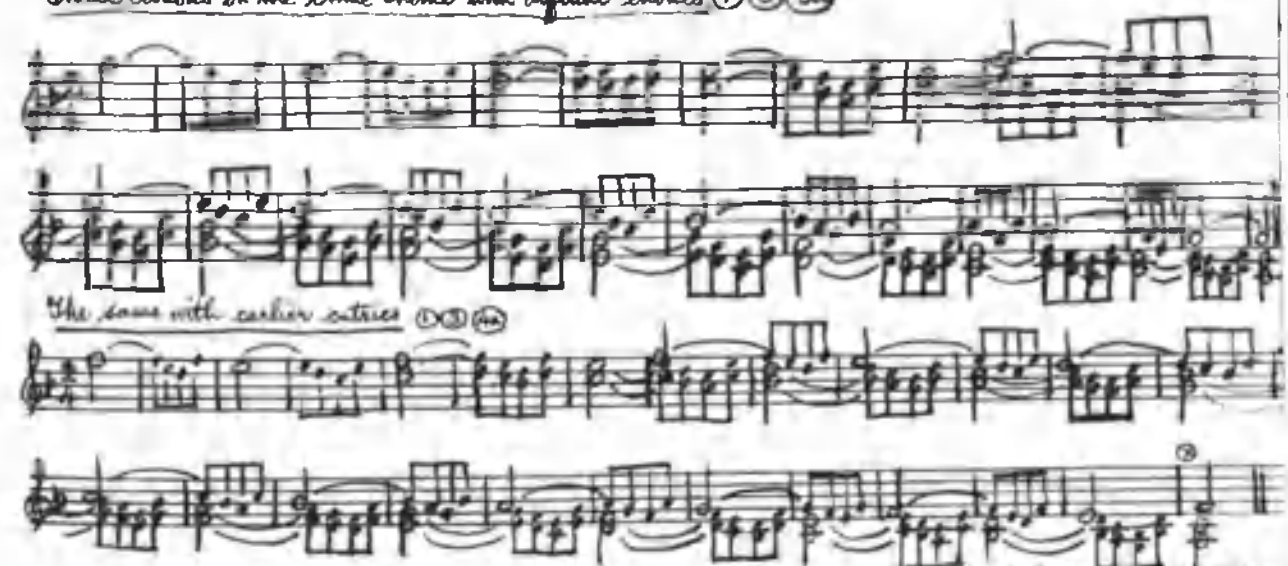
Suspensions with Ornamental Resolution on the formula S B S B ① ②a ④a ⑤



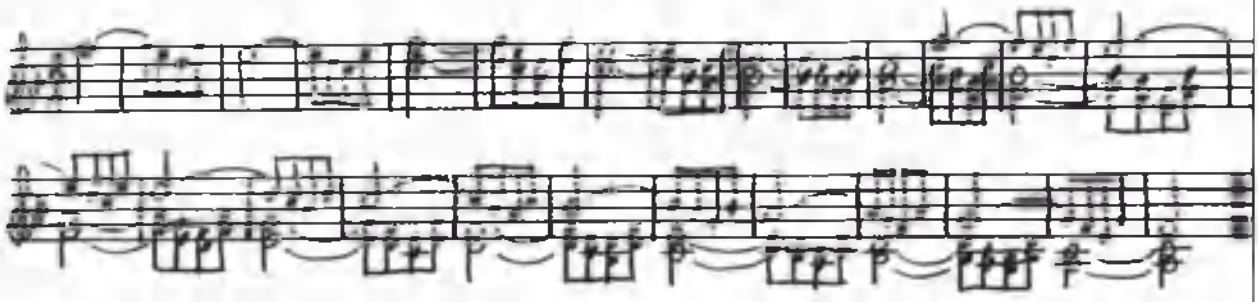
Turns and Passing Notes on the formula B S B S ① ③ ④a ⑥a



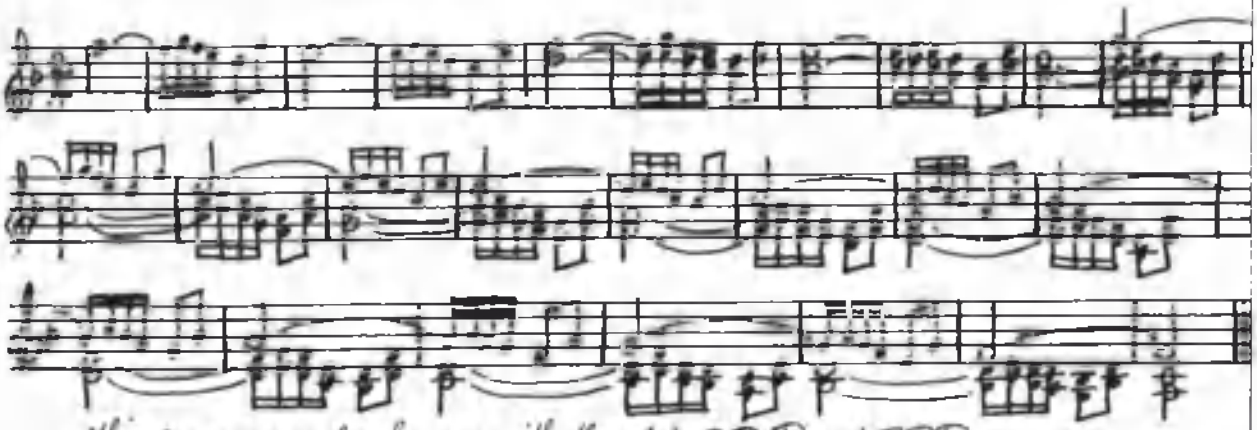
Three Canons on the Same Theme with different entries ① ③ ⑤a



The same with later entries ①③⑥a

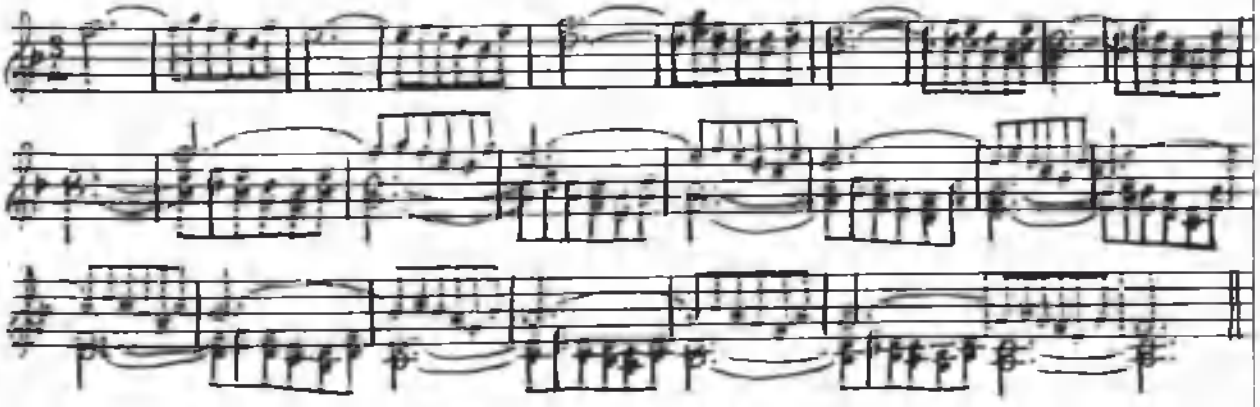


The Same Theme with melodic variation ①③⑤a



This canon may also be sung with the entries ①③④a and ①③⑥a

The Above with rhythmic variation ①③⑥a



This canon may also be sung with the entries ①③④a and ①③⑤a. As will be seen later, each of the above sequences is capable of producing a large variety of canons all differing from each other in some respect.

The following example shows a further extension of this principle of the melodic and rhythmic ornamentation of a simple theme ({|d' : – | l : – | t : – | s : –} etc) treated canonically. Sung to the words, "Come and trip it as you go,
On the light fantastic toe,"
this canon can be very effective in the classroom.
The whole sequence should be learned to the words first of all.

Key F

① {|:d',t,d',t|l.l : l.t.l,t|l :t,l,t,l|s.s:s,l,s,l|s : ③ l,s,l,s|f.f:f,s,f,s|f :s,f,s,f|m.m:m,f,m,f|⑥a m : f,m,f,m}

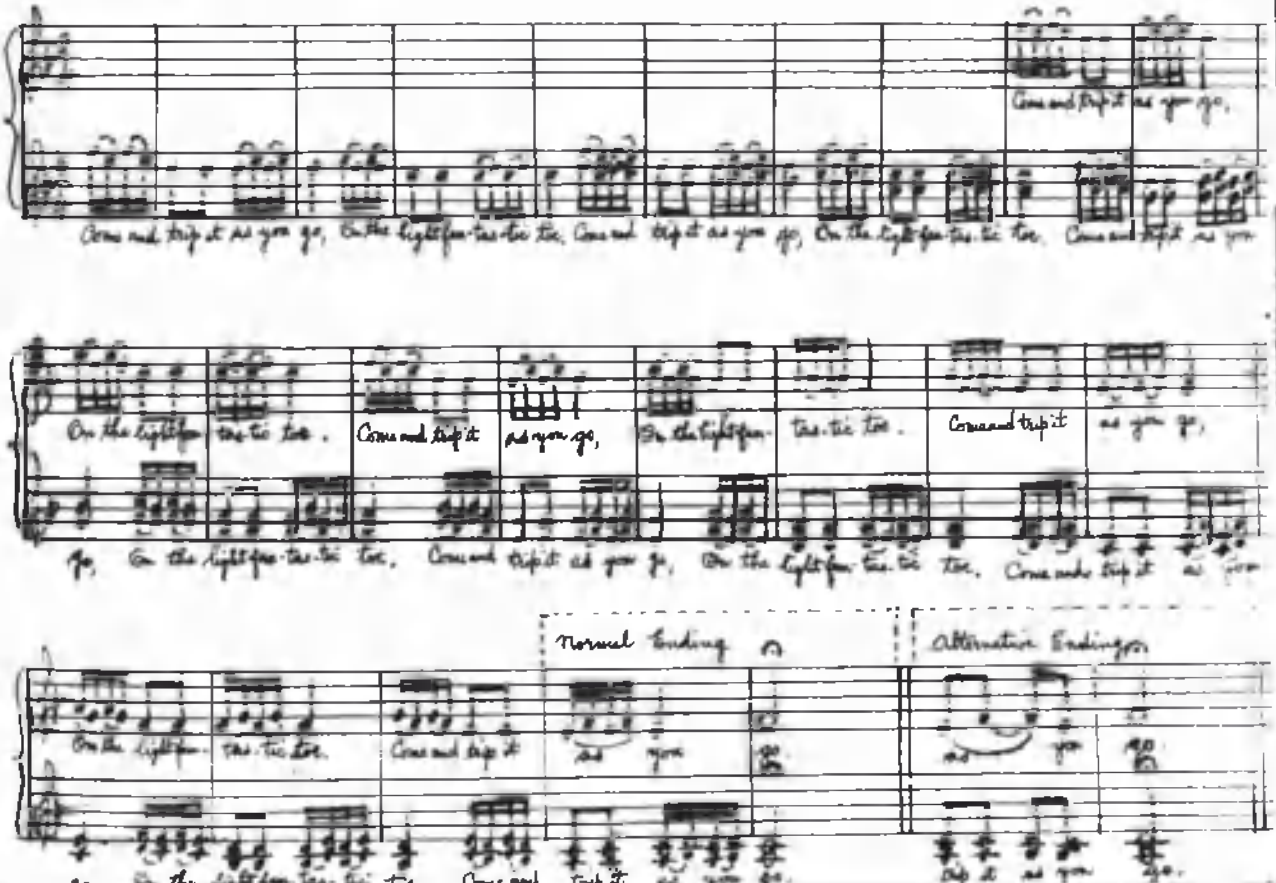
{|r.r:r,m,r,m|r :m,r,m,r|d.d:d,r,d,r|d :r,d,r,d|t,t,:t,d,t,d|t, :d,t,d,t,|l,l,:l,t,l,t,}

Voice ⑥a {:r,d,r,d|t,t,:t,.d |–.t,:d ||

{|l, :t,l,t,l,|s,.s,:s,l,s,l,|s, :l,s,l,s,|f,f,:f,s,f,s,|f, :s,f,s,f,|m,m,:m,f,m,f,|m, :– ||

Voice ③ {:t,l,t,l,|s,.s,:l,.s,|s, || Voice ① {:s,f,s,f,|m,m,:f,.f,|m, :– ||

This canon may be sung without any break, or the alternative ending indicated may be used.



The above canons are just a few from the many that may be derived from the basic sequence of descending thirds {d' :- |l :- |t :- |s :-}. They are made up, for the most part, of contrapuntal idioms which belong to the everyday vocabulary of the contrapuntist.

During the long history of the art of counterpoint, the various contrapuntal and harmonic idioms have all been evolved by a process of natural selection, which, so long as Music was a purely Vocal Art, proceeded slowly but surely. But, with the entry of the musical instrument (c.1600) as an imitator and later on as a rival of the voice, this process of natural selection has gained in momentum. And now with the perfection of the modern piano and the exploitation of orchestral timbre in relation to dynamics, and more especially with the coming of musical reproduction by means of gramophone and radio, the enrichment of the harmonic texture has proceeded by leaps and bounds by a process of selection which can scarcely any longer be called natural.

> "The choral music of the sixteenth century, both sacred and secular, represents indeed a golden age of all that is normal to choral harmony. Musical education itself was then in perfect tune with the free practice of the art. It began at the right mental age with the training of choir-boys in real music. The rules of strict counter-point were the result of at least two centuries of experience with a constantly growing refinement of perception. They were not, as the late W.S. Rockstro maintained, 'the precepts to which

> "the Great Masters gave their loving obedience'; on the contrary, they were generalizations by shrewd observers of the practice of the great masters.... In the sixteenth century the path of progress was the path of purity. And there was no motive for revolution so long as the interests of the unaccompanied chorus were all that mattered. Can we conceive a more normal and more purely musical centre for the aesthetics of music than the perfection of the unaccompanied chorus?"
>
> ("Normality and Freedom in Music", by Sir Donald F. Tovey, page 16. Oxford, Clarendon Press, 1936.)

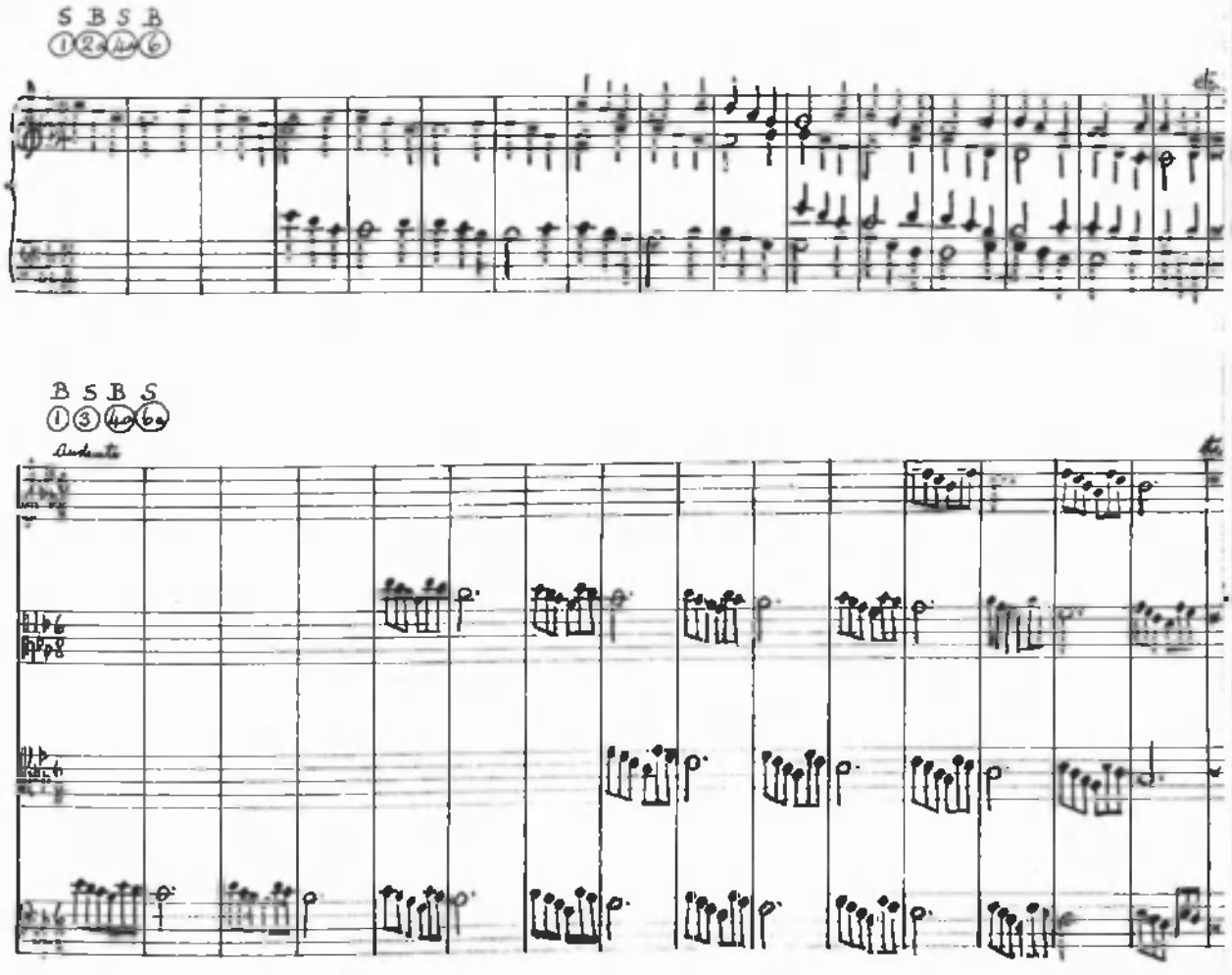
It is the purpose of these canonic sequences to recreate as far as is possible in the classroom the conditions under which the contrapuntal art evolved, and to provide material for oral practice in unaccompanied part-singing, by means of which the pupils may become familiar at first hand with the various contrapuntal and harmonic idioms.

Music Writing

As we mentioned in a previous chapter, these canonic sequences also make ideal material for class practice in music writing. Once the method of solving the canons from the canonic formulae, ① ③ ④a , $\overset{S}{①}$ $\overset{B}{②a}$ $\overset{S}{④a}$ $\overset{B}{⑥}$, etc. is understood, it will be found that this canon writing is interesting enough to make the task pleasant, and difficult enough to

make it instructive and to give incentive to the pupils. In fact, canon solving carries with it much of the fascination of crossword puzzle solving.

The mixed voice canons provide material for a suitable introduction to writing in the Bass Clef and in Short Score, while the use of Open Score and the C Clefs will help to familiarise older pupils with Open Score reading.



Further, as was pointed out before, sequence writing and canon writing are to be commended to the class teacher for their ease of assignment as well as for their ease of correction. Although our examples are, for the sake of convenience, all given in Keys F and $E^{\flat}$, the canons should be written out in various keys.

Keyboard Harmony

It need hardly be said that canonic sequences like the above form admirable material for practice in keyboard harmony. They should be practised at the pianoforte in all keys and through several octaves, until the various harmonic and contrapuntal idioms become as familiar to the player's fingers as the melodic idioms are to the singer's voice. Much experience in this kind of work has shown that fluency in the digital manipulation of harmonic and contrapuntal idioms will come from such practice on the Piano Keyboard, just as surely as fluency in the vocal manipulation of melodic and rhythmic idioms will come from the practice of sequence singing on the Vocal Keyboard or Sequence Modulator. The same, of course, applies to the keyboard practice of Harmonic Sequences (see page 169).

In the following chapter we have tabulated a series of canons all based on the sequence of descending thirds, {d' :- |l :- |t :- |s :-}. As will be seen, from 40 to 41 canons may be derived from each canonic sequence by means of the canonic formulae, ①④ , ①③④⑥ etc.

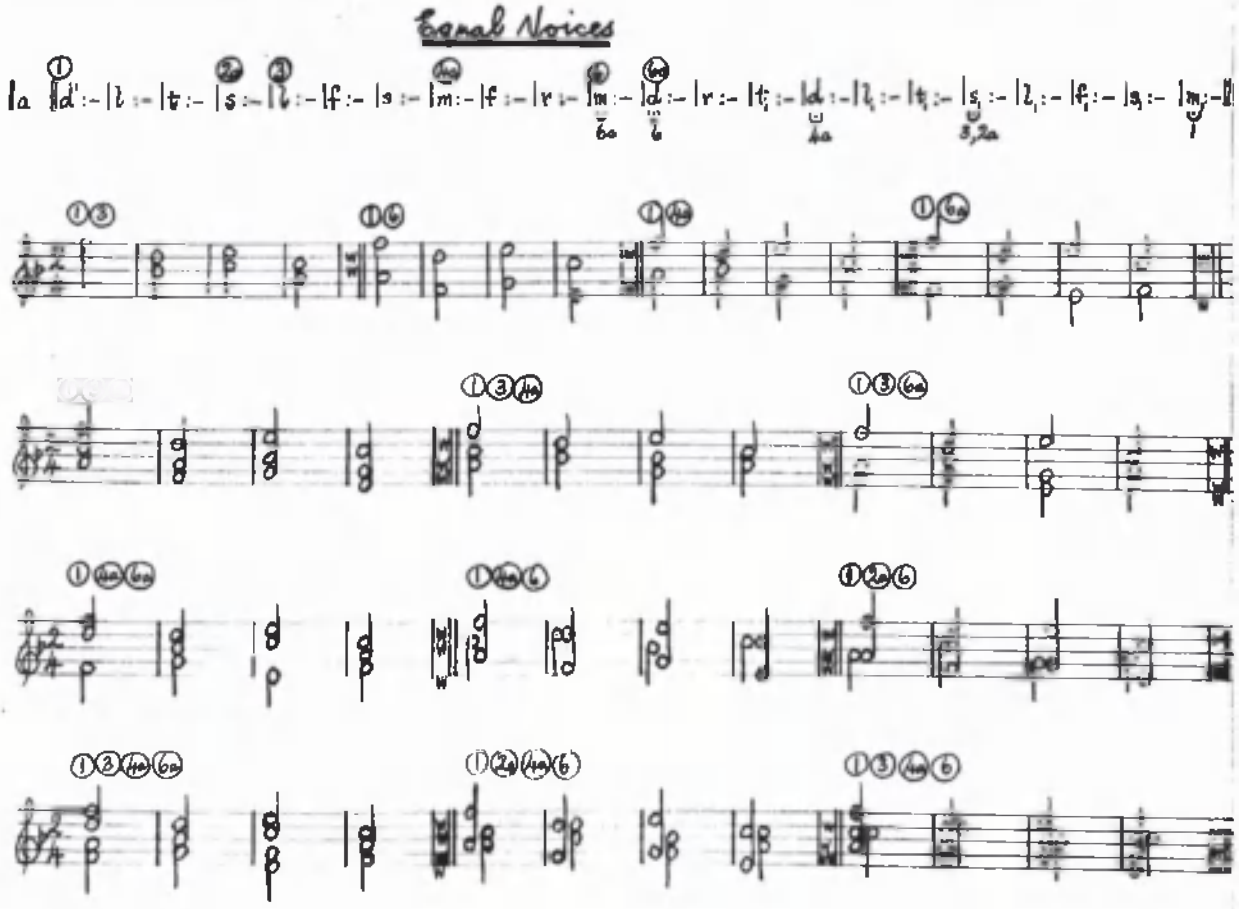
CHAPTER XIII

CANONS BASED ON A SEQUENCE OF DESCENDING THIRDS

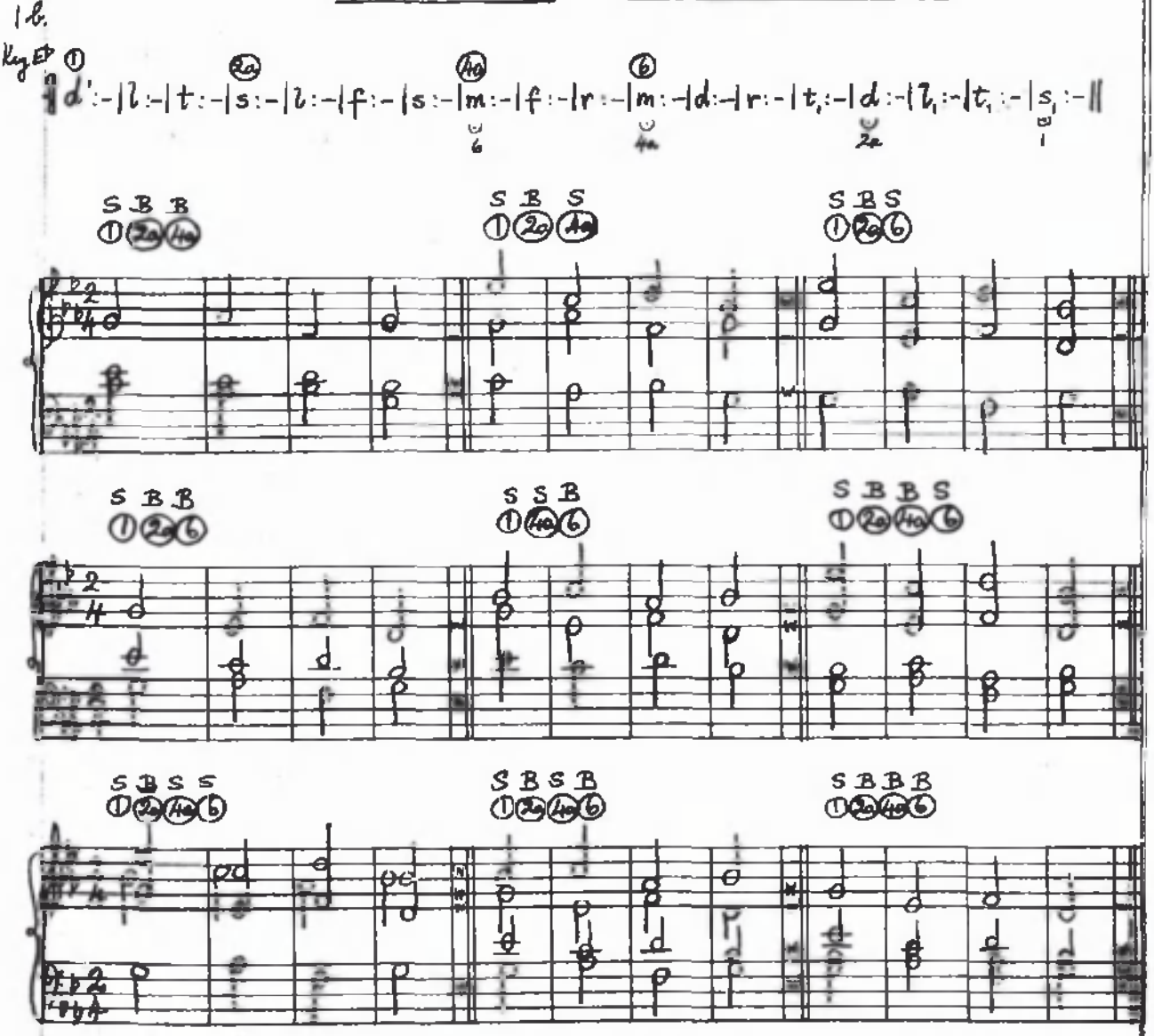
In this chapter, at the head of each set of canons, we shall write out the canonic sequence in tonic sol-fa notation, marking the points of entry, ① ③ ⑤a etc., and the final pauses for the different voices. Then we shall give in staff notation four bars of each canon beginning at the point of entry of the last voice, and above these print the canonic formulae indicating the number and point of entry of the voices.

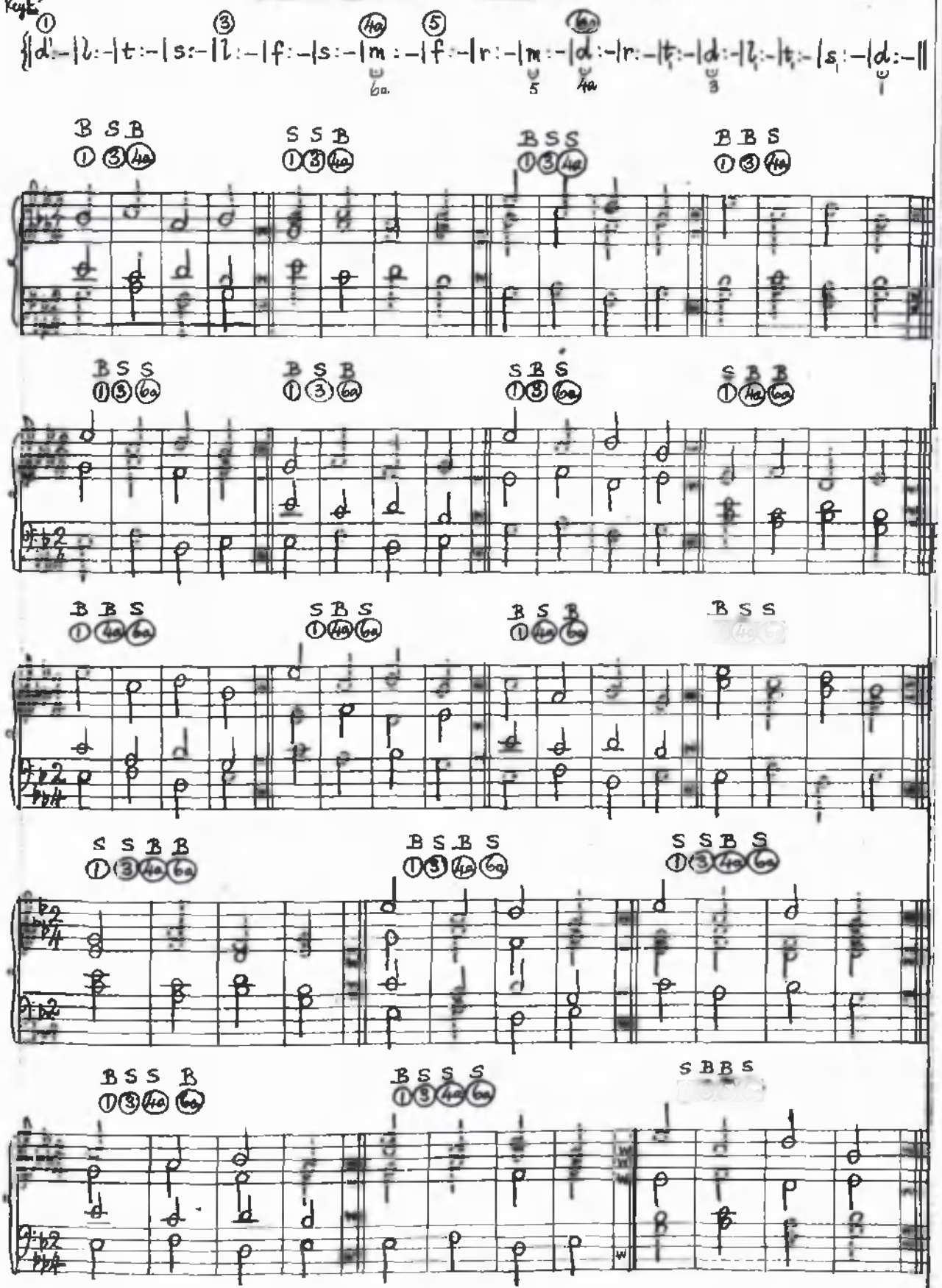
First, then, the Basic Sequence of Descending Thirds

Equal Voices



Mixed Voices Three and Four Part




{|d'-|l:-|t:-|s:-|l:-|f:-|s:-|m:-|f:-|r:-|m:-|d:-|r:-|t1:-|d:-|l1:-|t1:-|s1:-|d:-||
B S B
S S B
B S S
B B S
B S S
B S B
S B S
S B B
S S B B
B S B S
S S B S
B S S B
B S S S
S B B S

Key F

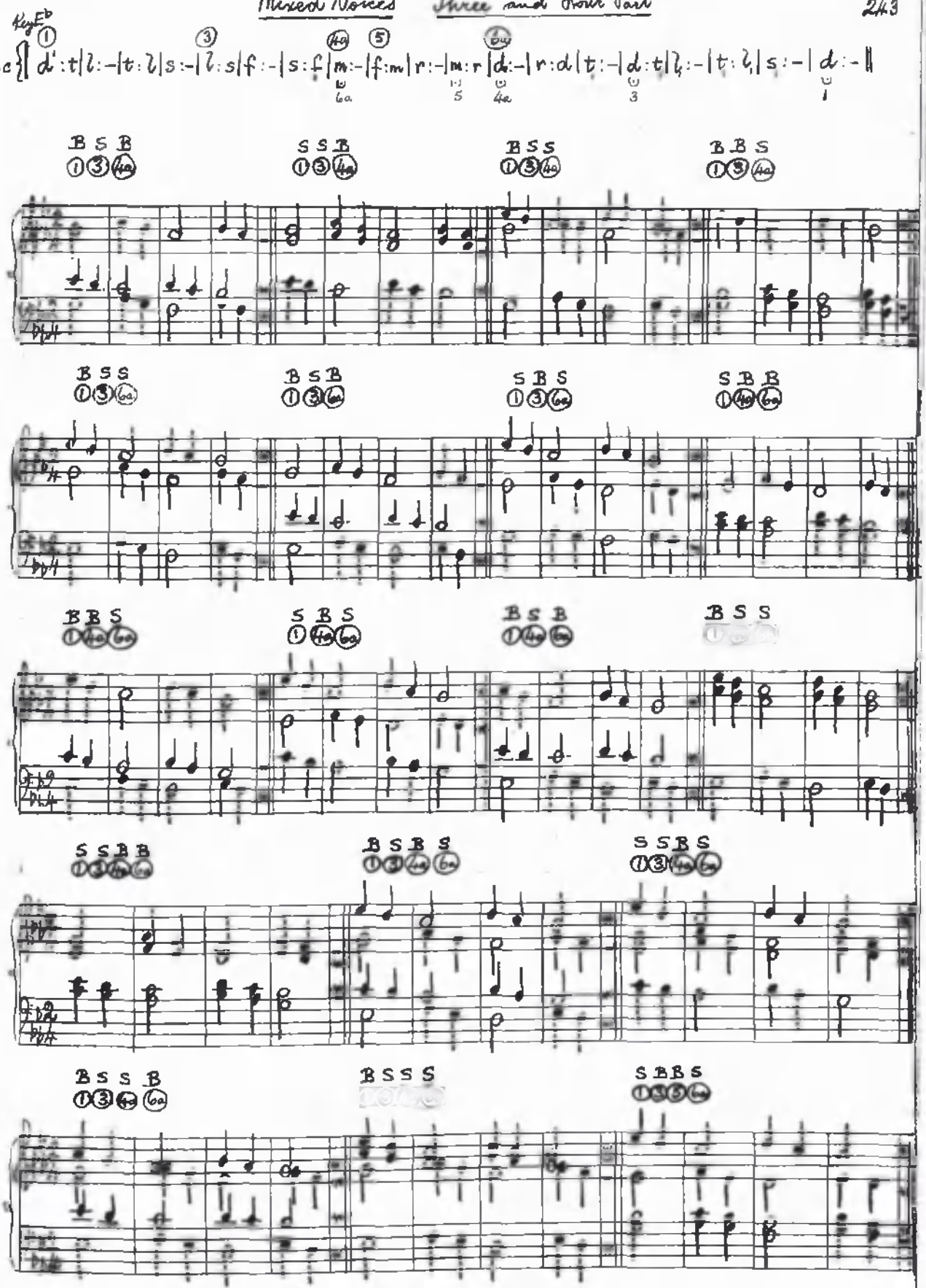
2a | d' : t | l : - | t : l | s : - | l : s | f : - | s : f | m : - | f : m | r : - | m : r | d : - | r : d | t, : - ||

| d : t, | l, : - | t, : l, | s, : - | l, : s, | f, : - | s, : f, | m, : - ||

Mixed Voices Three and Four Part

Key E♭

2b | d' : t | l : - | t : l | s : - | l : s | f : - | s : f | m : - | f : m | r : - | m : r | d : - | r : d | t, : - | d : t | l, : - | t, : l, | s, : - ||


Key E♭
2c
d' :t|l :-|t :l|s :-|l :s|f :-|s :f|m :-|f :m|r :-|m :r|d :-|r :d|t :-|d :t|l :-|t :l|s :-|d :-
B S B
S S B
B S S
B B S
B S S
B S B
S B S
S B B
B B S
S B S
B S B
B S S
S S B B
B S B S
S S B S
B S S B
B S S S
S B B S

Equal Noises

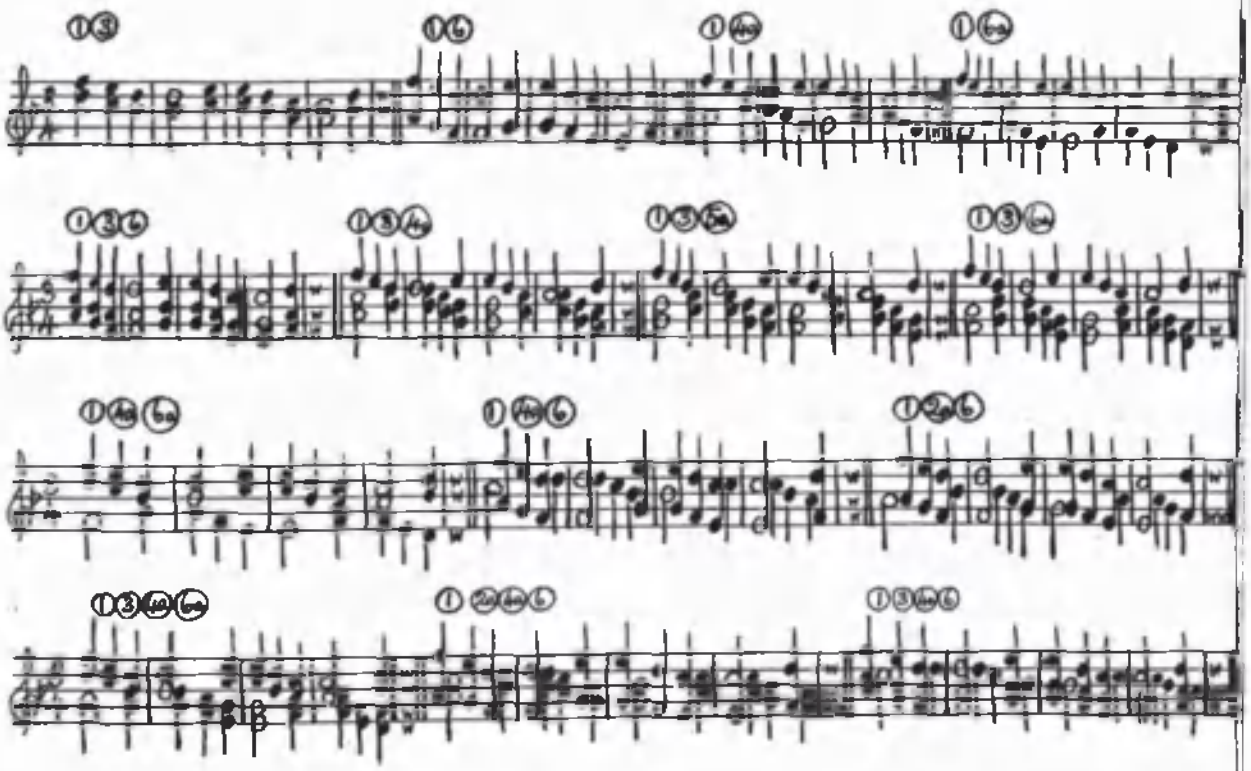
Key F ① ② ③ ④ ⑤ ⑥ ⑥

3a {|d' : t : l | l : - : t | t : l : s | s : - : l | l : s : f | f : - : s | s : f : m | m : - : f | f : m : r | r : - : m | m : r : d | d : - : r}

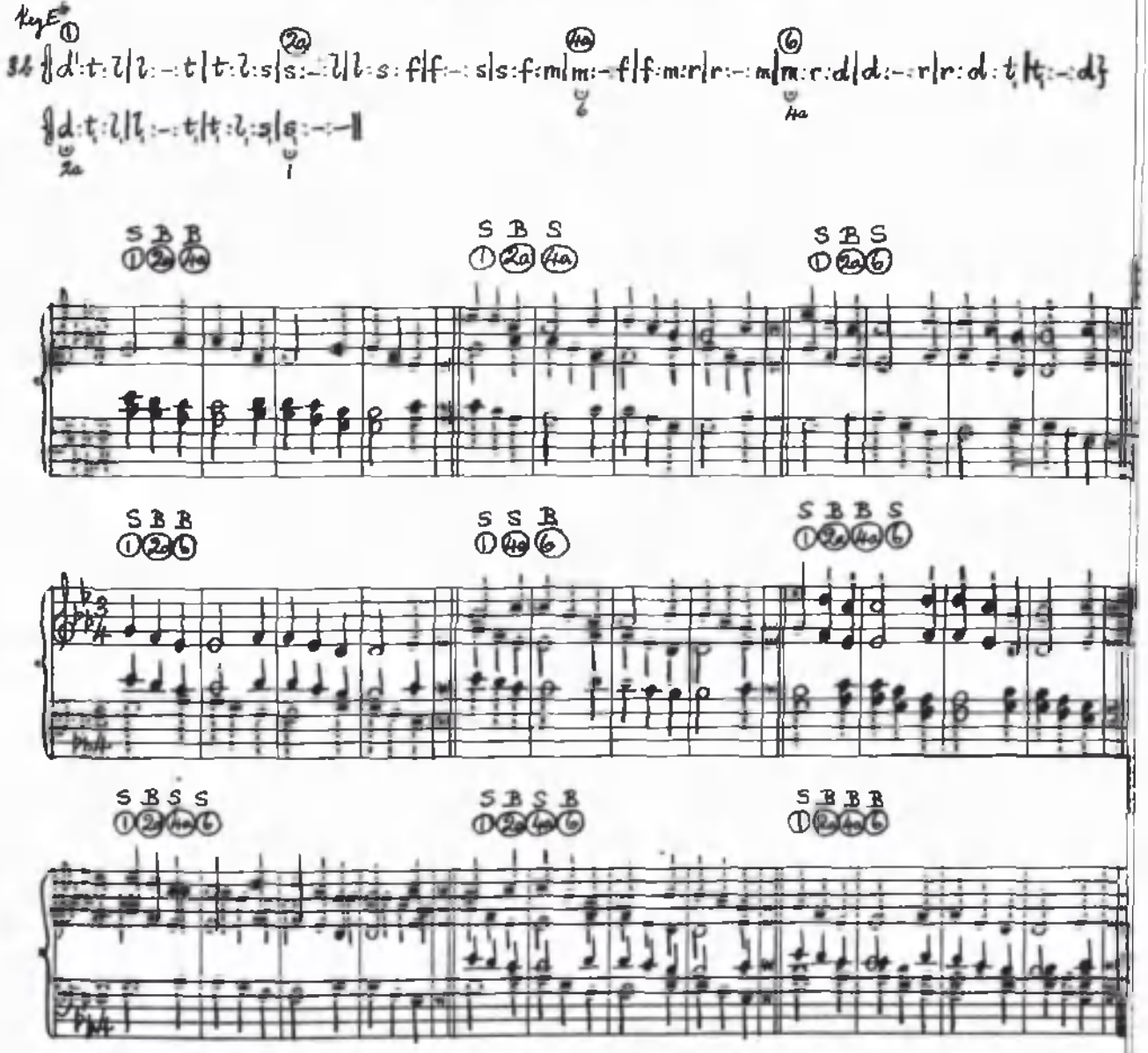
6a 6, 5a

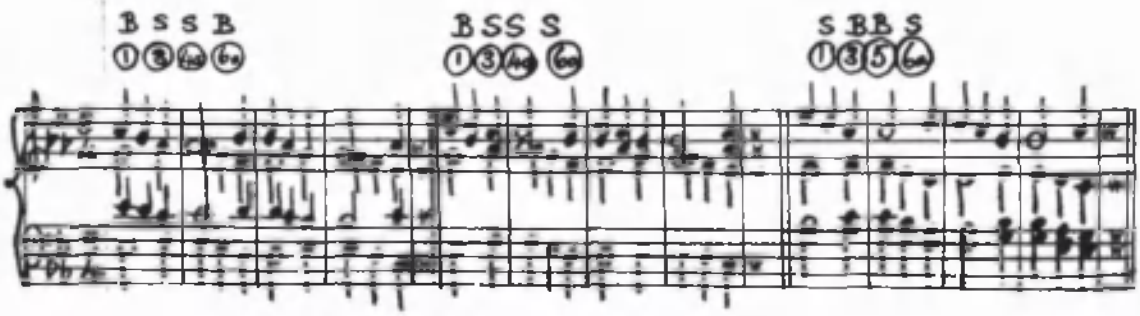
{|r : d : t₁ | t₁ : - : d | d : t₁ : l₁ | l₁ : - : t₁ | t₁ : l₁ : s₁ | s₁ : - : l₁ | l₁ : s₁ : f₁ | f₁ : - : s₁ | s₁ : f₁ : m₁ | m₁ : - : - ||

4a 3, 2a 1

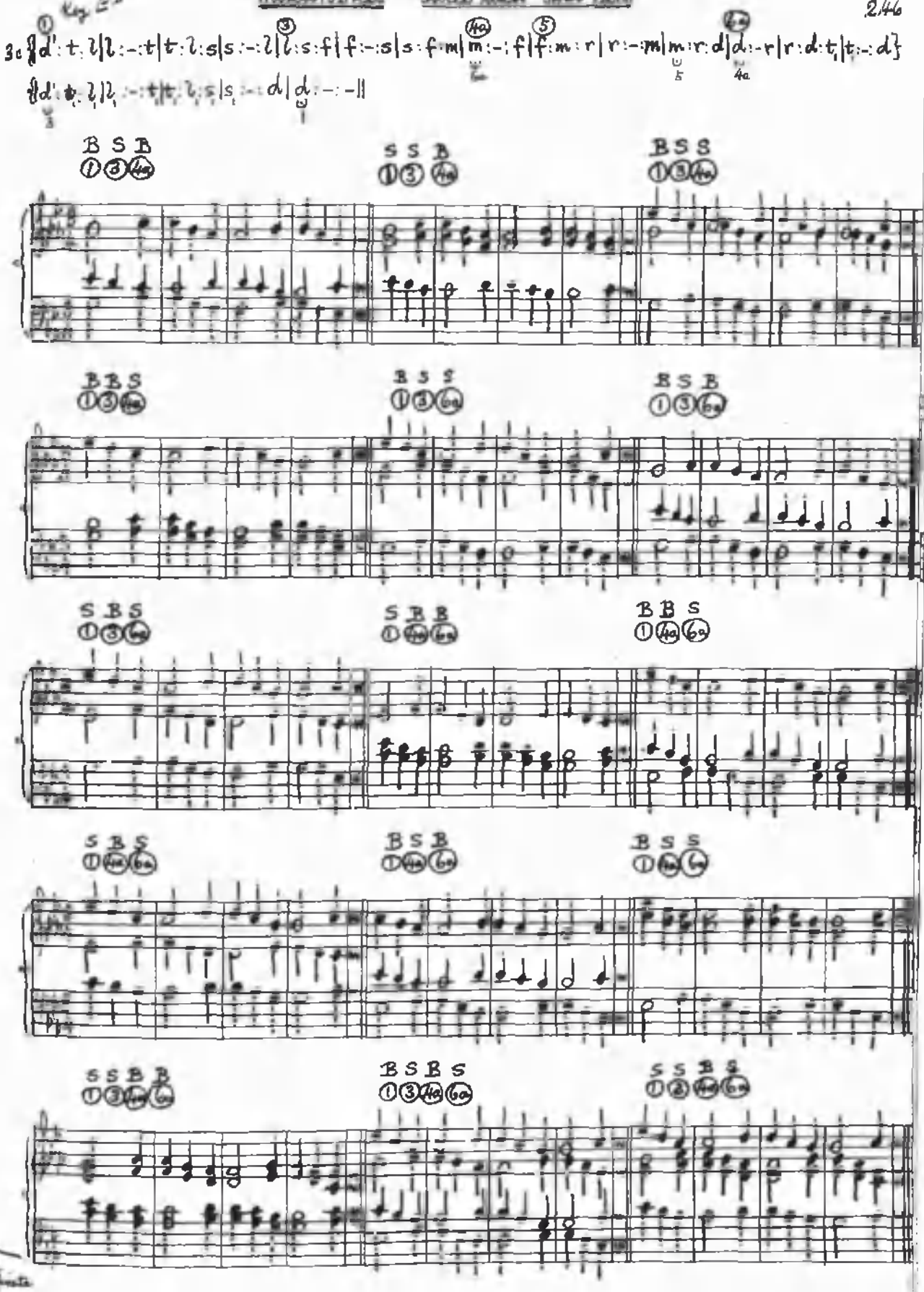


Mixed Voices Three and Four Part




B S S B
B S S S
S B B S

Key E♭



3c {(1) d': t: l | l: -: t | t: l: s | s: -: l | (3) l: s: f | f: -: s | s: f: m | (4a) m: -: f | (5) f: m: r | r: -: m | m: r: d | (6a) d: -: r | r: d: t₁ | t₁: -: d}

{d': t₁: l₁ | l₁: -: t₁ | t₁: l₁: s₁ | s₁: -: d | d: -: -||

B S B (1) (3) (4a) — S S B (1) (3) (4a) — B S S (1) (3) (4a)

B B S (1) (3) (4a) — B S S (1) (3) (6a) — B S B (1) (3) (6a)

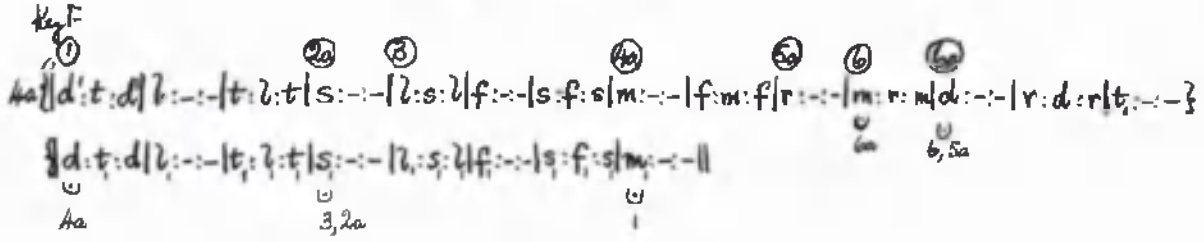
S B S (1) (3) (6a) — S B B (1) (4a) (6a) — B B S (1) (4a) (6a)

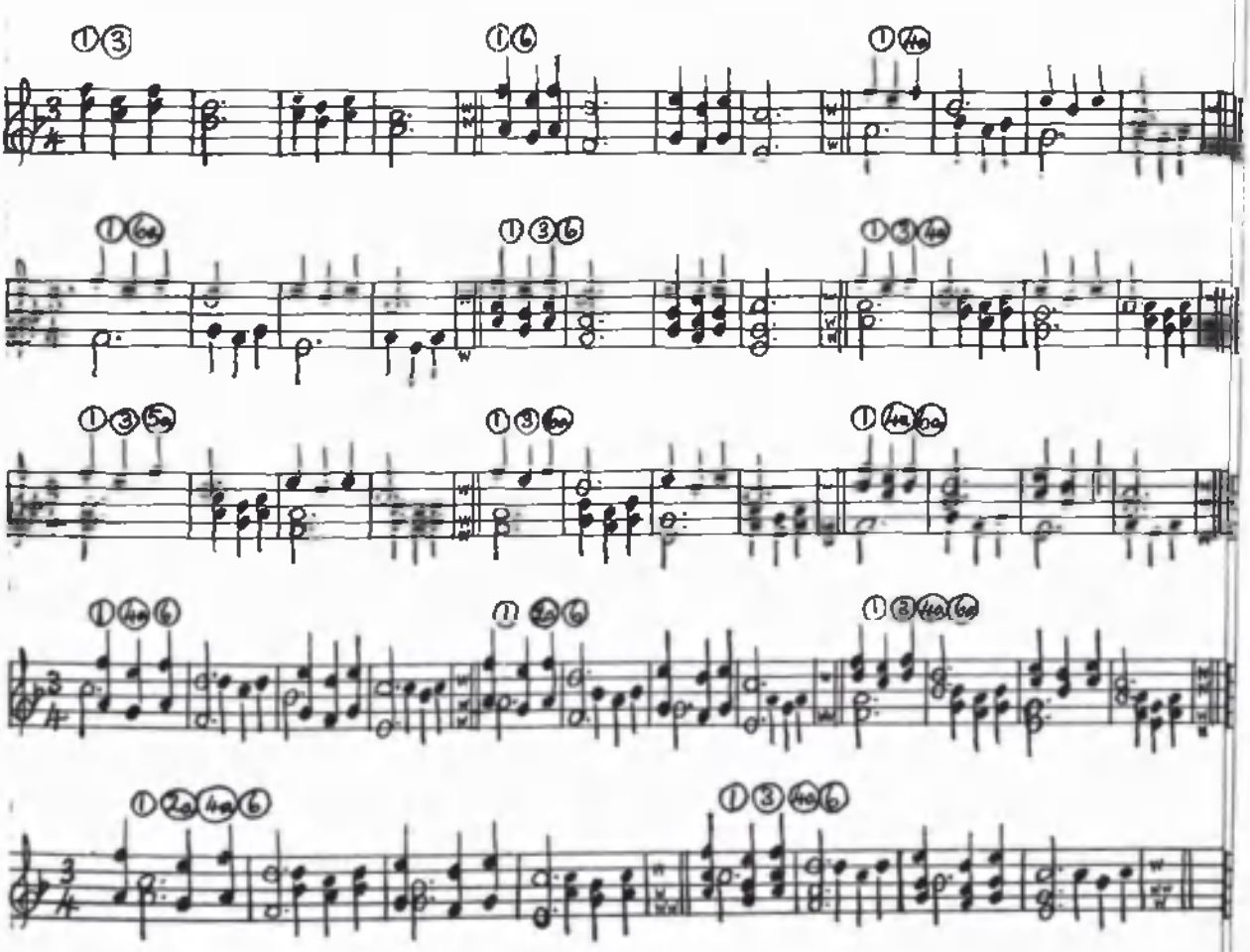
S B S (1) (4a) (6a) — B S B (1) (4a) (6a) — B S S (1) (4a) (6a)

S S B B (1) (3) (4a) (6a) — B S B S (1) (3) (4a) (6a) — S S B S (1) (3) (4a) (6a)

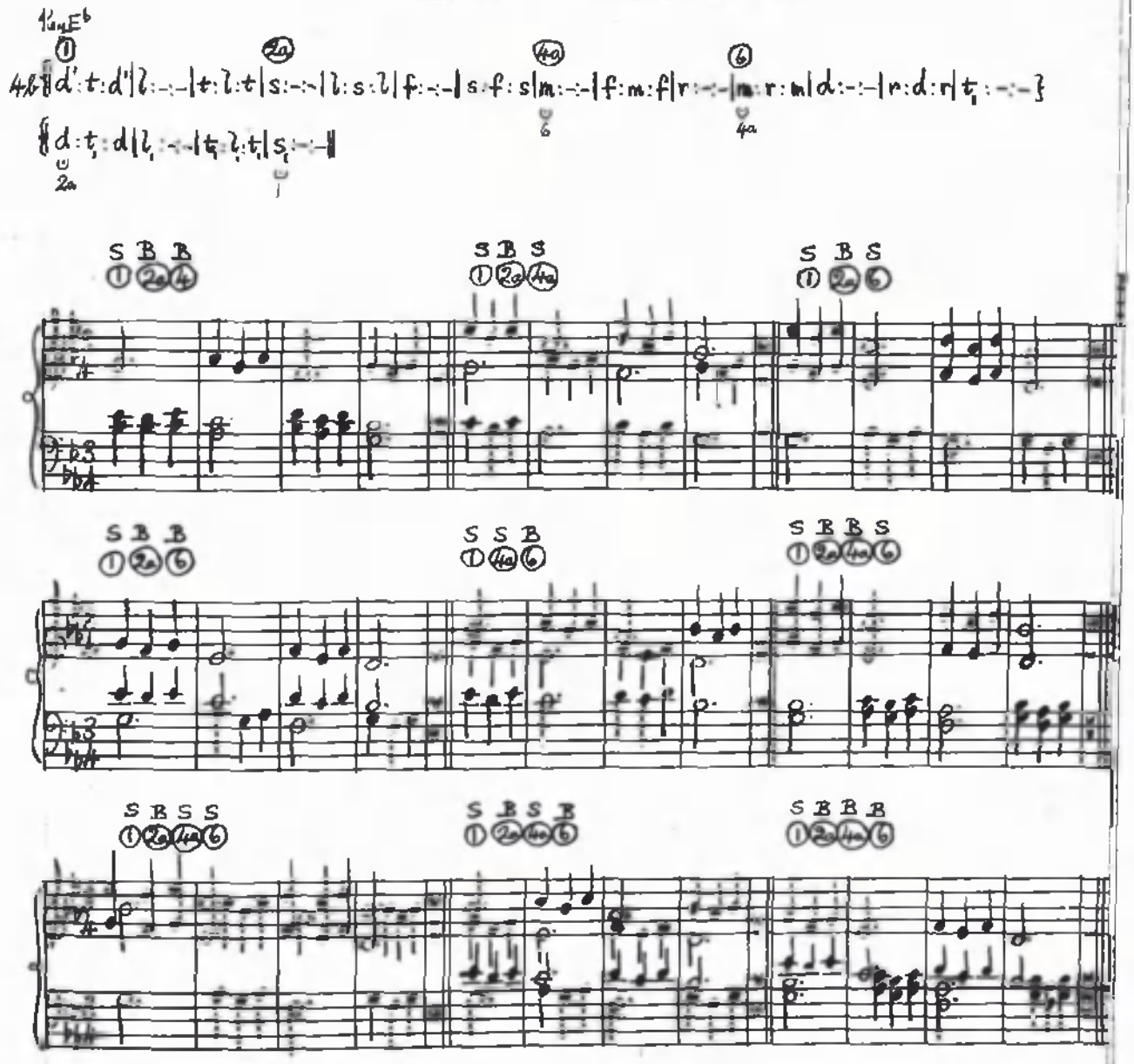
See Appendix

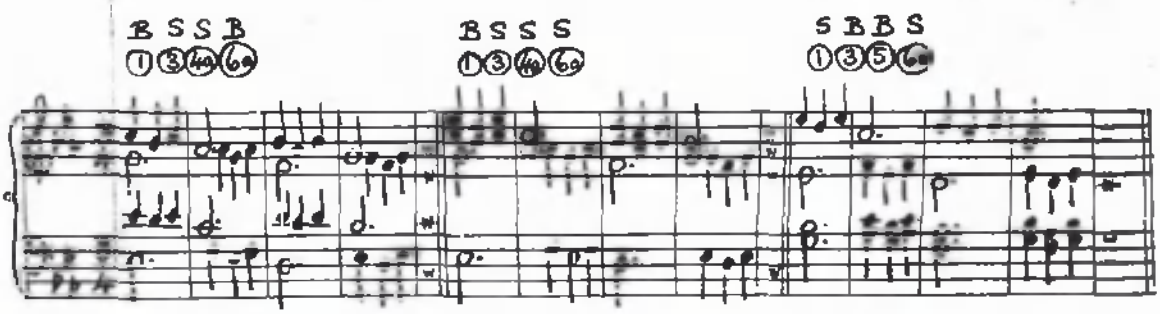
Equal Voices





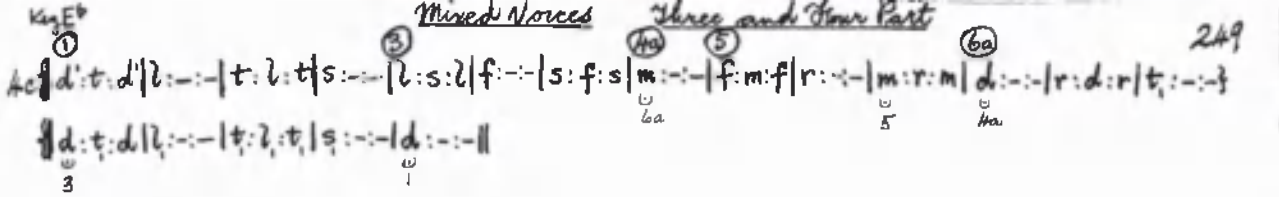
Mixed Voices Three and Four Part

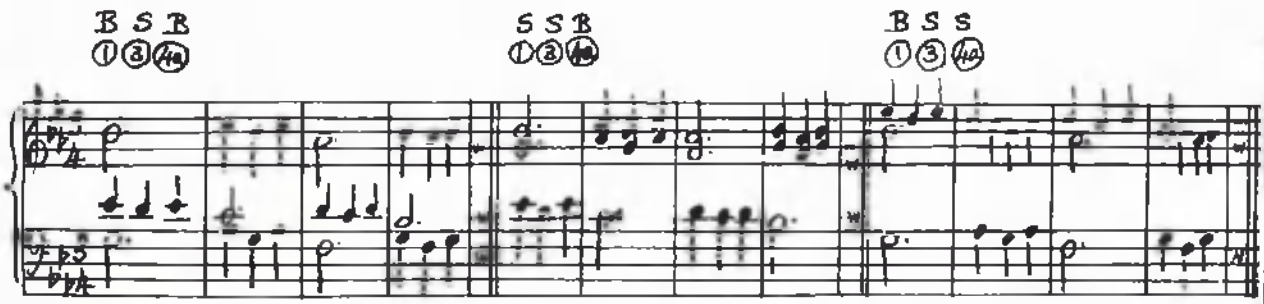


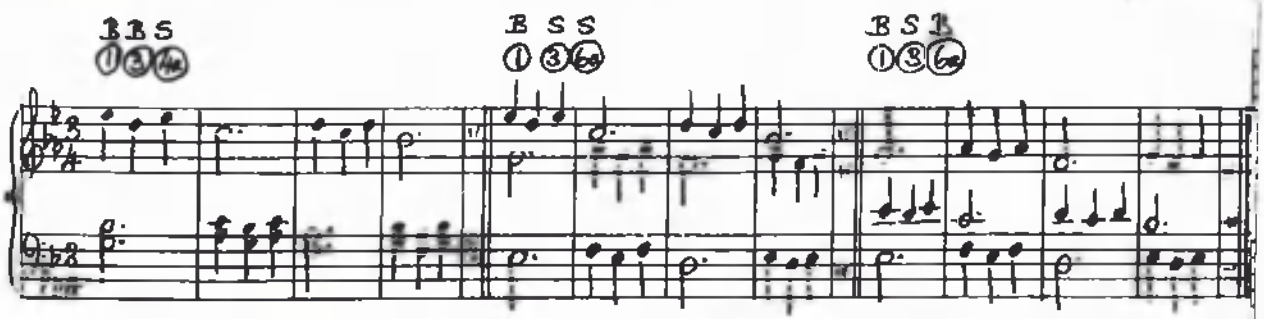

B S S B
1 3 4 6
B S S S
1 3 4 6
S B B S
1 3 5 6

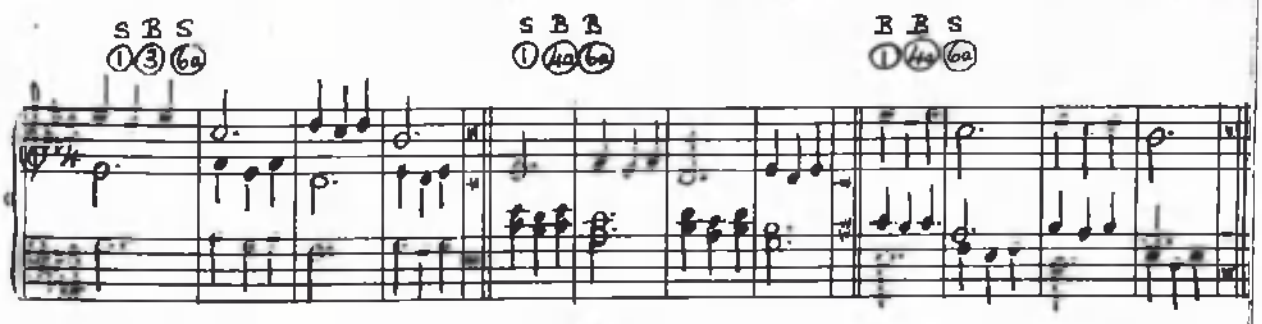
Mixed Voices — Three and Four Part

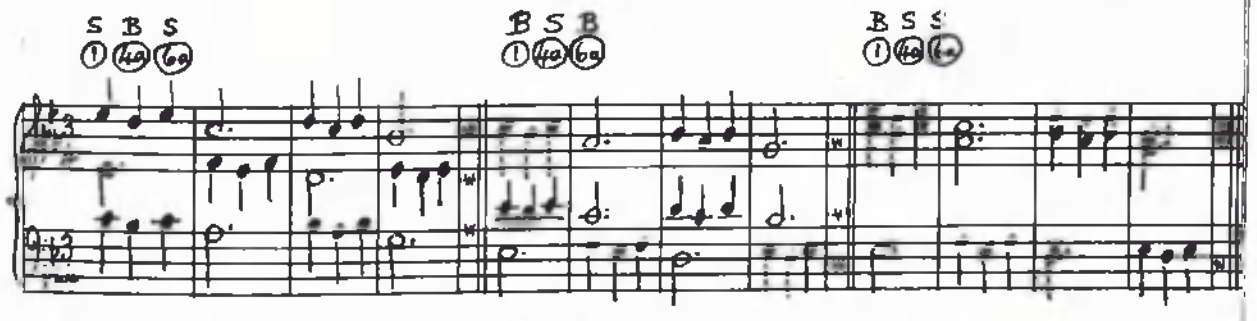
Key E♭

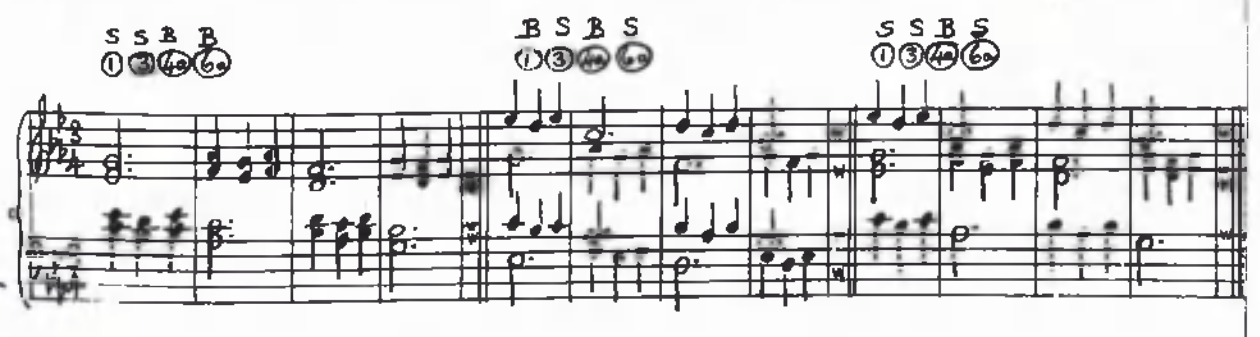










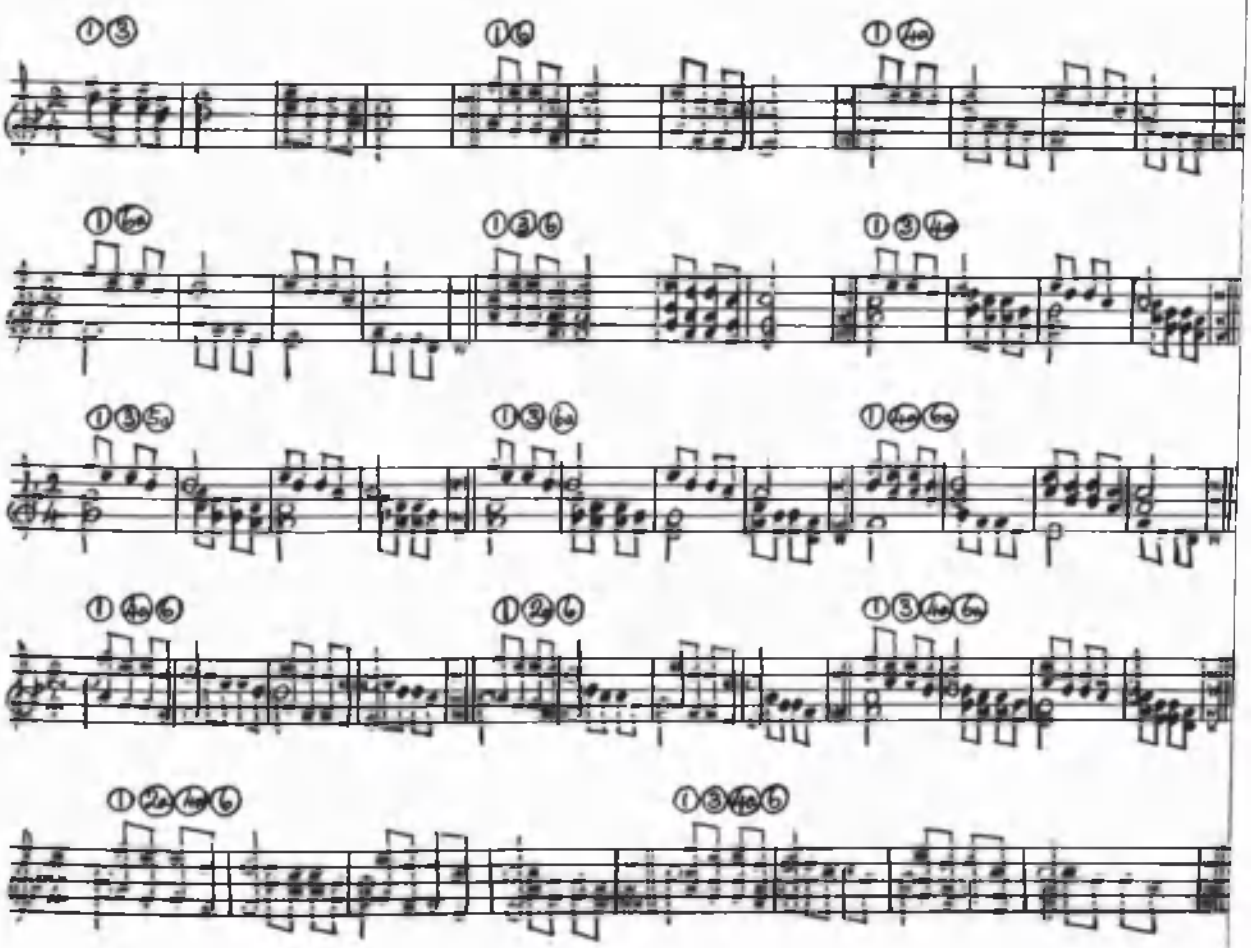


Equal Voices

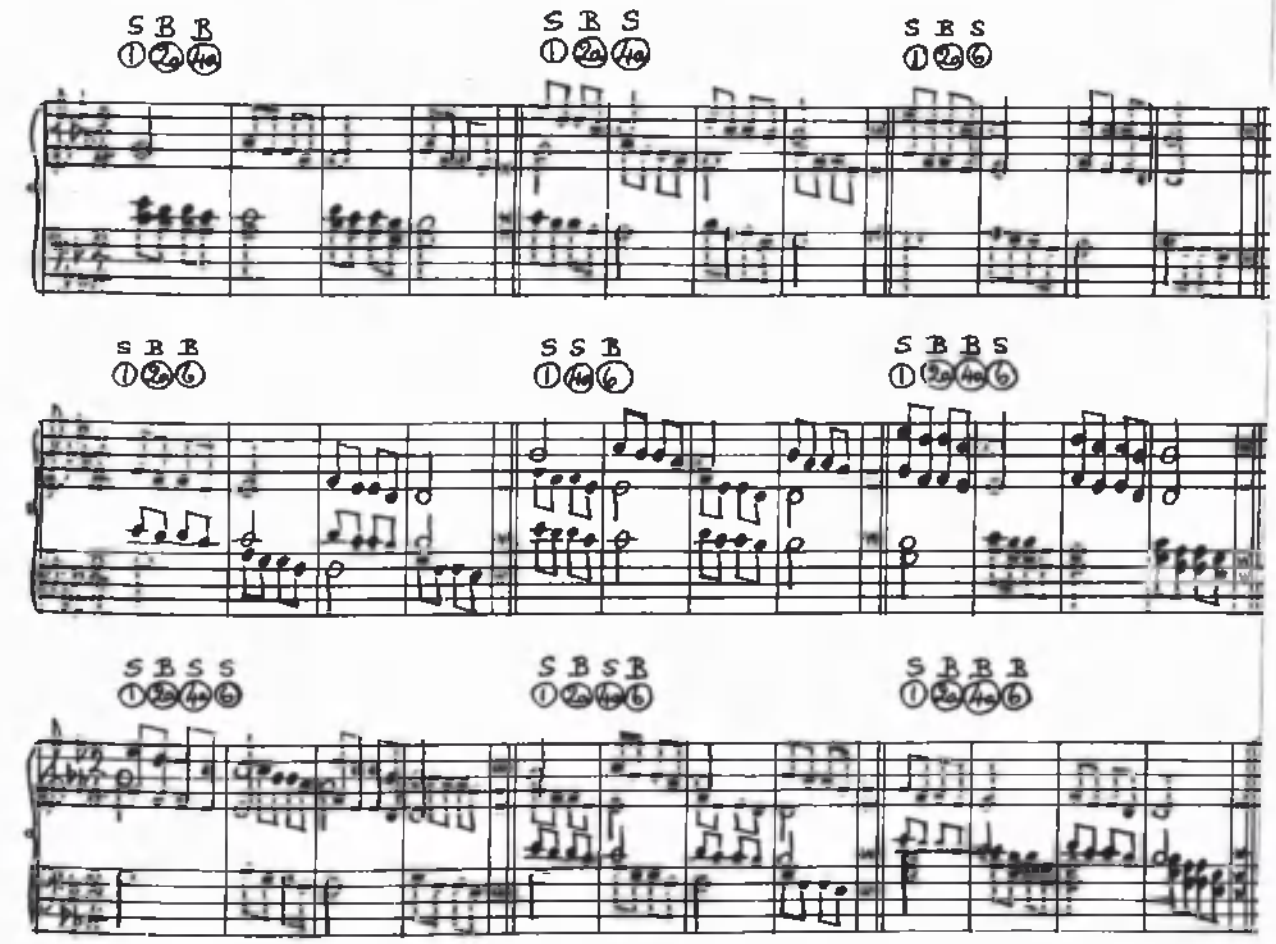
Key F

5a {d.t:t.l | l:- | t.l:l.s | s:- | l.s:s.f | f:- | s.f:f.m | m:- | f.m:m.r | r:- | m.r:r.d | d:- | r.d:d.t₁ | t₁:-}

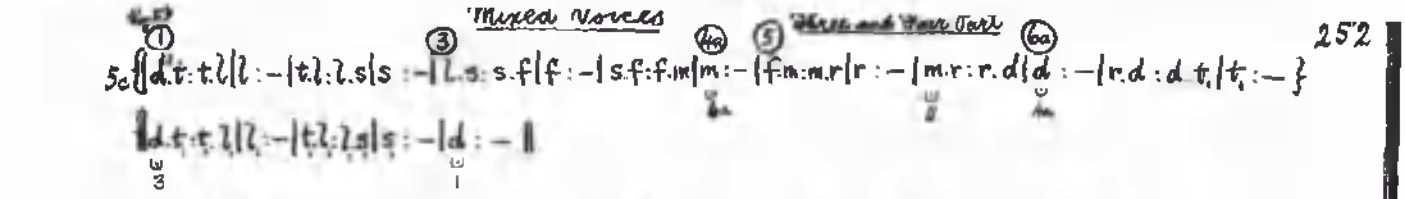
{{d.t₁:t₁.l₁ | l₁:- | t₁.l₁:l₁.s₁ | s₁:- | l₁.s₁:s₁.f₁ | f₁:- | s₁.f₁:f₁.m₁ | m₁:- ||

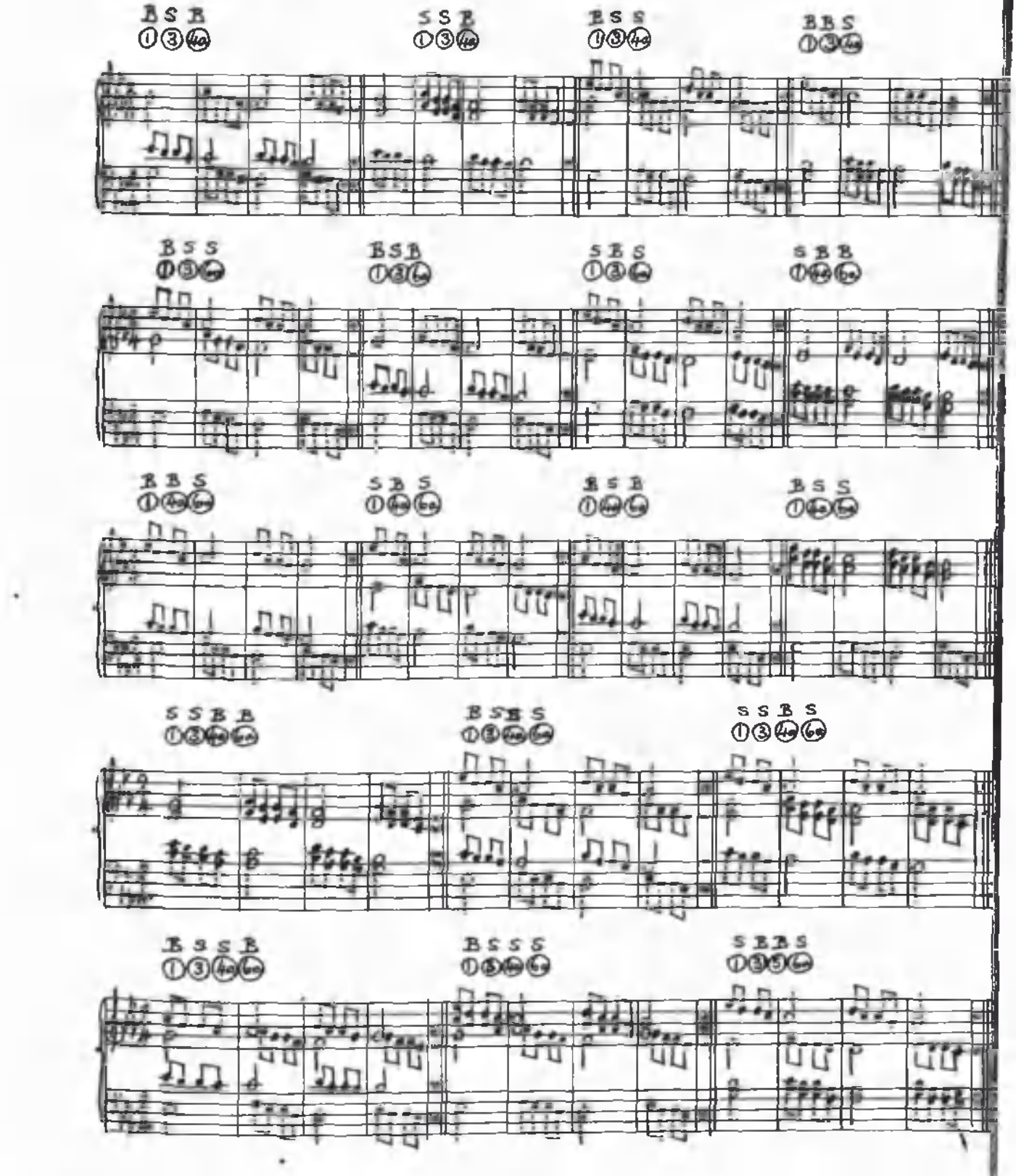


Mixed Voices Three and Four Part

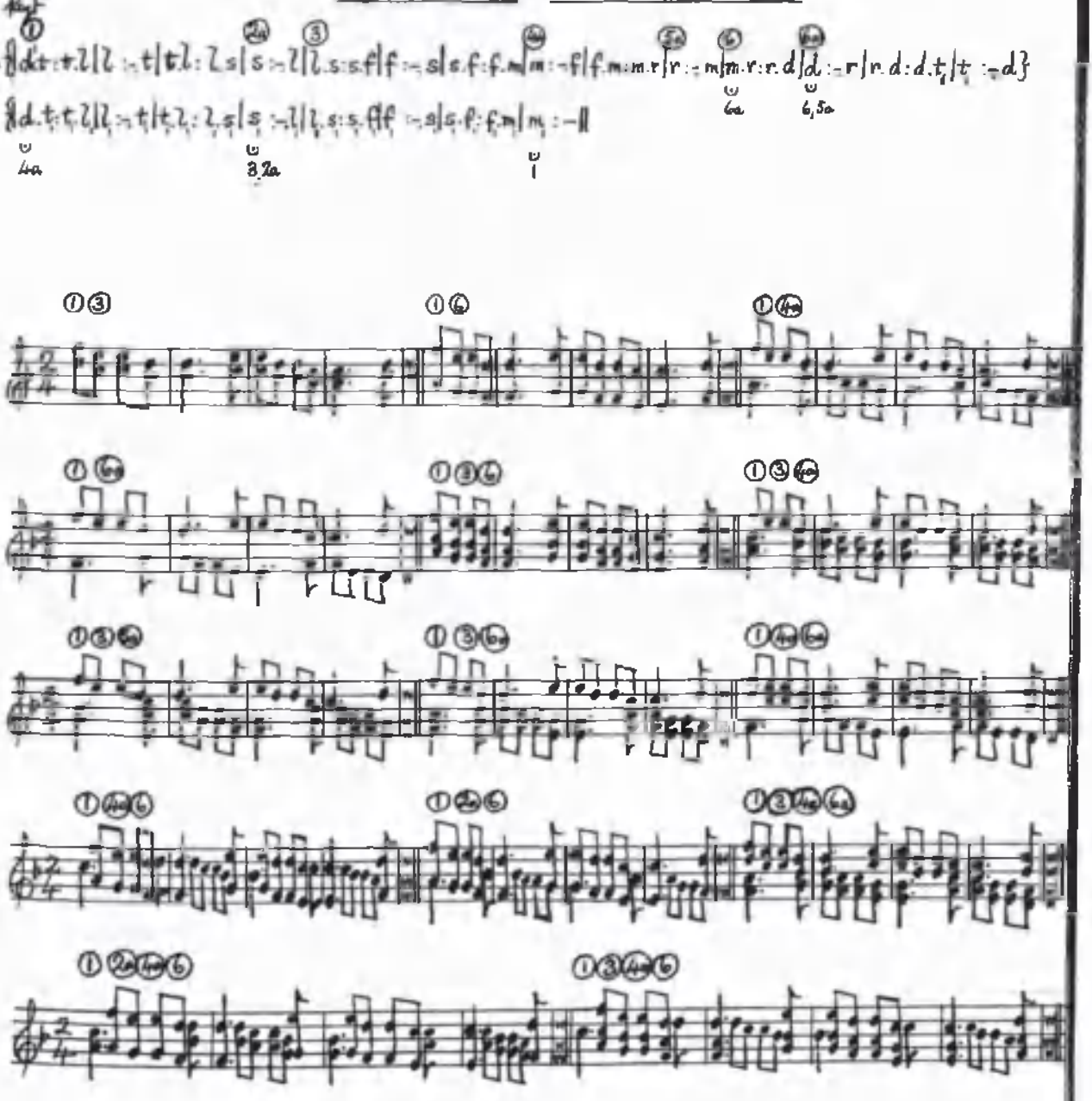


Mixed Voices

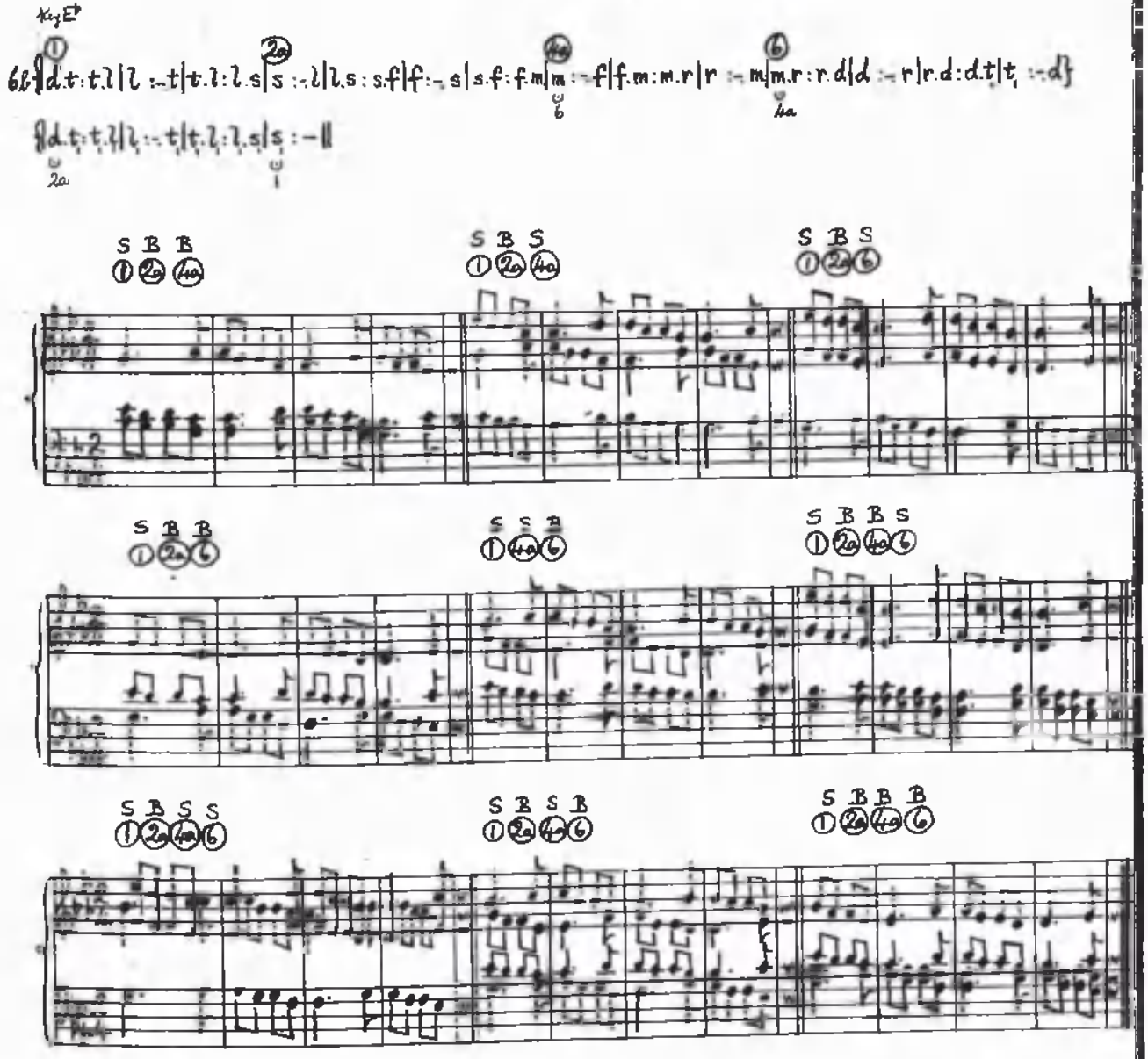




Equal Voices Three and Four Part

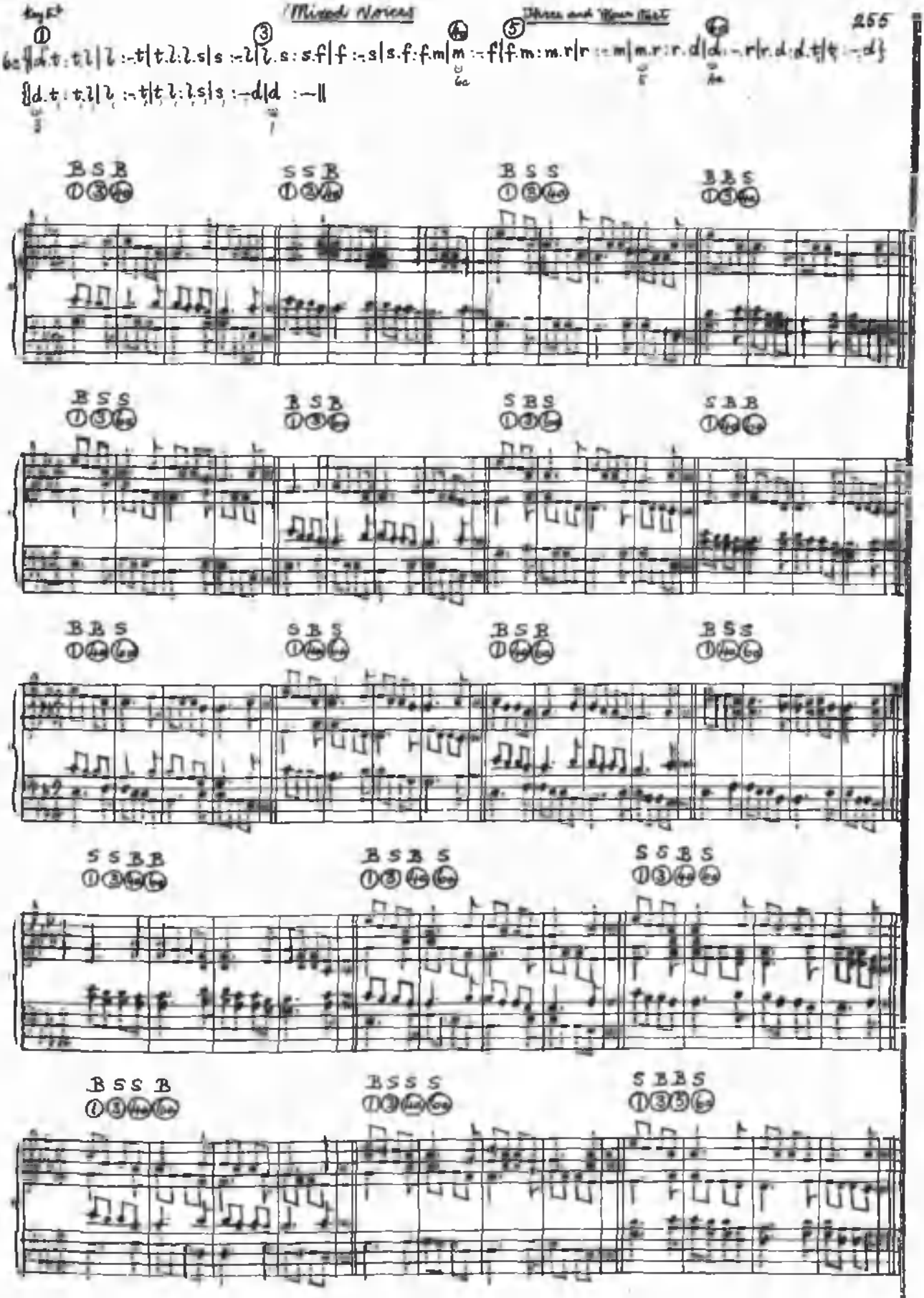


Mixed Voices : Three and Four Part

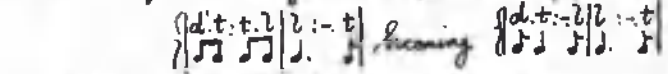


Mixed Voices

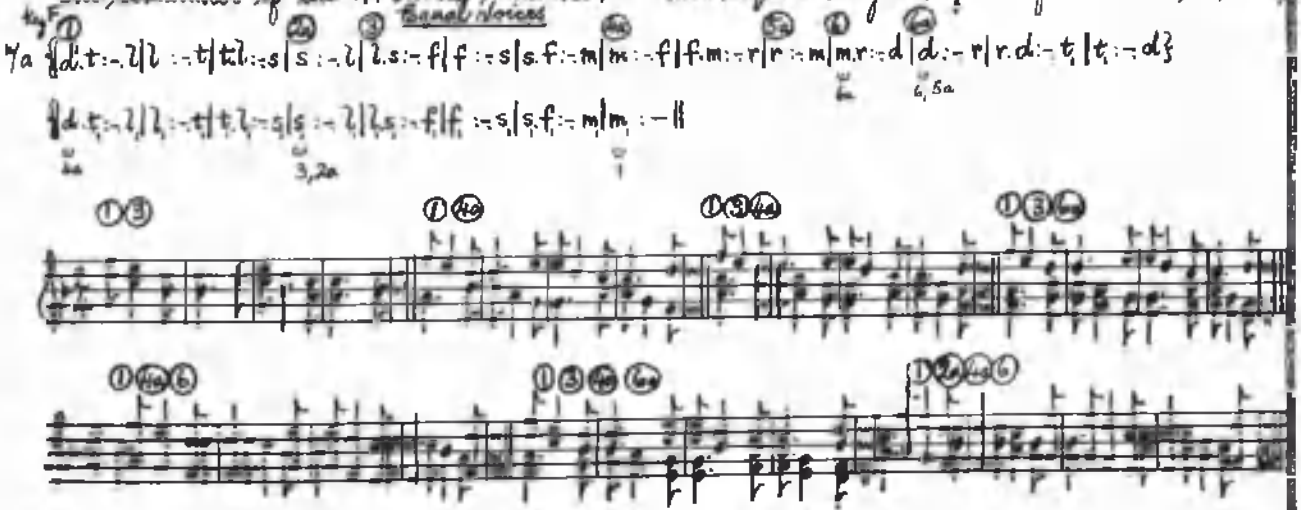
Three and Four Part

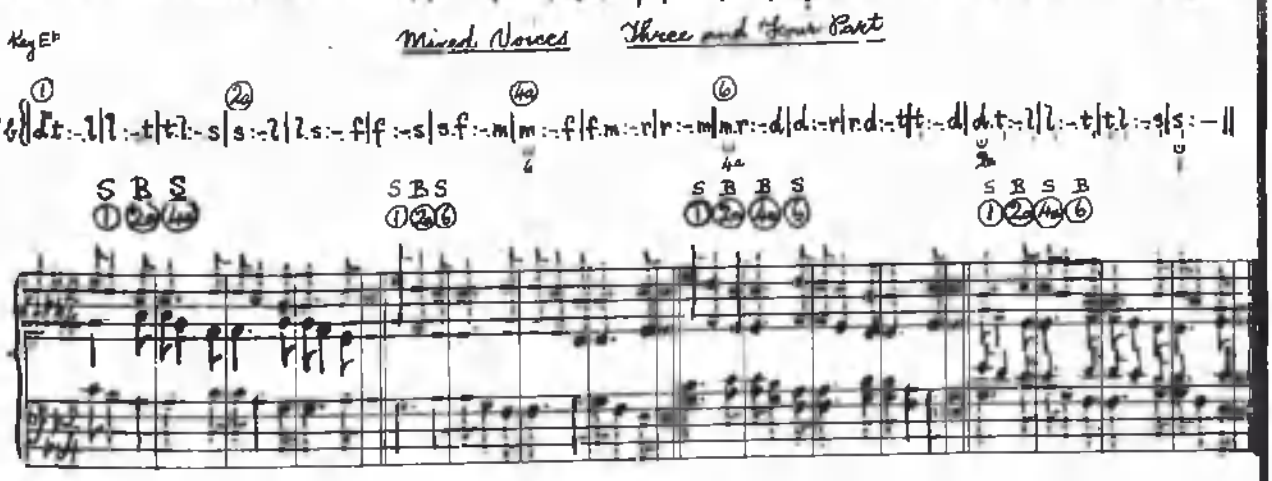


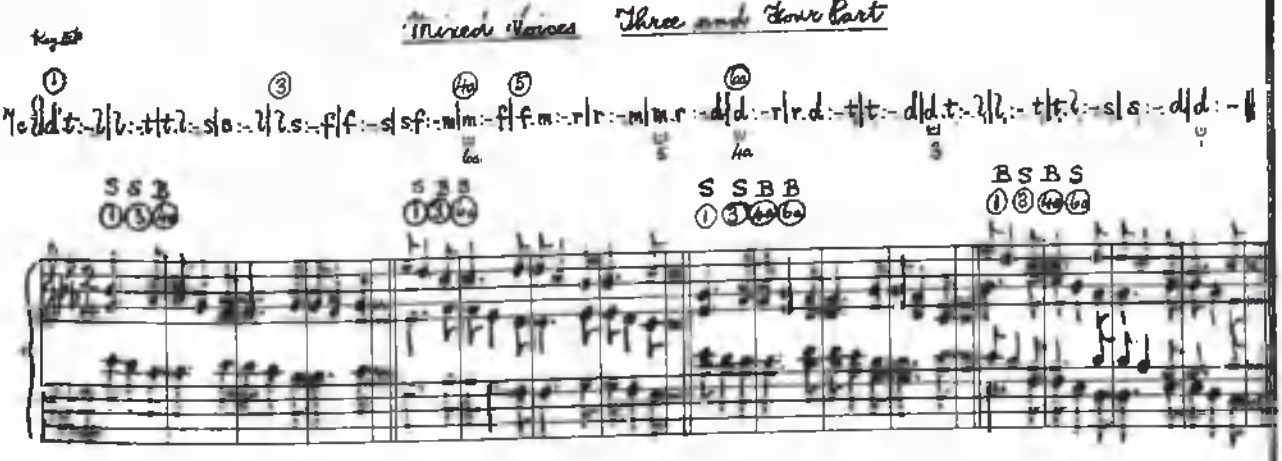
As the following series of canons is derived from the previous one by simply tying the two middle quavers of the sequential figure,



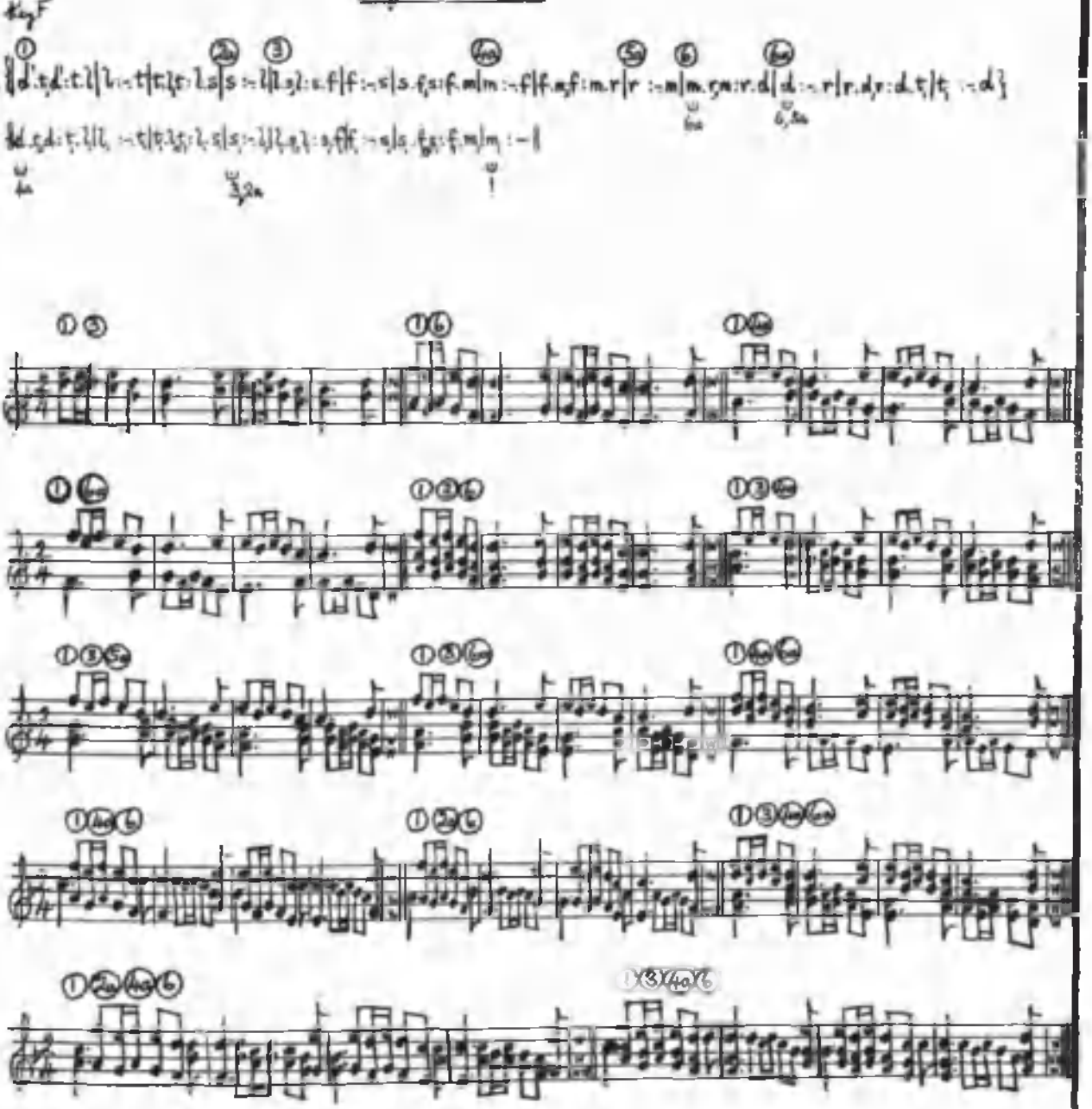
only a few examples of each of the three sets of canons are appended. The remainder of the 41 canons available with this sequence may be inferred from Nos. 6a, 6b and 6c.







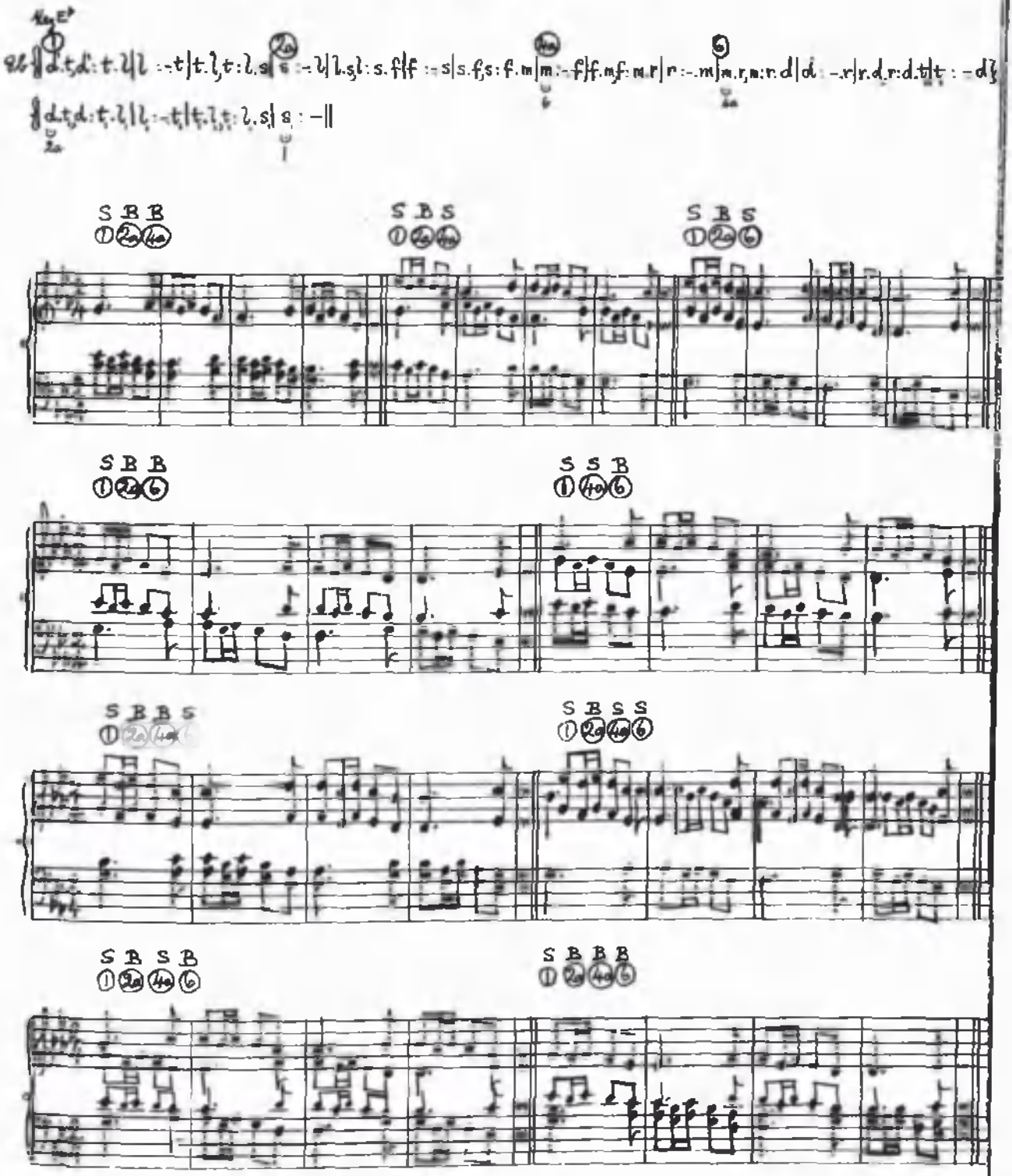
Equal Voices



N.B. The above canon may also be sung to the rhythmic figures

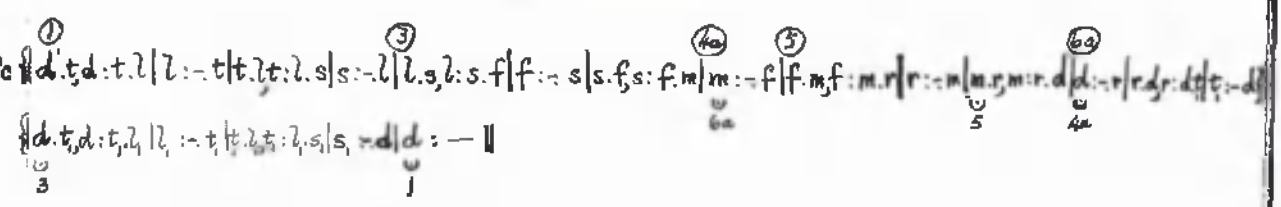


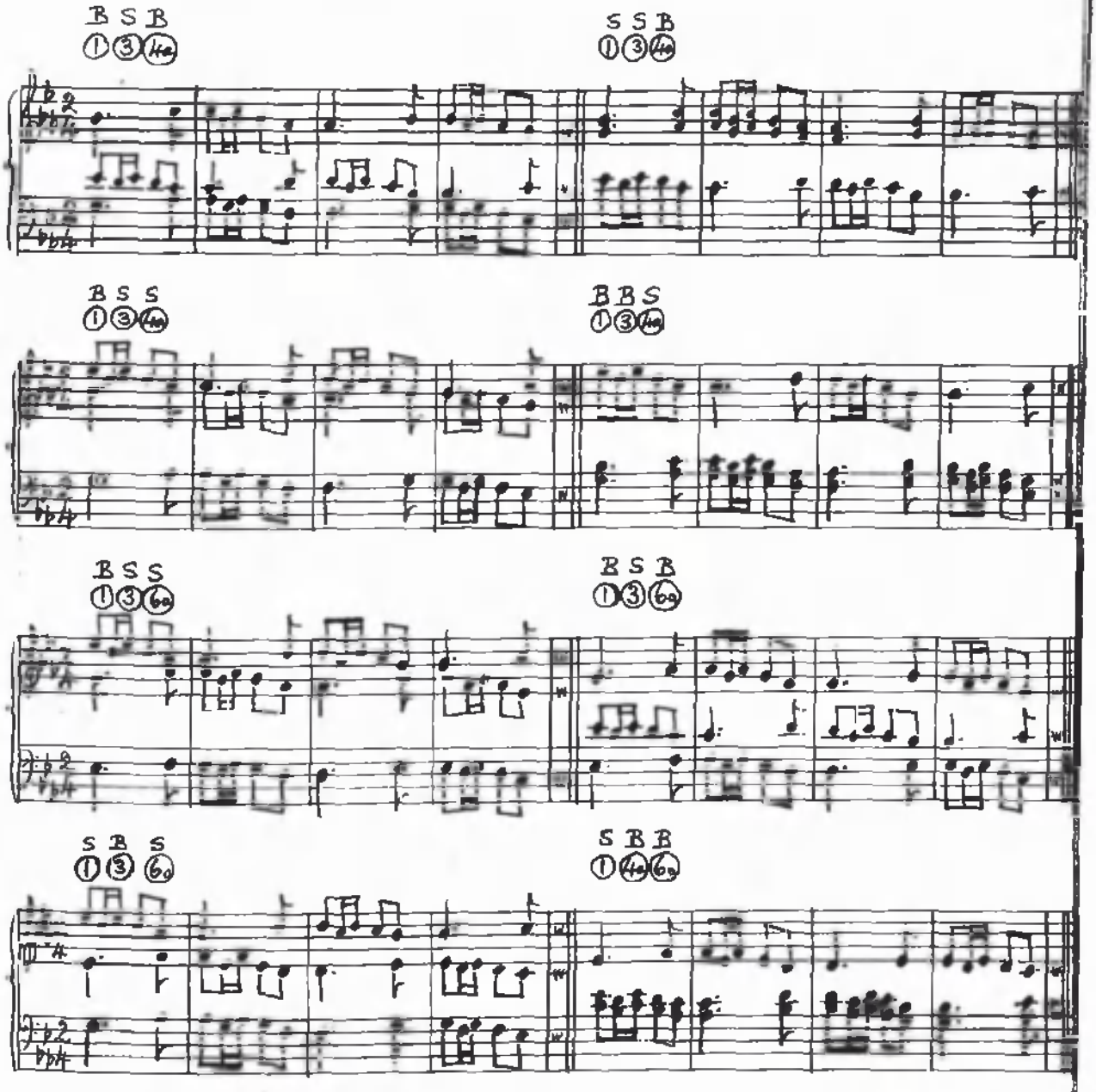
Mixed Voices Three and Four Part



Mixed Voices Three and Four Part

Key E♭





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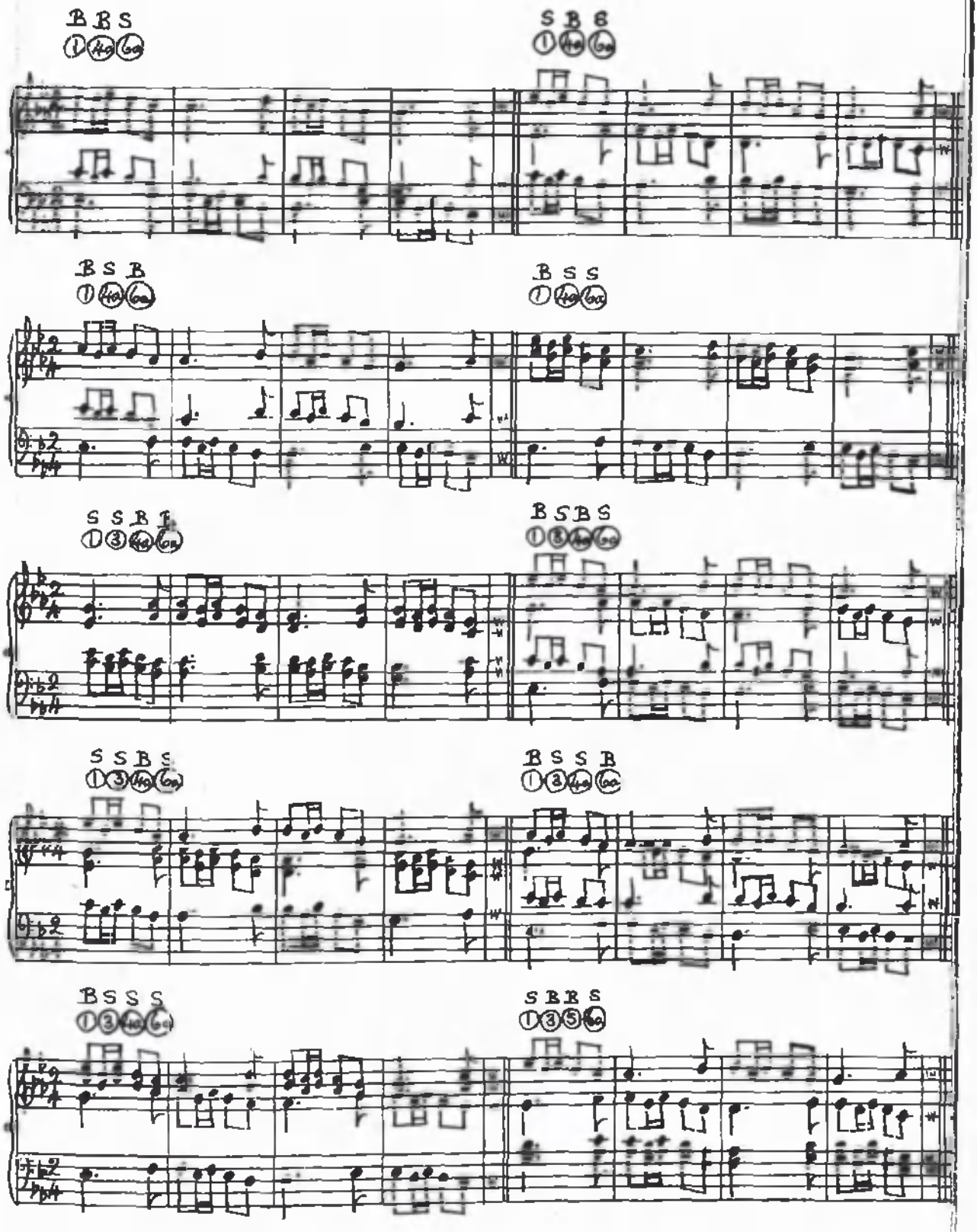
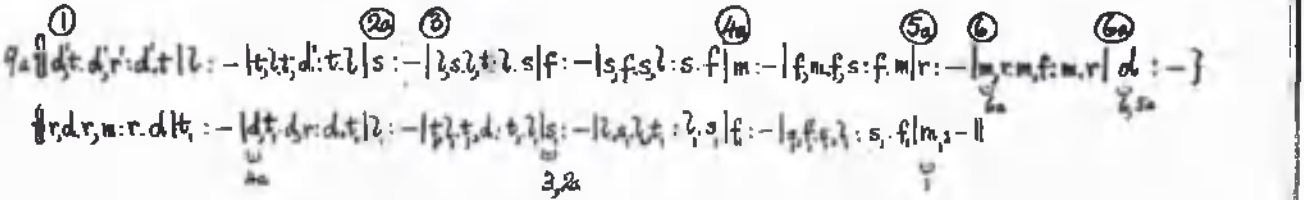
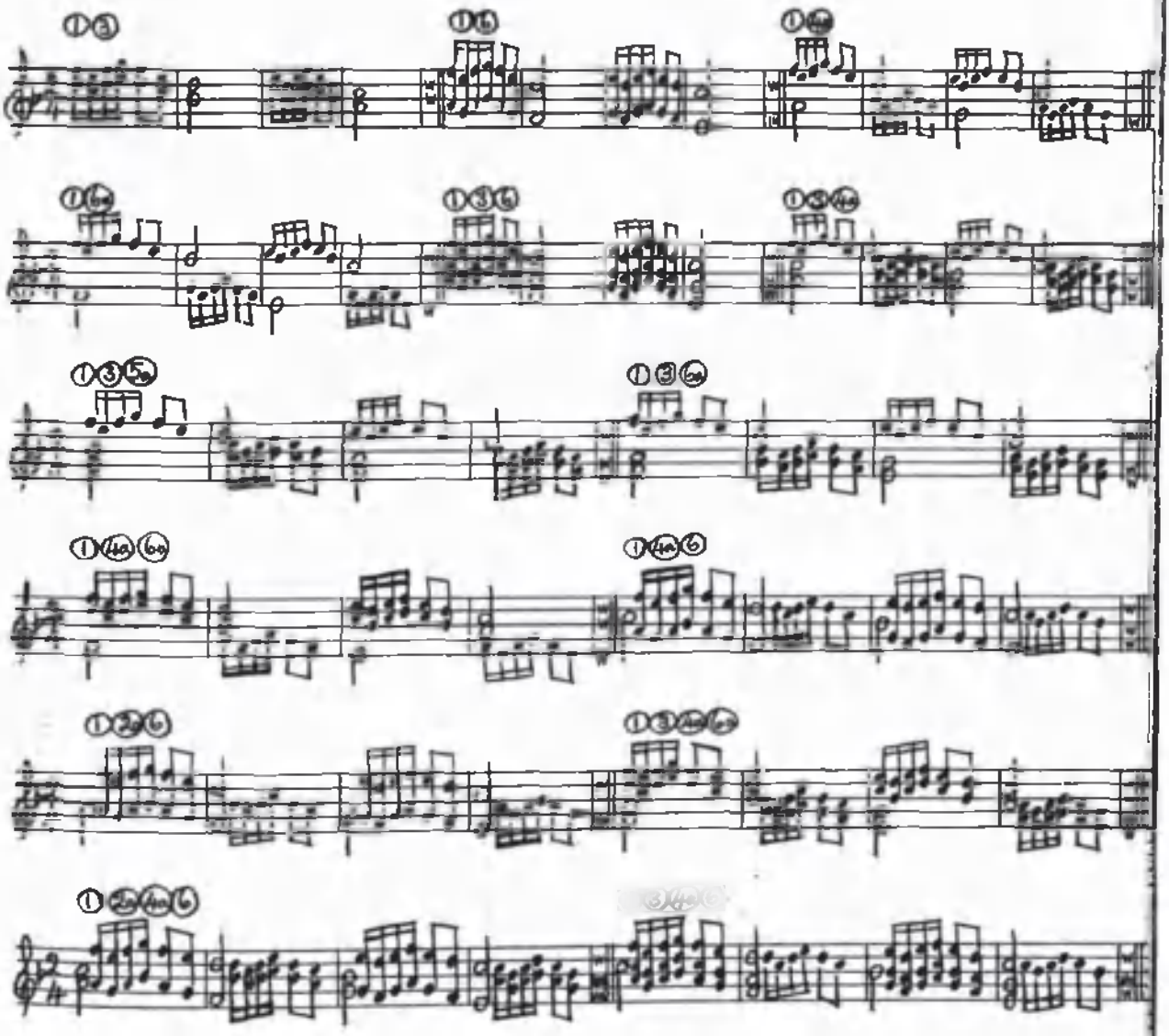

B B S
S B S
B S B
B S S
S S B S
B S B S
S S B S
B S S B
B S S S
S B B S

Equal Voices

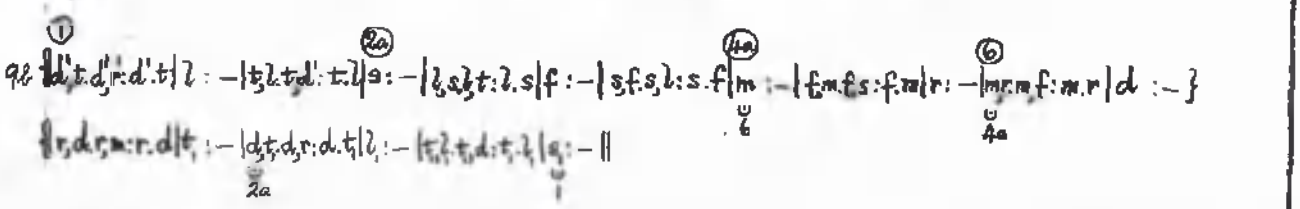
Key F

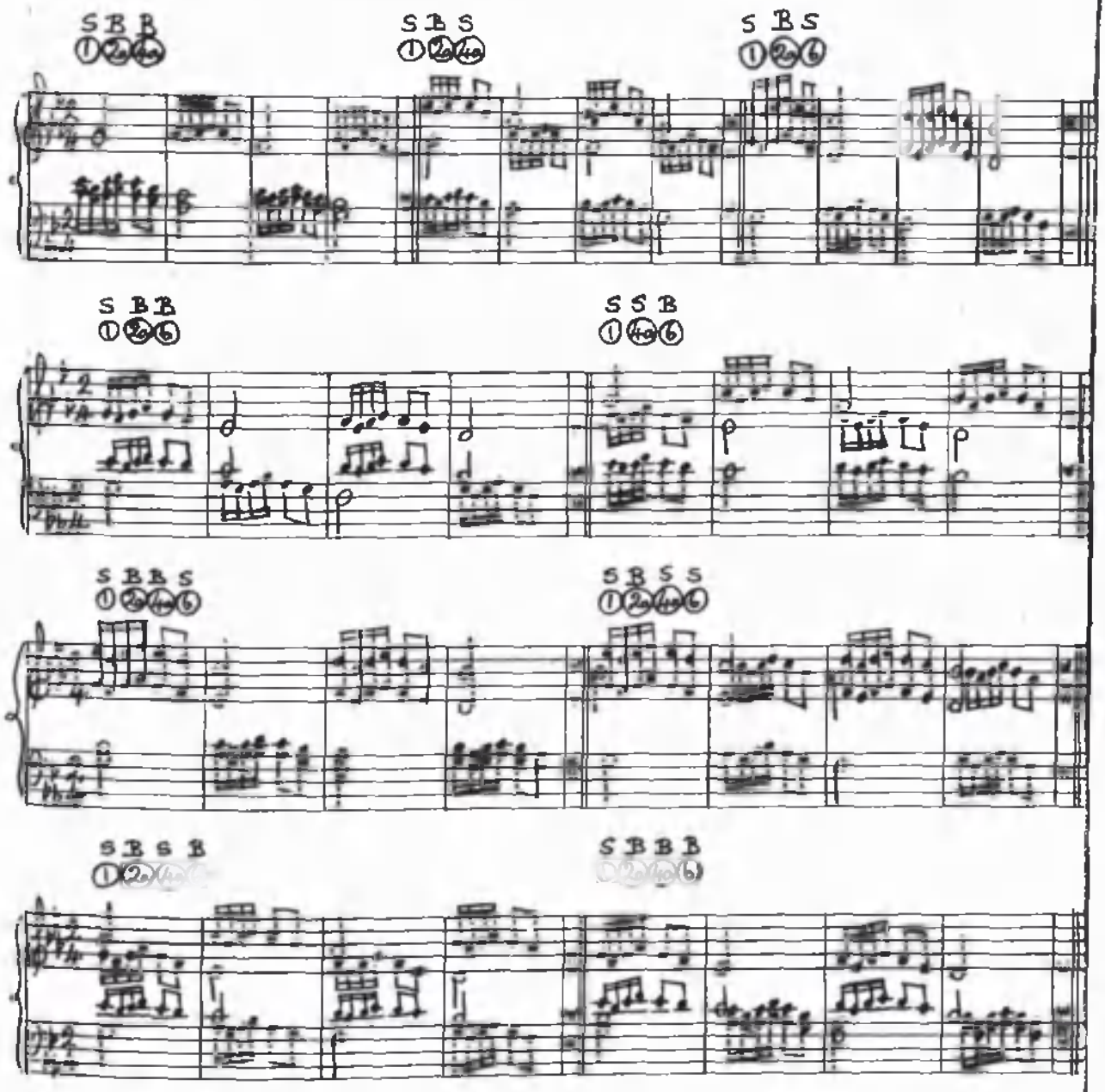




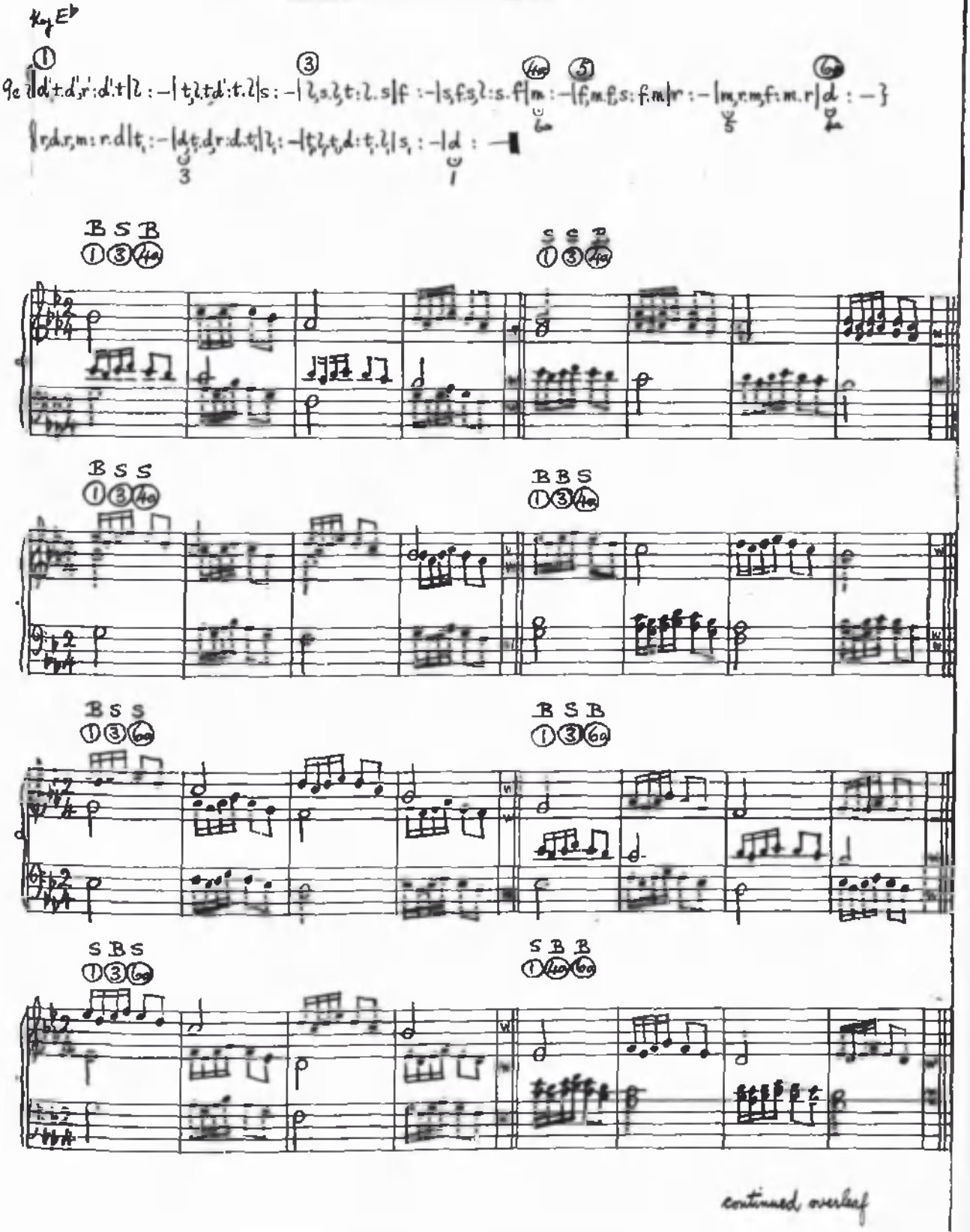
Mixed Voices Three and Four Part

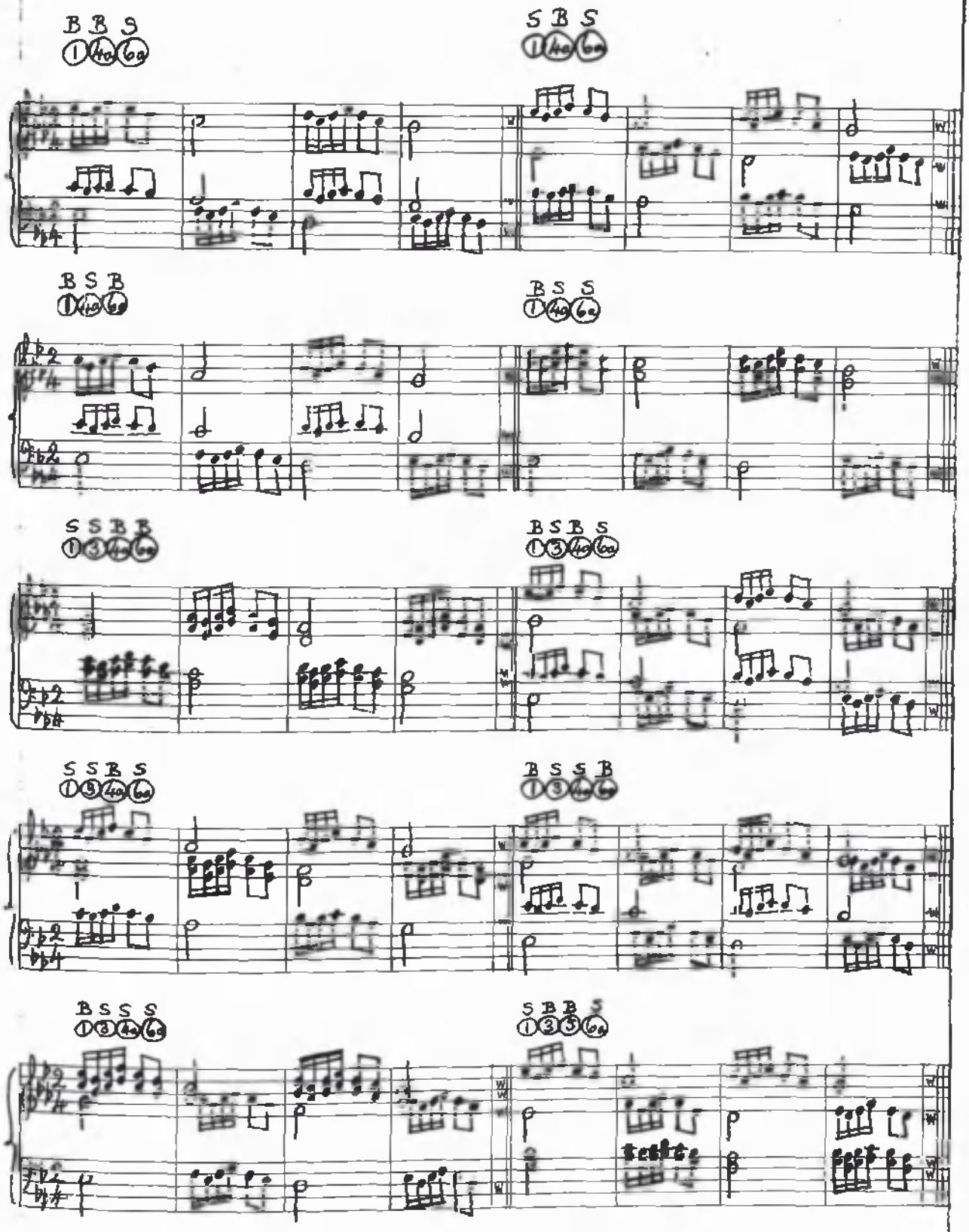
Key Eb





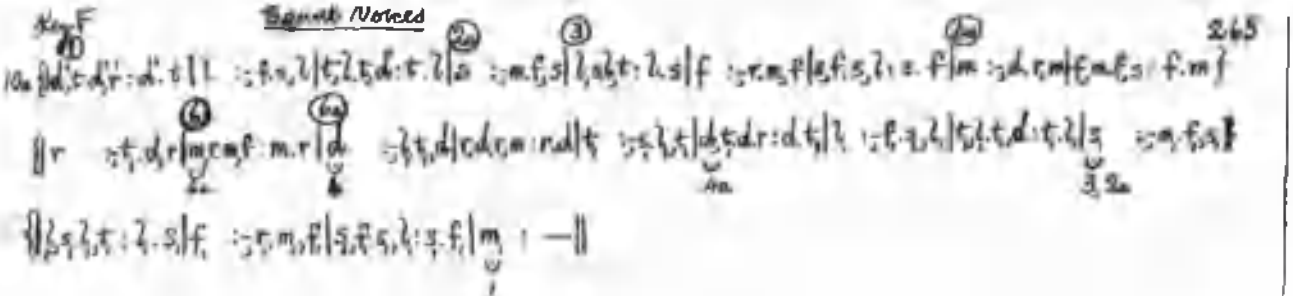
Mixed Voices Three and Four Part

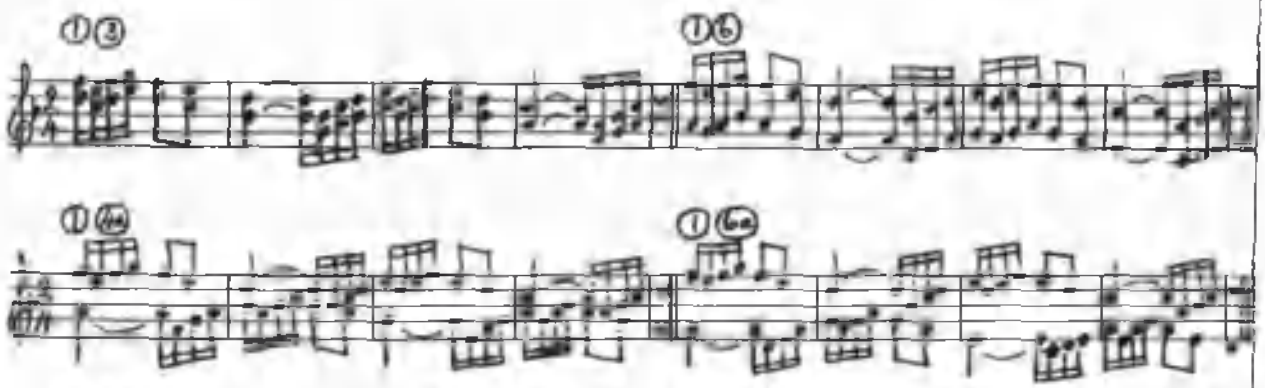


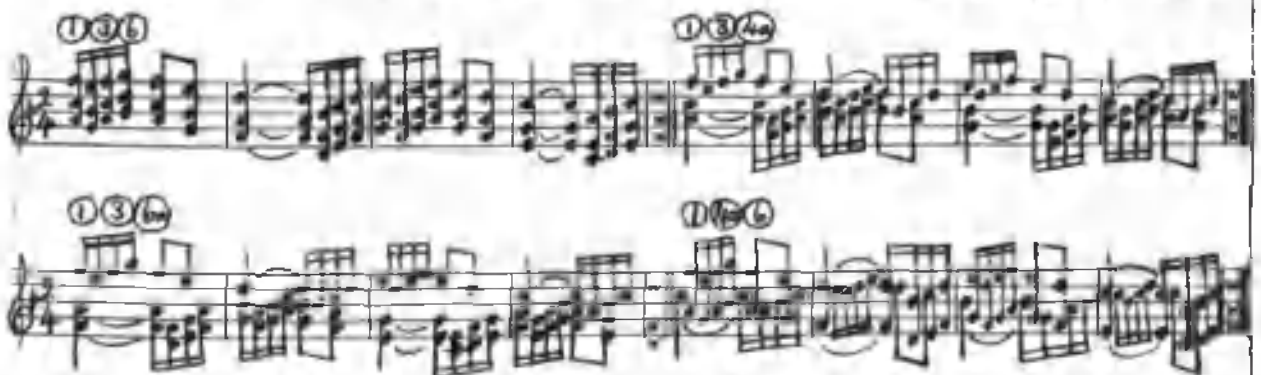

B B S
S B S
B S B
B S S
S S B B
B S B S
S S B S
B S S B
B S S S
S B B S

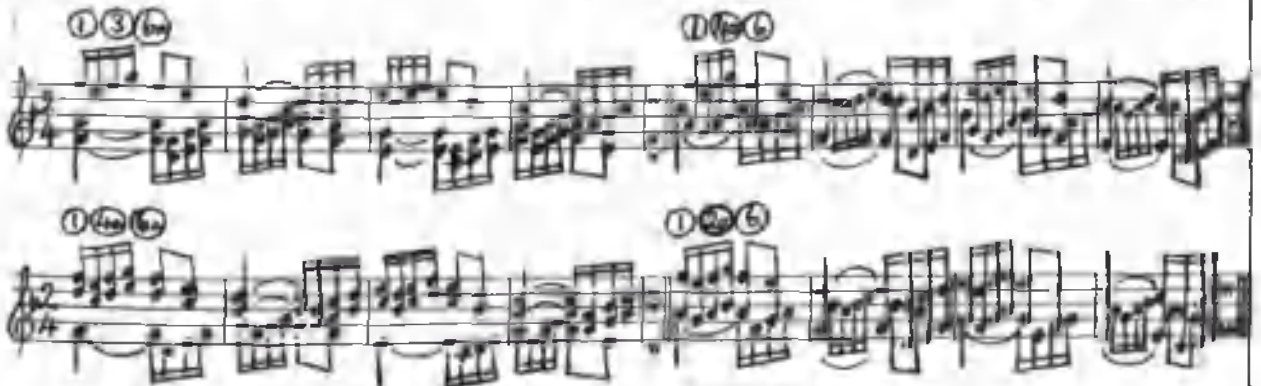
Key F

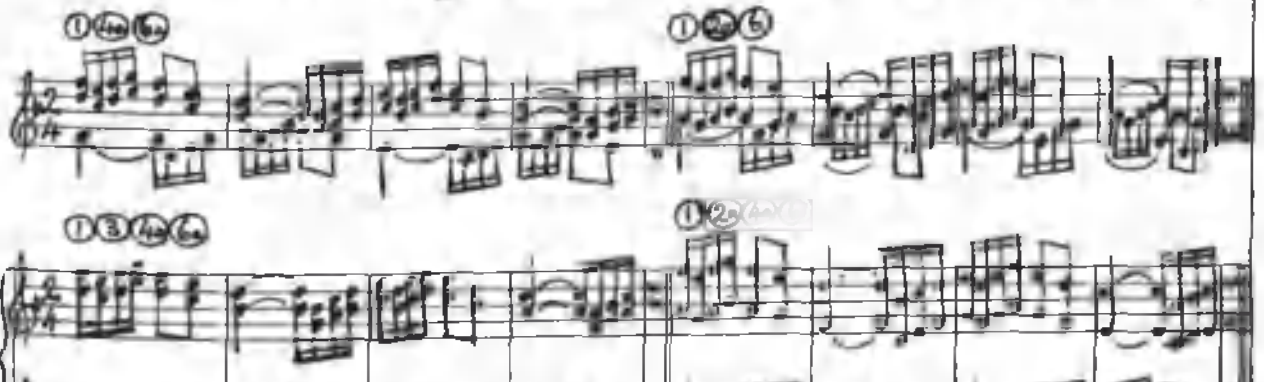
Eight Voices

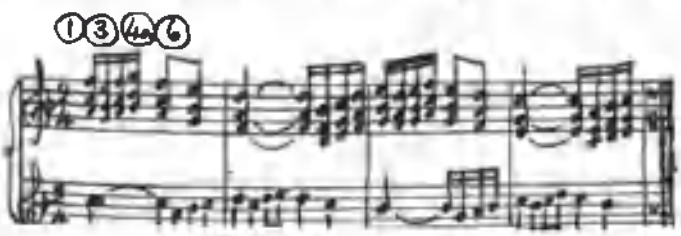






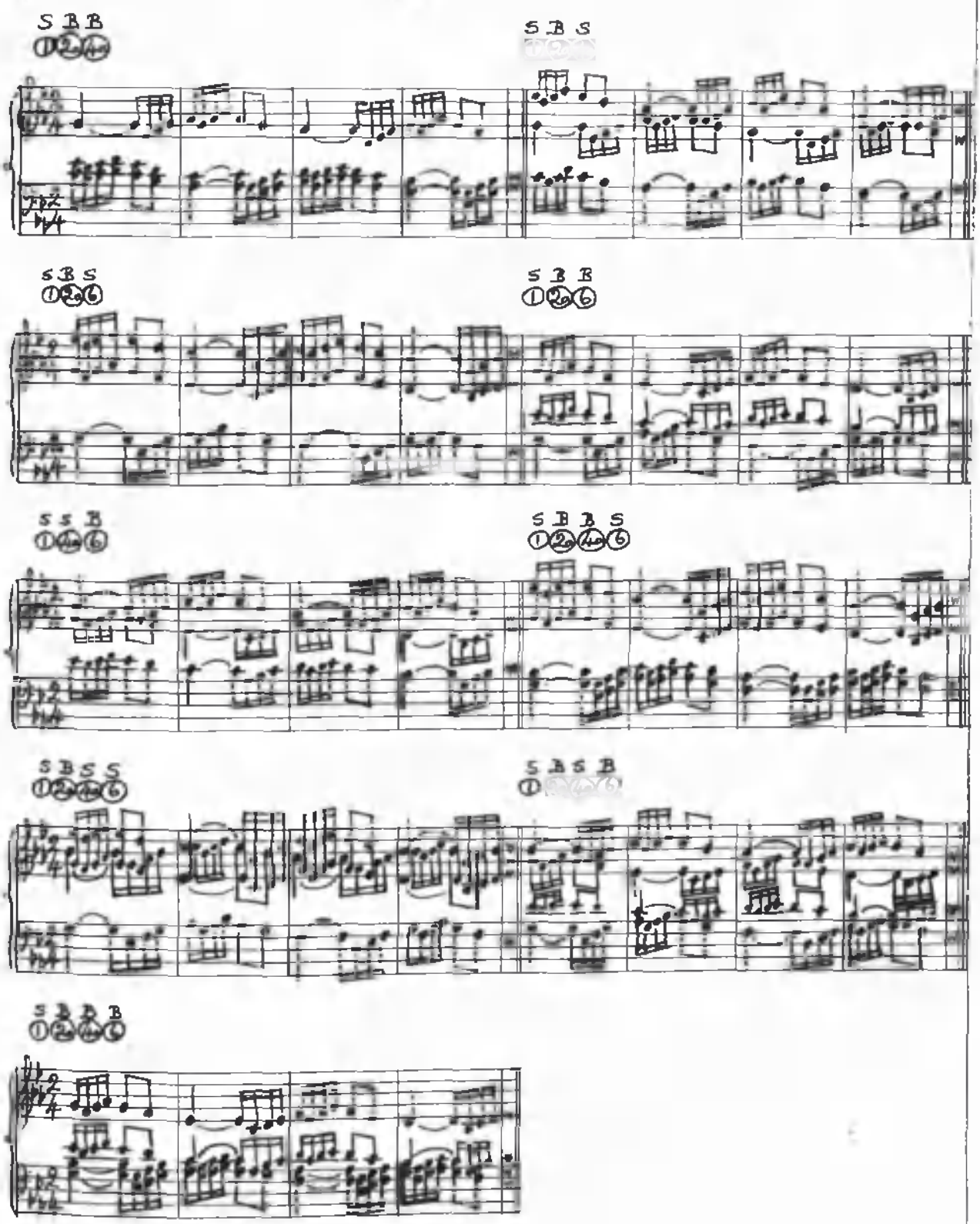




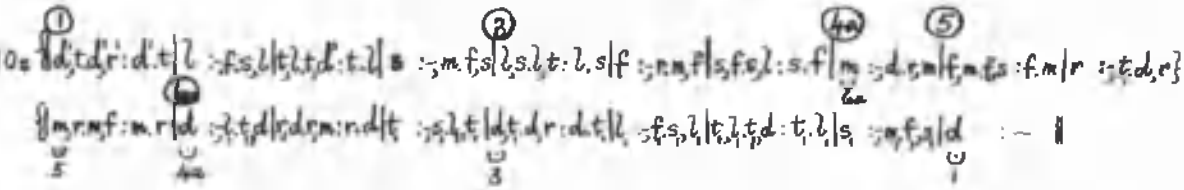


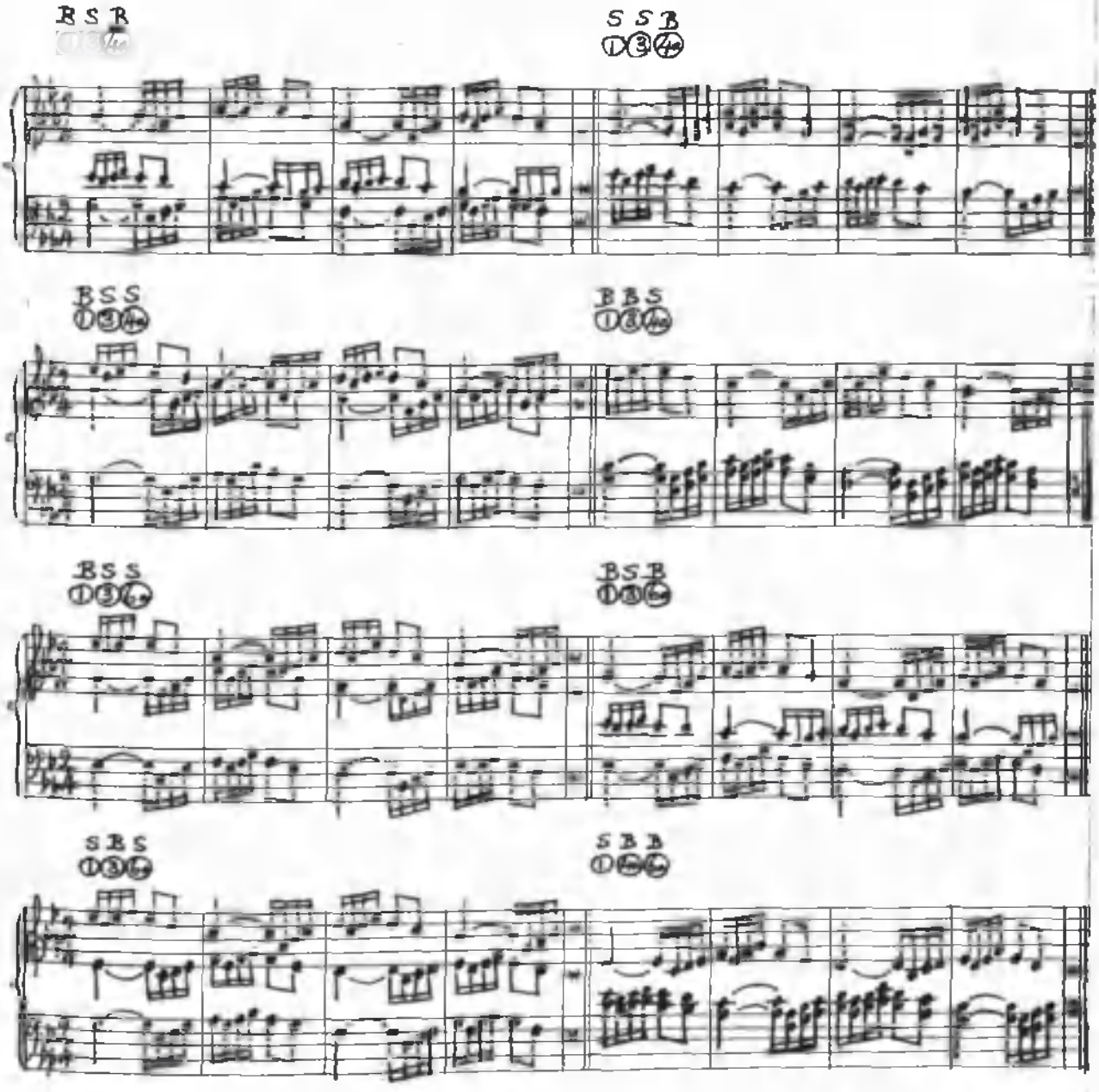
Key E♭ Maxim Nonces

10b



Key E♭ — Mixed Voices — Three and Four Part





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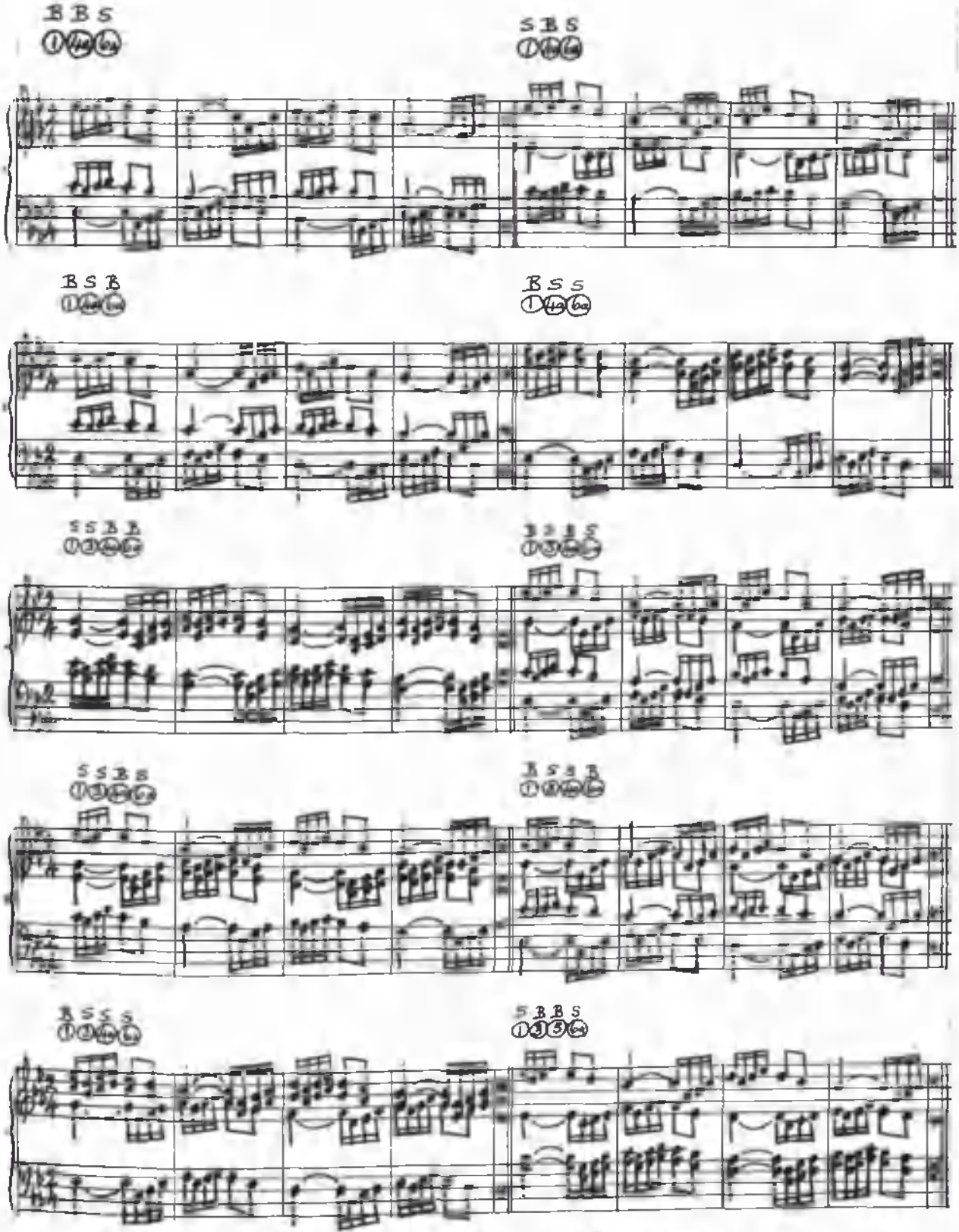


Note the progressive articulation of the plain basic sequence {1d:-1t:-1s:-3 from which we started.

Key F

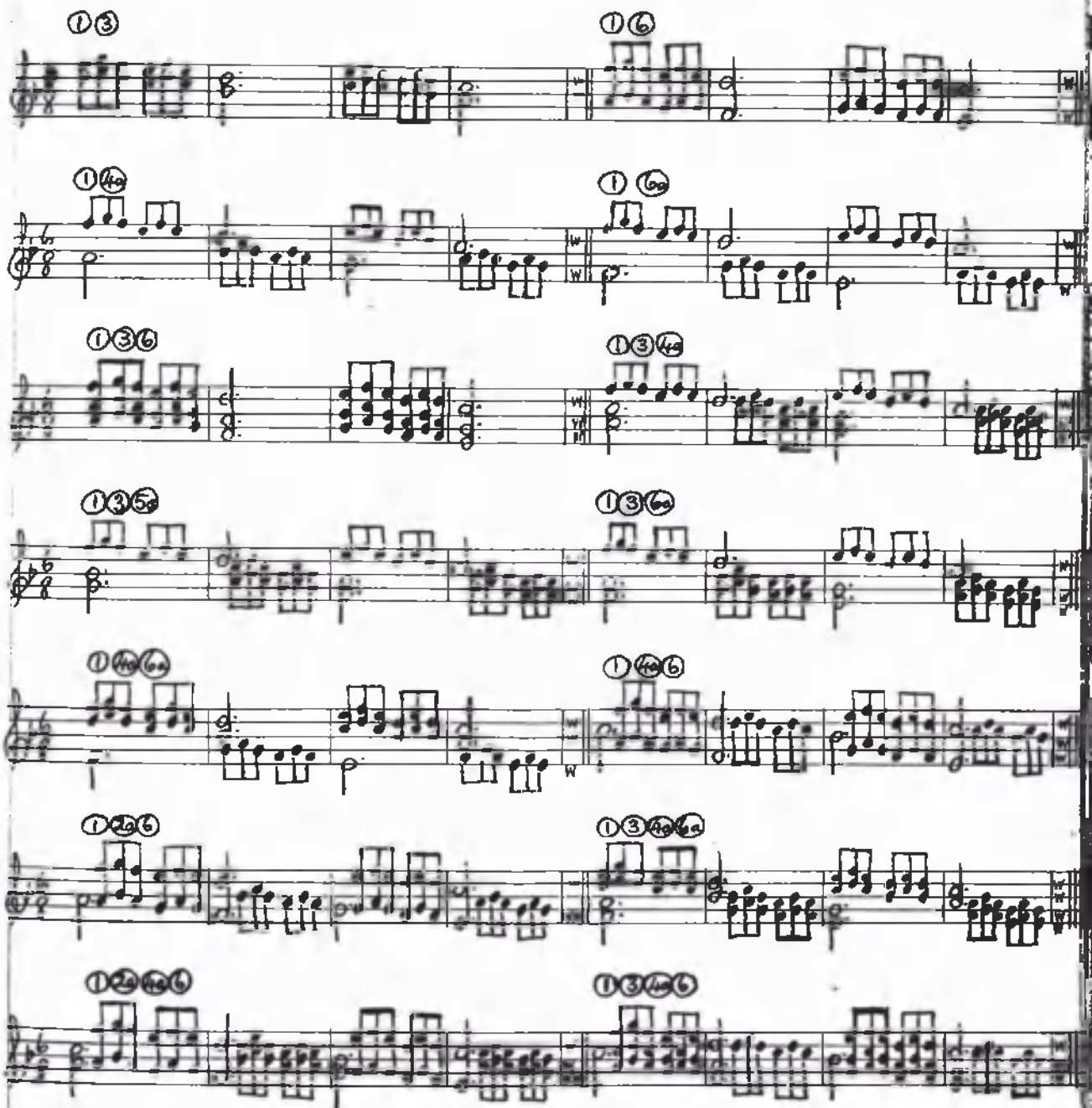
Equal Notes

11a ‖ ① d₁r₁d' : t₁d₁t₁ | l : – | t₁d₁t₁ : l₁t₁l₁ | ② s : – | ③ l₁t₁l₁ : s₁l₁s₁ | f : – | s₁l₁s₁ : f₁s₁f₁ | ④a m : – | f₁s₁f₁ : m₁f₁m₁ | ⑤a r : – | ⑥ m₁f₁m₁ : r₁m₁r₁ | ⑥a d : – | r₁m₁r₁ : d₁r₁d₁ | t₁ : – ‖

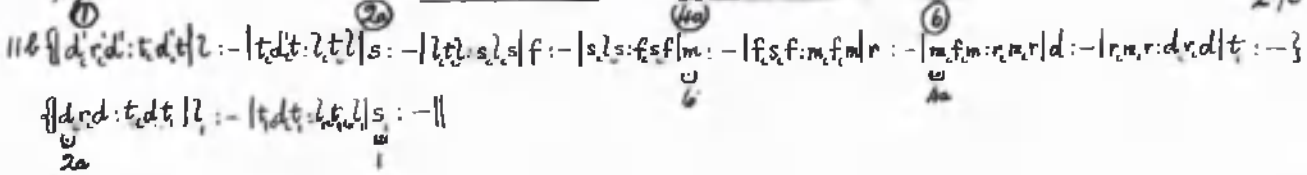
6a 6,5a

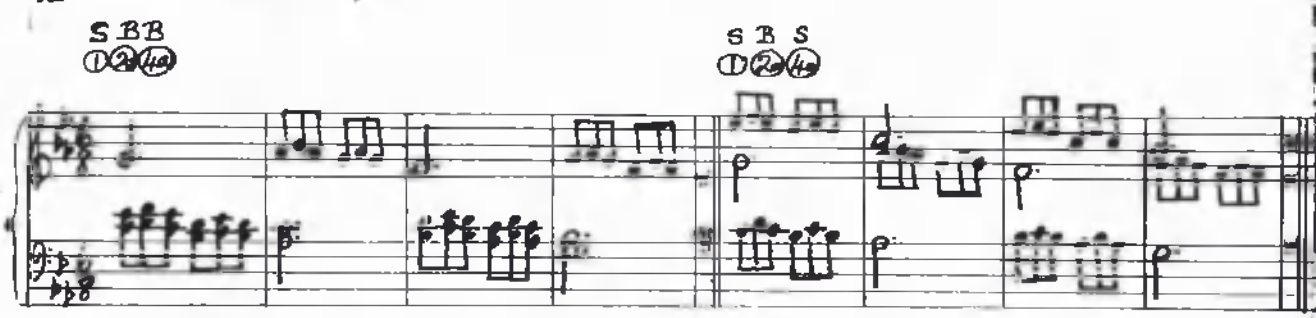
‖ d₁r₁d : t₁d₁t₁ | l₁ : – | t₁d₁t₁ : l₁t₁l₁ | s₁ : – | l₁t₁l₁ : s₁l₁s₁ | f₁ : – | s₁l₁s₁ : f₁s₁f₁ | m₁ : – ‖

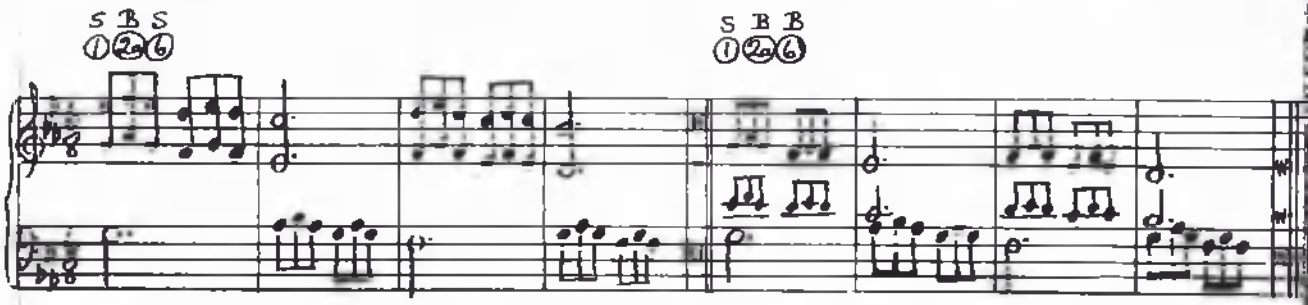
4a 3,2a 1

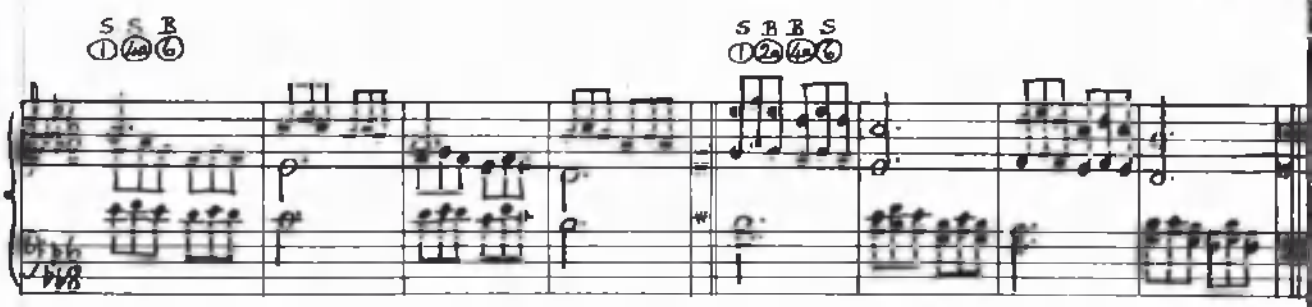


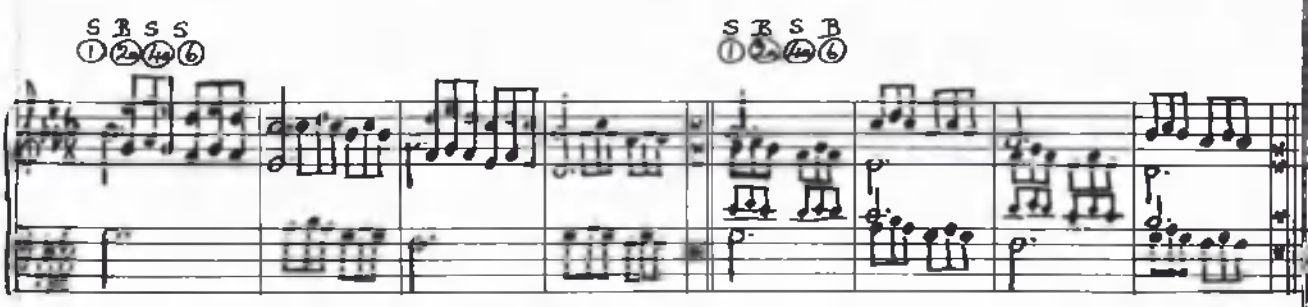
Key E♭ (1) — Mixed Voices — Three and Four Part

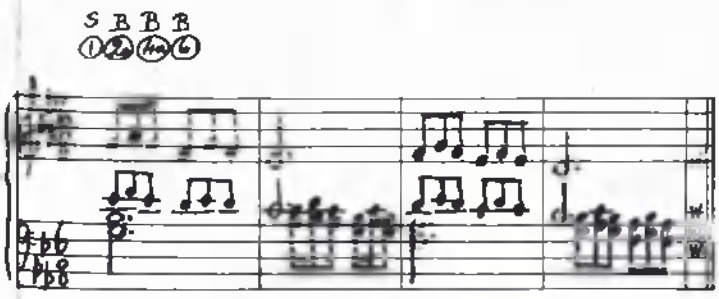






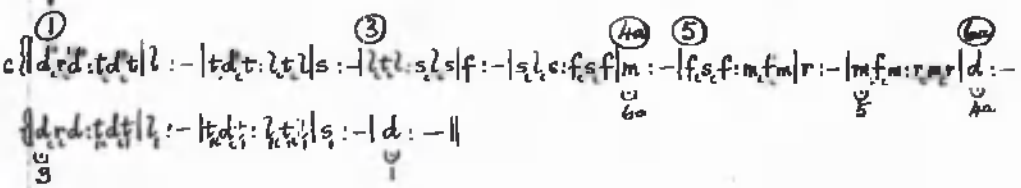


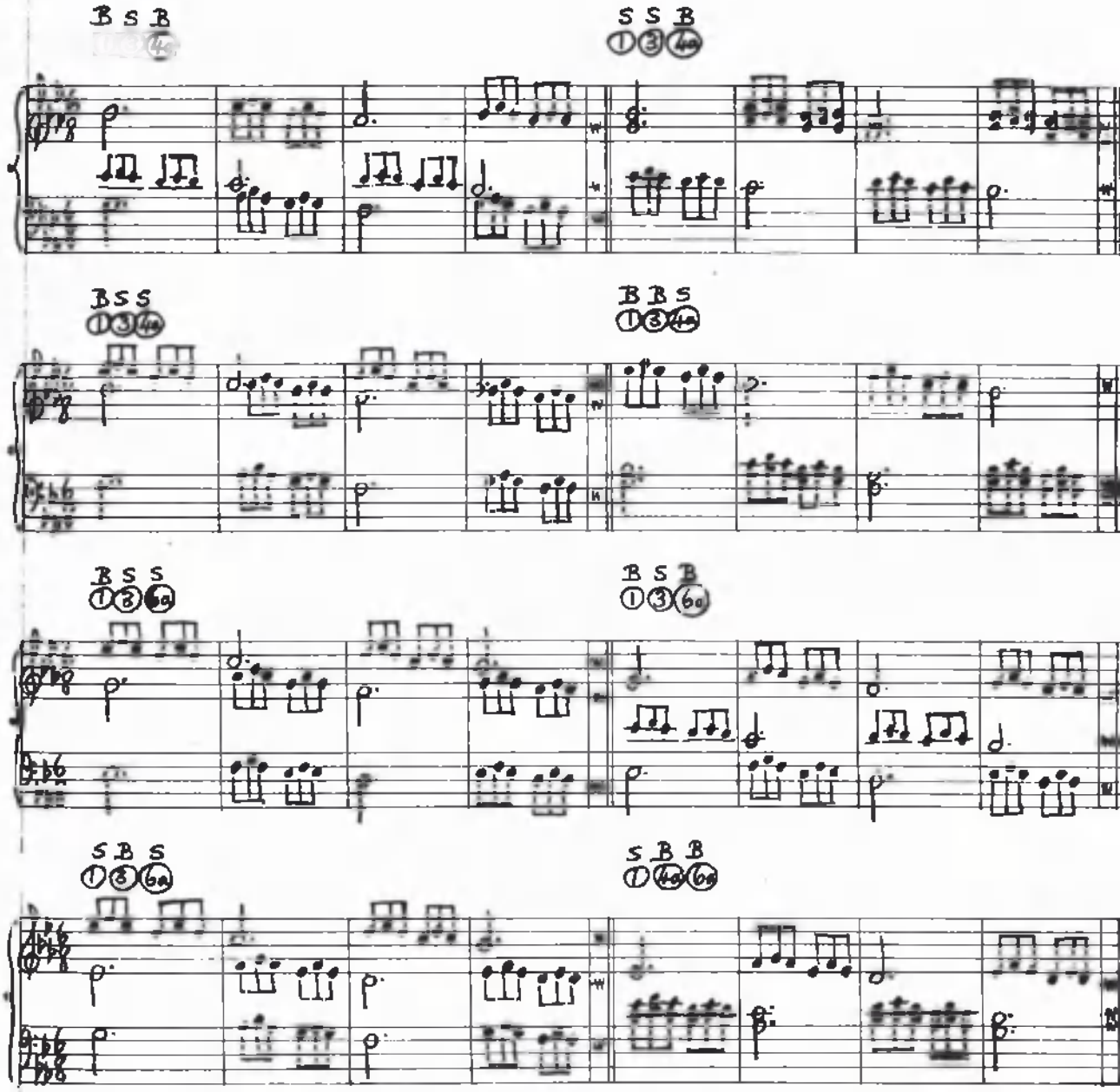




Mixed Voices Three and Four Part

Key E♭





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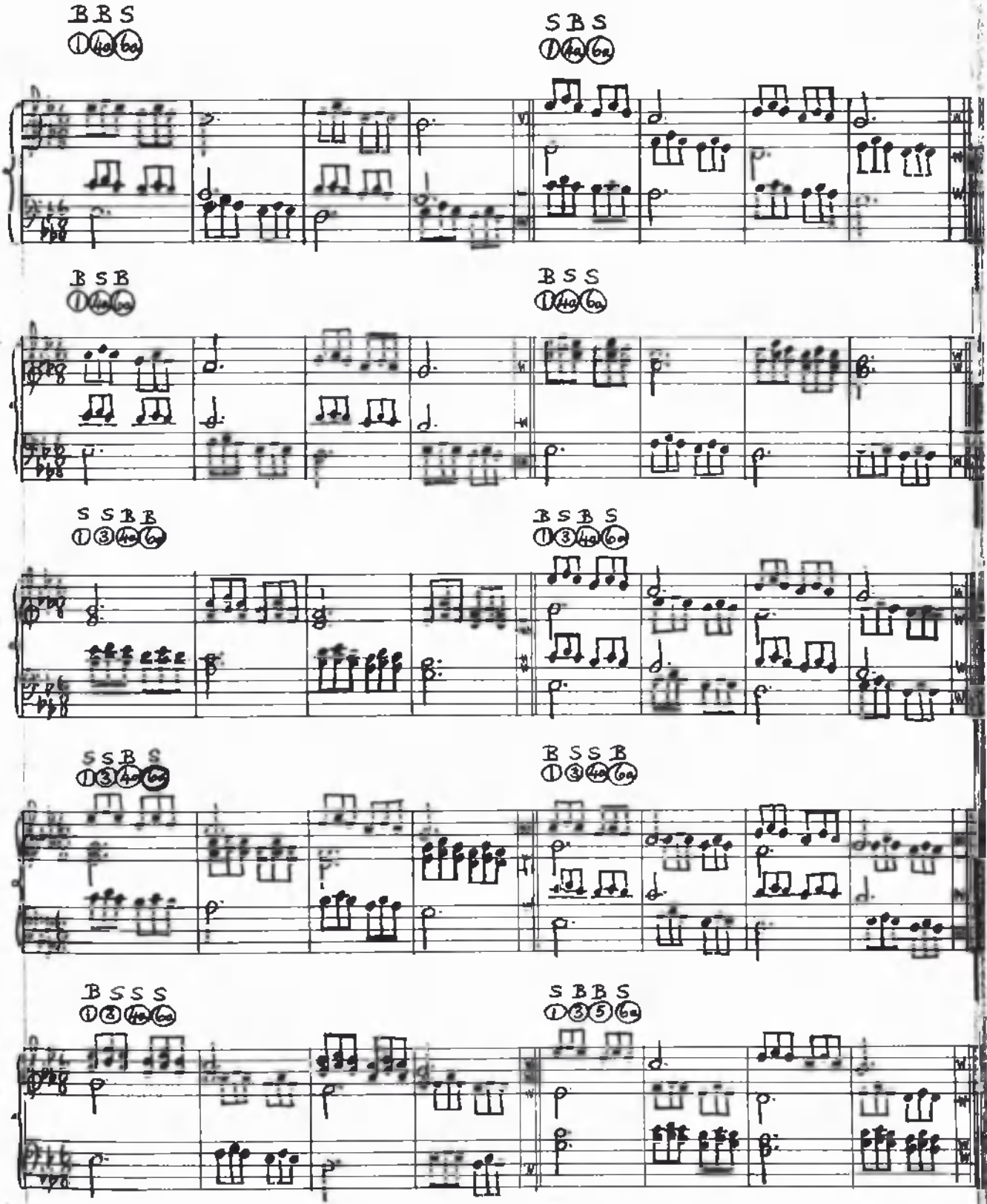
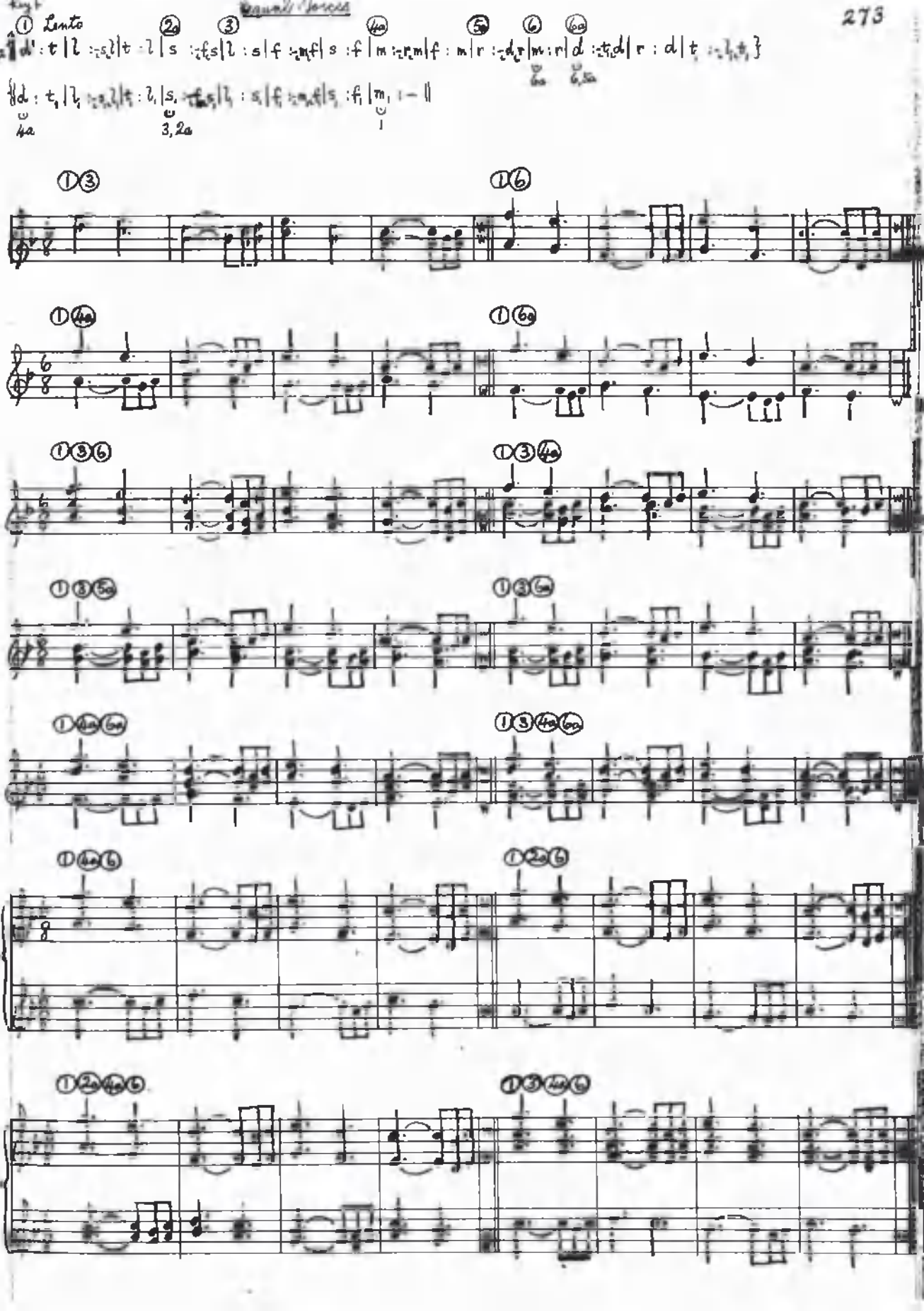
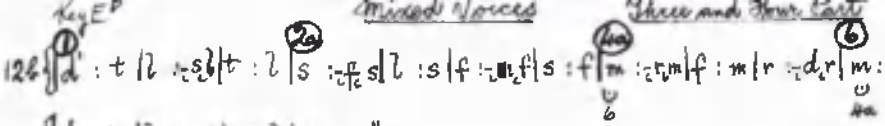
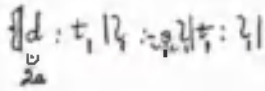

B B S
1 4a 6a
S B S
1 4a 6a
B S B
1 4a 6a
B S S
1 4a 6a
S S B B
1 3 4a 6a
B S B S
1 3 4a 6a
S S B S
1 3 4a 6a
B S S B
1 3 4a 6a
B S S S
1 3 4a 6a
S B B S
1 3 5 6a


Equall Voices
① Lento
12a
4a
3,2a
1
①③
①⑥
①④a
①⑥a
①③⑥
①③④a
①③⑤a
①③⑥a
①④a⑥a
①③④a⑥a
①④a⑤
①2a⑤
①2a④a⑤
①③④a⑤

Key E♭ Mixed Voices Three and Four Part





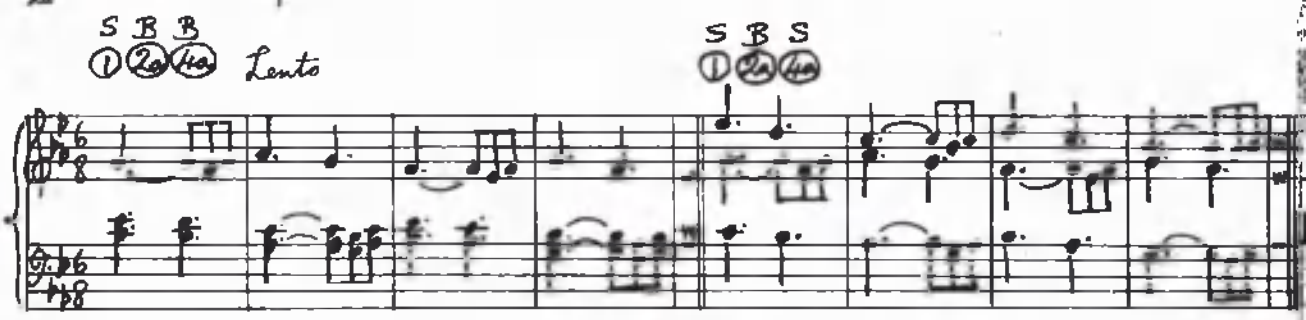
126 {| ① d : t | l : s | t : l | ② s : f | s | l : s | f : m | f | s : f | ④ m : t | m | f : m | r : d | r | ⑥ m : r | d : t | d | r : d | t : l | t |}

{| d : t | l : s | l | t : l | s : - ||}

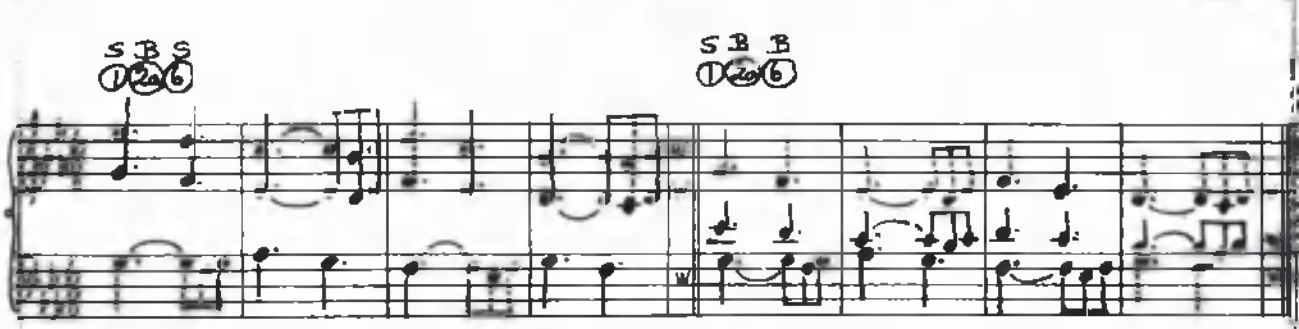
S B B
① ② ④ Lento

S B S
① ② ④

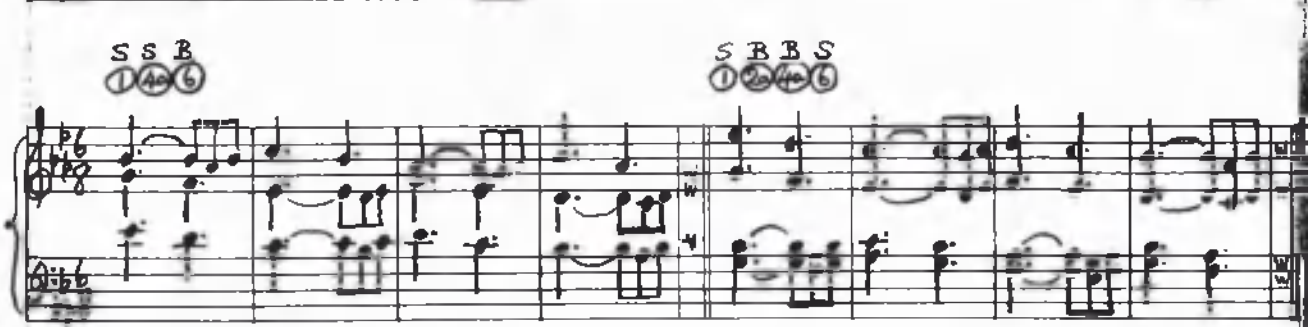
S B S
① ② ⑥



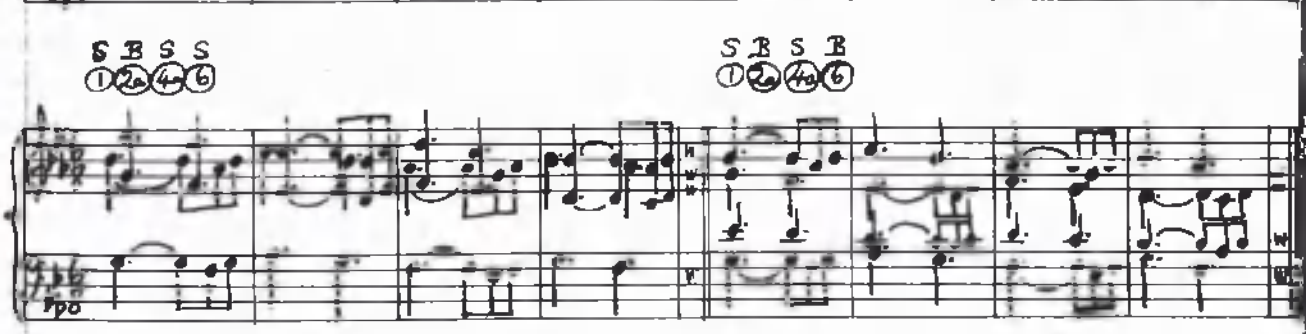
S B B
① ② ⑥



S S B
① ④ ⑥

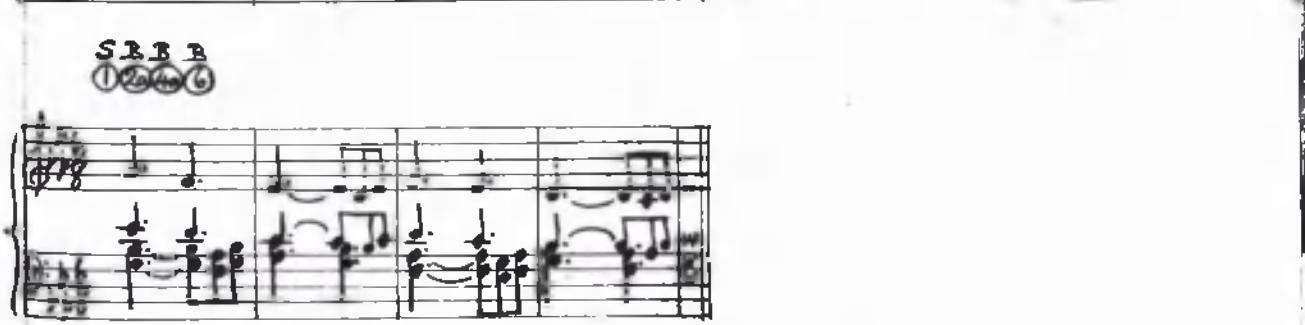


S B B S
① ② ④ ⑥



S B S S
① ② ④ ⑥

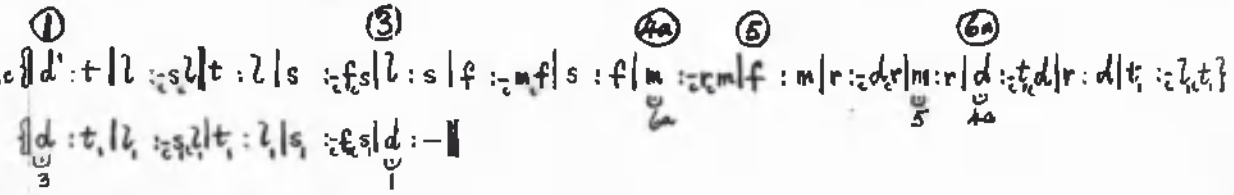
S B S B
① ② ④ ⑥

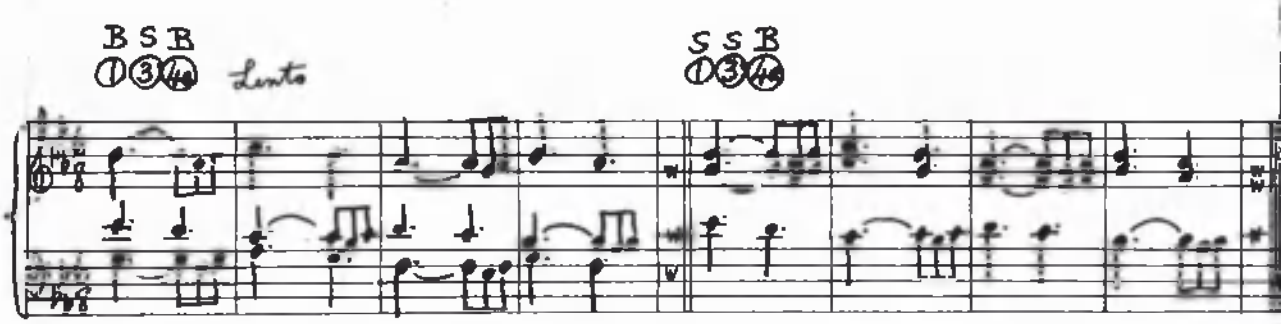


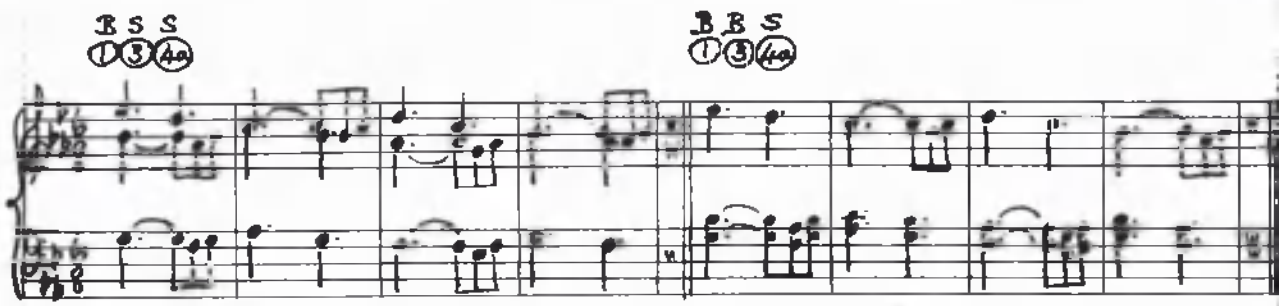
S B B B
① ② ④ ⑥

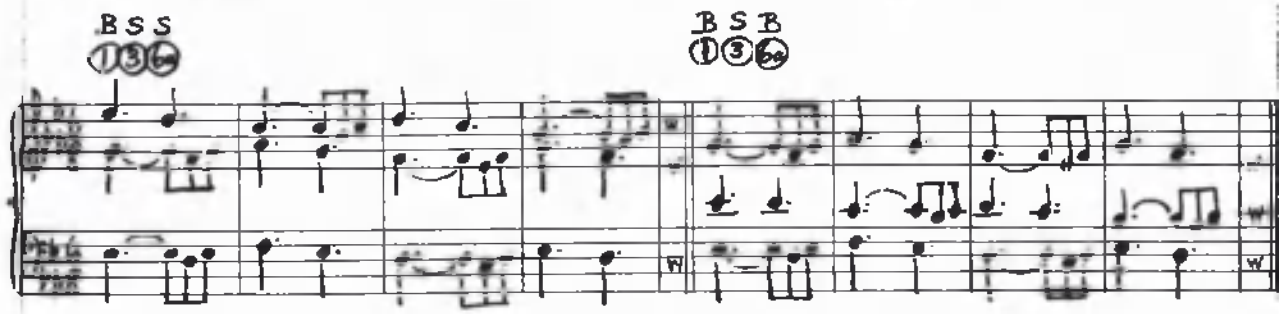
Mixed Voices Three and Four Part

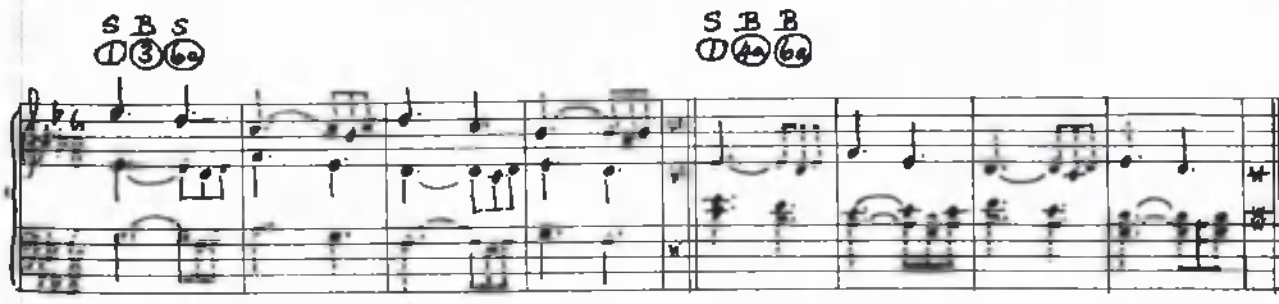
Key E♭











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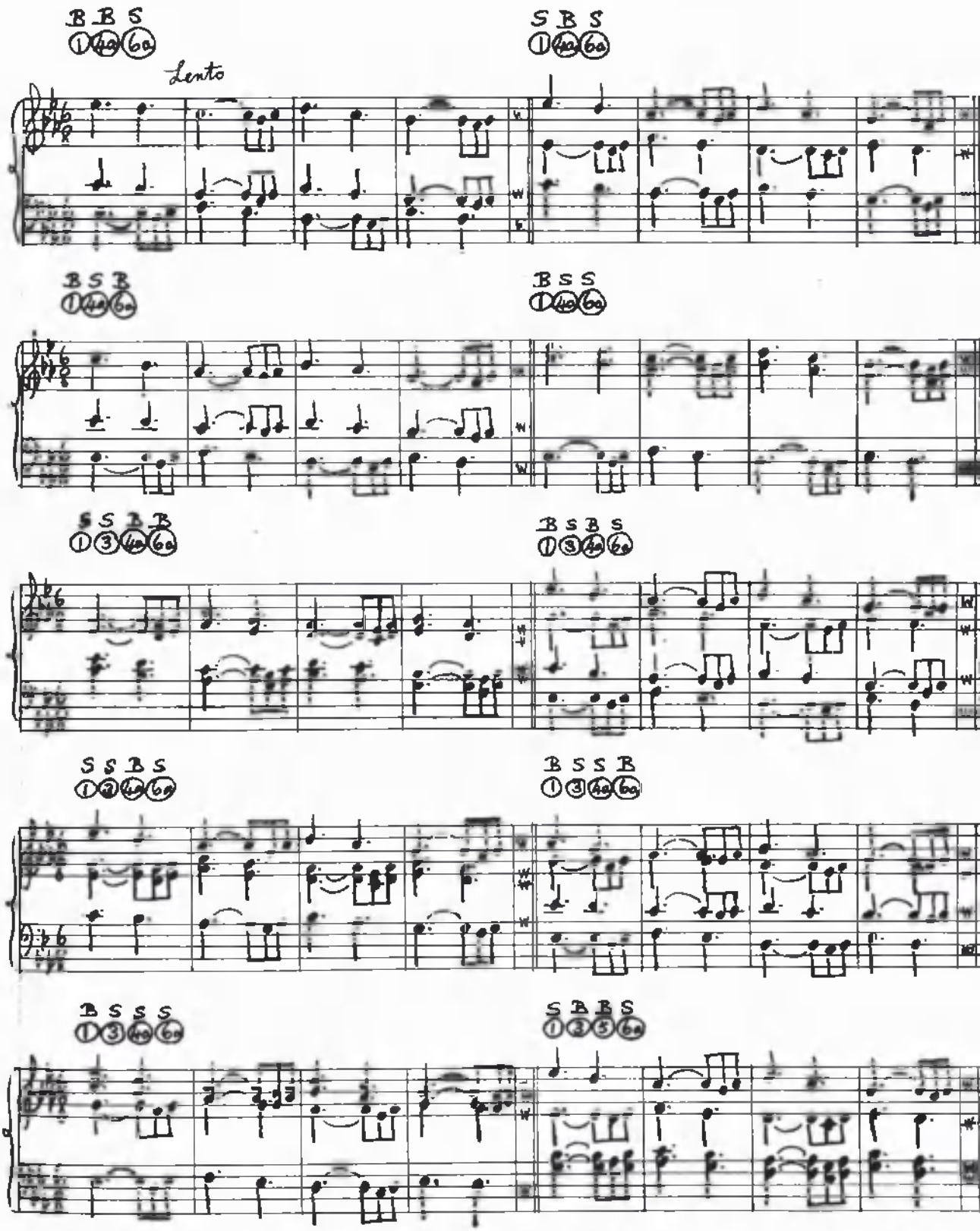
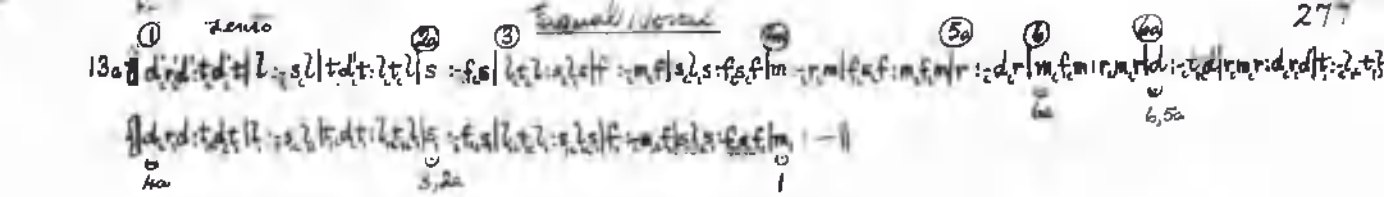
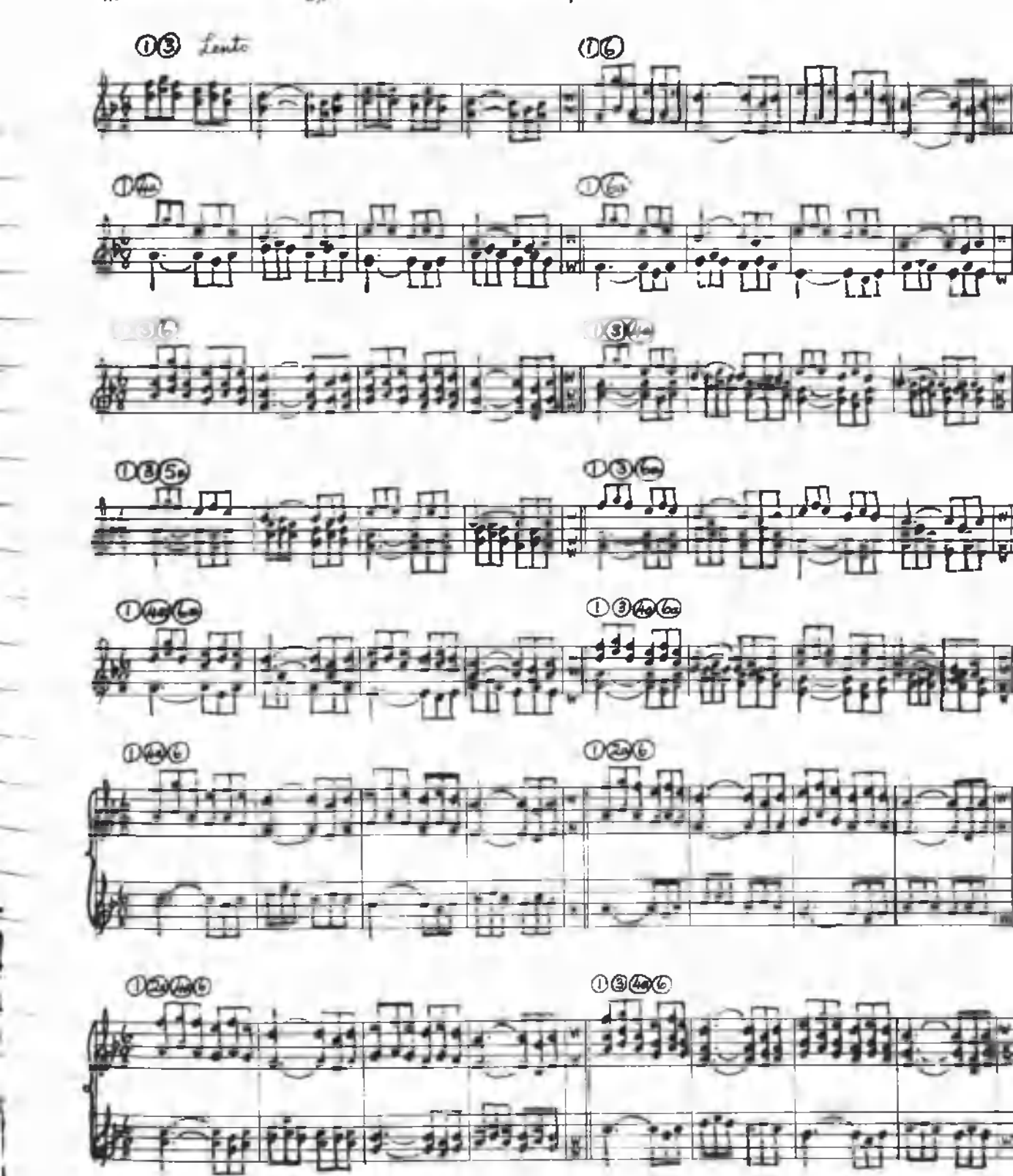


N.B. In Canons 12a, b and c, the close "consecutives" in some of the parts may be pardoned for the sake of the practice in part singing derived from them.


Lento
Espressivo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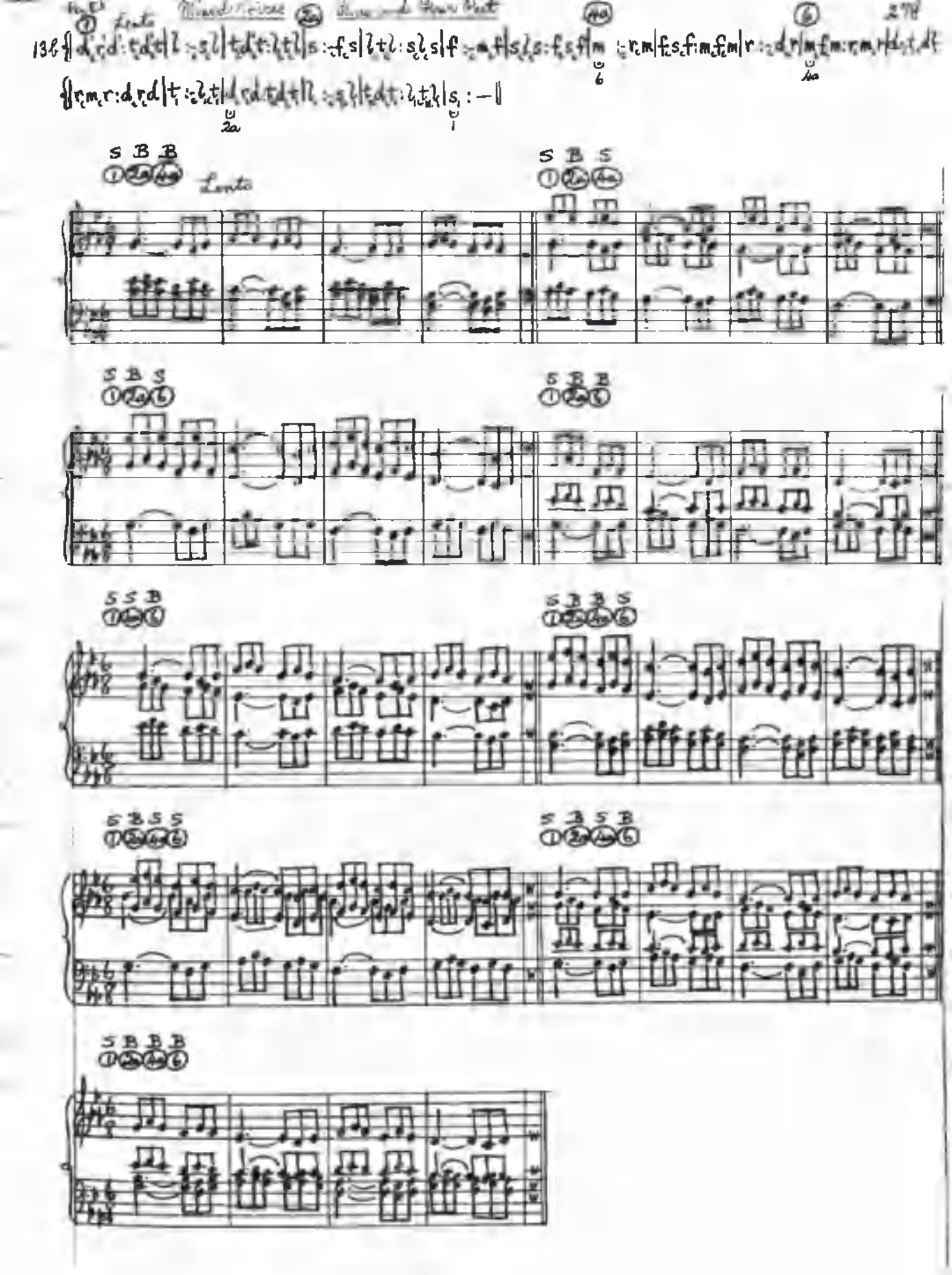
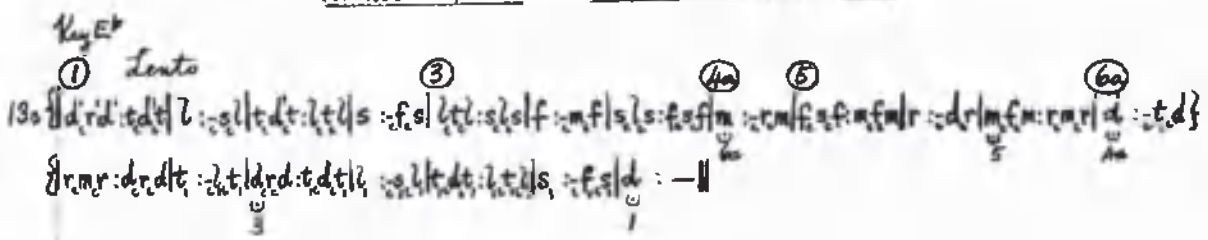
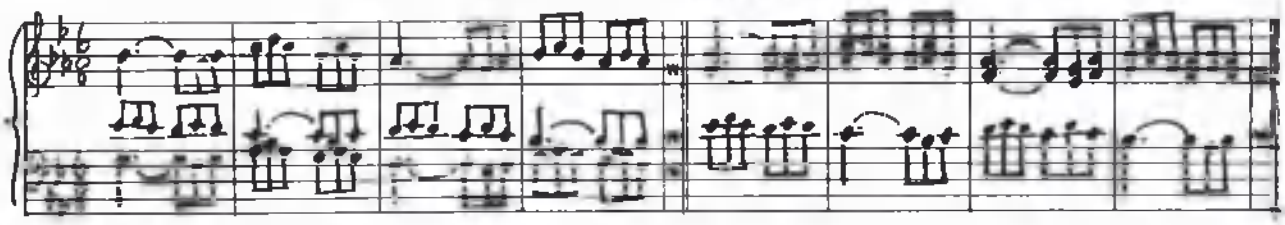

Lento
S B B
S B S
S B S
S B B
S S B
S B B S
S B S S
S B S B
S B B B

Mixed Voices Three and Four Part

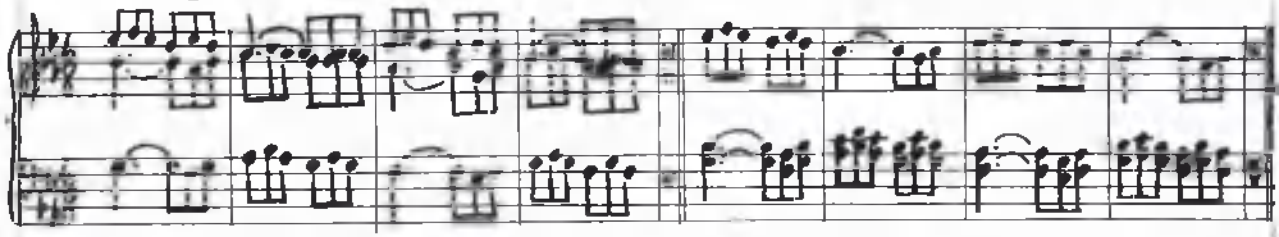


B S B
① ③ 4a Lento



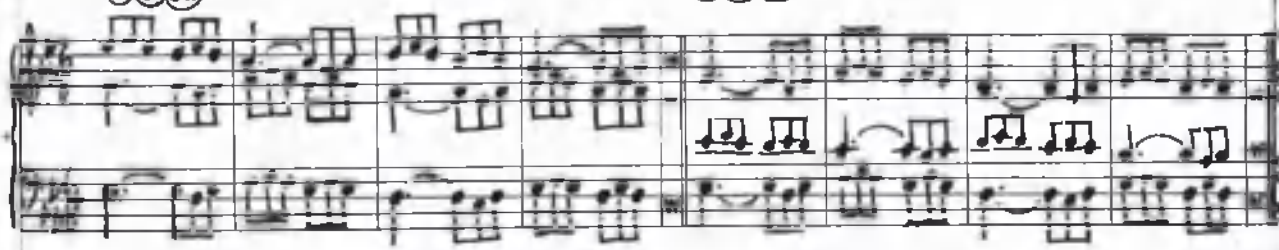
S S B
① ③ 4a

B S S
① ③ 4a



B B S
① ③ 4a

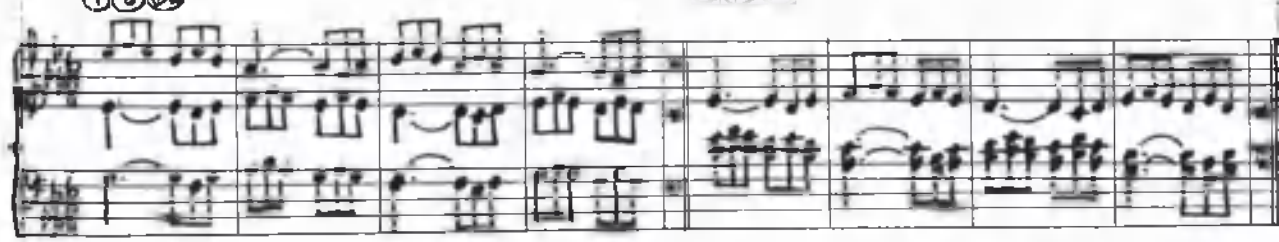
B S S
① ③ 6a



B S B
① ③ 6a

S B S
① ③ 6a

S B B
① 4a



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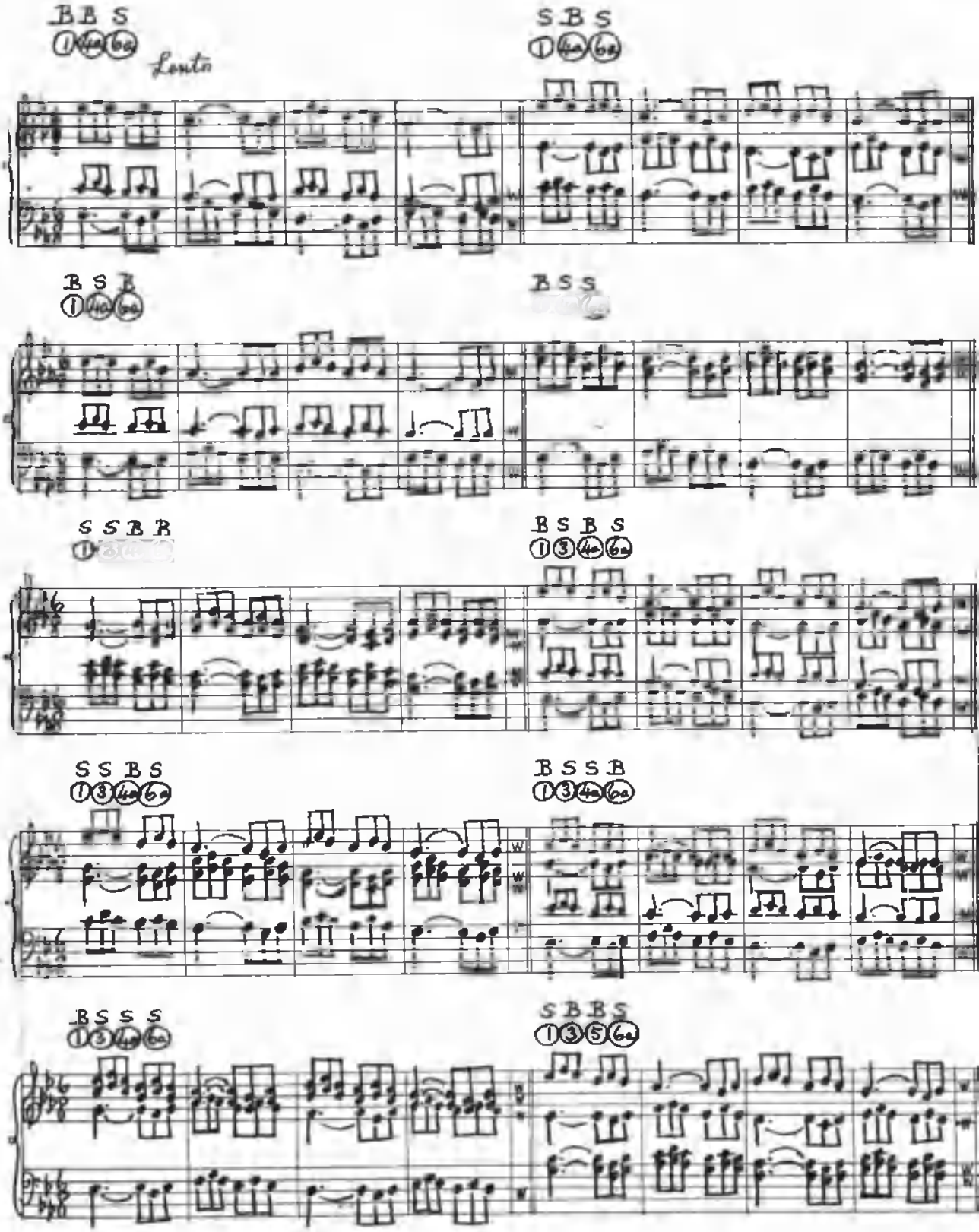

B B S
S B S
Lento
B S B
B S S
S S B B
B S B S
S S B S
B S S S
B S S S B
S B B S

CHAPTER XIV

CANONS BASED ON A SEQUENCE OF DESCENDING THIRDS (CONTD.)

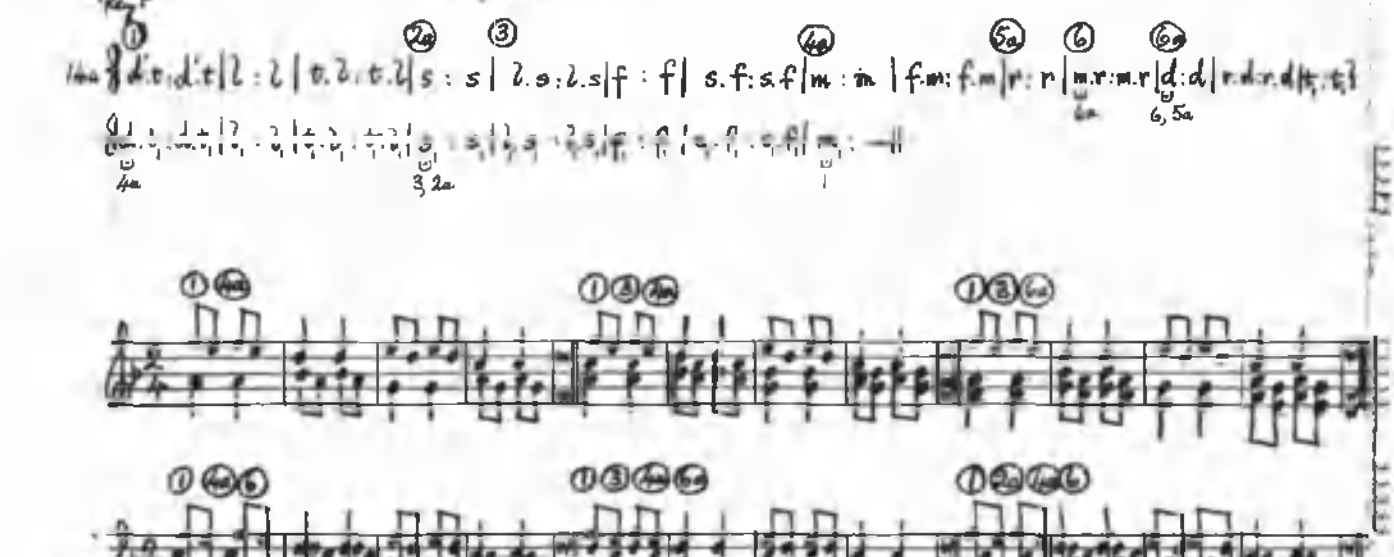
It will be observed that in some of the above canons the discords are somewhat close, especially in the canons for three and four equal voices. These canons should be avoided with beginners. But it may be pointed out that the ability to preserve just intonation and to avoid harsh tone in a context of close discords is a measure of the aural technique of the singers. And so the teacher's aim should be to lead the pupils gradually from the more euphonious canons to the more dissonant ones. The method of approach to these dissonances through canonic singing and through stepwise movement will help the pupils considerably to overcome the natural tendency to shrink before the harsher dissonances.

Many more canons may yet be derived from the basic canonic sequence of descending thirds {|d' :- |l :- |t :- |s :-} etc. We shall append a few in the following pages. It should not be necessary now, however, to give examples in staff notation of each of the 40 or 41* canons that may be sung from each canonic sequence. These may all be inferred from the previous examples given. So we shall content ourselves with writing out each of the canonic sequences in tonic sol-fa notation and adding a few typical examples of the (a), (b) and (c) sets.

* N.B. Where the entry ⑤ₐ does not appear in the tonic sol-fa layout, it may be assumed that the canon ①②⑤ₐ is not practicable with that particular sequence.

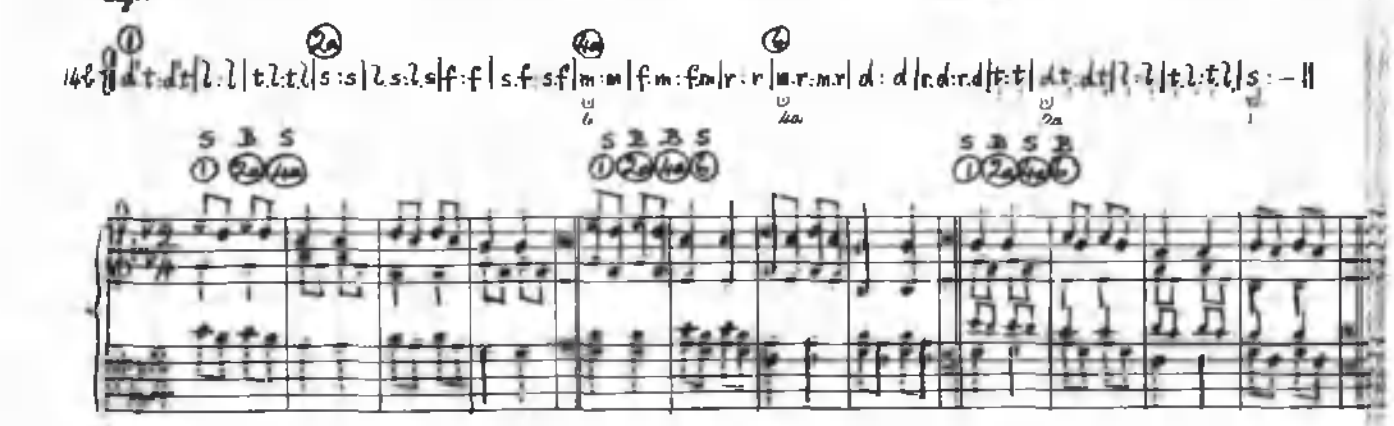
Equal Voices

Key F



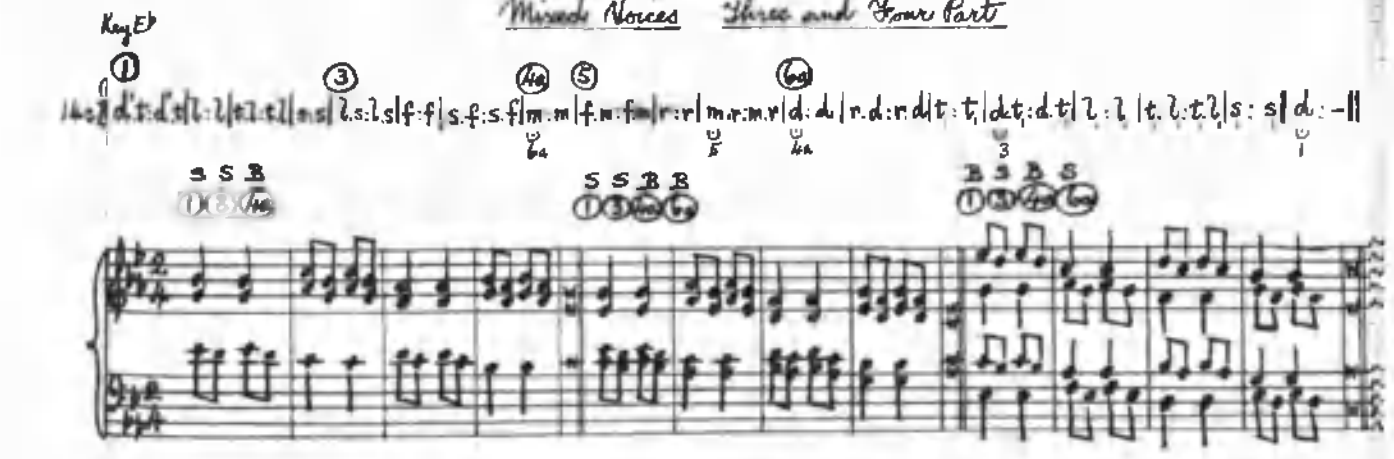
Mixed Voices Three and Four Part

Key E♭



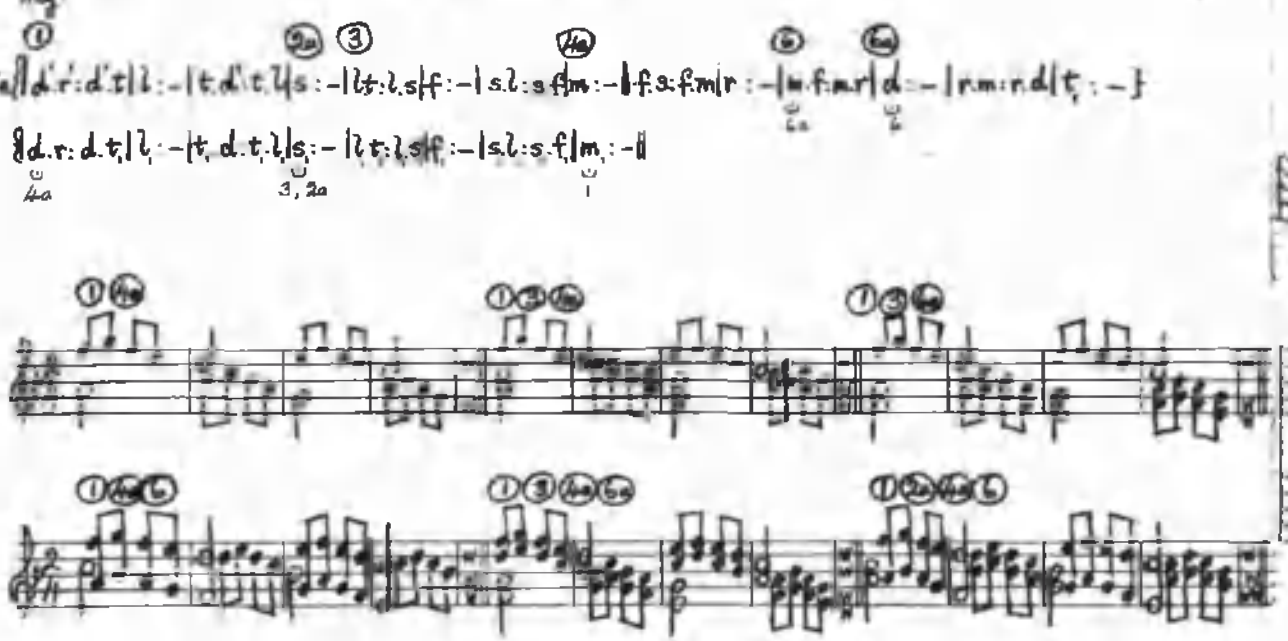
Mixed Voices Three and Four Part

Key E♭



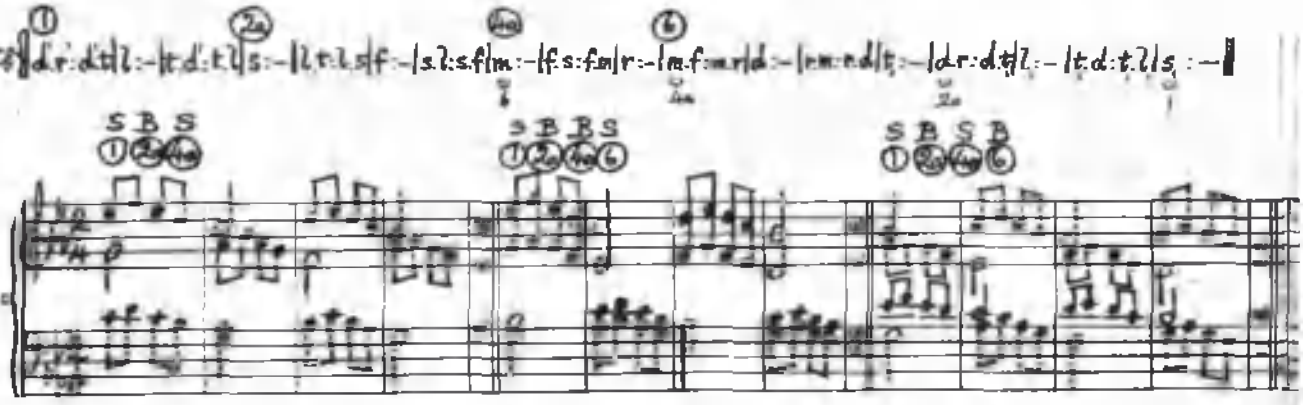
Equal Voices

Key F



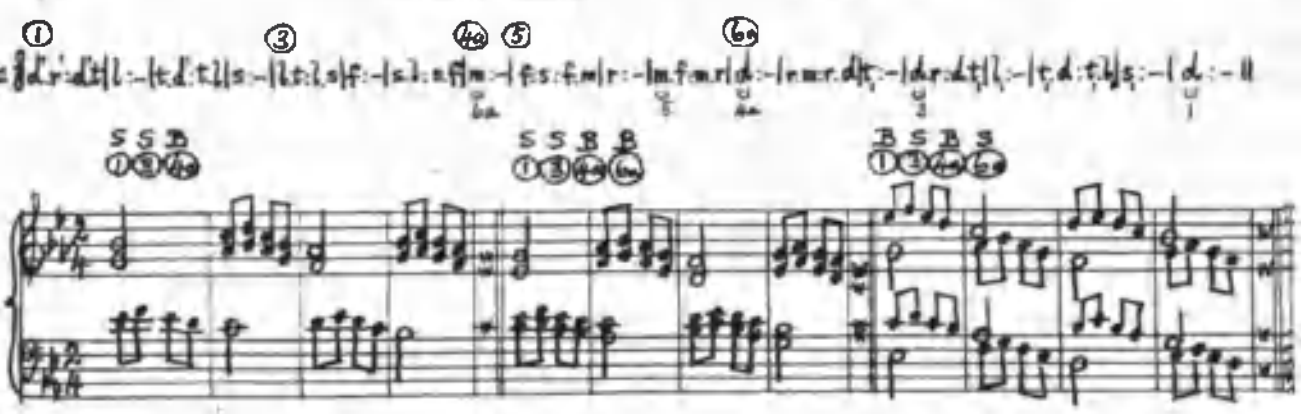
Mixed Voices Three and Four Part

Key E♭

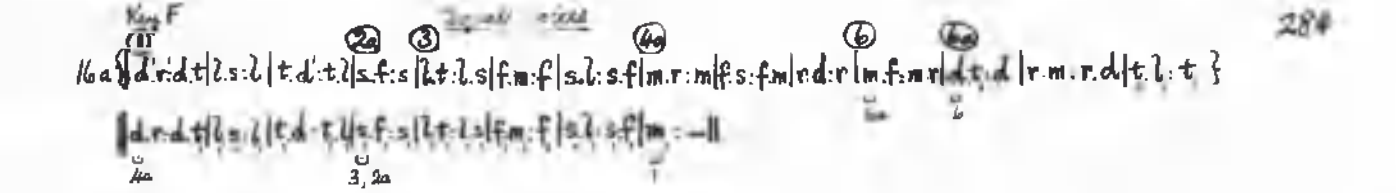


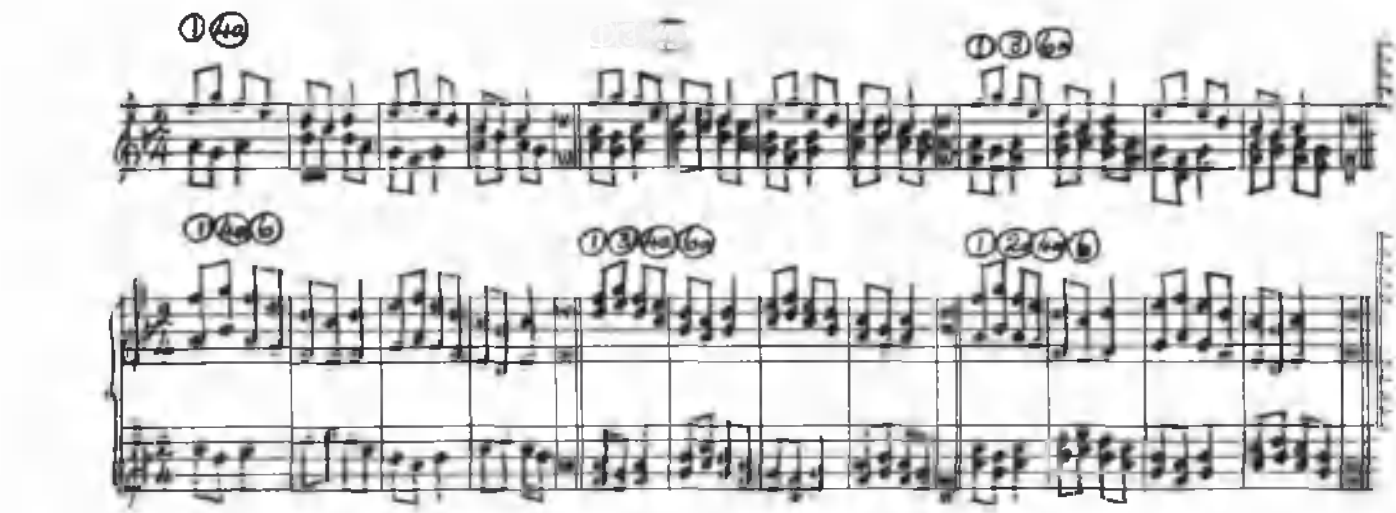
Mixed Voices Three and Four Part

Key E♭



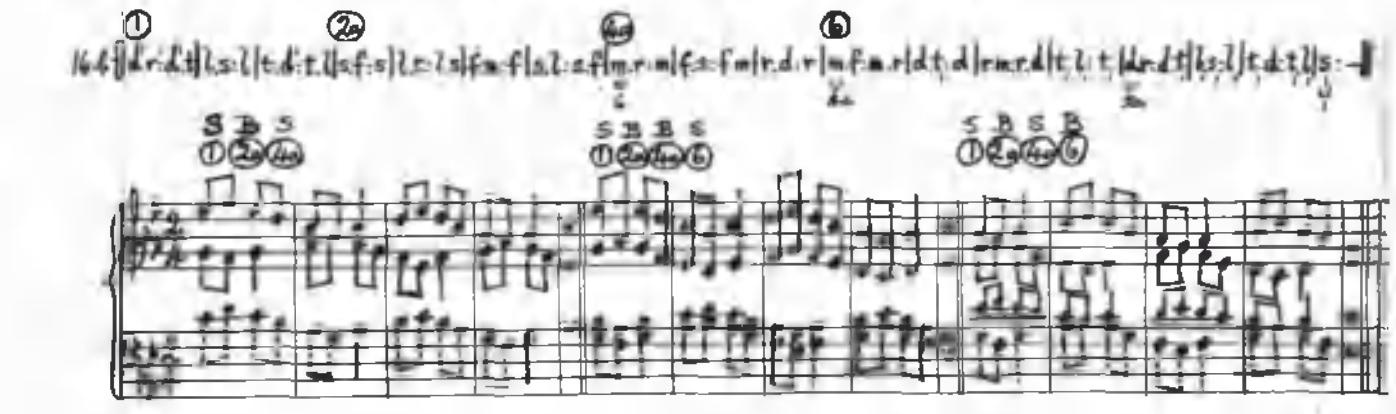
Key F





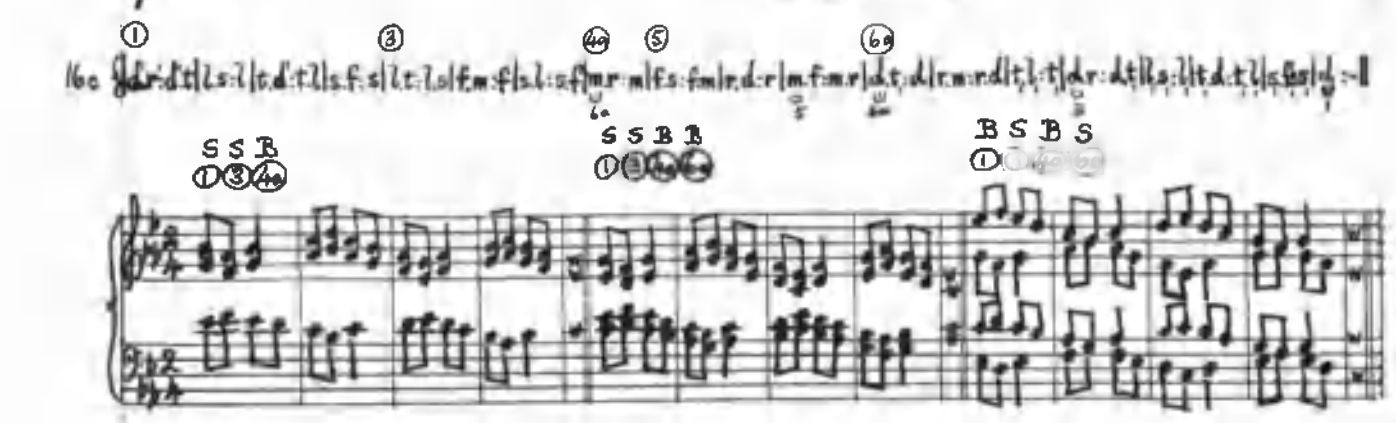
Key E♭

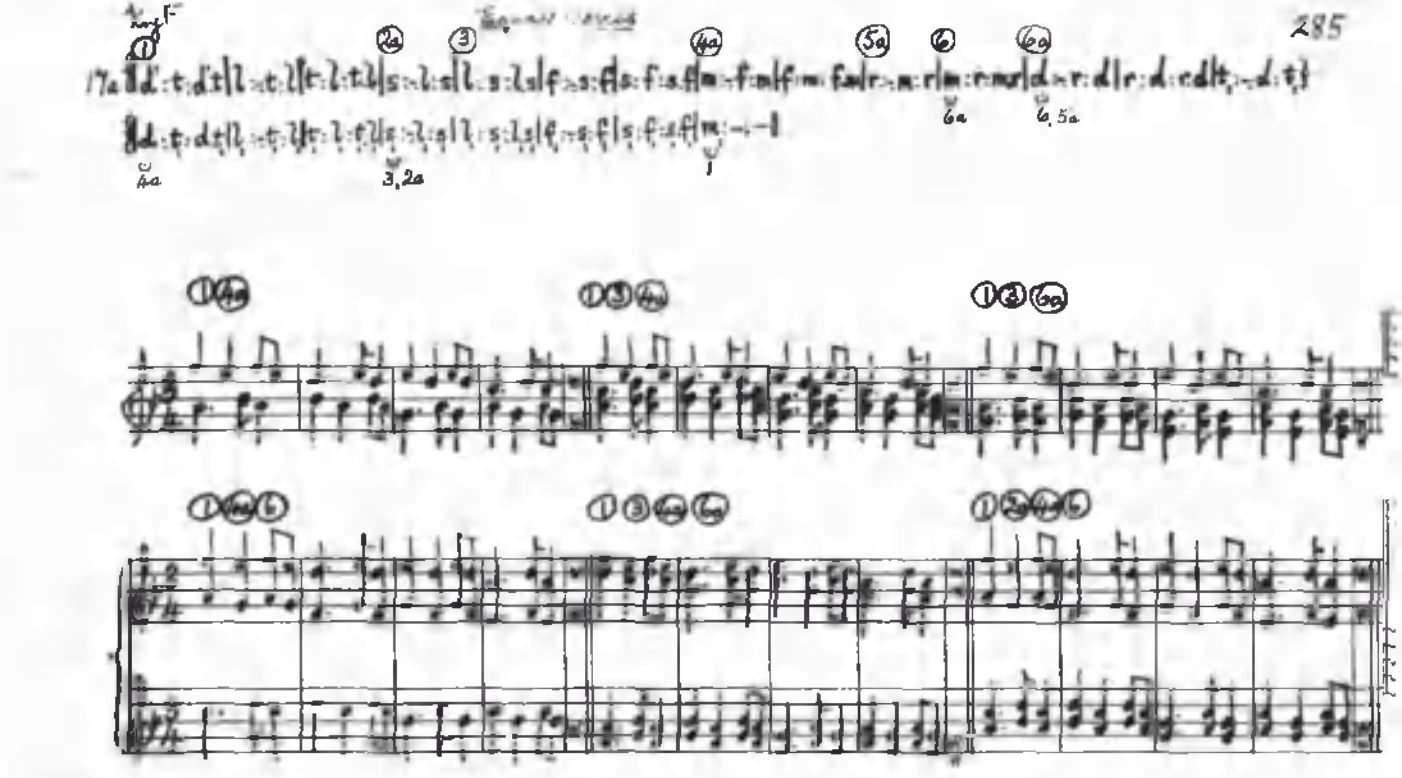
Mixed Voices Three and Four Part



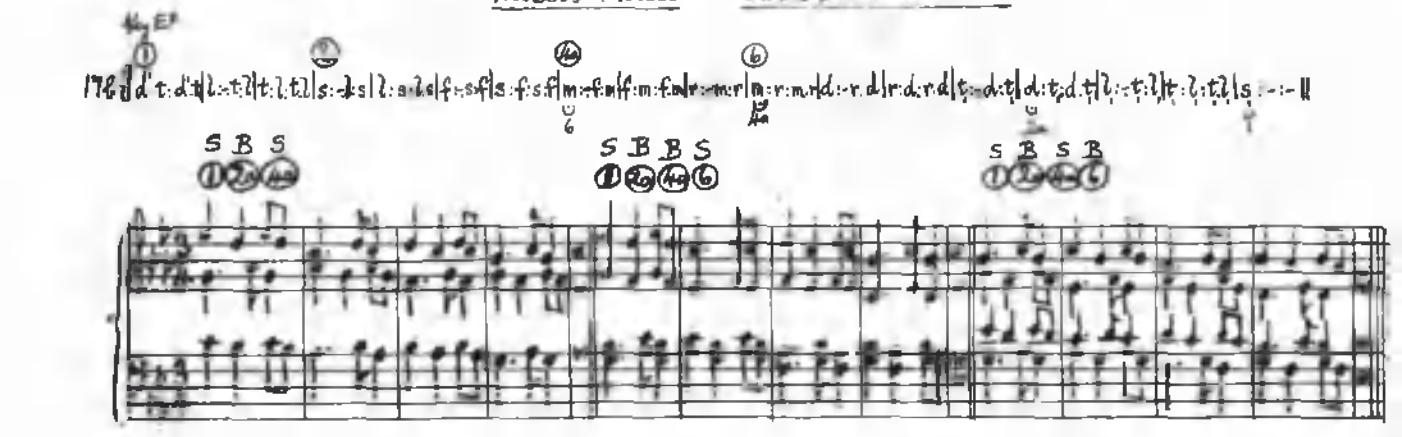
Key E♭

Mixed Voices Three and Four Part

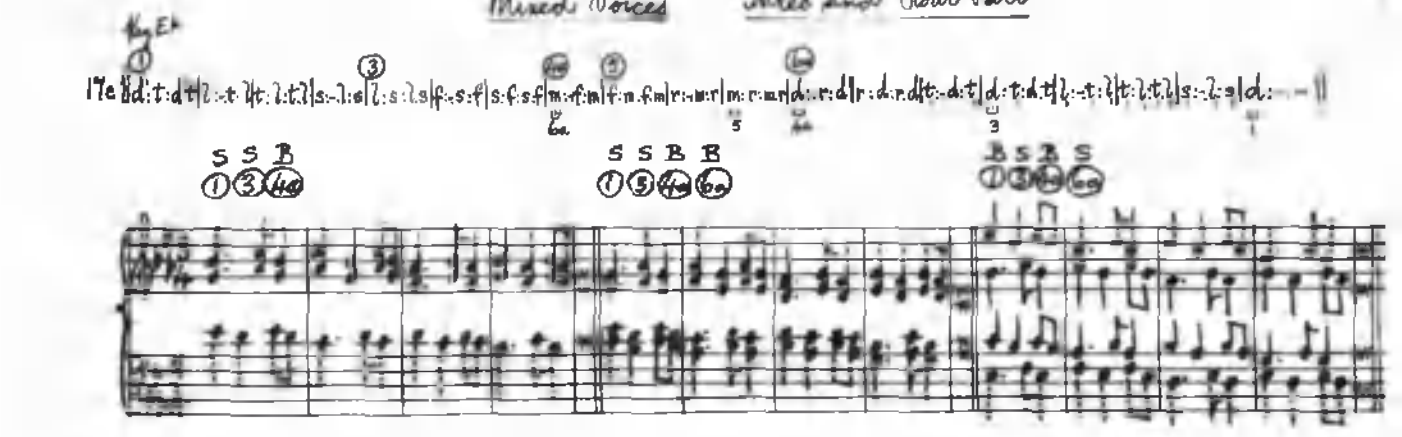




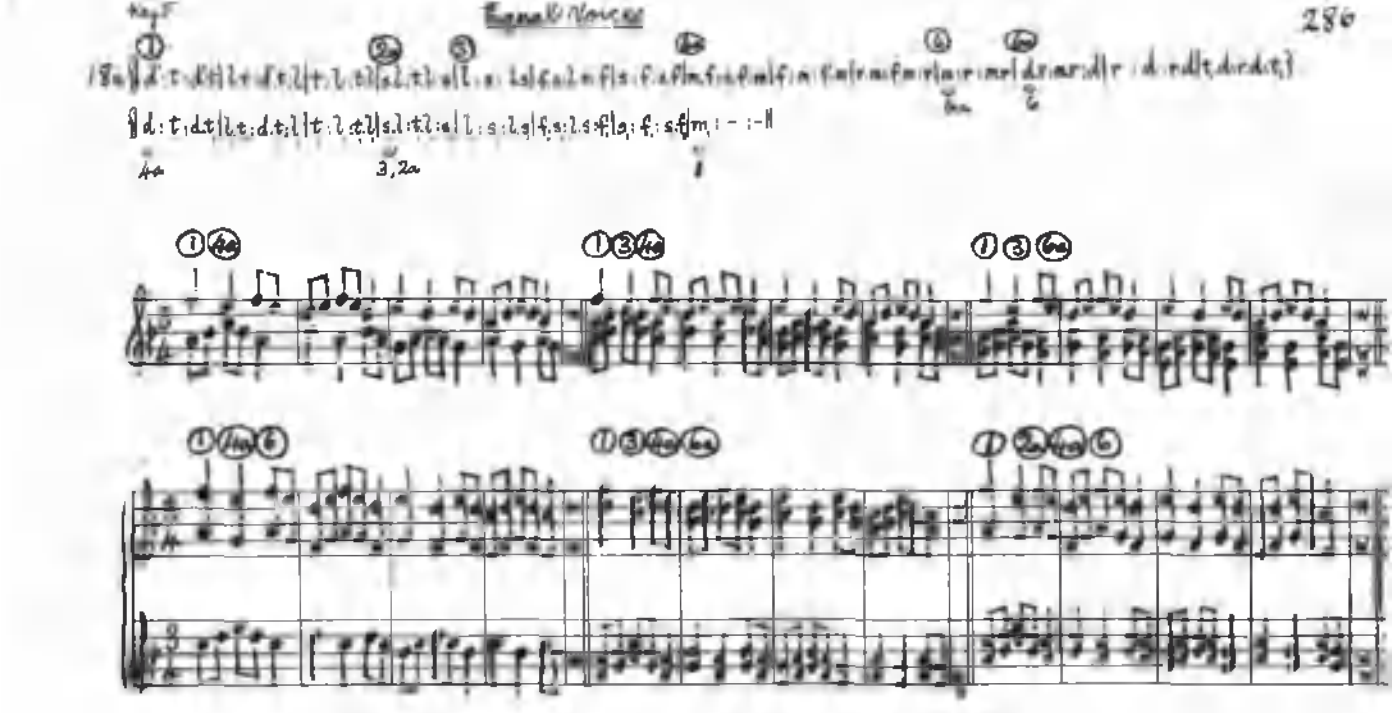
Mixed Voices Three and Four Part



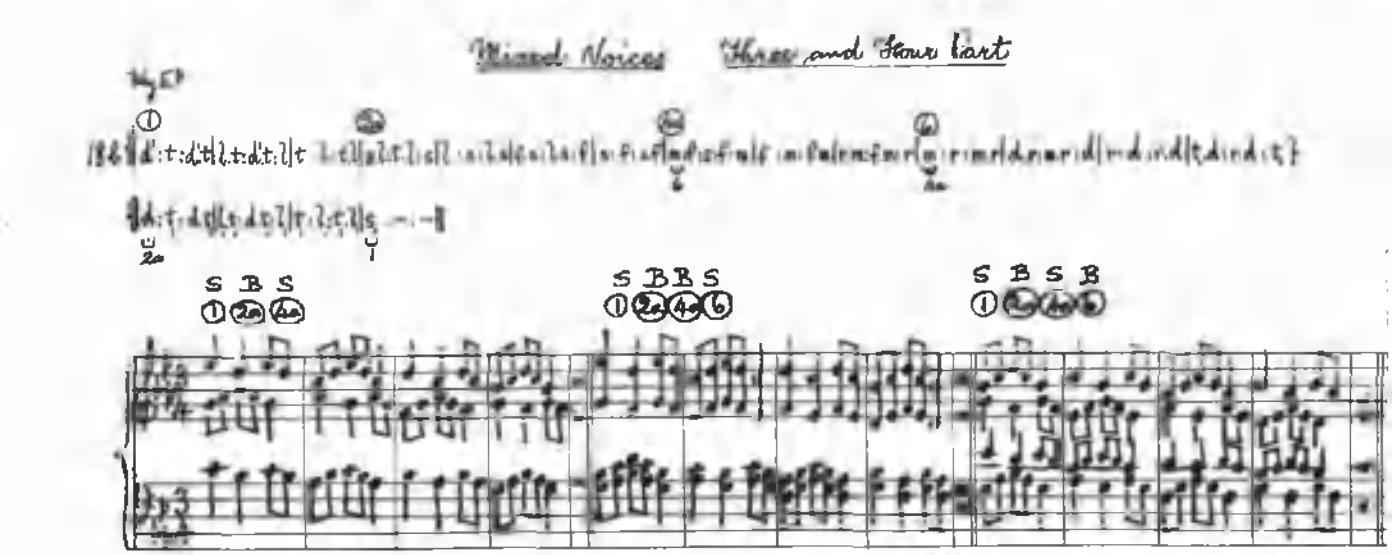
Mixed Voices Three and Four Part



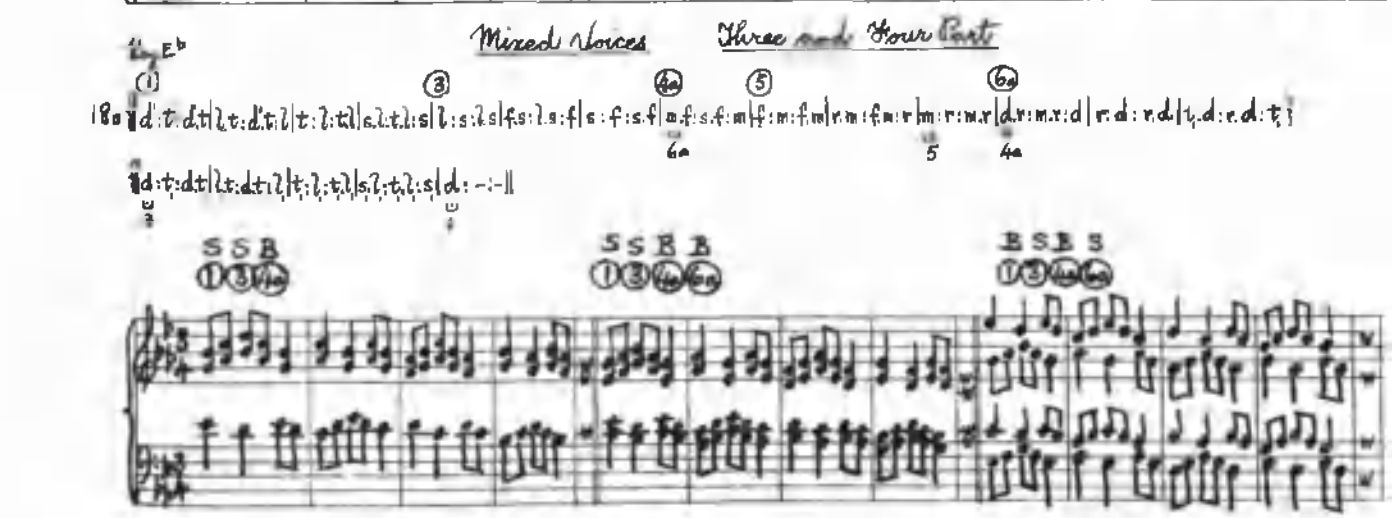
Equal Voices



Mixed Voices Three and Four Part



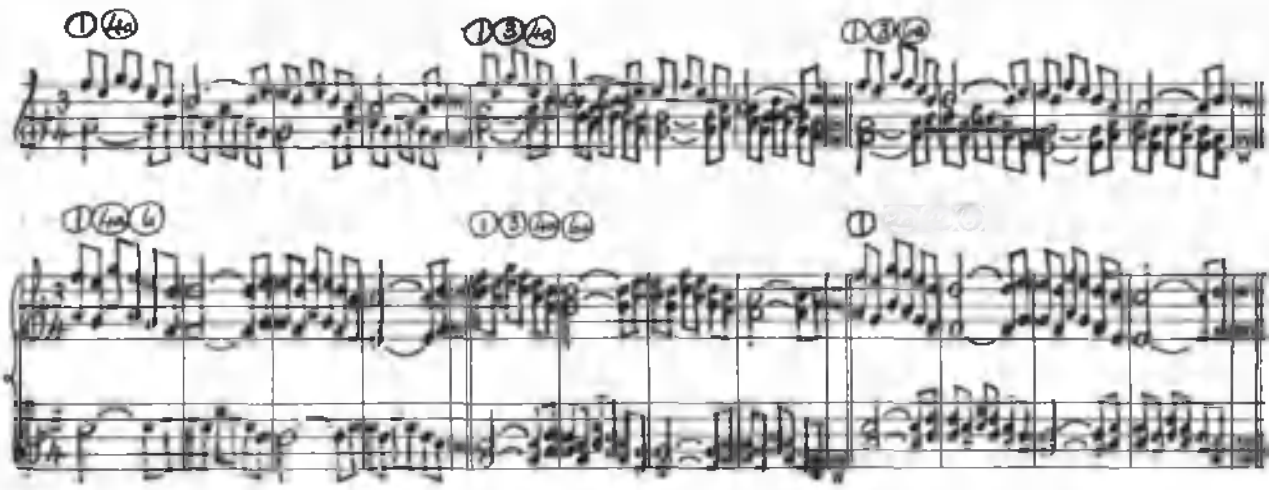
Mixed Voices Three and Four Part



Key F

Equal Voices

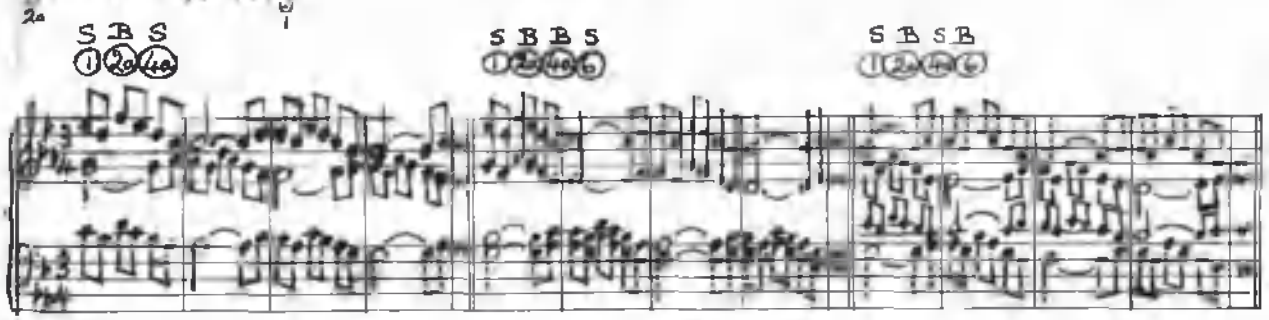
19a



Key E♭

Mixed Voices Three and Four Part

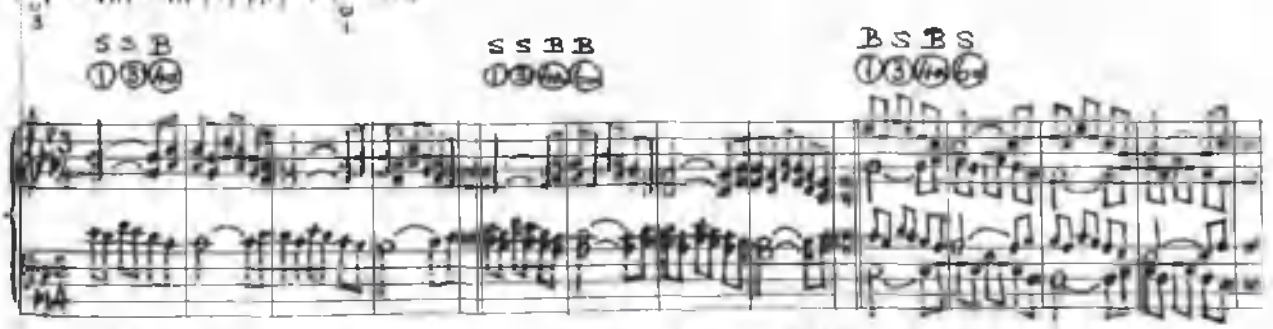
19b



Key E♭

Mixed Voices Three and Four Part

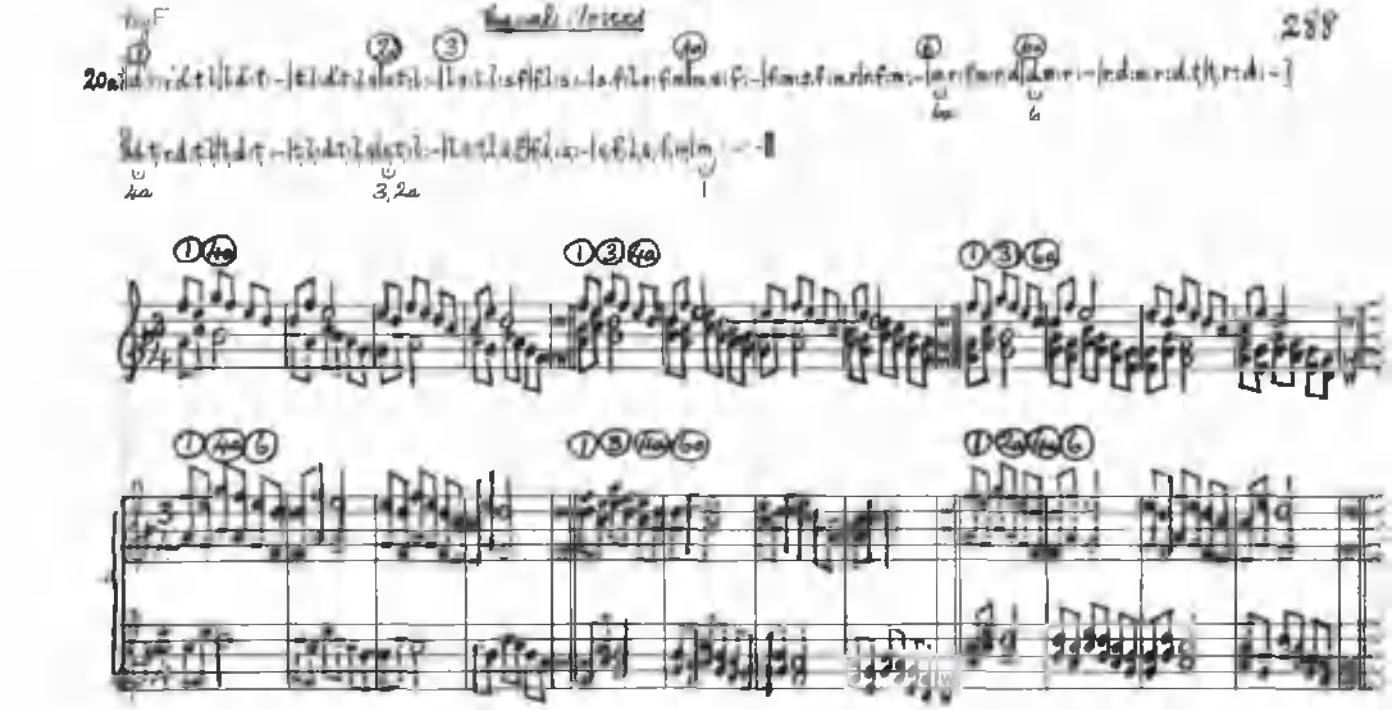
19c



See No. 30 a, b, c for the same canon in Compound Time.

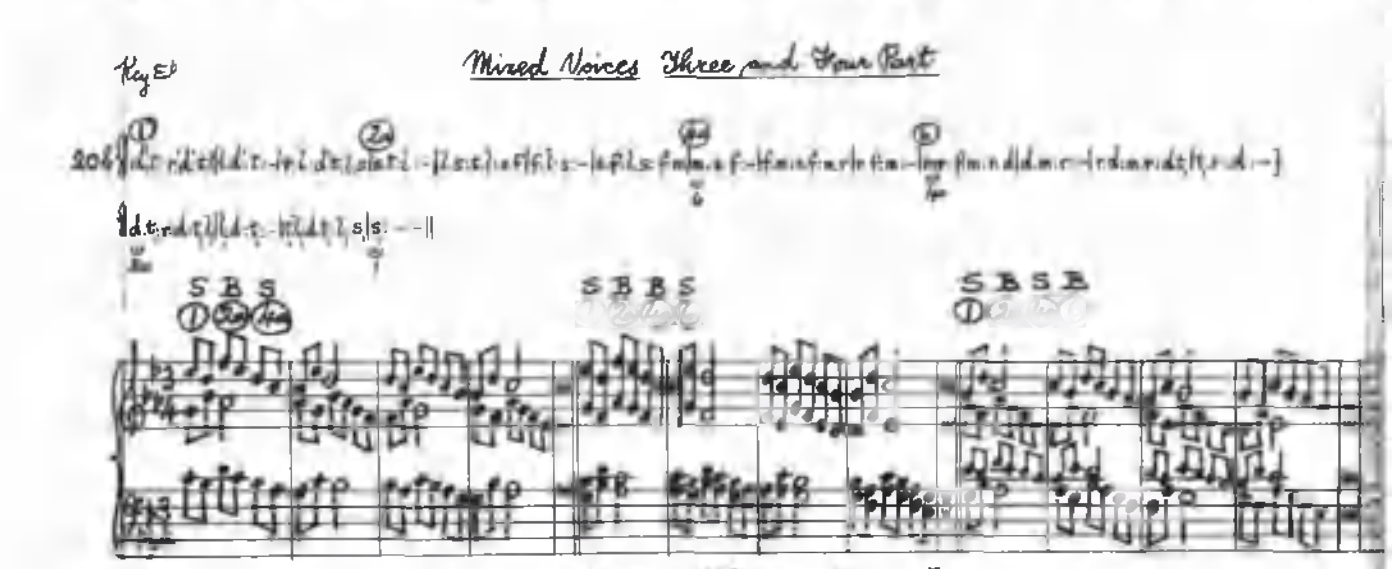
Key F

Mixed Voices



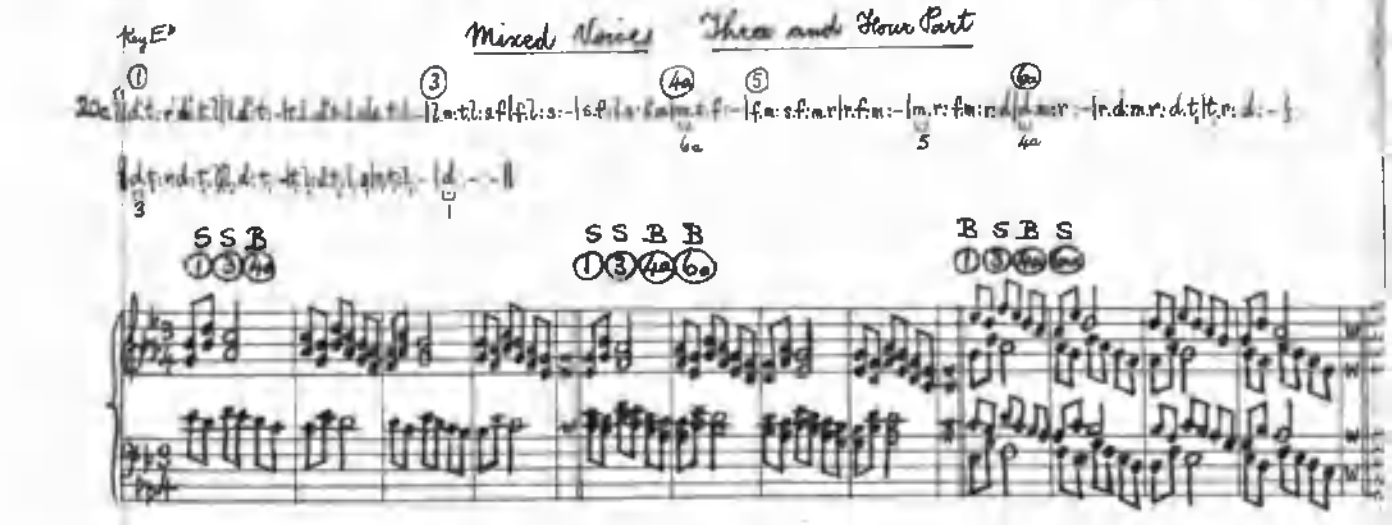
Key E♭

Mixed Voices Three and Four Part



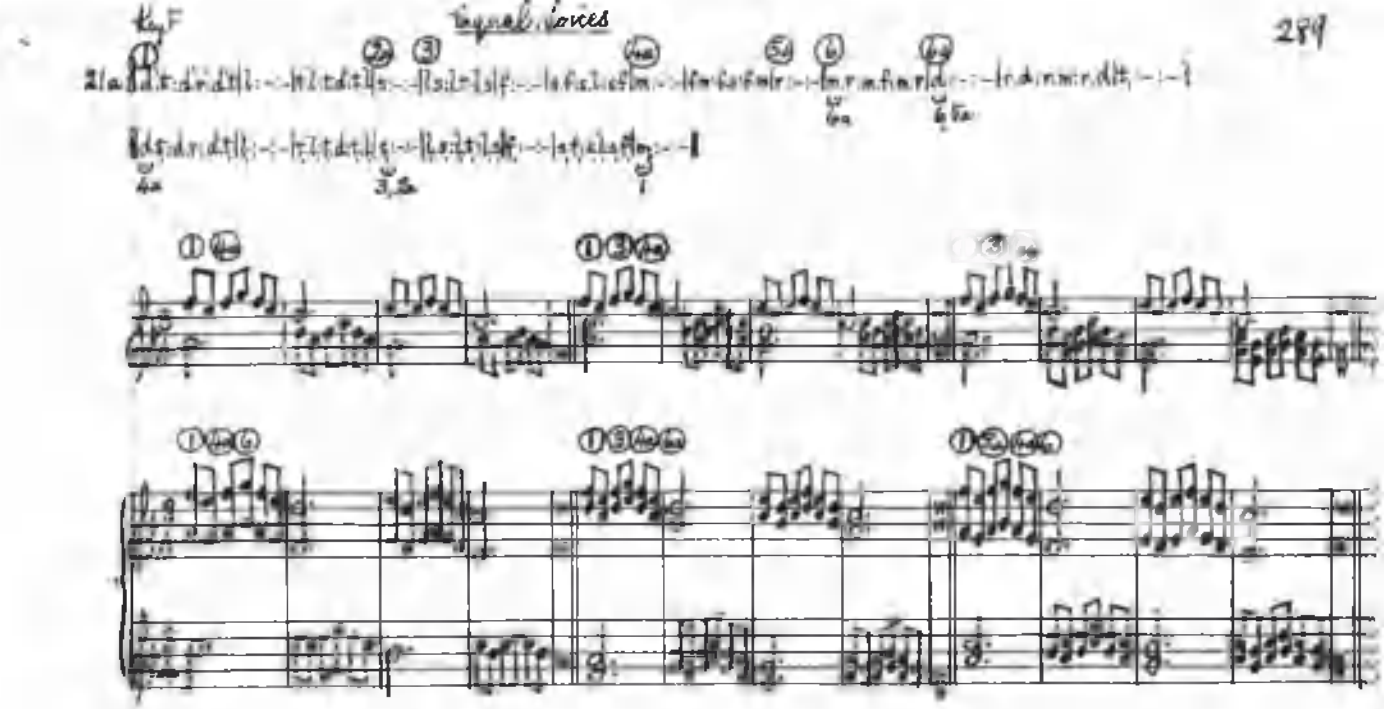
Key E♭

Mixed Voices Three and Four Part



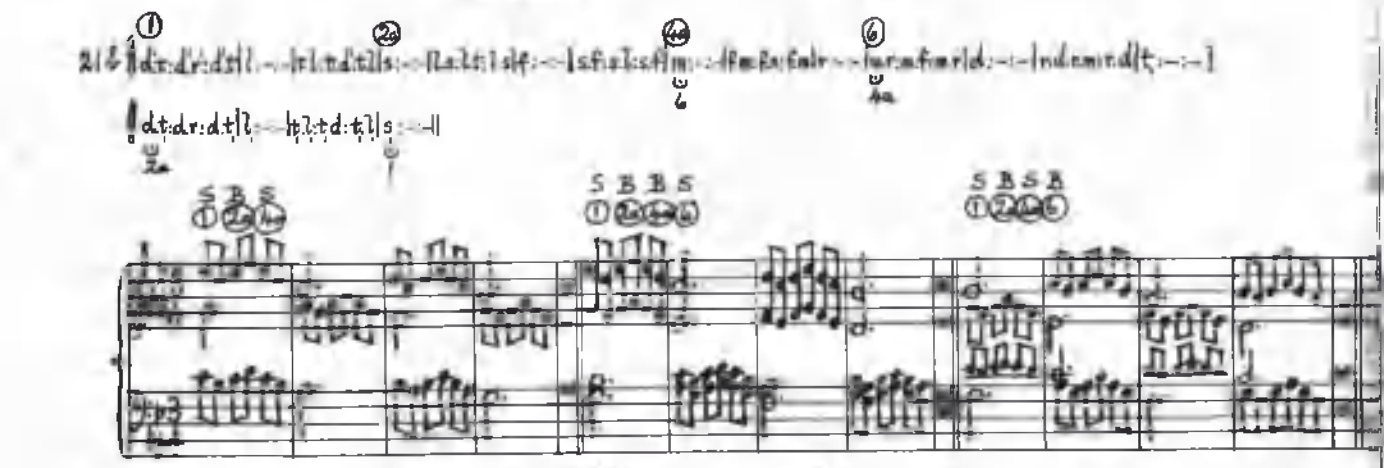
Key F

Equal Voices



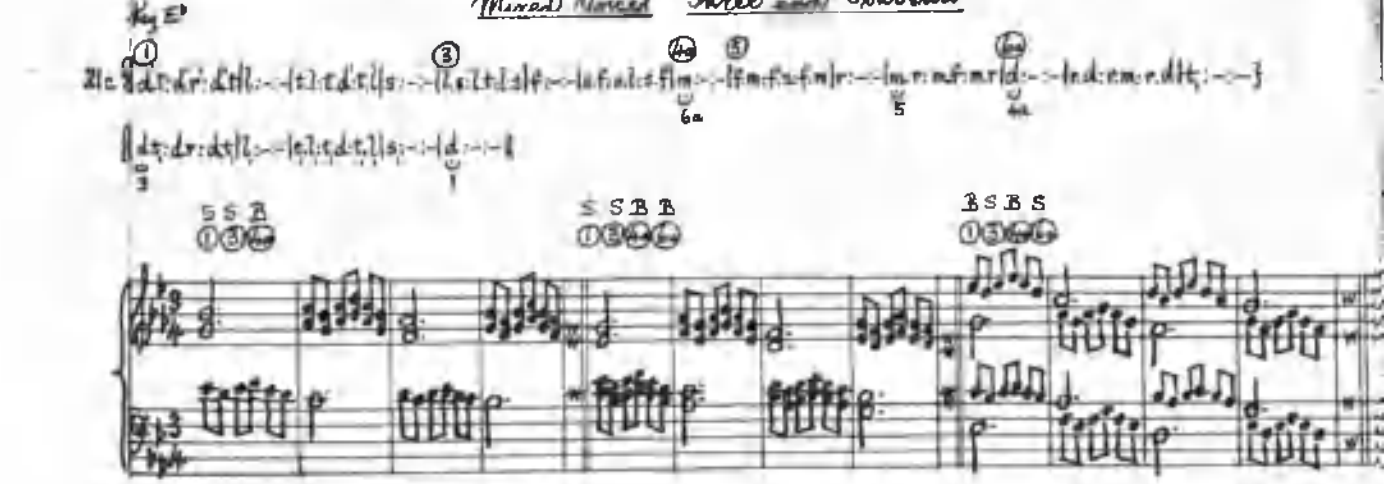
Key E♭

Mixed Voices Three and Four Part



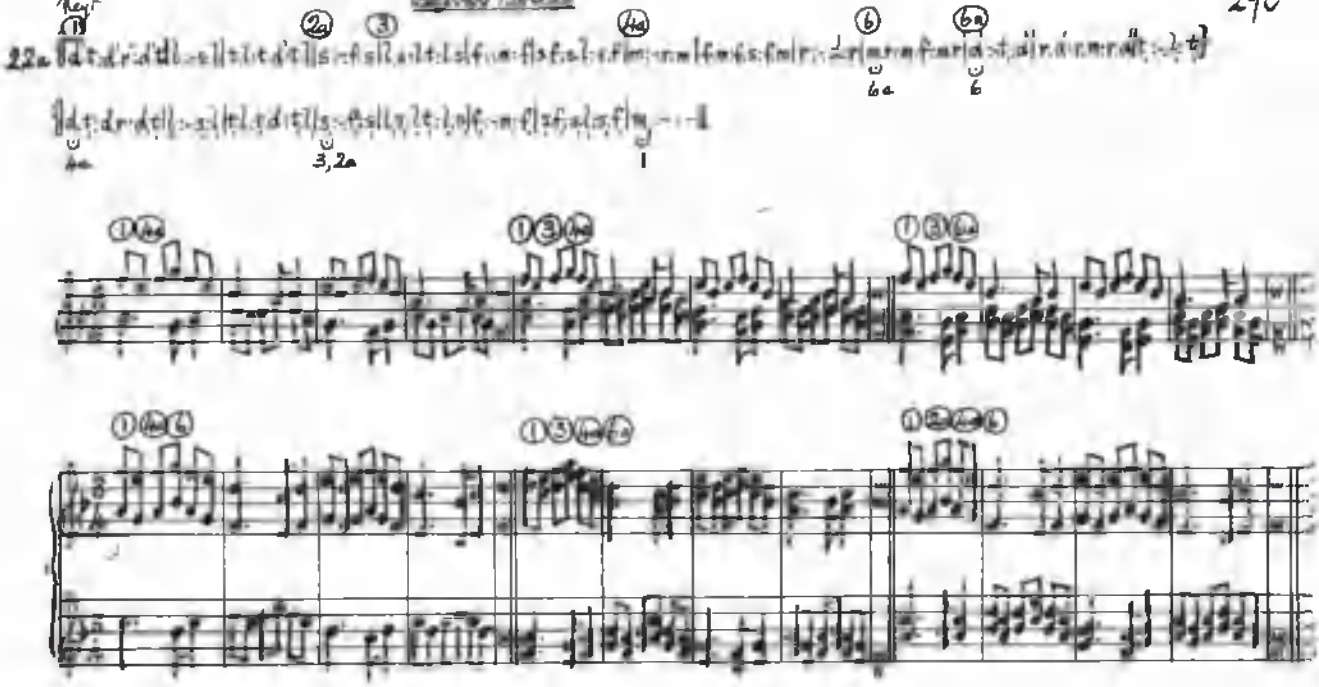
Key E♭

Mixed Voices Three and Four Part



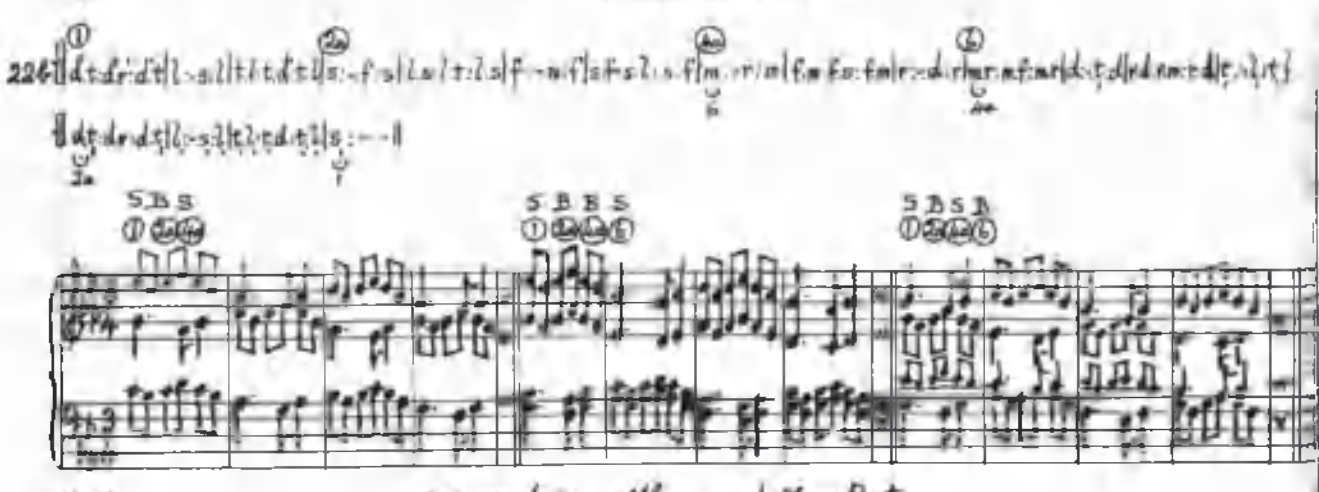
Key F

Equal Voices



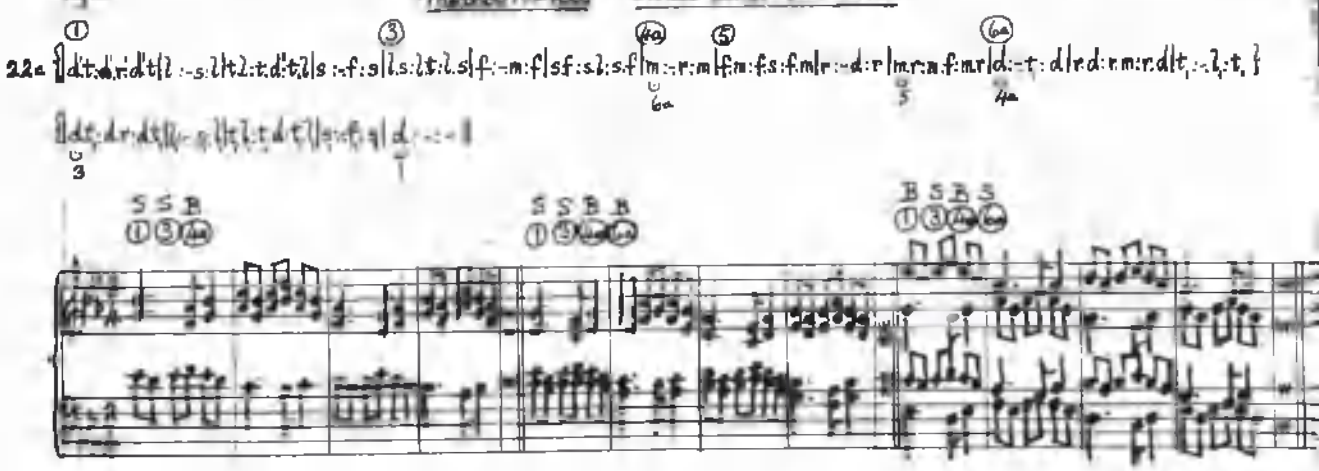
Key E♭

Mixed Voices Three and Four Part



Key E♭

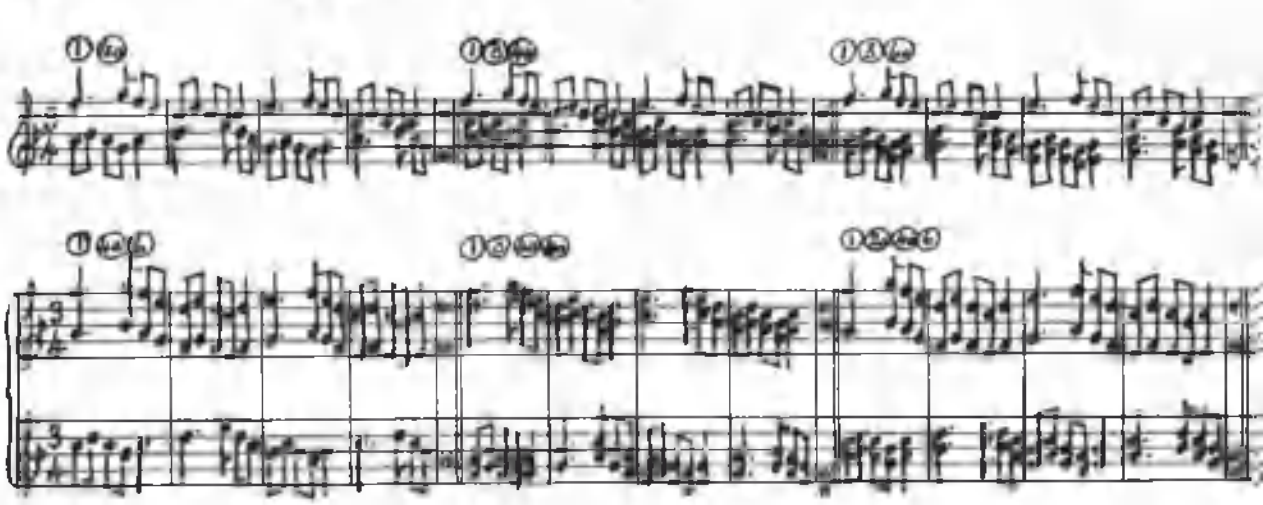
Mixed Voices Three and Four Part



Key F

Female Voices

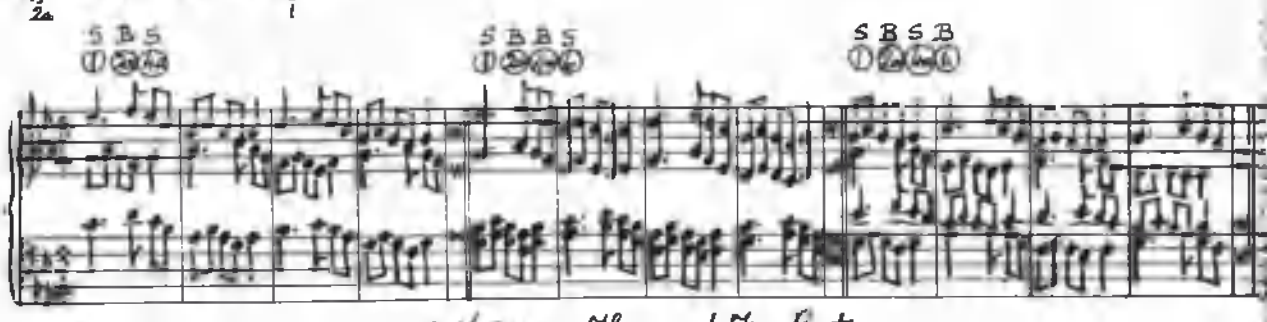
23a



Key E♭

Mixed Voices Three and Four Part

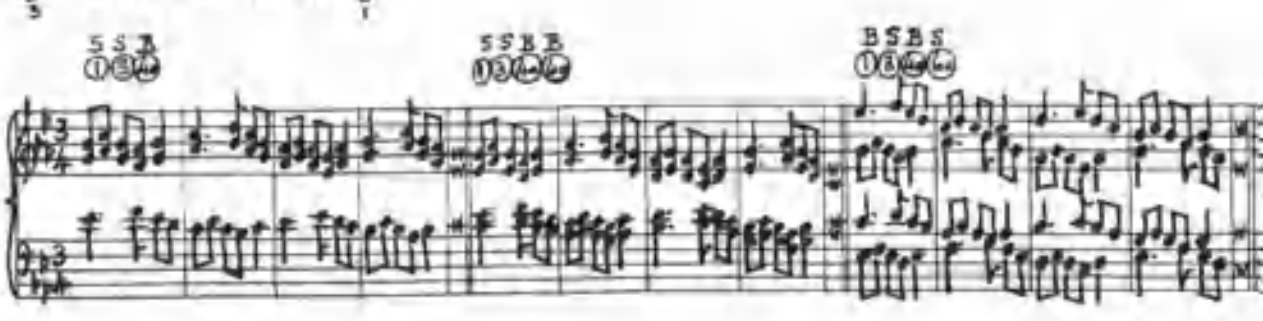
23b



Key E♭

Mixed Voices Three and Four Part

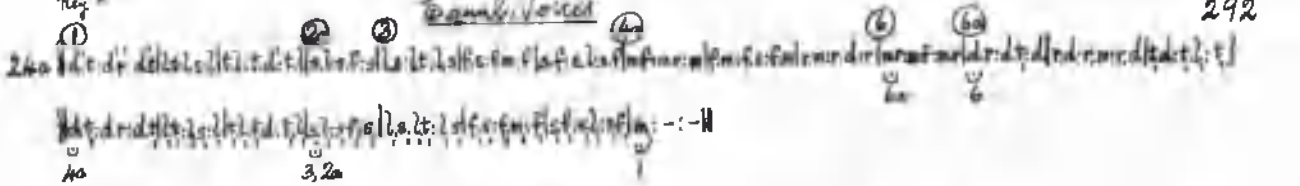
23c

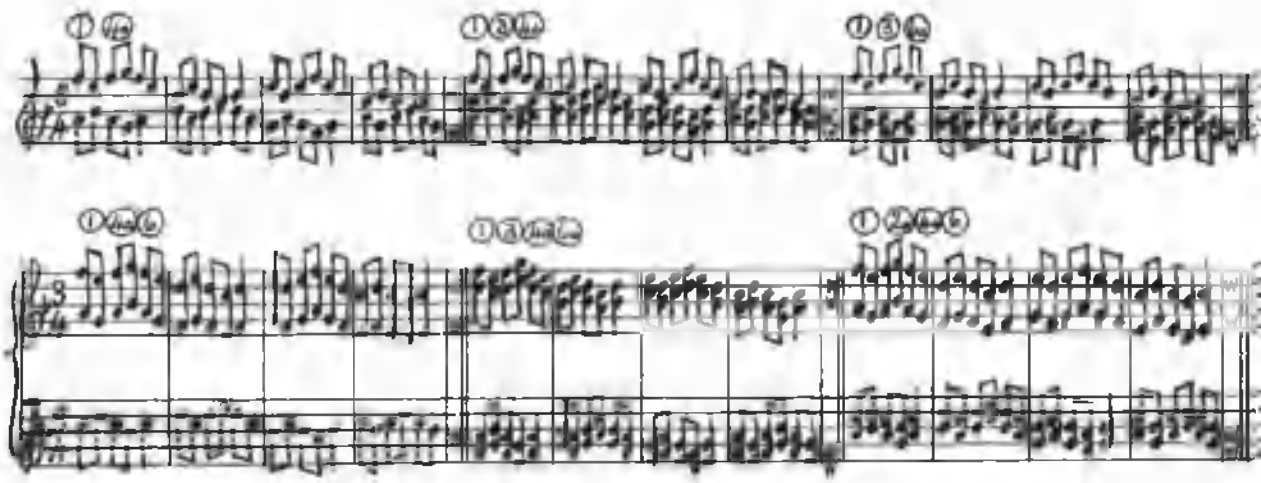


Key E♭

Equal Voices

24a

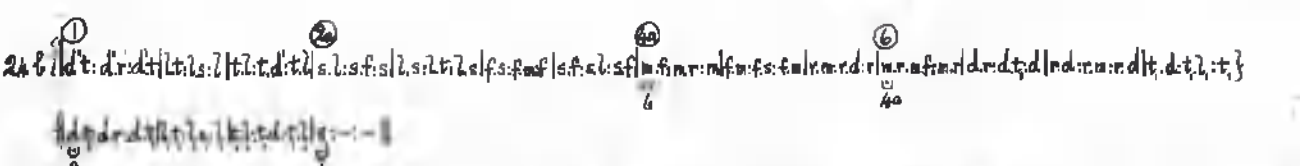


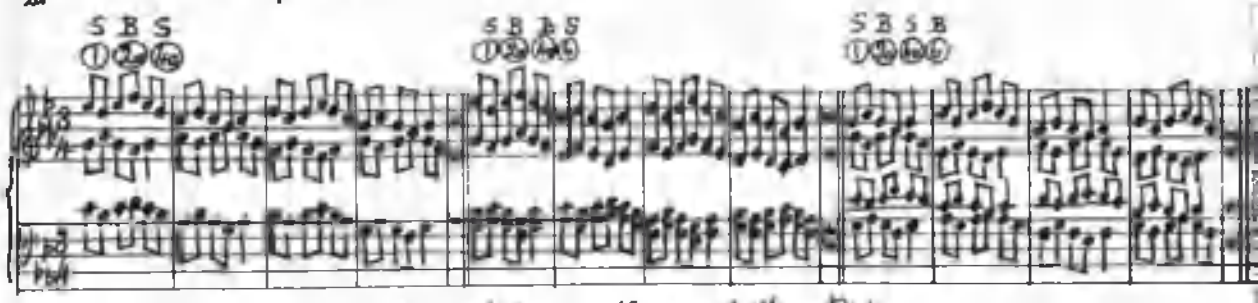


Key E♭

Mixed Voices Three and Four Part

24b

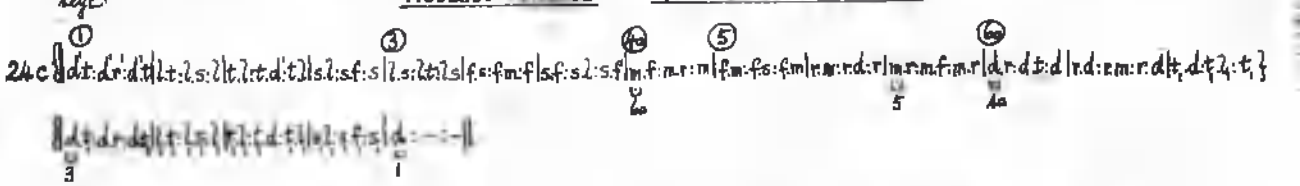


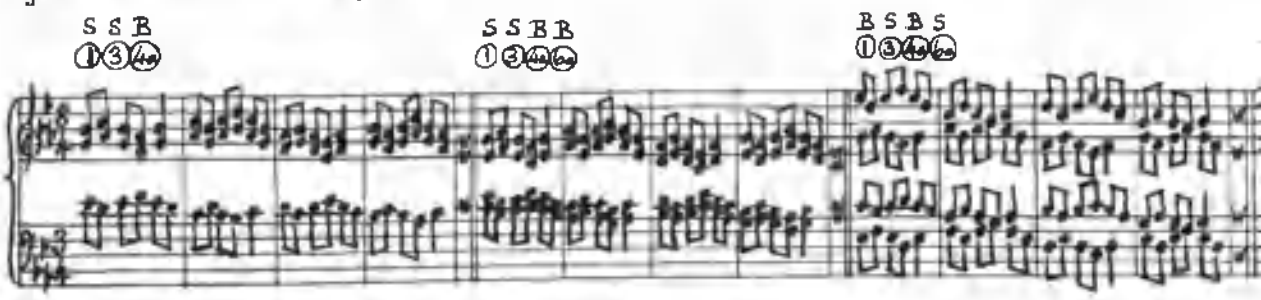


Key E♭

Mixed Voices Three and Four Part

24c

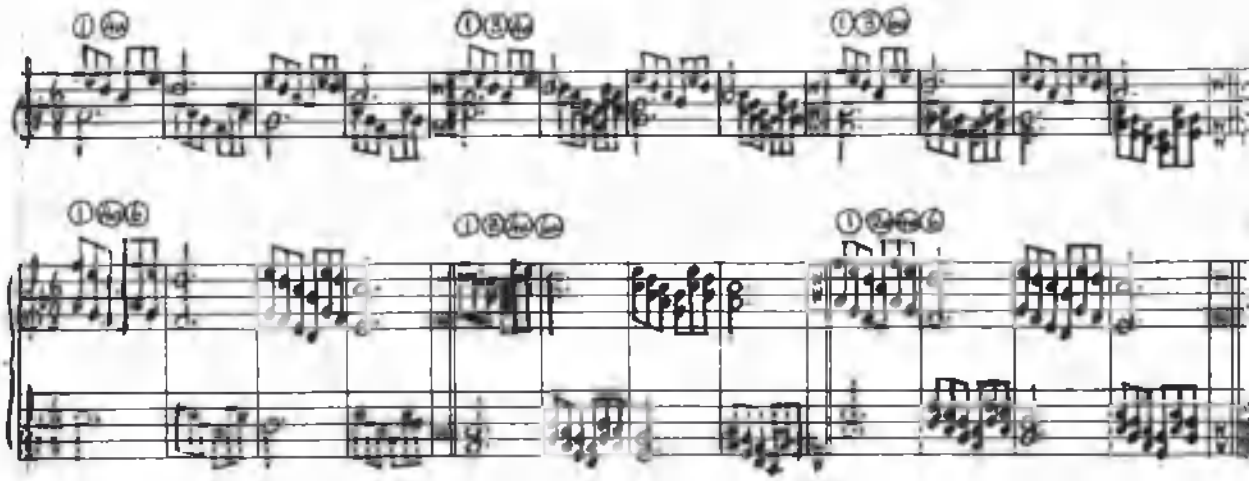




Key F

Equal Voices

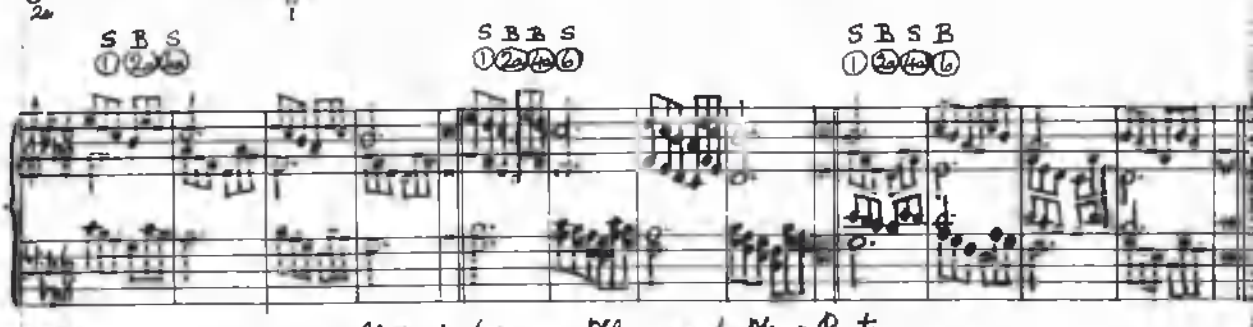
25a



Mixed Voices Three and Four Part

Key E♭

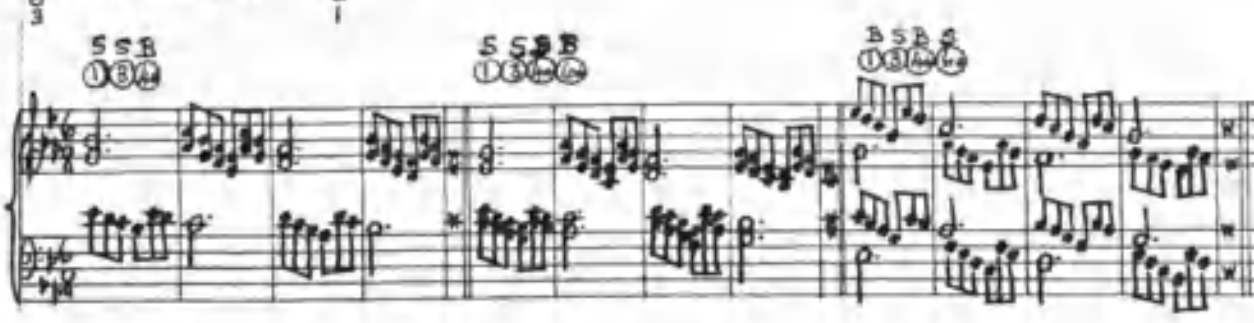
25b



Mixed Voices Three and Four Part

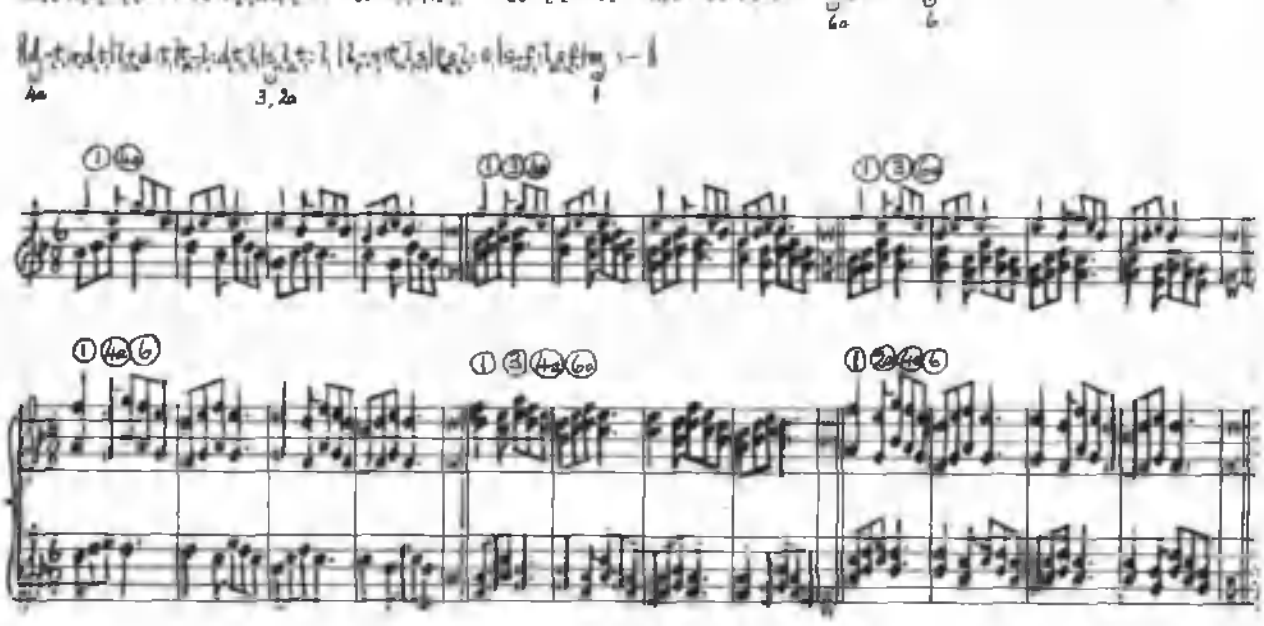
Key E♭

25c



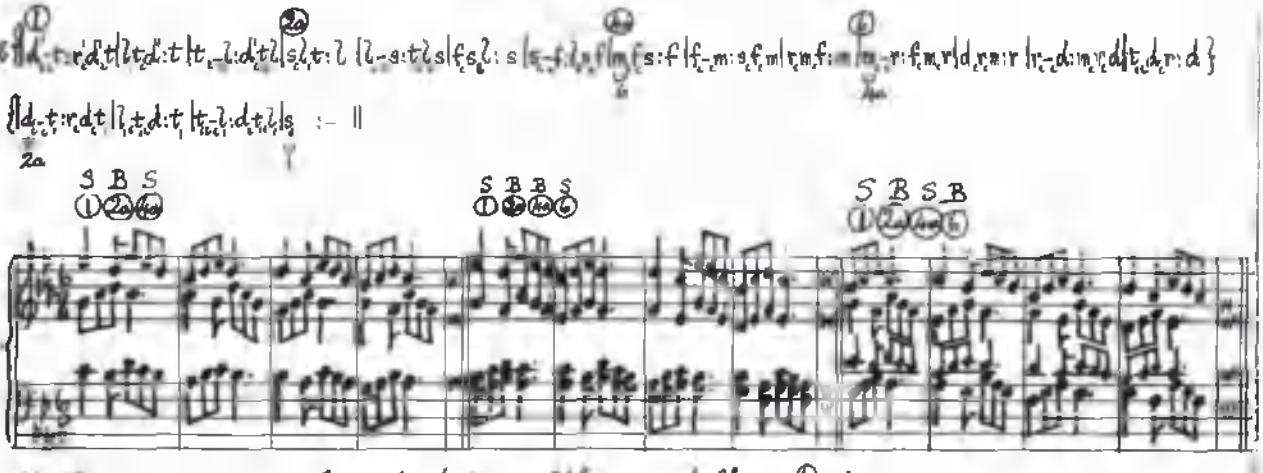
Mixed Voices

26a



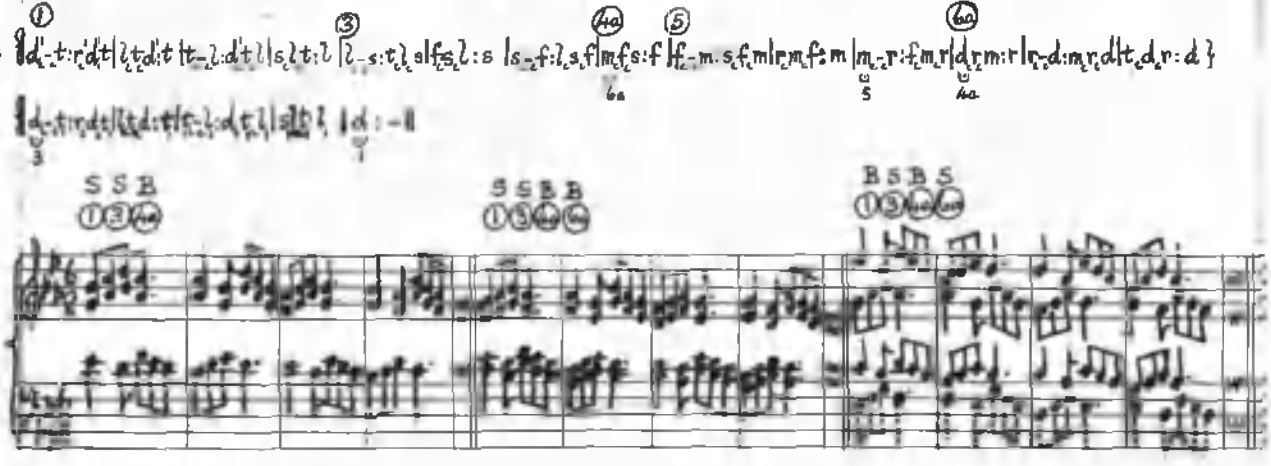
Mixed Voices Three and Four Part

26b



Mixed Voices Three and Four Part

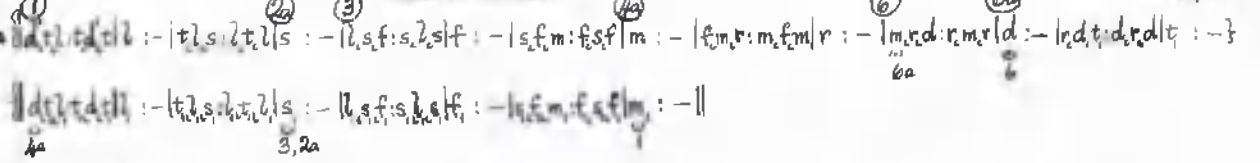
26c

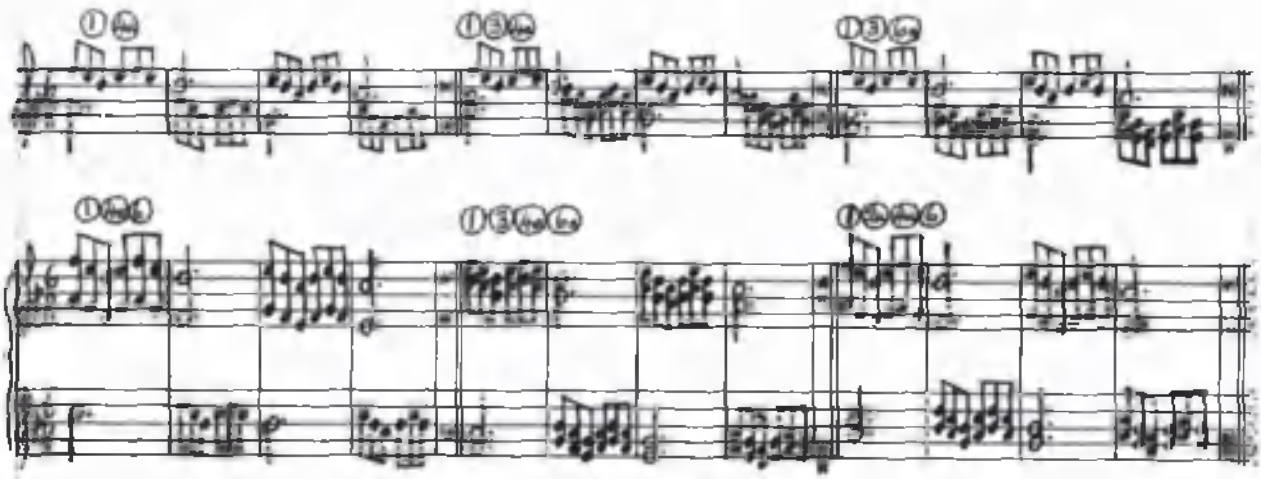


Key F

Equal Voices

27a

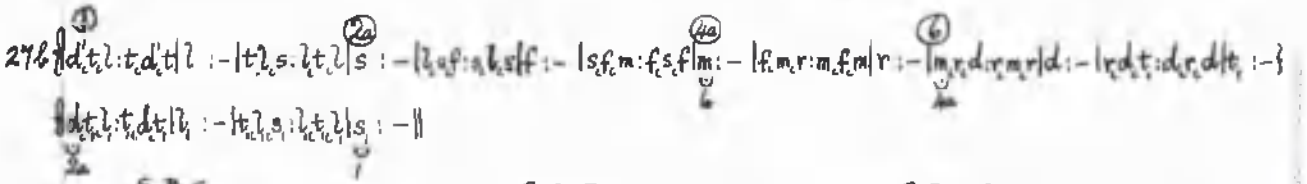


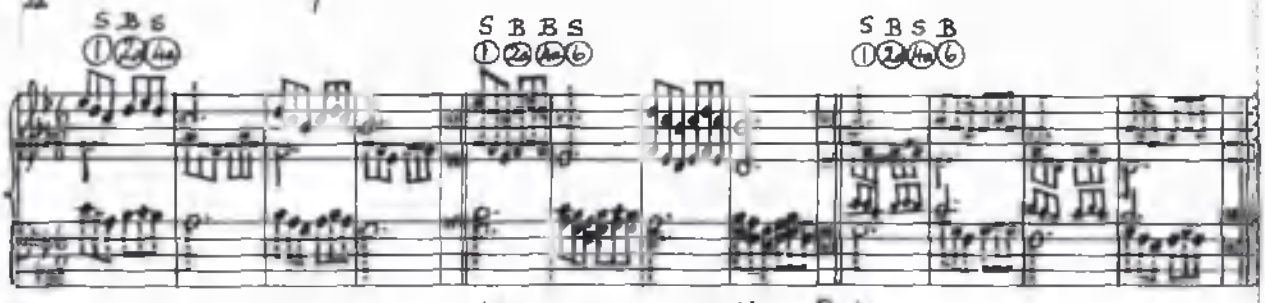


Key E♭

Mixed Voices Three and Four Part

27b

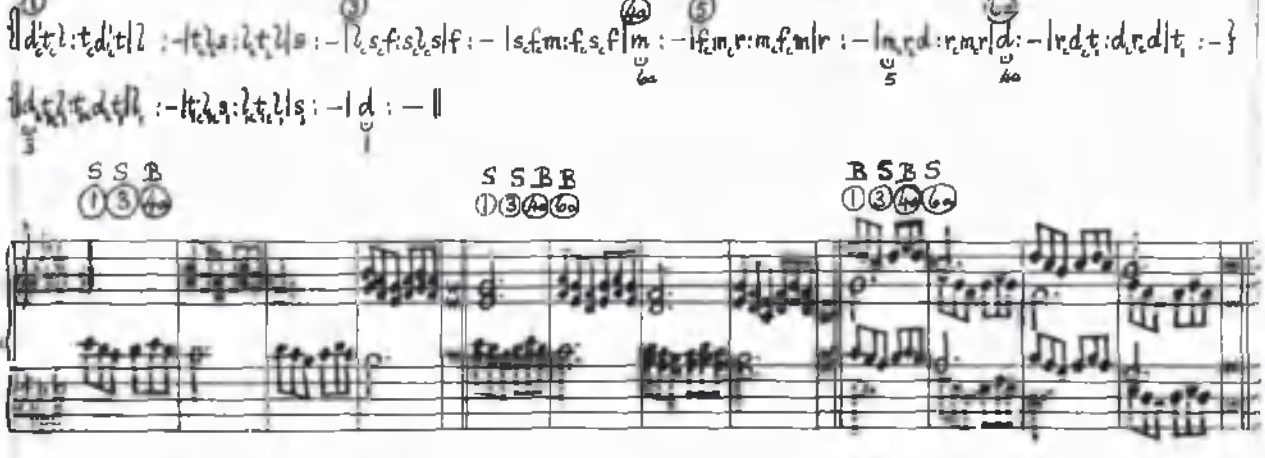




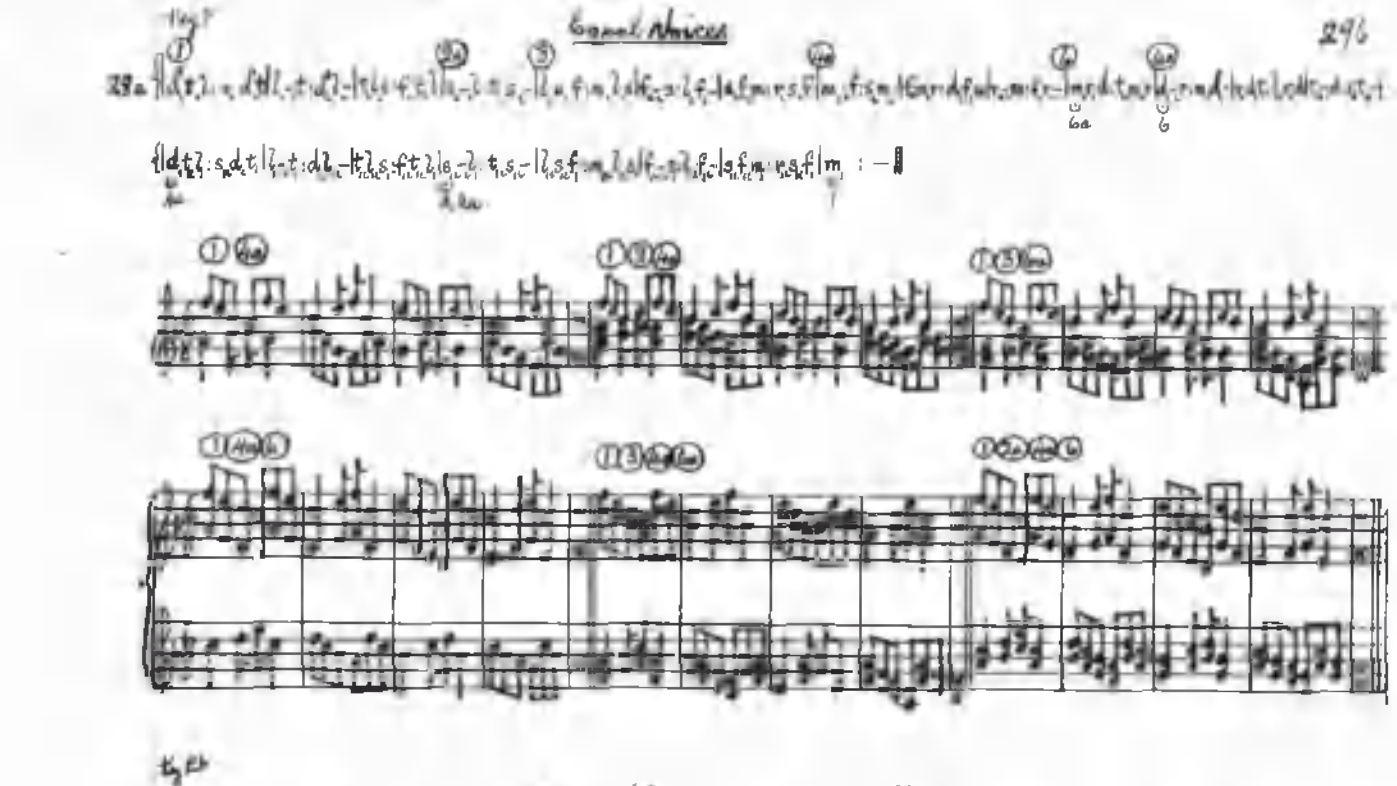
Key E♭

Mixed Voices Three and Four Part

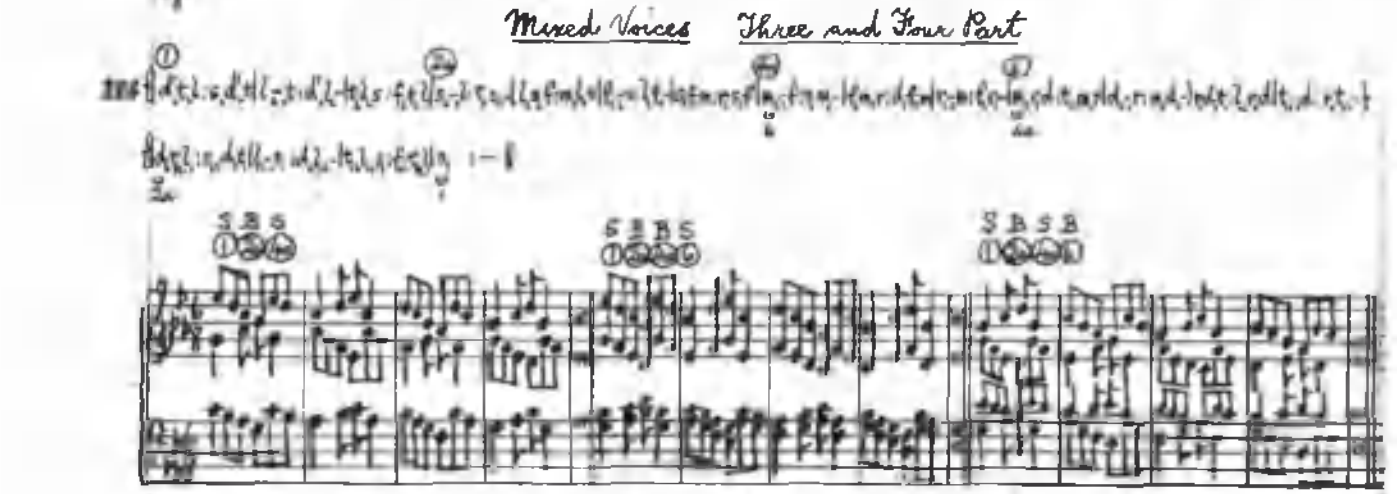
27c



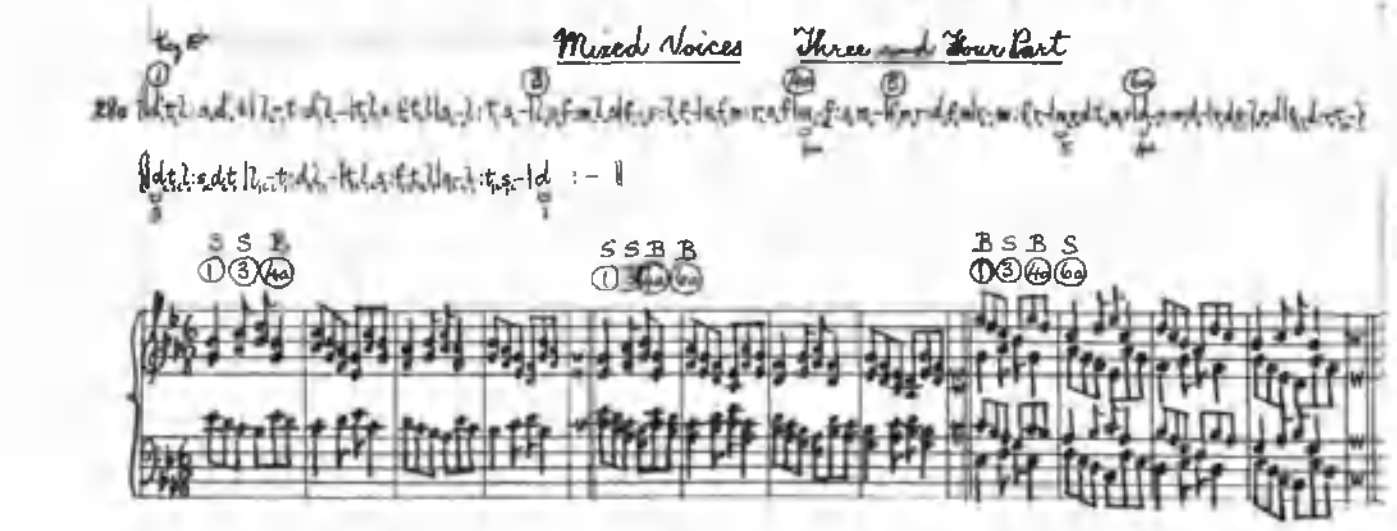
Equal Voices



Mixed Voices Three and Four Part

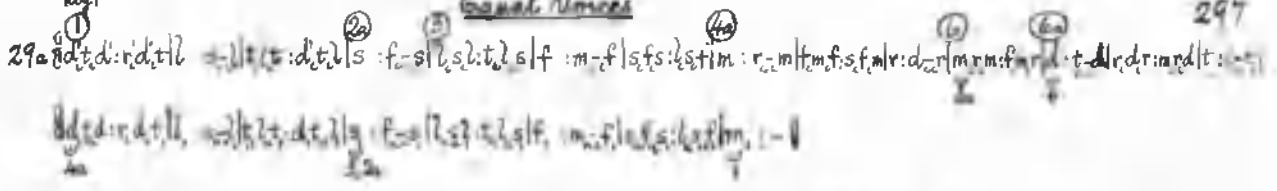


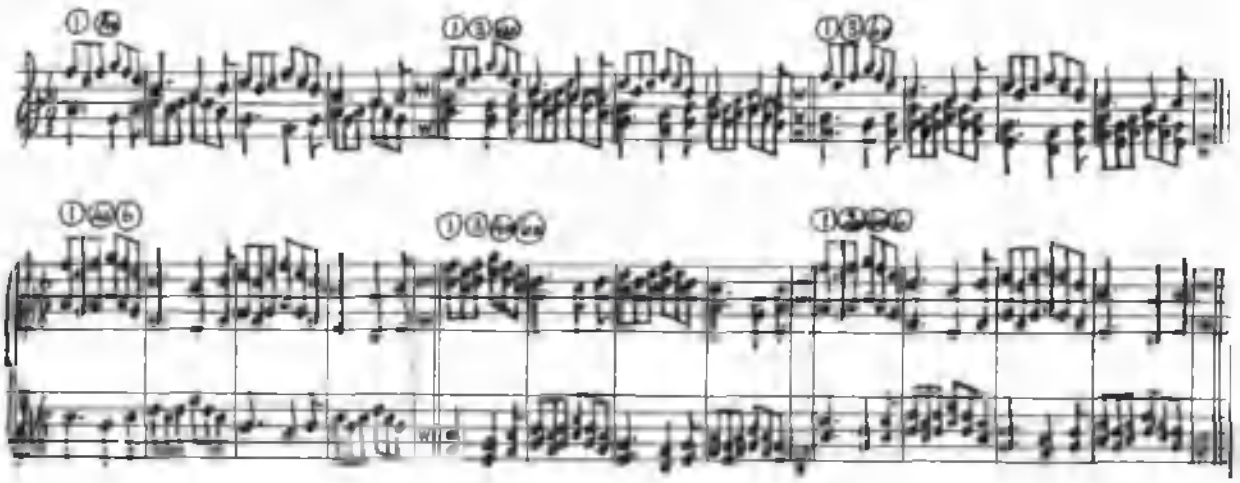
Mixed Voices Three and Four Part



Key F

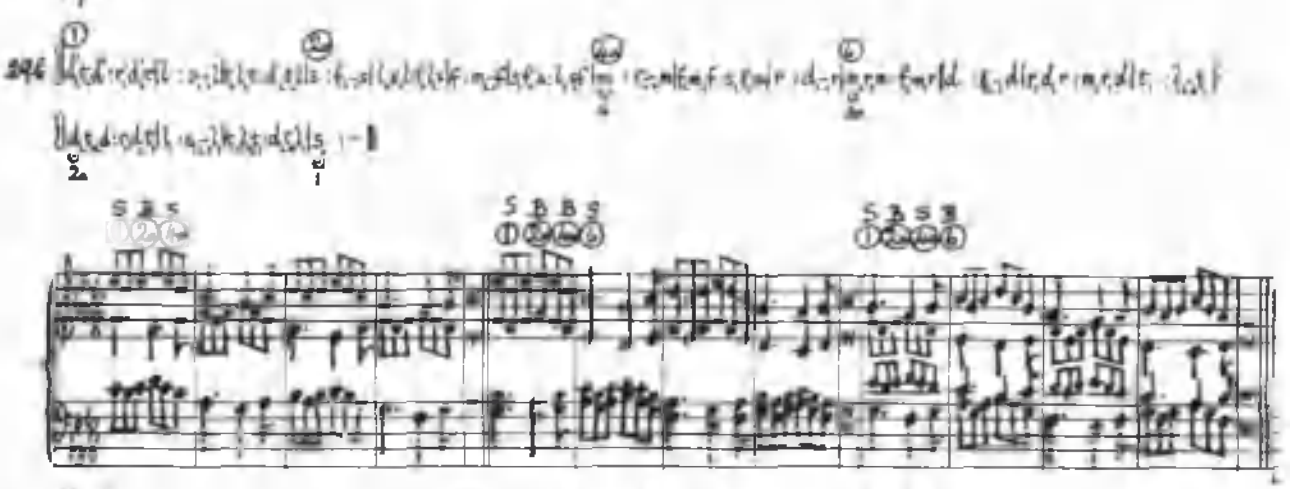
Equal Voices





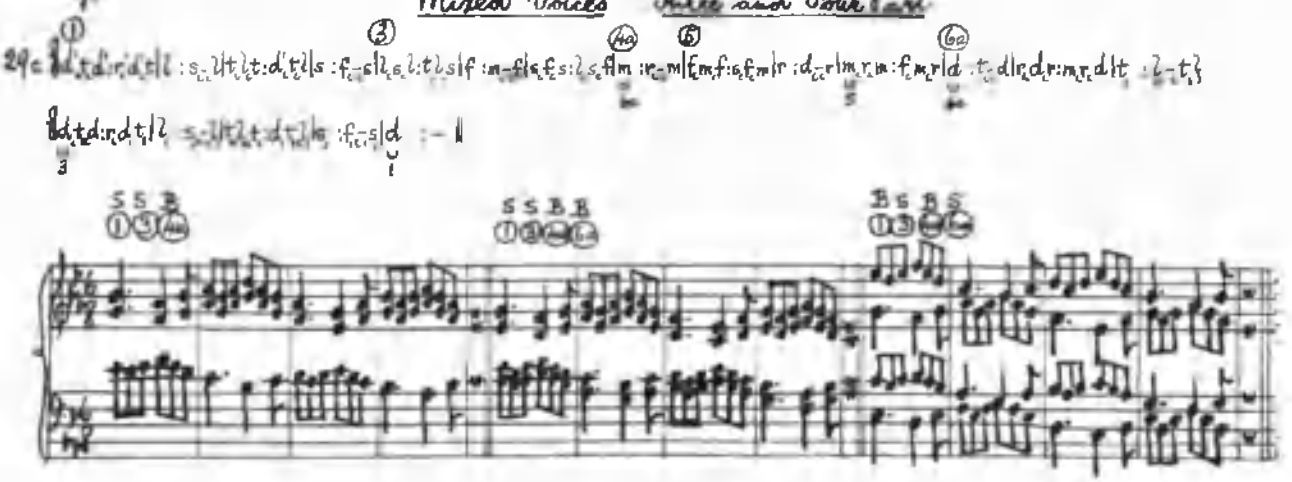
Key E♭

Mixed Voices Three and Four Part



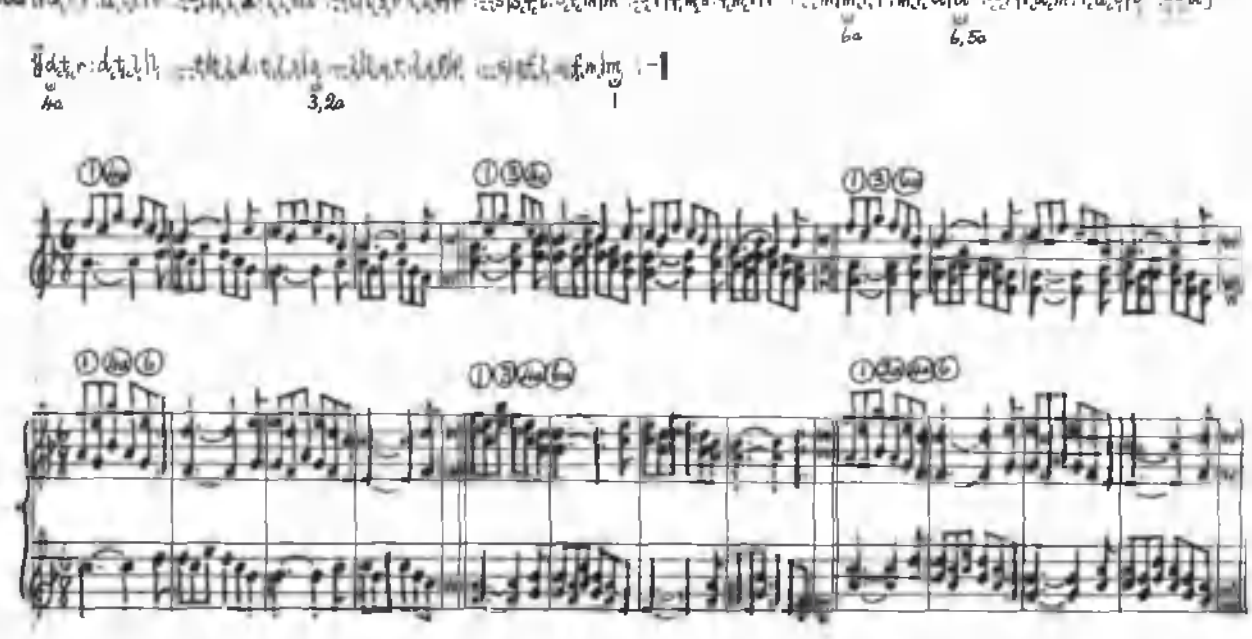
Key E♭

Mixed Voices Three and Four Part



Equal Voices

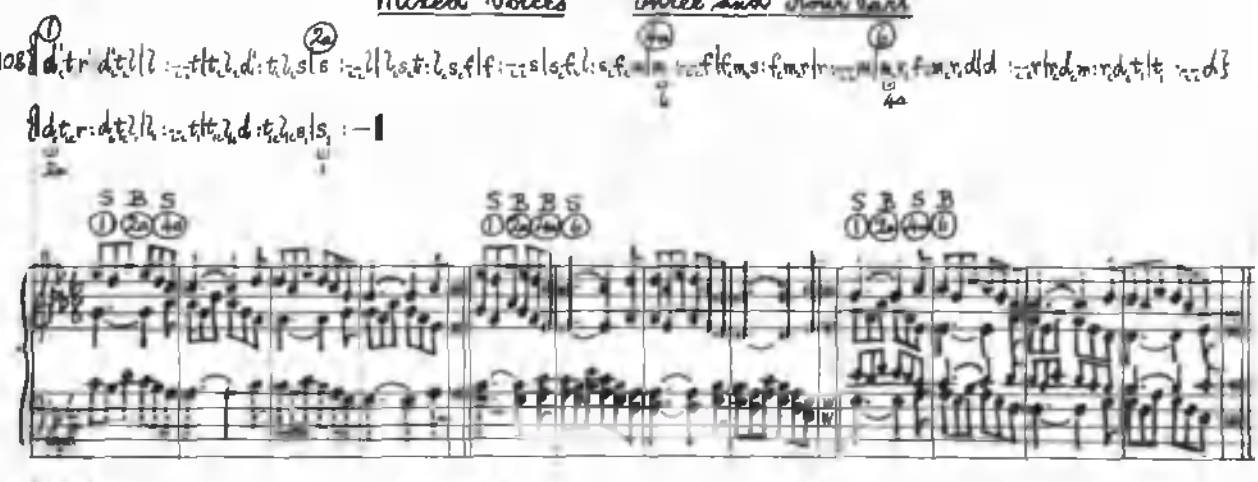
30a



Key E♭

Mixed Voices Three and Four Part

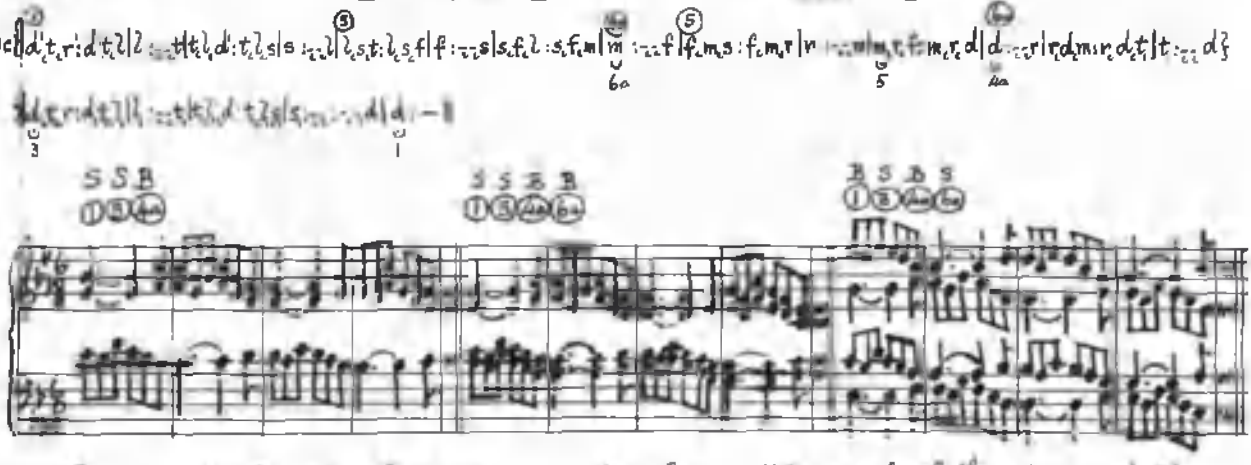
30b



Key E♭

Mixed Voices Three and Four Part

30c



See No. 19a, b, c for the same canon in Simple Time, to the rhythm 3/4 ♫ ♫ ♫ | 𝅗𝅥 ♫ |

CHAPTER XV

CANONS BASED ON A SEQUENCE OF DESCENDING THIRDS (CONTD.)

We have now shown 30 examples of canonic sequences, all derived from the plain basic sequence of descending thirds - ‖d' :-|l :-|t :-|s :-‖ Each of these sequences is capable of producing from 40 to 41 canons, all differing from each other in harmonic progression or in the number or disposition of the voice parts, and all finishing without a break on the tonic chord.

These canons, as will be seen, vary considerably in the degrees of dissonance involved, and will provide practice in part-singing for pupils of all ages from Juveniles to Adolescents. Even with young children it is possible, and also desirable, to attempt the mixed voice canons, where the teacher may sing the bass part or play the bass part or parts on the piano. This plan of filling in parts may also be applied to canons for equal voices.

As we have mentioned before, these canons are presented here with the object of filling a gap in the present-day Singing Class curriculum. Part-singing is impossible there, unless the separate parts are "drummed" into the children - a most objectionable time-wasting and voice-wasting process - or unless the pupils are able to read the parts for themselves. Unfortunately, under present conditions reading ability develops so slowly that most children leave school without being able to take any great share in part-singing.

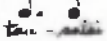
Hence the dilemma! Part-singing provides one of the finest means for developing musical ability and sight-reading ability. But by present methods part-singing cannot be indulged in to any great extent, without a fair degree of sight-reading ability on the part of the pupils! And even when part-singing is introduced by way of sight-reading, i.e. through notation, it is bound to be a slow and expensive process, because we are asking children to do something through symbols, which they have never been able to attempt without symbols, i.e. orally.

This oral stage in part-singing is the missing link — a link which is hardly supplied by ordinary round and canon singing. For, just as a prolonged oral stage of language speaking should precede the symbolic stage of language reading, and just as a prolonged oral stage of song singing should precede the notational stage of melodic sight-reading, so a prolonged oral stage of part-singing should precede the notational stage of part-reading. And we believe that this necessary oral stage in part-singing may be filled by canonic sequence singing on the method which we have endeavoured to expound above.

Practically no sight-reading ability is required for the singing of sequences. Further, the effect of singing sequences is cumulative, and children who are able to sing a melodic sequence find little difficulty in singing the same sequence in canon form.

It need hardly be added, too, that the singing of under-parts to the sol-fa syllables greatly develops the aural technique and the music-spelling or sol-faing ability of the pupils by extending and enriching the connotation or mental effects of the sounds of the scale degrees. The mediant comes into its own, so far as the child is concerned, only when he can sing it or image it in its various contexts in chords and harmonic progressions. For, as Professor Whitehead says, in "Science and the Modern World":

> "A thing is only itself in drawing into its own limitations the larger whole in which it finds itself."

This should be remembered by those music teachers who think, when they have given the lesson on, for example, "m", "r", "t", "fe", or  , according to the prescribed scheme of work, that the matter can now be dismissed as a "fait accompli", and that if the class still have trouble with it, this is simply because they have not been attending.

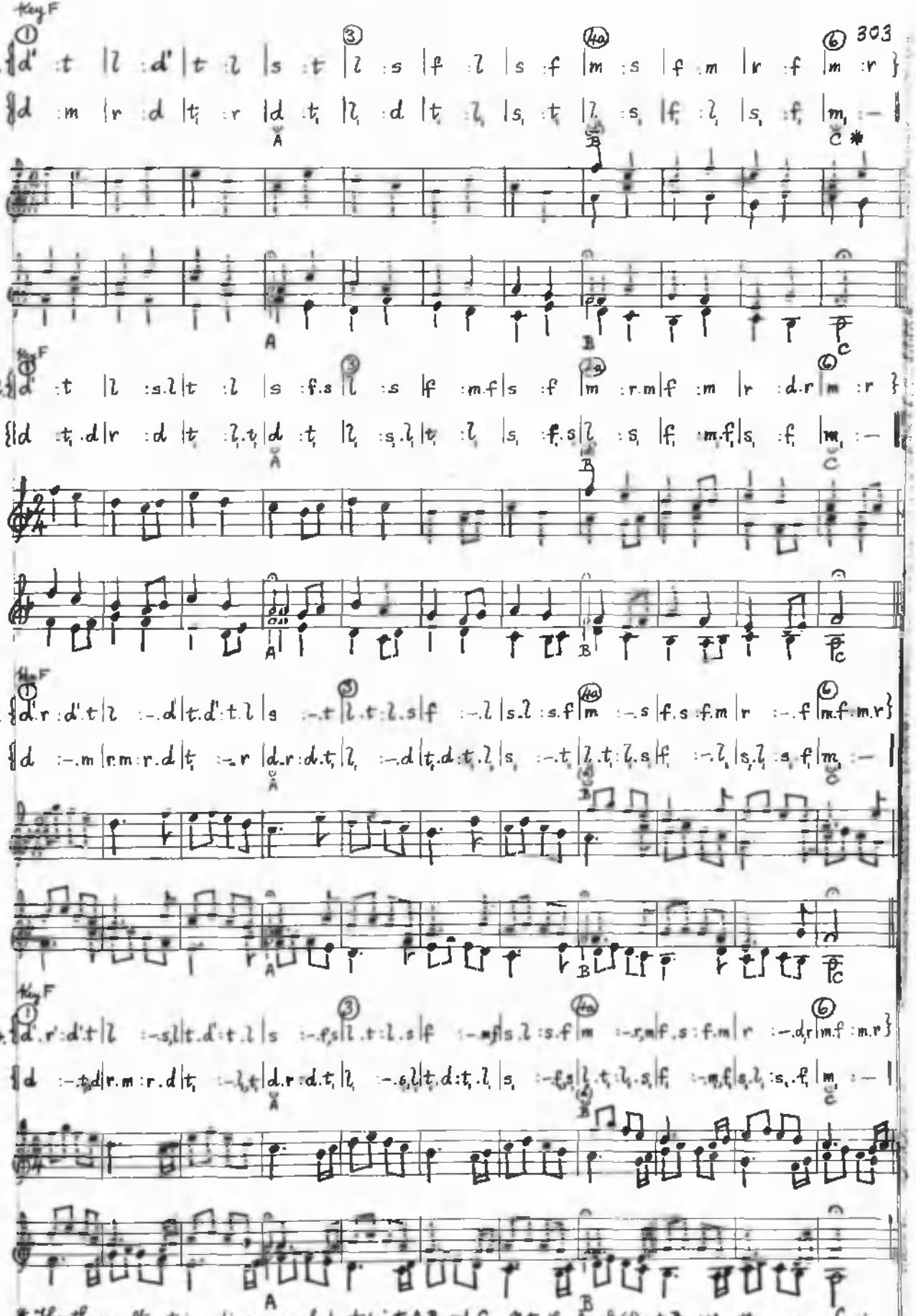
We shall now conclude this section by giving some examples of canonic sequences, still based on descending thirds, but more limited in scope than the previous thirty examples, i.e. sequences which may not be used with certain entries because of the forbidden consecutives which these would involve, but which may be used with other entries,

especially ①④. Canons on ①③ (thirds), ①⑥ (sixths) and ①③⑥ ("six-threes") may, of course, be sung from any descending sequence whatever.

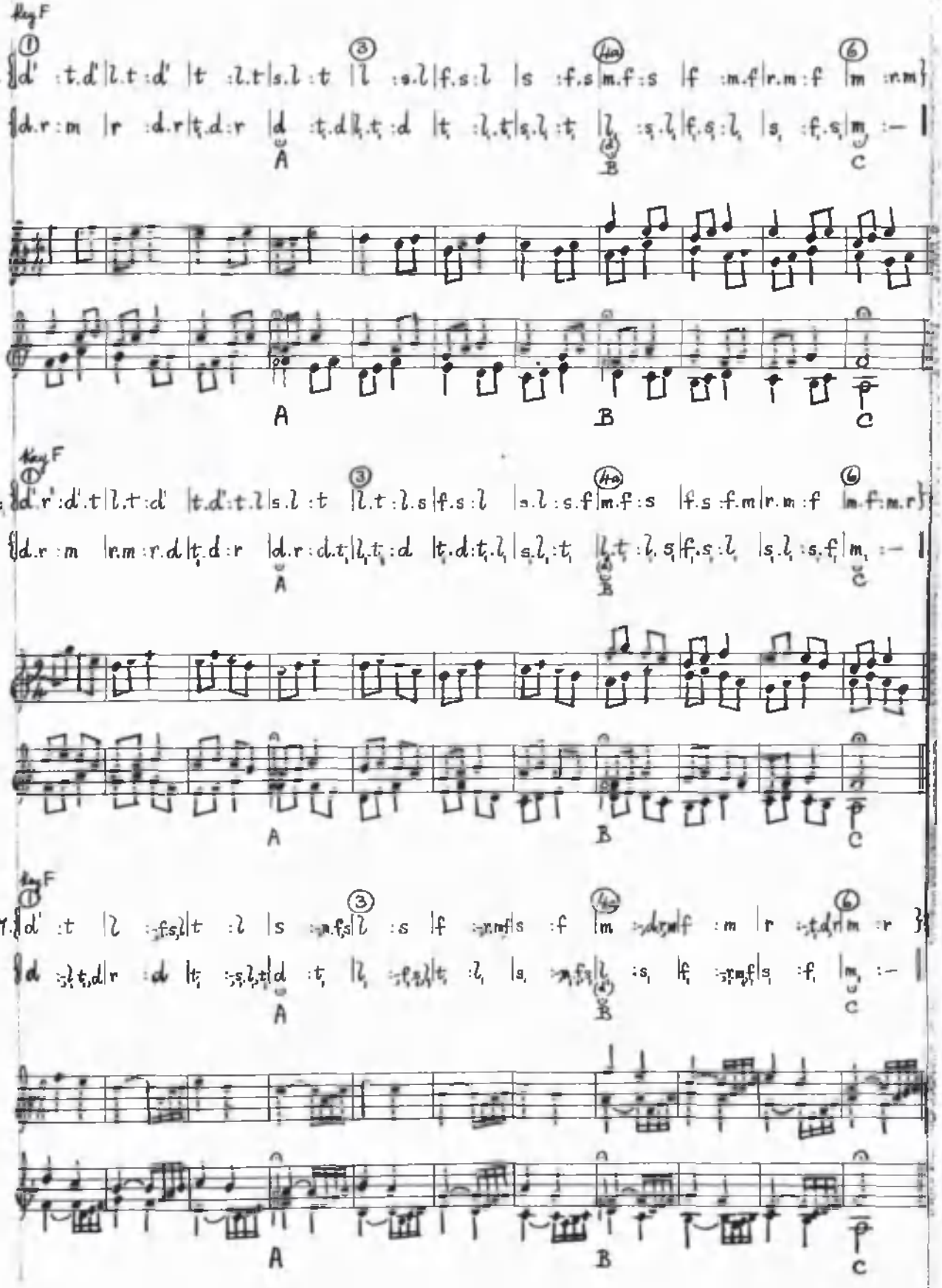
Alternative Endings for Equal Voice Canons

As has been pointed out before, objection may be taken to the wide range of the complete sequences, especially in connection with their use with younger pupils. This objection, however, may be obviated by the use of an alternative ending at the 15th or the 19th bar. In the latter case, voice ① would finish at the 19th bar on "d" instead of "l", as is shown in the (c) lay-out of the canons, 1c, 2c, 3c, etc. in the previous pages. These alternative endings are indicated here.

This method of shortening the canonic sequences may be applied to all canons based on descending thirds. It is useful for young classes, as it restricts the range to a ninth or a tenth, and allows the use of lower keys, e.g. E, D or C. It should be remembered that the keys of F, and, in the case of mixed voices, E♭, are used here merely for the convenience of the reader.



* The three alternative endings are marked at points A, B, and C. Note the trunk (6) at B. The other voice or voices should pause when voice (1) reached A, B or C as desired.

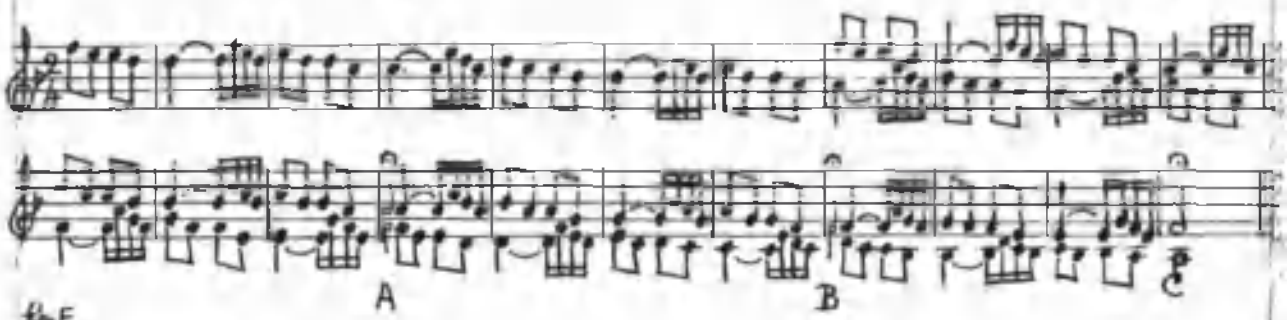

Key F
35.
36.
37.
A
B
C

Key F

38. ① d' : t : t . l | l : -, d' . t, l | t . l : l . s | s : -, t . l, s | ③ l . s : s . f | f : -, l . s, f | s . f : f . m | ④a m : -, s . f, m | f . m : m . r | r : -, f . m, r | ⑥ m . r : r . d

d : -, m . r, d | r . d : d . t, | t, : -, r . d, t, | d . t, : t, . l, | l, : -, d . t, l, | t, . l, : l, . s, | s, : -, t, . l, s, | l, . s, : s, . f, | f, : -, l, . s, f, | s, . f, : f, . m, | m, : - ‖

A B C

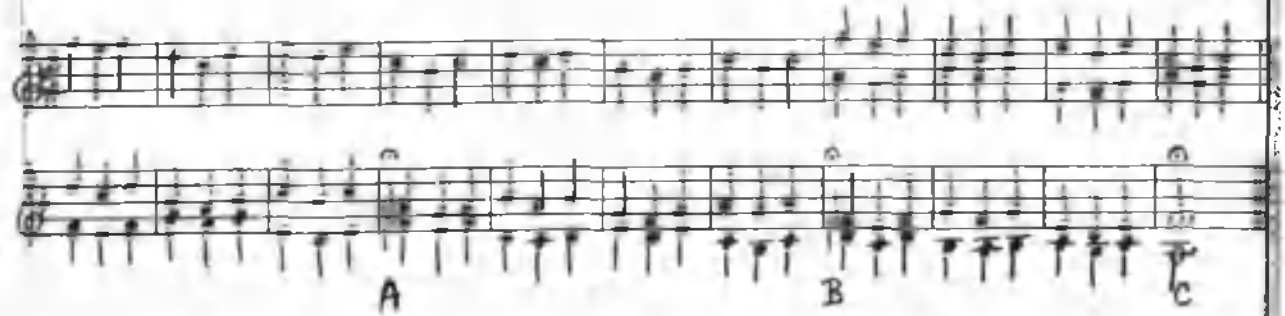


Key F

39. ① d' : t : d' | l : s : l | t : l : t | s : f : s | ③ l : s : l | f : m : f | s : f : s | ④a m : r : m | f : m : f | r : d : r | ⑥ m : r : m

d : t, : d | r : d : r | t, : l, : t, | d : t, : d | l, : s, : l, | t, : l, : t, | s, : f, : s, | l, : s, : l, | f, : m, : f, | s, : f, : s, | m, : - : - ‖

A B C



In the following canon the intervals are wider, but the result is exactly the same as in the above. Note the earlier entry, and the crossing of voices.

Key F

40. ① d' : t : d' | f : m : f | t : l : t | ②a m : r : m | l : s : l | r : d : r | s : f : s | d : t, : d | f : m : f | t, : l, : t, | m : r : m

l, : s, : l, | r : d : r | s, : f, : s, | d : t, : d | f, : m, : f | t, : l, : t, | m, : - : - ‖



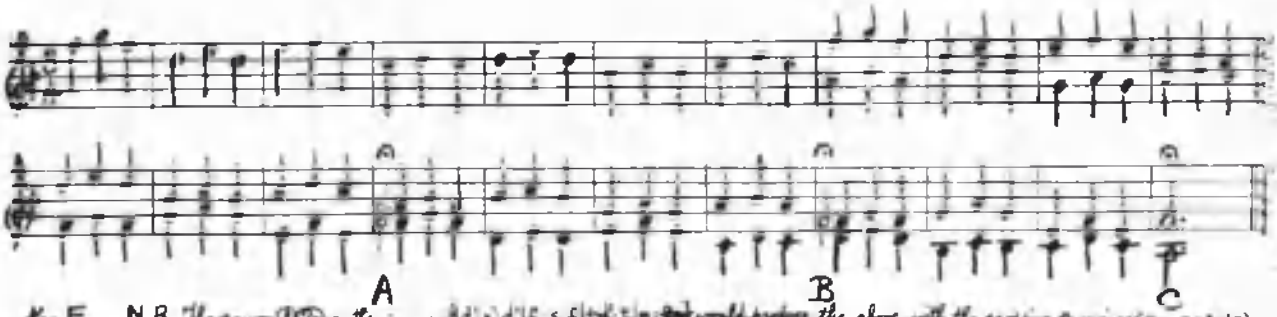
Key F

41. ① ③ 4a ⑥

{ d' : r' : d' | l : t : l | t : d' : t | s : l : s | l : t : l | f : s : f | s : l : s | m : f : m | f : s : f | r : m : r | m f : m }

{ d : r : d | r : m : r | t₁ : d : t₁ | d : r : d | l₁ : t₁ : l₁ | t₁ : d : t₁ | s₁ : l₁ : s₁ | l : t₁ : l₁ | f₁ : s₁ : f₁ | s₁ : l₁ : s₁ | m₁ : - : - ‖

A B C



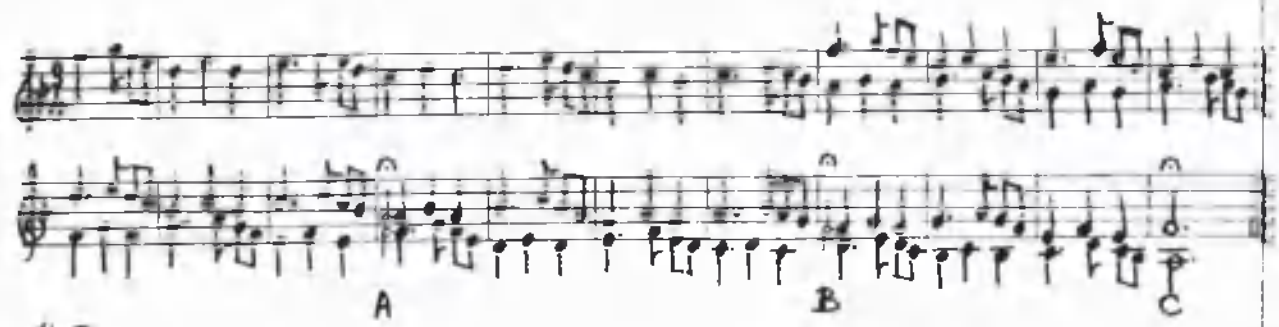
Key F N.B. The canon ①② on the inquiry { d' : r' : d' | f : s : f | t : d' : t | m : f : m } would produce the above, with the crossing of voices (See 39 & 40)

42. ① ③ 4a ⑥

{ d' : - : r' : d' : t | l : t : l | t : - : d' : t : l | s : l : s | l : - : t : l : s | f : s : f | s : - : l : s : f | m : f : m | f : - : s : f : m | r : m : r | m : - : f : m : r }

{ d : r : d | r : - : m : r : d | t₁ : d : t₁ | d : - : r : d : t₁ | l₁ : t₁ : l₁ | t₁ : - : d : t₁ : l₁ | s₁ : l₁ : s₁ | l : - : t₁ : l₁ : s₁ | f₁ : s₁ : f₁ | s₁ : - : l₁ : s₁ : f₁ | m₁ : - : - ‖

A B C



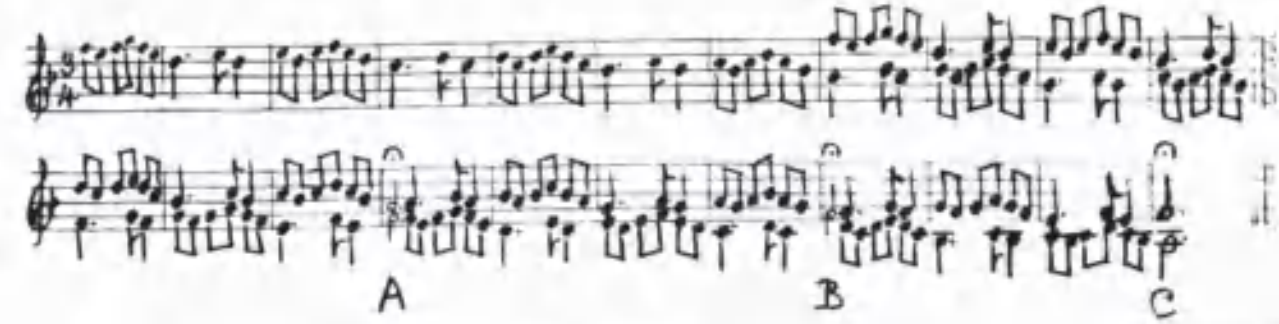
Key F

43. ① ③ 4a ⑥

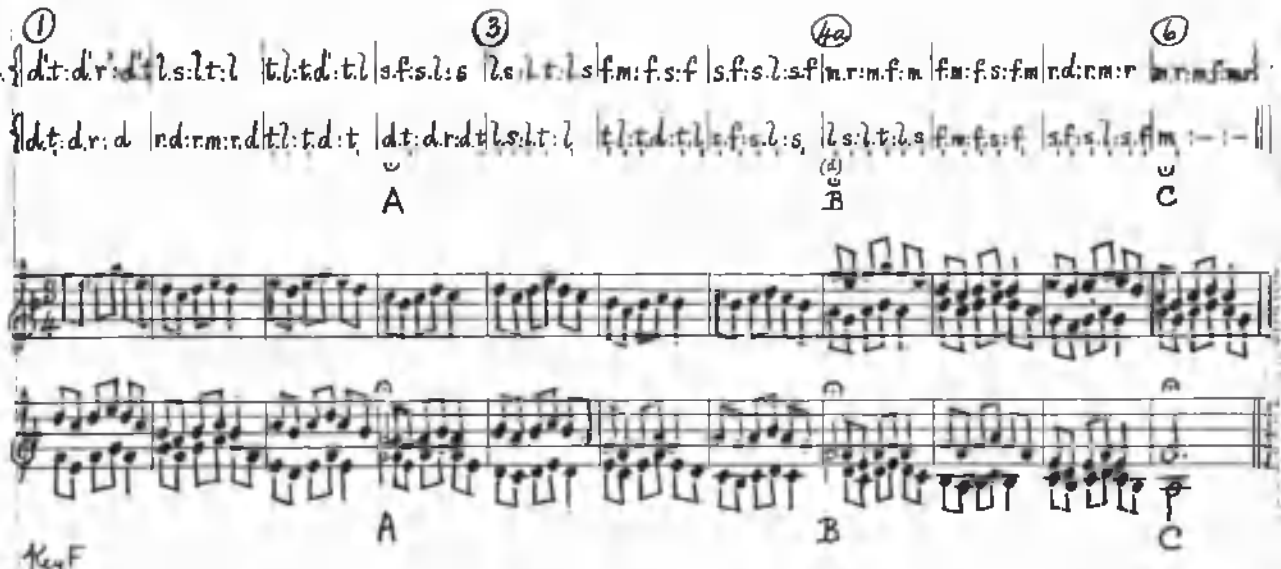
{ d' : t : d' : r' : d' : t | l : - : t : l | t₁ : l₁ : t₁ : d' : t : l | s : - : l : s | l : s : l : t : l : s | f : - : s : f | s : f : s : l : s : f | m : - : f : m | f : m : f : s : f : m | r : - : m : r | m : r : m : f : m : r }

{ d : - : r : d | r : d : r : m : r : d | t₁ : - : d : t₁ | d : t₁ : d : r : d : t₁ | l₁ : - : t₁ : l₁ | t₁ : l₁ : t₁ : d : t₁ : l₁ | s₁ : - : l₁ : s₁ | l : s : l : t : l : s | f₁ : - : s : f | s : f : s : l : s : f | m₁ : - : - ‖

A B A



Key F



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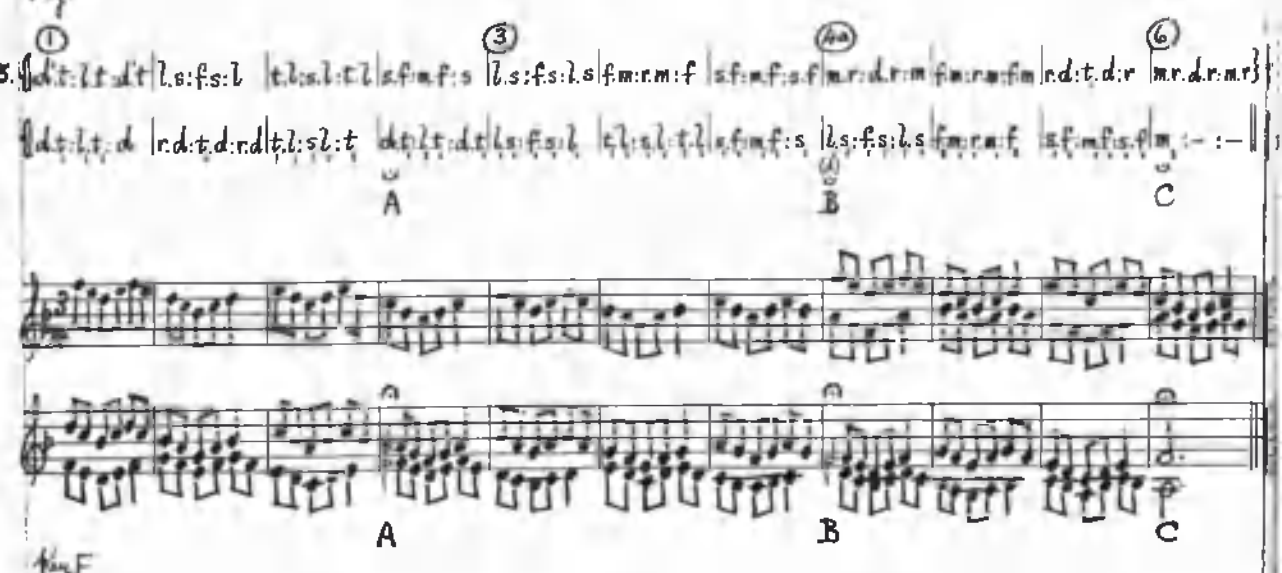

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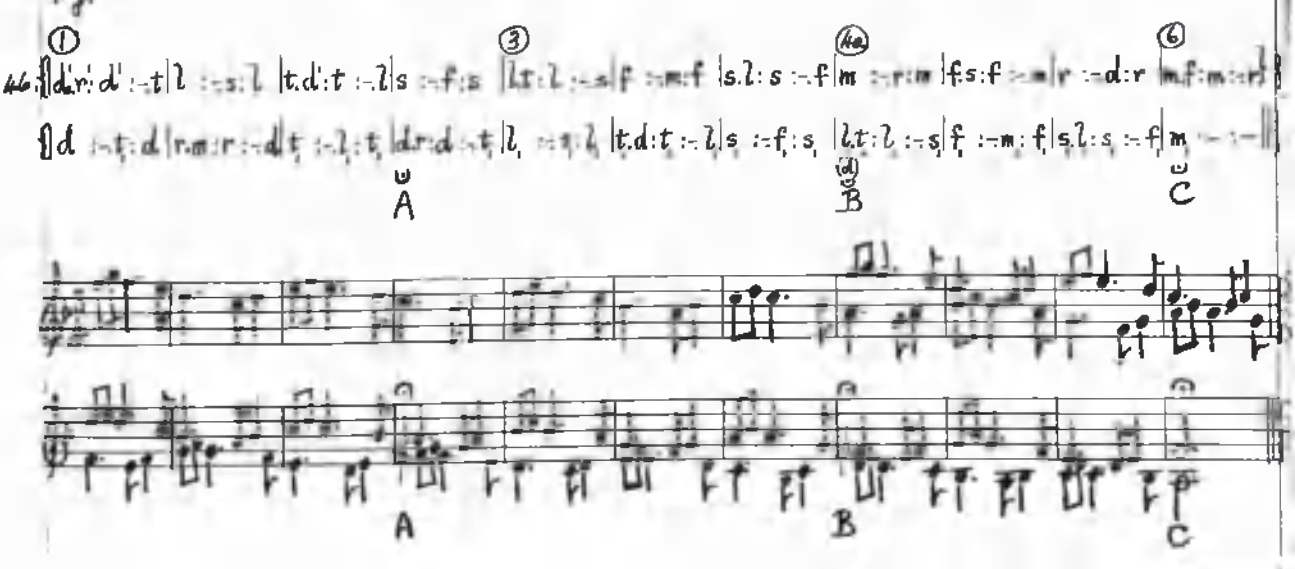
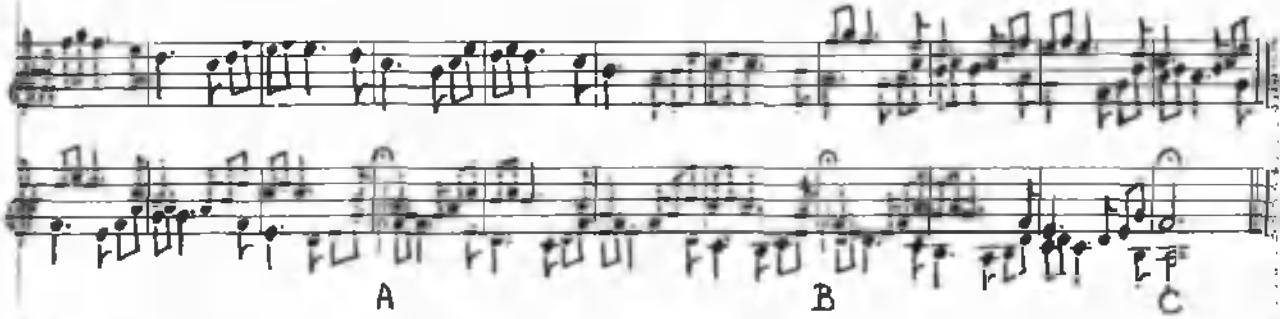


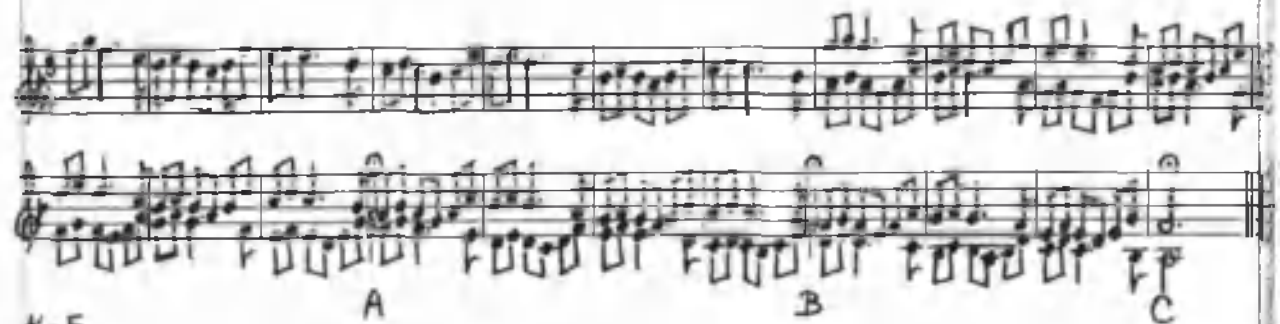
key F

47.



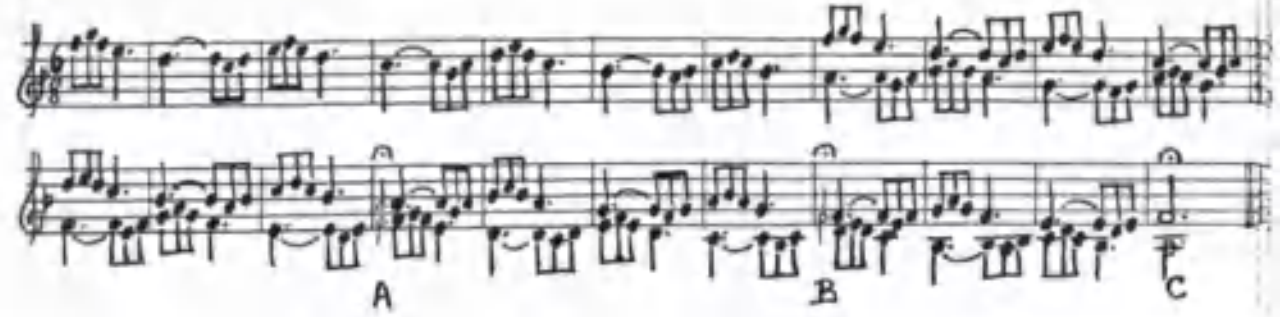
key F

48.



key F

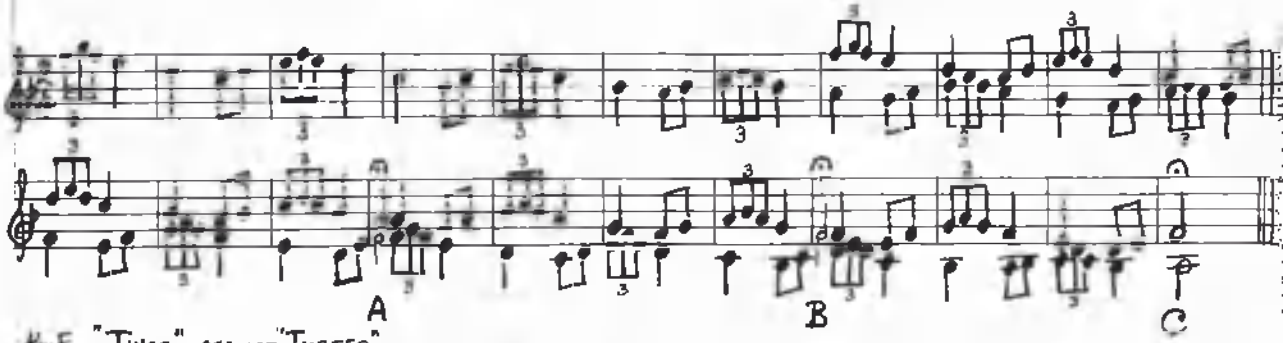
49.



"Twos" and "Threes"

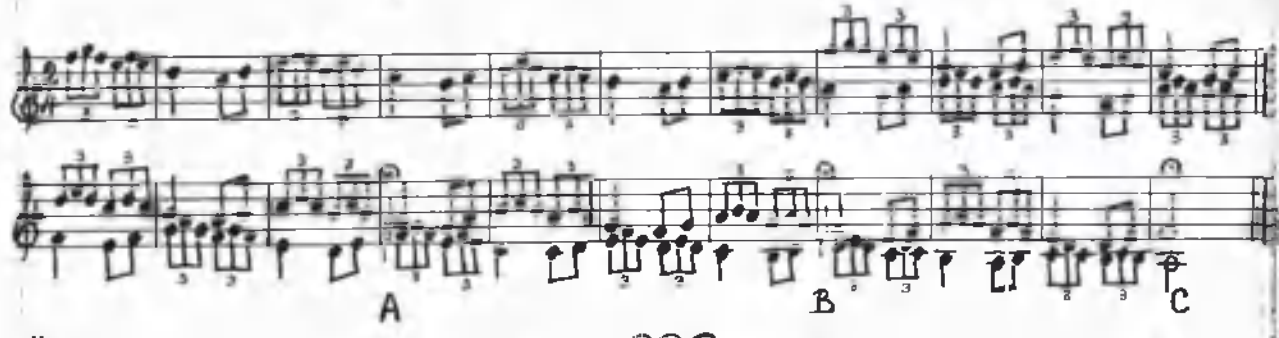
Key F

50.



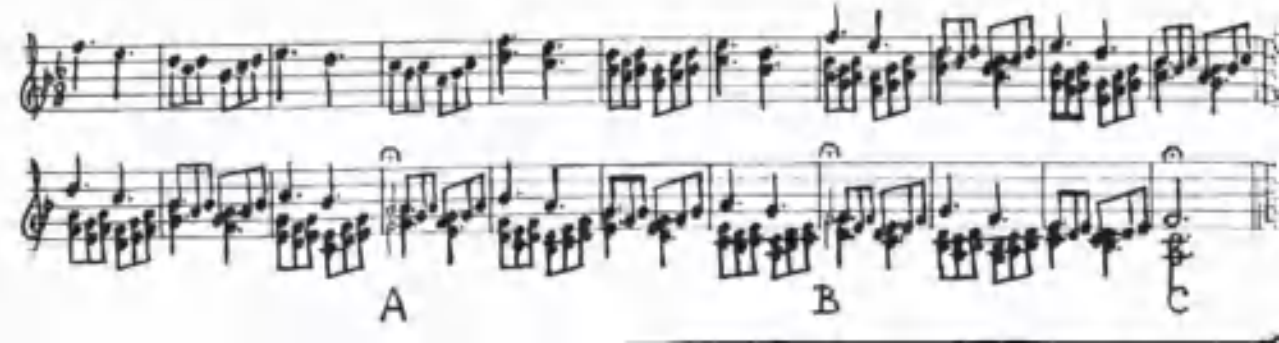
Key F **"Twos" against "Threes"**

51.



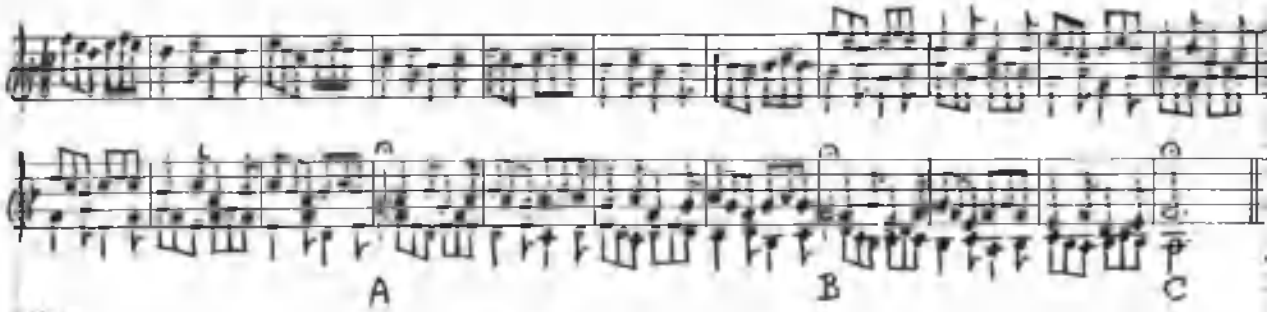
Key F **A General Favourite** – for three voices ① ③ ④

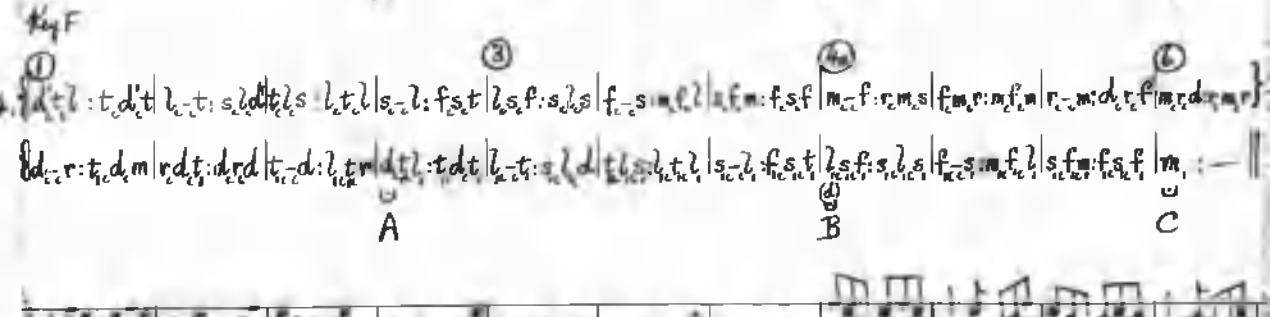
52.



Key F

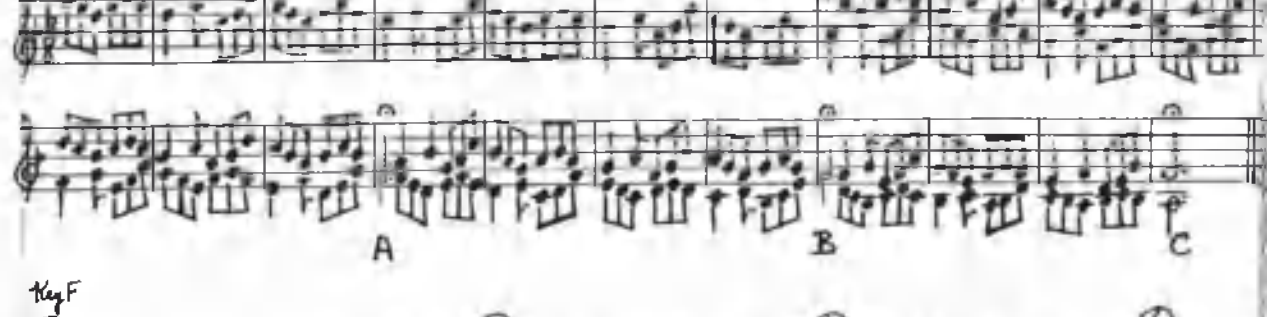
53.

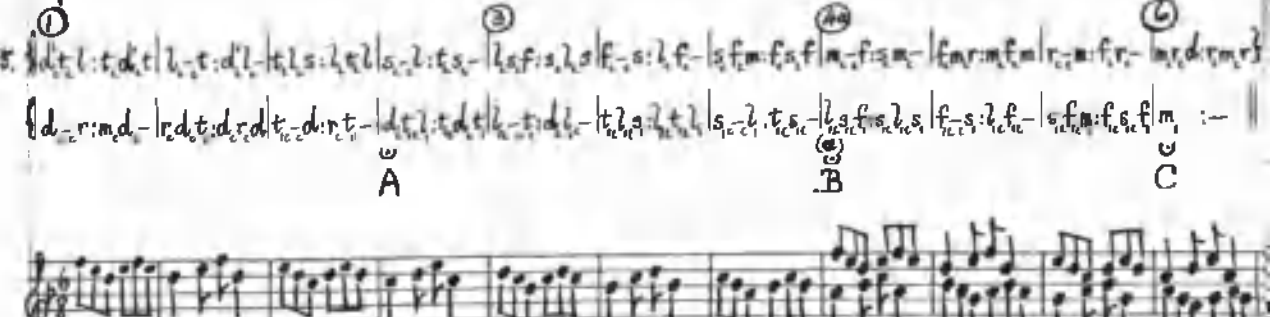




Key F

54.





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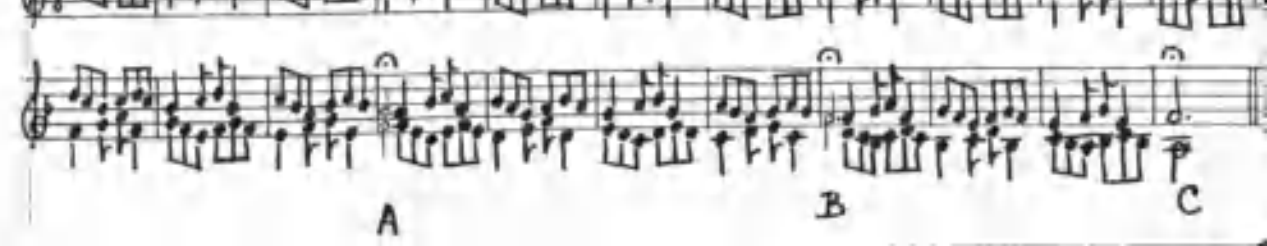
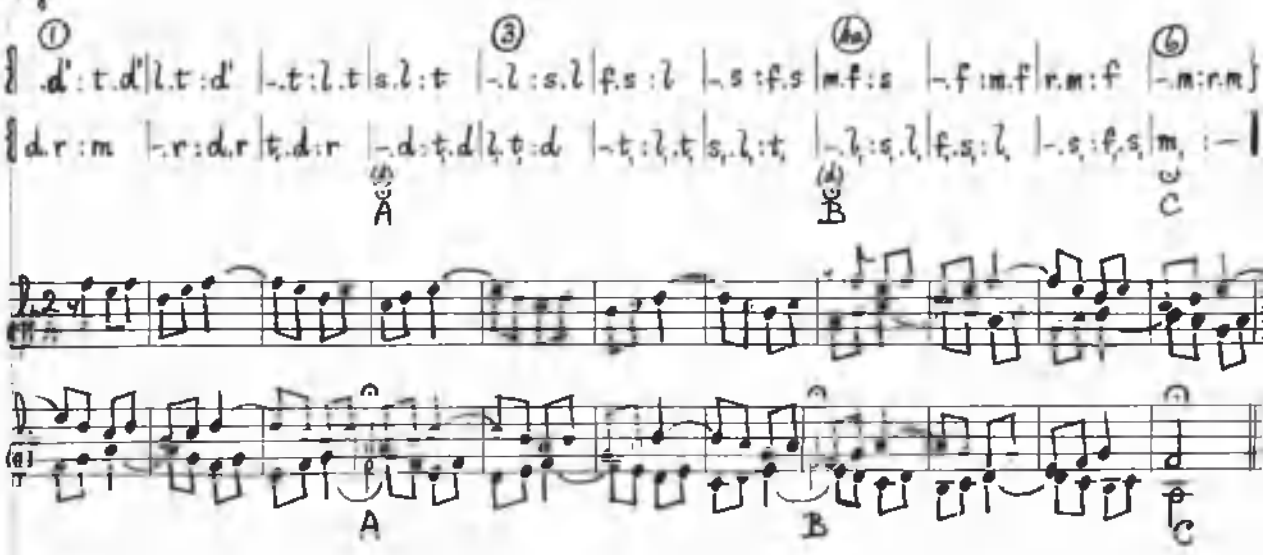
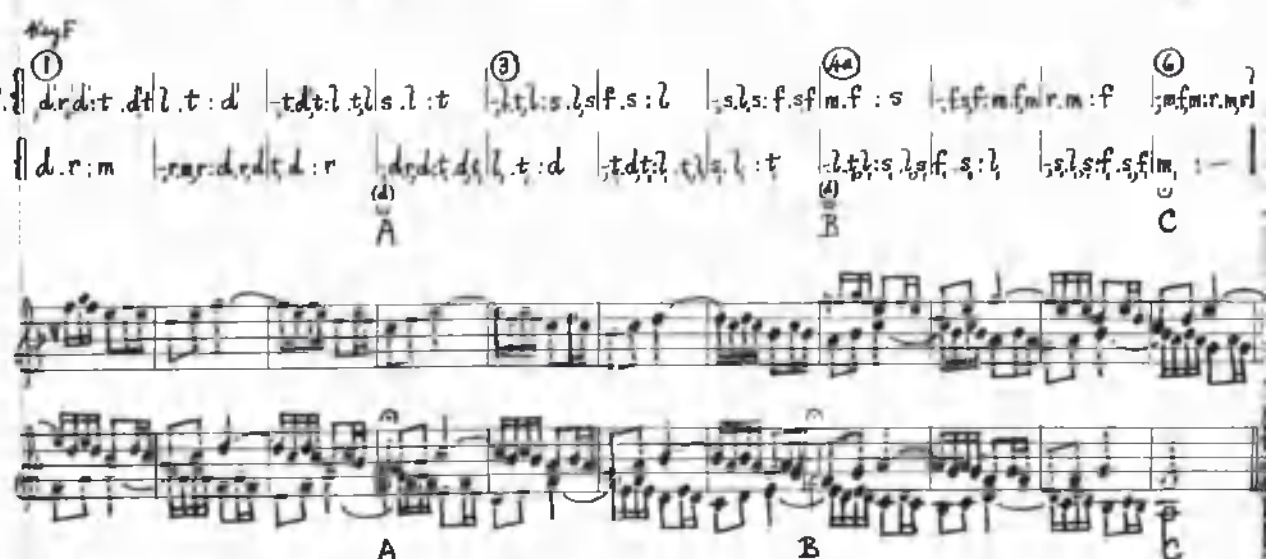
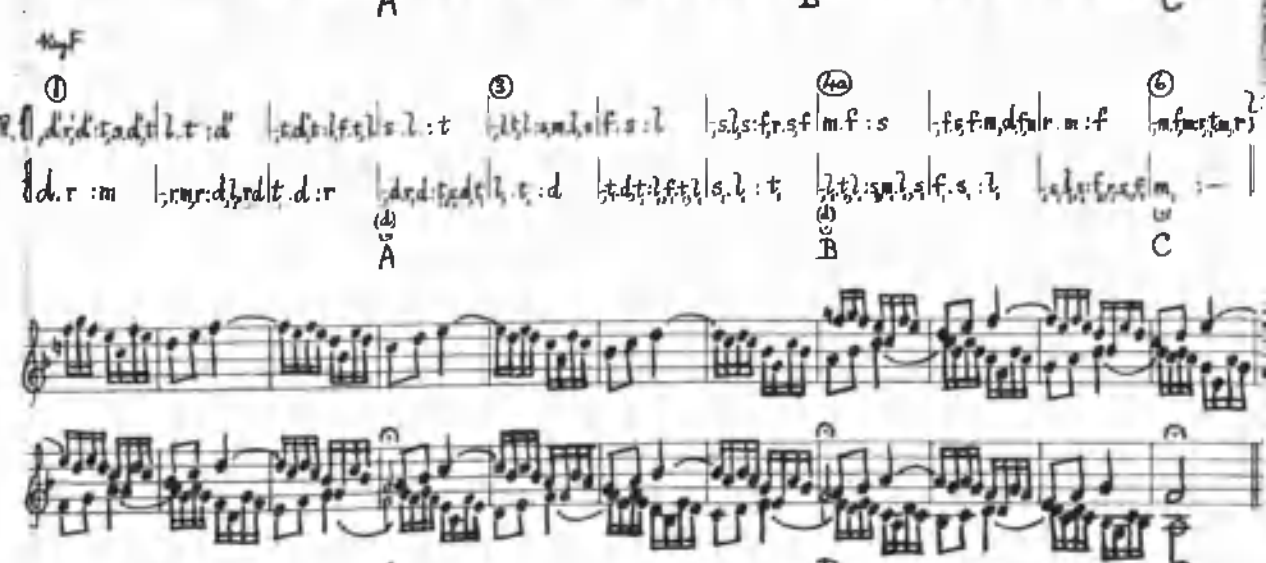


Key F





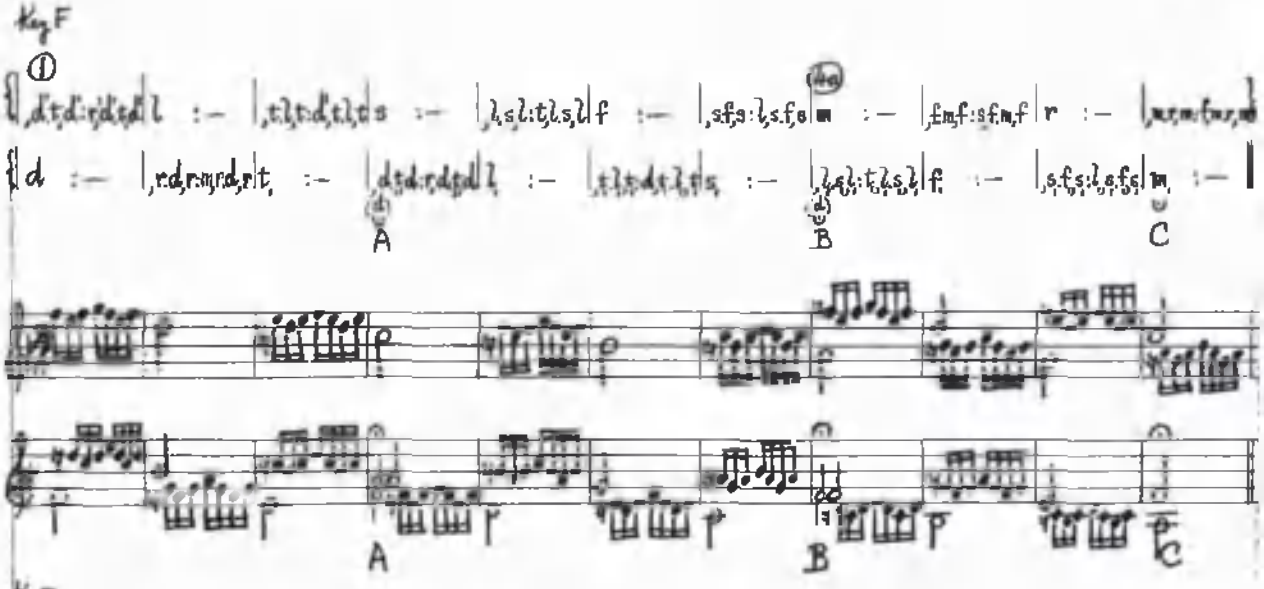
Key F



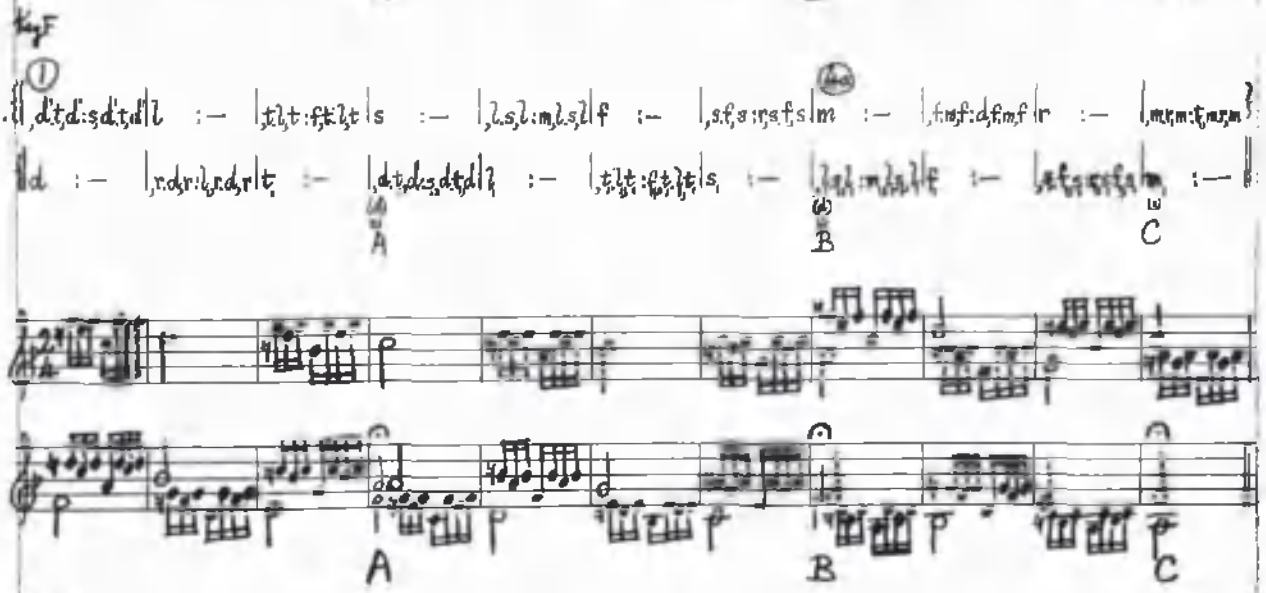


Key F

59.



60.



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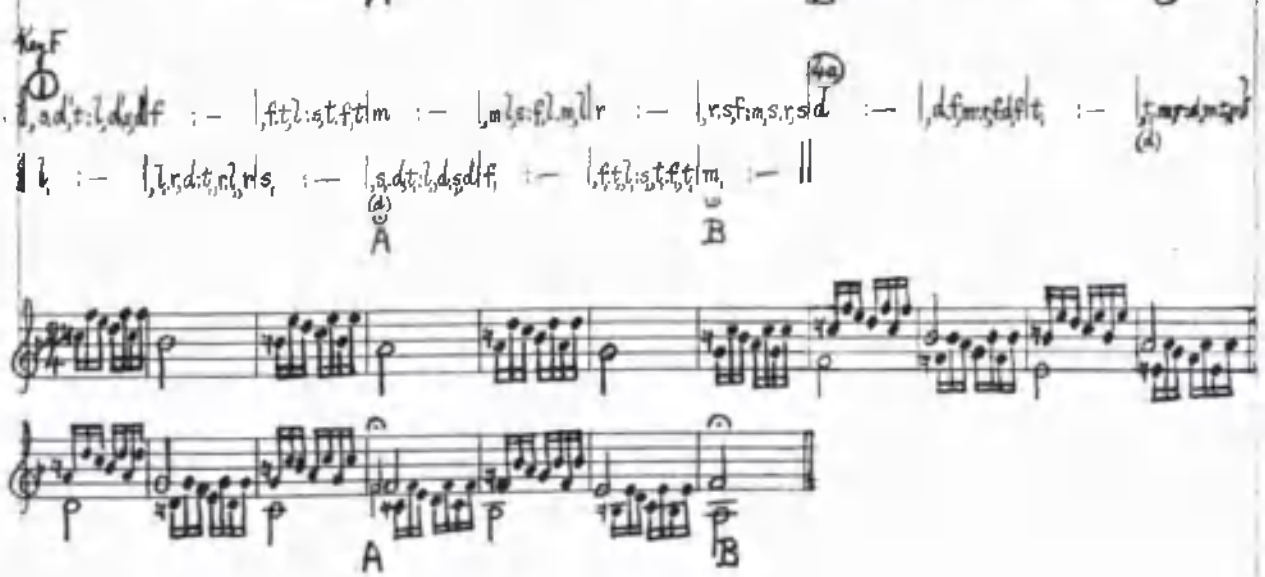


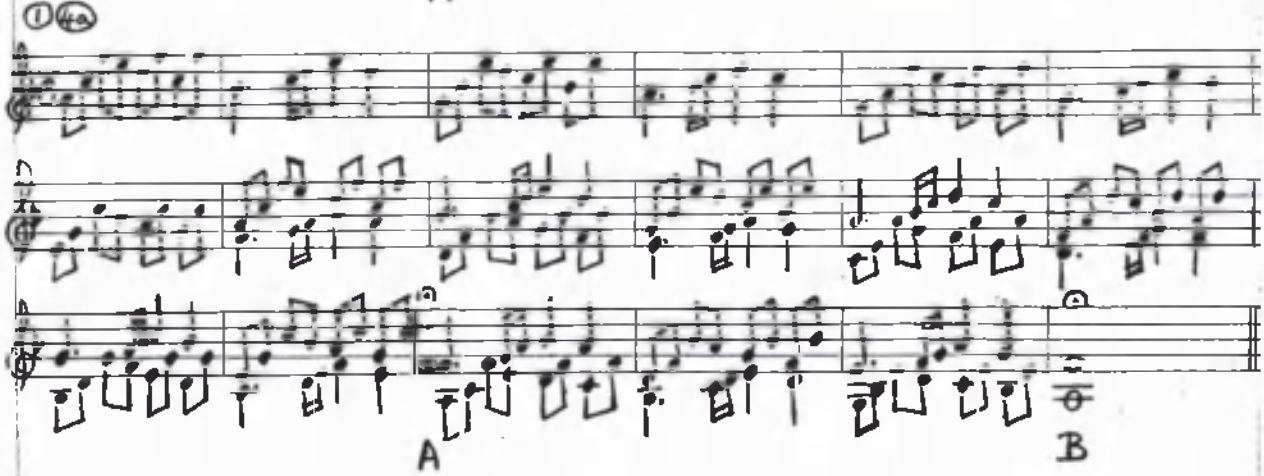
Key F

62. ① m.s : d'.t | l.d' : s.d' | f :-.s,l | t : l | r.f : t.l | s.t : f.t | m :-.f,s | l : s | d.m : l.s | f.l : m.l | r :-.m,f | s : f }

t.r : s.f | m.s : r.s | (4a) d :-.r,m | f : m | l.d : f.m | r.f : d.f | t :-.d,r | m : r | s.t : m.r | d.m : t.m | l :-.t,d | r : d }

f.l : r.d | t.r : l.r | s :-.l,t | d : t | m.s : d.t | l.d : s.d | f :-.s,l | t : l | r.f : t.l | s.t : f.t | m :- | - : - |

(d) A B



CHAPTER XVI

CANONS ON CHROMATIC SEQUENCES

Chromatic notes may be used in two ways: first, for purposes of melodic grace or ornamentation, and, secondly, for purposes of harmony or modulation.

As melody antedates harmony in the history of music, so the use of chromatic notes as melodic constituents antedates their use as harmonic or modulatory constituents. In fact, as we have already shown, from the early days of polyphonic music down to modern times the harmonic vocabulary has been progressively enriched through the introduction of notes which had been inflected originally for purposes of melody.

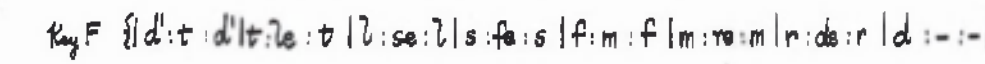
It would seem natural, then, that chromatic notes should be introduced in the Singing Class for their melodic virtues, and not for their merits in establishing modulation and showing the relationships of keys.

We have already shown how chromatic notes may be introduced for melodic purposes in sequence singing (see page 134). In asking children to apply what we have called the Semitonal Mordent Principle in sequences like

Key F ‖d':t:d' |t:l:t |l:s:l |s:f:s |f:m:f |m:r:m |r:d:r |d :-:-‖

whereby the vowel of the middle syllable is raised, when necessary, to the acute vowel "ee", and a semitone is sung

between the upper and lower notes, thus:



we are applying a principle which was carried out, without any indication in the notation, by singers more that seven hundred years ago.

In his famous Treatise, Jean de Garlande (1190-1240) deals with the problems of "Musica Ficta", and lays down the following rules.

1. "Whenever in plainsong 'la sol la' occurs, the 'sol' must be 'altered' and the passage sung 'fa mi fa'."
   (Or, in modern terms, whenever in plainsong 'l s l' occurs, the 's' must be raised and the passage sung 'l se l'.)

2. "When 'sol fa sol' appears, the 'fa' must be 'altered', and the passage sung 'fa mi fa'."
   (Or, as we would say today, when 's f s' appears, the 'f' must be raised and the passage sung 's fe s'.)

3. "When the plainsong is 're ut re', the 'ut' should be 'altered', and the passage sung 'fa mi fa'."
   (That is, when the plainsong is 'r d r', the 'd' should be raised and the passage sung 'r de r'.)

(See The Oxford History of Music, 2nd Edition, Vol.I, page 278)

Immediately after quoting the above, Wooldridge, the Editor of this Volume, continues:

> "It may appear, perhaps, as somewhat remarkable that the first use, by the learned writers, of the Sol-fa nomenclature, proper to the hexachordal system, should coincide with the first settlement of the rules of chromatic alteration; for although the hexachordal system had been, from the time of its completion, occasionally described, yet, apart from these descriptions, there is scarcely to be found, until the period at which we have now arrived, any designation of the notes of the scale otherwise than by letters. But the reason for the change is this, that the new chromatic alteration of notes had revealed the existence of a musical principle, perceived at first entirely in its practical aspect, which could only be accurately stated by a reference to the hexachordal system, and by the use of its peculiar nomenclature."

It should be noted that in the days of "Musica Ficta" the mental effect of the semitonal lower mordent was brought home to the singers by the use in each case of the syllables "fa mi fa".

The reason for the use of the same syllables "fa mi fa" in each case is that only six syllables - "ut re mi fa sol la" - were then in use for purposes of sol-faing; and when the music extended beyond the hexachord,- e.g. "d" to "d'" or "s," to "s" - the syllables were transposed, much in the same manner as they are transposed today in the Tonic Sol-fa System by means of a bridge-note when a modulation takes place. Thus under the old "Mutation" System it was arranged that the syllable "mi" with its acute "ee" vowel should always occur at the semitonal step. According to the hexachordal system of sol-faing, the notes from C to C' would be sung "ut re mi fa ut re mi fa", while the notes from G_1 to G

would be sung "ut re mi ut re mi fa sol".

The leading note, "si", with its acute vowel, was not introduced till about the year 1600, while the use of this semitonal "ee" vowel was not extended to all the raised chromatic syllables - "de re fe se le" - till Curwen's day.

It is instructive to note in passing that this psychologically sound principle of marking the semitonal steps in the syllables by the use of a special acute vowel sound is to be found in solmisation or sol-fa systems as far apart in time and space as those of the Hindus and the ancient Greeks, as well as in the mediaeval Guidonian system and the present day Tonic Sol-fa System. In the Greek system of sol-faing, as it happens, the semitonal vowel sound appears in the upper note of the "diatonic" semitone and not in the lower note as in our system, e.g. m f, t d'. But when we read that the ancient Greeks always conceived melody and scale from above downwards, so that, from <u>their</u> point of view, the semitonal vowel always came before the acute interval, we see that the same fundamental psychological principle is at work.

(See "The Music of Hindustan", by A.H. Fox-Strangways, Oxford University Press, pp.84 and 85, and Grove's Dictionary under "Solmisation".)

It is important to stress this question of the semitonal step in relation to sol-faing, for it is the

position of the semitones in the scale or mode that decides the character of particular scales or modes, as is borne out by the vague, nebulous character of wholetone music and the indeterminate, heterogeneous character or lack of character of modern totalitarian chromaticism.

And as with scales and modes, so with intervals. It is the position of the semitones in the diatonic scale that makes one diatonic interval a major second or third, and another diatonic interval a minor second or third, one diatonic interval a perfect fourth or fifth and another diatonic interval a diminished or augmented fourth or fifth. If the importance of the disposition of the tonal and semitonal steps in the scale is admitted, one must then admit the importance of the aural recognition by pupils at an early stage of these same tonal and semitonal steps. And this aural recognition is precisely what will come from sol-faing practice in the chromatic notes, especially the raised chromatics. For, as has already been pointed out, the sol-faing of the chromatic notes, like the incision of the surgeon's scalpel, lays bare the structure or anatomy of the scale with respect to tonal and semitonal steps, as no amount of exposition or explanation of staves, clefs, key signatures, sharps, double sharps, naturals, flats and double flats will do.

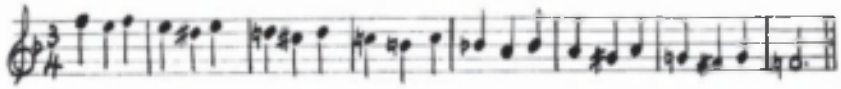
Yet in spite of all this, and in spite of the fact that even young children, though ignorant of the chromatic syllables, are familiar with most of the chromatic sounds through the hearing and singing of popular music, we find that most educationists, in their aural training and sight-reading systems, are content to delay the introduction of chromatic notes, until their use in modulation or in explaining the relationship of the key of the Dominant and Subdominant to that of the Tonic forces them to introduce at least "fe" and "ta".

The typical example of this type of logical exposition of subject-matter in defiance of all psychological considerations is to be found in the sight-reading system that begins with Key C and follows on at intervals with Keys G, F, D, B♭ etc. in the order of the sharps and flats in the key signature! Such educationists are obsessed with the idea of music as a written language. They fail to separate in their minds the idea of music from the idea of staff notation, the idea of music-spelling from the idea of music-reading, the idea of aural discrimination from the idea of visual discrimination, the idea of sight-singing from the idea of sight-playing, two distinct processes which cannot be regarded as in the same category at all.

In the present case, the result of this mental confusion is the attempt to coordinate two separate abilities

which mature at different rates and at different stages of growth, namely, music-spelling (or sol-faing) and staff sight-reading. Thus, sol-faing ability must wait on staff-reading ability, for sol-fa and staff must follow a parallel course, pari passu. While the ability to sing and to recognise by mental effect a chromatic sound like "fe" must wait on the ability to understand the position and notational accompaniments on the stave of such a note in various keys. And the result of all this is that few children ever get beyond "fe" and "ta" in their use of the sol-fa syllables.

It should be recognised that while the following chromatic sequence in staff notation,



makes considerable demands on the eye and on the intelligence of children with no keyboard experience, the same chromatic sequence in tonic sol-fa notation

key F | d' : t : d' | t : la : t | l : se : l | s : fe : s | f : m : f | m : re : m | r : de : r | d : - : - ||

makes very little demand on the eye or on the intelligence of such children, and, unlike the staff example, the sol-fa example holds good for all keys and all octaves throughout the whole gamut of music.

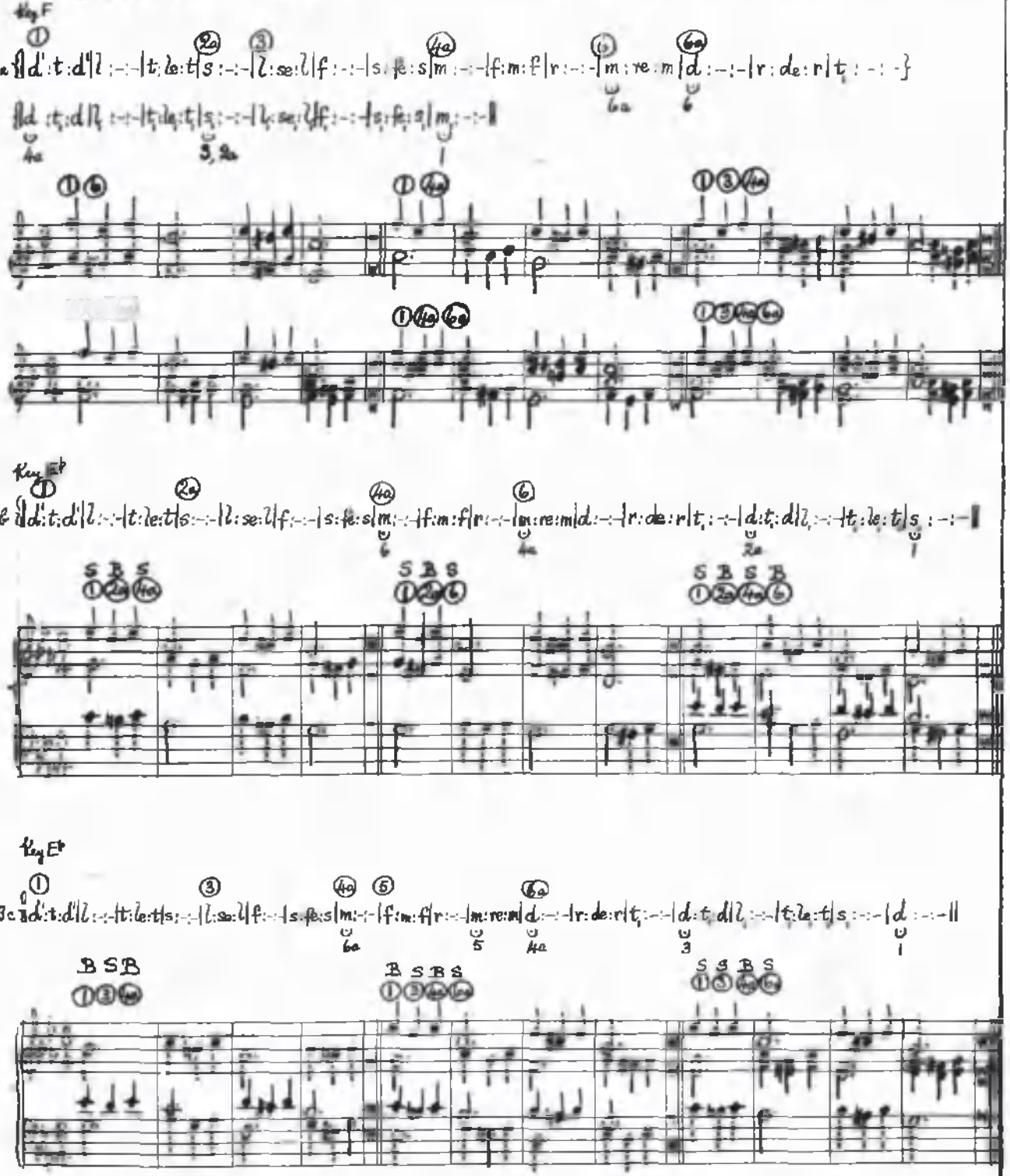
Let us state here that our aim is identical with that of the staff-obsessed teacher, namely, to get children to read music at sight from staff notation. But in music, as in all language subjects, an extensive aural and oral stage should precede the visual or notational stage with all its necessary ambiguities. And it is in order to ensure the provision of this fruitful oral stage in the teaching of music-reading, that we draw attention to music-spelling practice, both diatonic and chromatic, in unison and in parts, on the lines which we have indicated.

In the following examples of chromatic sequence canons, it will be seen that in some cases the chromatic notes are simply melodic ornaments, while in others they become harmonic constituents.

If the children learn to sing the chromatic sequence first of all, they will experience very little difficulty with the canon.

Chromatic Sequence Canons.

The following canon is simply the chromatic version of the diatonic canon No. 4a, 4b, 4c on pages 247-249. Most of the 41 canons for equal and mixed voices shown there, may be attempted, with the exception of ①③⑤a. Specimen examples are given below, beginning at the point of entry of the last voice. These, like all the canons in this book, finish regularly on the tonic chord. For a shorter version, i.e. a canon with a lesser range, equal voices may sing from No. 63c below, where the sequence is broken off on the last note in order to close sooner.



Chromatic Sequence Canons with Modulations

Below are given some examples of the same chromatic sequence with additional chromatic notes used for purposes of modulation. It will be seen that by means of these chromatic sequence canons we obtain modulations to all the related keys — relative minor, dominant, supertonic minor, subdominant and mediant minor.

64a. Key F ①

| d' : t : d' | l : – : – | t : le : t | se : – : – | l : se : l | fe : – : – | s : fe : s | m : – : – | f : m : f | r : – : – | m : re : m |

| d : – : – | r : de : r | t_1 : – : – | d : t_1 : d | l_1 : – : – | t_1 : le_1 : t_1 | se_1 : – : – | l_1 : se_1 : l_1 | f_1 : – : – | s_1 : fe_1 : s_1 | m : – : – |

Relative Minor and Dominant

64b. Key F ①

| d : t : d' | l : – : – | t : le : t | s : – : – | l : se : l | f : – : – | s : fe : s | m : – : – | f : m : f | r : – : – | m : re : m |

| d : – : – | r : de : r | t_1 : – : – | d : t_1 : d | l_1 : – : – | t_1 : le_1 : t_1 | se_1 : – : – | l_1 : se_1 : l_1 | f_1 : – : – | s_1 : fe_1 : s_1 | m : – : – |

Supertonic Minor

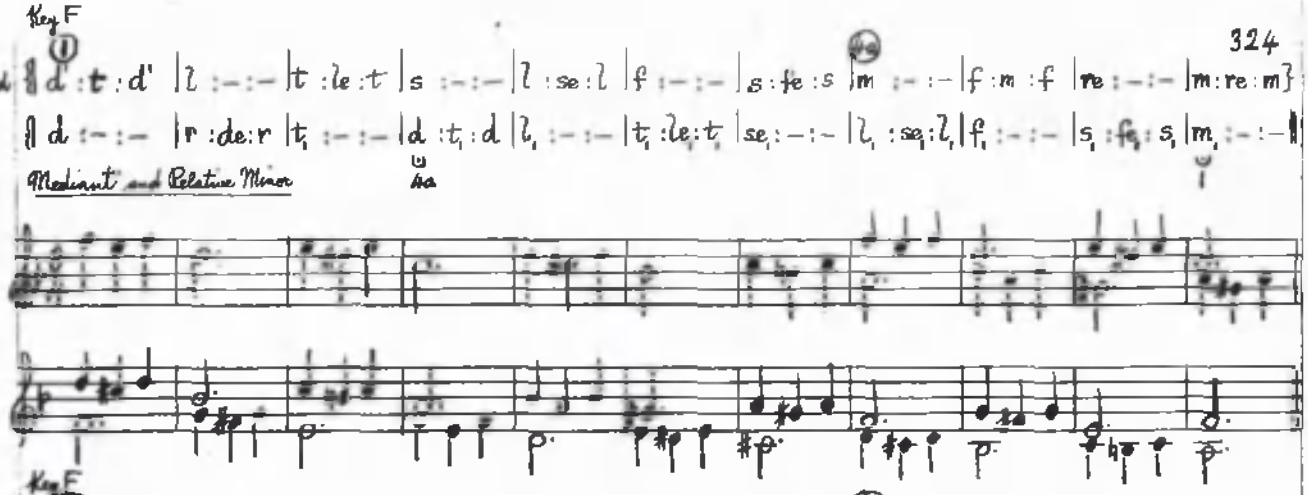
64c. Key F ①

| d' : t : d' | l : – : – | t : le : t | se : – : – | l : se : l | f : – : – | s : fe : s | m : – : – | f : m : f | r : – : – | m : re : m |

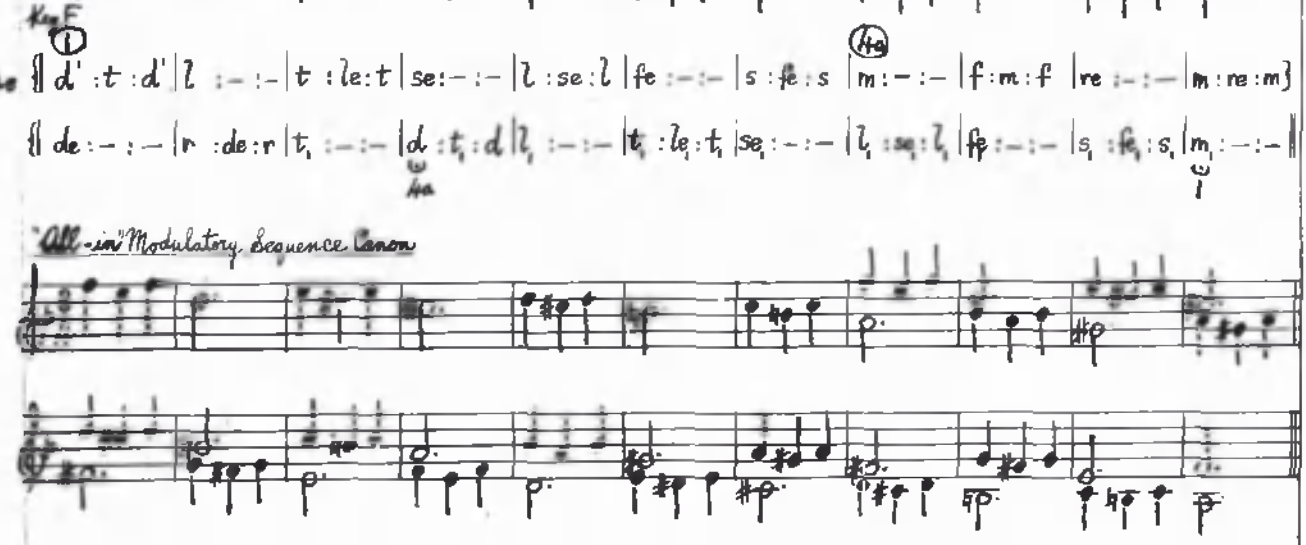
| d : – : – | r : de : r | t_1 : – : – | d : ta_1 : d | l_1 : – : – | ta_1 : l_1 : ta_1 | se_1 : – : – | l_1 : se_1 : l_1 | f_1 : – : – | s_1 : fe_1 : s_1 | m : – : – |

Relative Minor and Subdominant

64d Key F

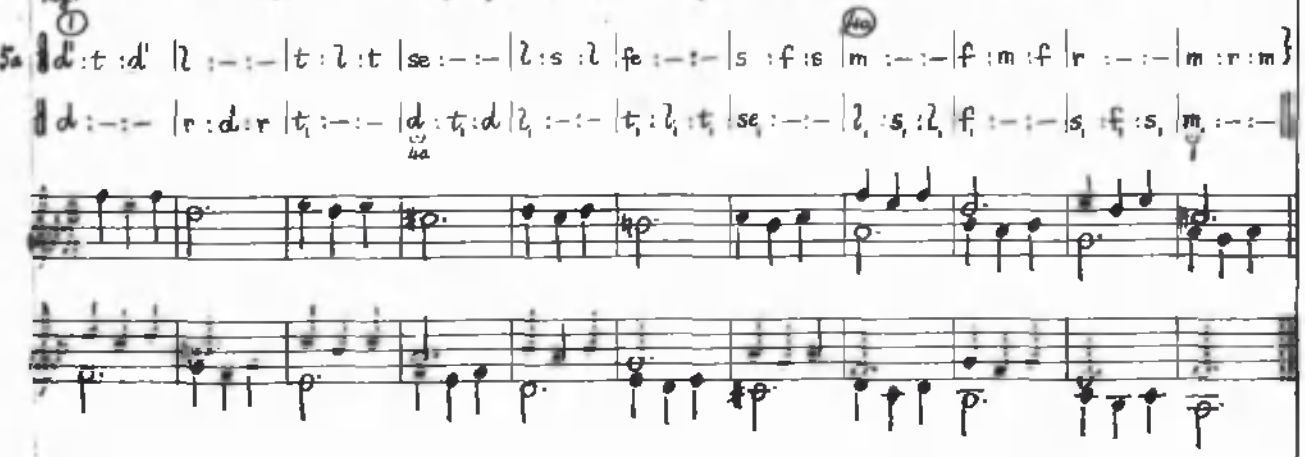


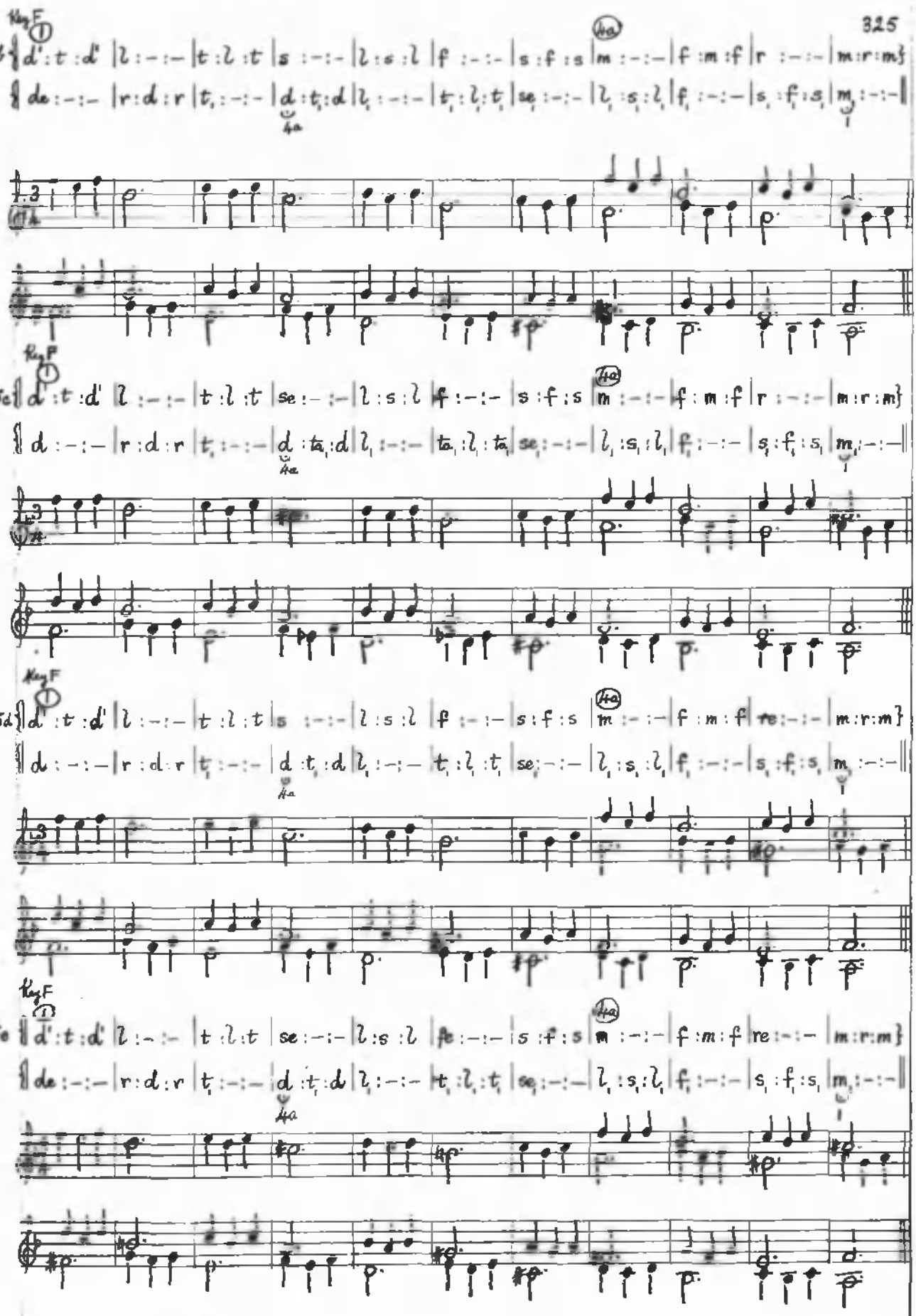
64e Key F



The following five canons should be compared with the previous five canons, 64 a, b, c, d, e. Here the lower mordent figure is diatonic throughout, while in the previous examples it is semitonal throughout — the chromatic notes being used only for purposes of modulation in this canon series.

65a Key F

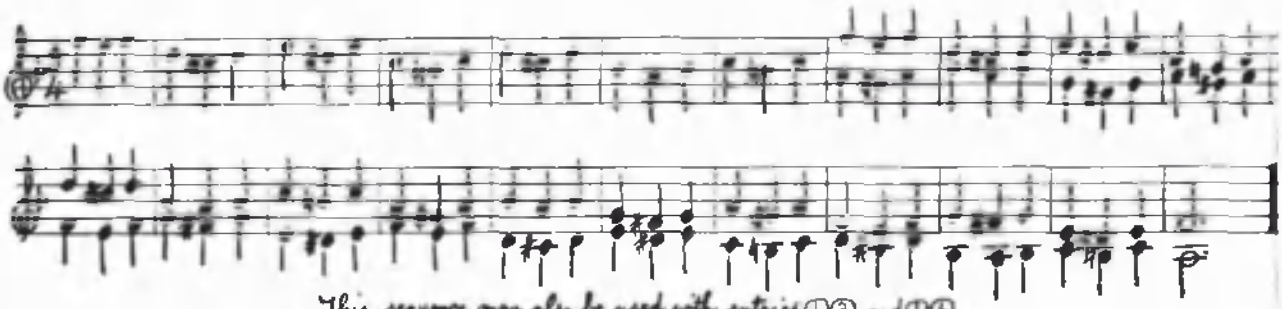



Key F
656
d' :t :d' | l :-:- | t :l :t | s :-:- | l :s :l | f :-:- | s :f :s | m :-:- | f :m :f | r :-:- | m :r :m
de :-:- | r :d :r | t, :-:- | d :t, :d | l, :-:- | t, :l, :t, | se, :-:- | l, :s, :l, | f, :-:- | s, :f, :s, | m, :-:-
Key F
65c
d' :t :d' | l :-:- | t :l :t | se :-:- | l :s :l | f :-:- | s :f :s | m :-:- | f :m :f | r :-:- | m :r :m
d :-:- | r :d :r | t, :-:- | d :ta, :d | l, :-:- | ta, :l, :ta, | se, :-:- | l, :s, :l, | f, :-:- | s, :f, :s, | m, :-:-
Key F
65d
d' :t :d' | l :-:- | t :l :t | s :-:- | l :s :l | f :-:- | s :f :s | m :-:- | f :m :f | re :-:- | m :r :m
d :-:- | r :d :r | t, :-:- | d :t, :d | l, :-:- | t, :l, :t, | se, :-:- | l, :s, :l, | f, :-:- | s, :f, :s, | m, :-:-
Key F
65e
d' :t :d' | l :-:- | t :l :t | se :-:- | l :s :l | fe :-:- | s :f :s | m :-:- | f :m :f | re :-:- | m :r :m
de :-:- | r :d :r | t, :-:- | d :t, :d | l, :-:- | t, :l, :t, | se, :-:- | l, :s, :l, | f, :-:- | s, :f, :s, | m, :-:-

The two following canons are derived from the previous one.
The diatonic versions of these will be found in Nos. 39 and 40.
It should be noted that, though the intervals in the second canon are greater, the result is exactly the same as in No. 66.
Note the earlier entry and the crossing of the voice parts in No. 67

Key F **Descending Thirds**

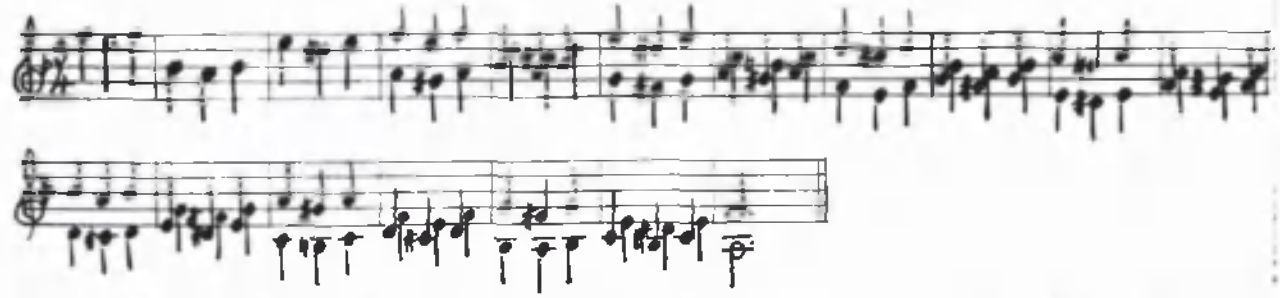
66. {| ① d' : t : d' | l : se : l | t : le : t | s : fe : s | ③ l : se : l | f : m : f | s : fe : s | ④a m : re : m | f : m : f | r : de : r | ⑥ m : re : m }
{| d : t₁ : d | r : de : r | t₁ : le₁ : t₁ | d : t₁ : d | l₁ : se₁ : l₁ | t₁ : le₁ : t₁ | s₁ : fe₁ : s₁ | l₁ : se₁ : l₁ | f₁ : m₁ : f₁ | s₁ : fe₁ : s₁ | m₁ : - : - ||
4a 1



This sequence may also be used with entries ①③ and ①⑥.

Key F **Descending Fifths**

67. {| ① d' : t : d' | f : m : f | t : le : t | ②a m : re : m | l : se : l | r : de : r | s : fe : s | d : t₁ : d | f : m : f | t₁ : le₁ : t₁ | m : re : m }
{| l₁ : se₁ : l₁ | r : de : r | s₁ : fe₁ : s₁ | d : t₁ : d | f₁ : m₁ : f₁ | t₁ : le₁ : t₁ | m₁ : - : - ||
2a 1



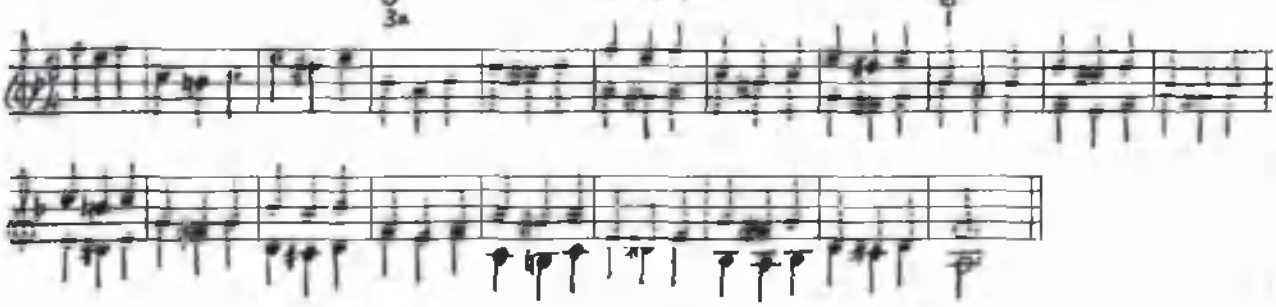
The above example actually belongs to the series of canonic sequences based on descending fifths, which will be dealt with later on.
It is included here because of its affinity with the previous canon.

We shall now anticipate the series of canonic sequences on descending fourths by including here a chromatic example similar to the above.

Key F **Descending Fourths**

68. {|d' : t : d' | s : fe : s | t : le : t | f : m : f | l : se : l | m : re : m | s : fe : s | r : de : r | f : m : f | d : t₁ : d | m : re : m}

{|t₁ : le₁ : t₁ | r : de : r | l₁ : se₁ : l₁ | d : t₁ : d | s₁ : fe₁ : s₁ | t₁ : le₁ : t₁ | f₁ : m₁ : f₁ | l₁ : se₁ : l₁ | m₁ : – : – ||



It will be noted that in the case of descending thirds the top part is brought in at bar (4a), in order that it may enter on the tonic chord, i.e., with the mediant in the bass. In the case of descending fourths, as above, the entry of the top part is at bar (3a), while in the case of descending fifths, as in example No. 67, the entry is at bar (2a). From the following examples it will be seen that with canonic sequences of descending seconds the entry of the top part is at bar (5a). We may thus sum up the whole series.

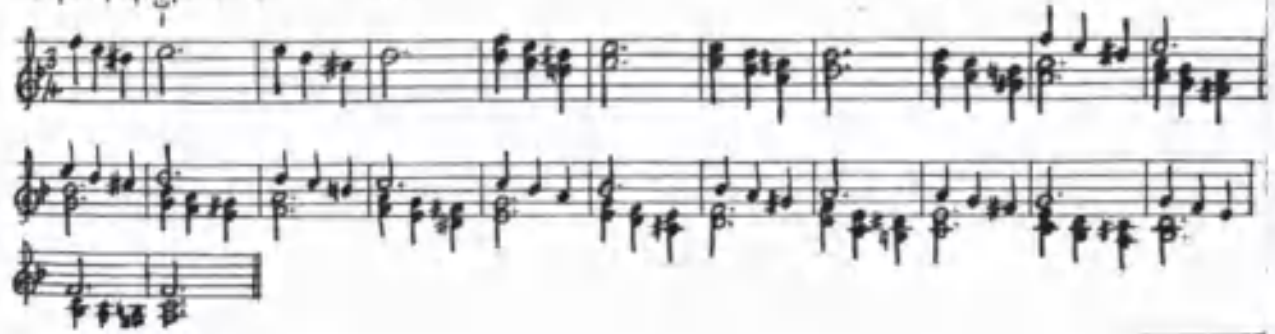
With descending		2nds	the top part enters when the lower part reaches bar							(5a)
"	"	3rds	"	"	"	"	"	"	"	(4a)
"	"	4ths	"	"	"	"	"	"	"	(3a)
"	"	5ths	"	"	"	"	"	"	"	(2a)

Key F **Descending Seconds**

69. {|d' : t : le | t : – : – | t : l : se | l : – : – | l : s : fe | s : – : – | s : f : m | f : – : – | f : m : re | m : – : – | m : r : de}

{|r : – : – | r : d : t₁ | d : – : – | d : t₁ : le₁ | t₁ : – : – | t₁ : l₁ : se₁ | l₁ : – : – | l₁ : s₁ : fe₁ | s₁ : – : – | s₁ : f₁ : m₁ | f₁ : – : –}

{|f₁ : m₁ : re₁ | m₁ : – : – ||

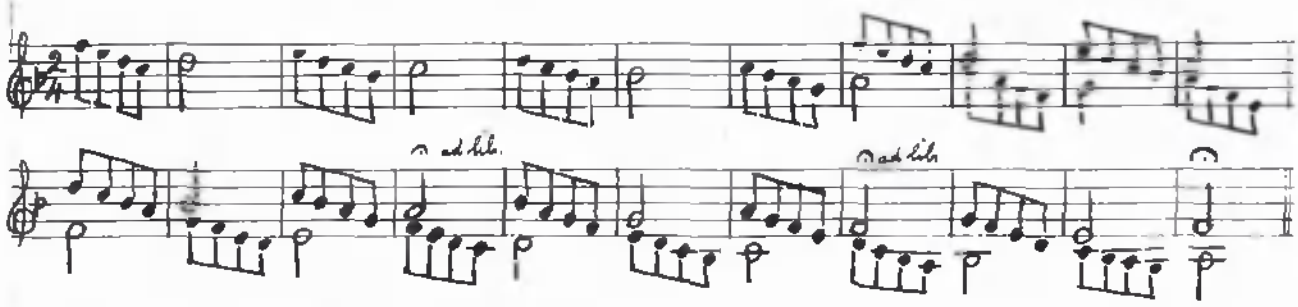


The following canonic sequence is shown first in diatonic form, then melodically inflected, and finally harmonically inflected in progressive manner.

Key F **Diatonic**

70a {| d'.t:l.s | l :– | t.l:s.f | s :– | l.s:f.m | f :– | s.f:m.r | m :– | f.m:r.d | r :– | m.r:d.t }

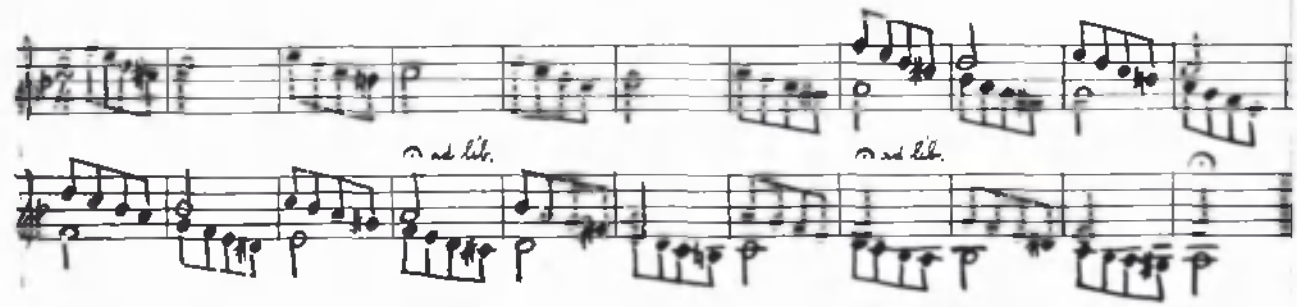
{| d :– | r.d:t.l | t :– | d.t:l.s | l :– | t.l:s.f | s :– | l.s:f.m | f :– | s.f:m.r | m :– |



Key F **Melodic Inflexions**

70b {| d'.t:l.se | l :– | t.l:s.fe | s :– | l.s:f.m | f :– | s.f:m.re | m :– | f.m:r.de | r :– | m.r:d.t }

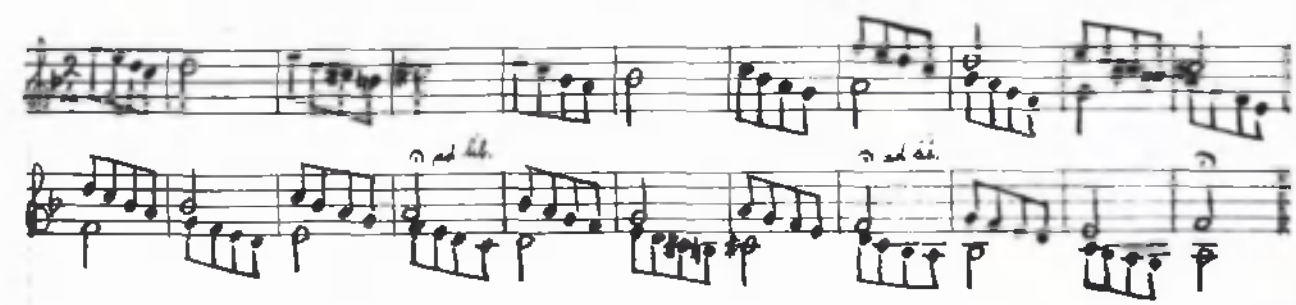
{ d :– | r.d:t.le | t :– | d.t:l.se | l :– | t.l:s.fe | s :– | l.s:f.m | f :– | s.f:m.re | m :– |



Key F **Modulation to Relative Minor**

70c {| d'.t:l.s | l :– | t.l:se.ba | se :– | l.s:f.m | f :– | s.f:m.r | m :– | f.m:r.d | r :– | m.r:d.t }

{| d :– | r.d:t.l | t :– | d.t:l.s | l :– | t.l:se.ba | se :– | l.s:f.m | f :– | s.f:m.r | m :– |

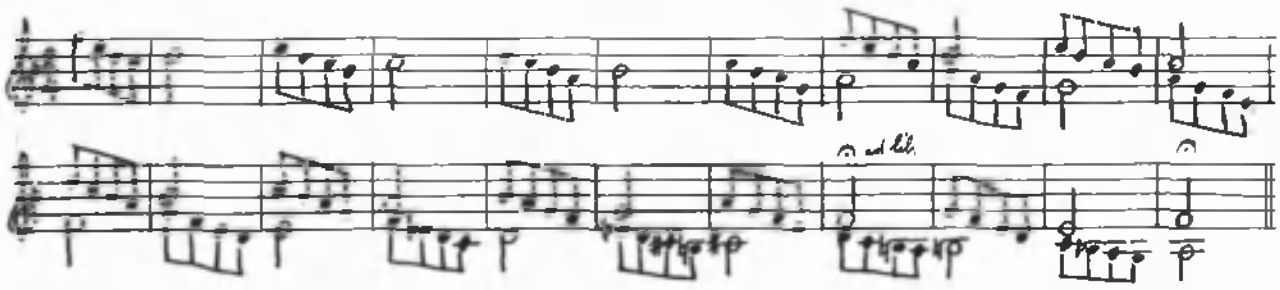


Modulations to Subdominant, Relative Minor and Dominant

Key F

70d ‖ d' . t : l . s | l :— | t . l : s . f | s :— | l . s : f . m | f :— | s . f : m . r | m :— | f . m : r . d | r :— | m . r : d . t, ‖

‖ d :— | r . d : t, . l, | t, :— | d . ta, : l, . s, | l, :— | ta, . l, : se, . ba, | se, :— | l, . s, : fe . m, | fe, :— | s, . f, : m, . r, | m, :— ‖

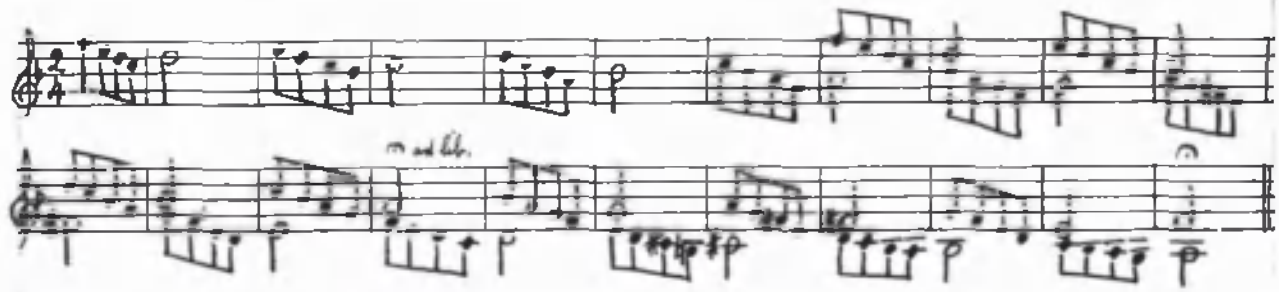


Key F

Modulations to Supertonic Minor and Relative Minor

70e ‖ d' . t : l . s | l :— | t . l : s . f | s :— | l . s : f . m | f :— | s . f : m . r | m :— | f . m : r . d | r :— | m . r : de . t, ‖

‖ de :— | r . d : t, . l, | t, :— | d . t, : l, . s, | l, :— | t, . l, : se, . ba, | se, :— | l, . s, : f, . m, | f, :— | s, . f, : m, . r, | m, :— ‖

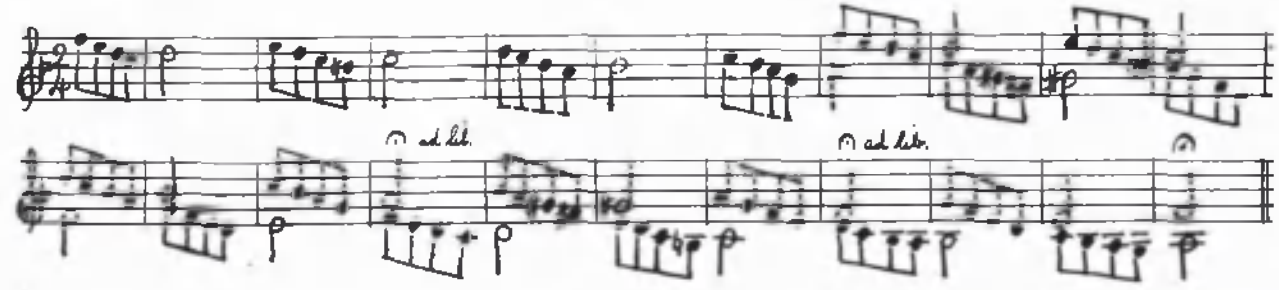


Key F

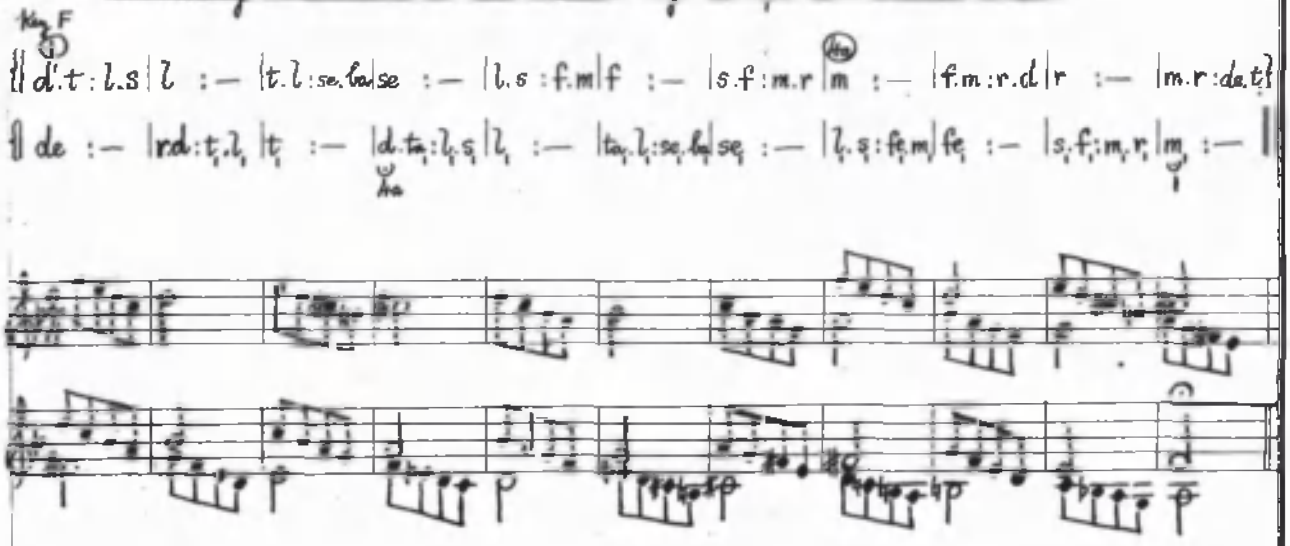
Modulation to Mediant Minor

70f ‖ d' . t : l . s | l :— | t . l : s . fe | s :— | l . s : f . m | f :— | s . f : m . r | m :— | f . m : re . de | re :— | m . r : d . t, ‖

‖ d :— | r . d : t, . l, | t, :— | d . t, : l, . s, | l, :— | t, . l, : s, . fe, | s, :— | l, . s, : f, . m, | f, :— | s, . f, : m, . r, | m, :— ‖



Containing Modulations to all Related Keys except the Mediant Minor



C H A P T E R XVII

CANONS BASED ON SCALES AND SCALE PASSAGES

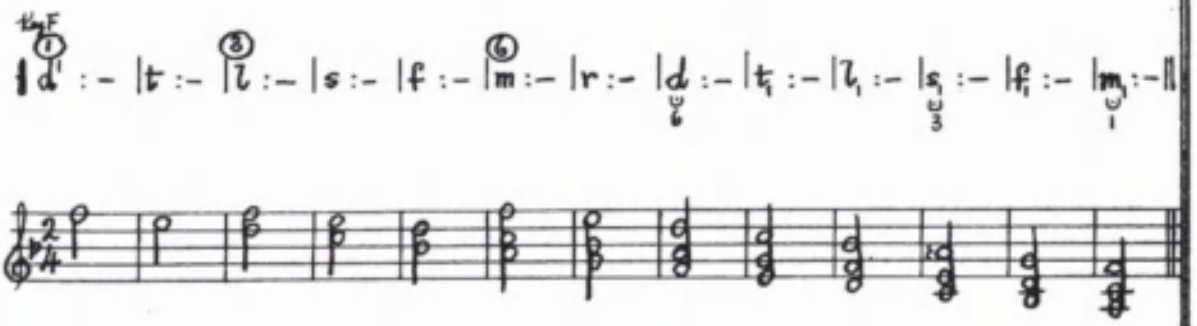
All the canons so far have been based on the same sequence of descending thirds {|d' :-|l :-|t :-|s :-} etc., and the great variety of harmonic and contrapuntal texture in these is obtained simply by ornamenting the original sequence germ melodically and rhythmically. No knowledge of notation is required for the singing of these canons, which thus provide oral material for part-singing for pupils at all stages of progress.

The advantages of such oral practice in part-singing must be evident to all. Even such a simple progression of $\frac{6}{3}$ chords as the following:

Key F

d' :-	t :-	l :-	s :-	f :-	m :-	r :-	d :-	
s :-	f :-	m :-	r :-	d :-	t_1 :-	l_1 :-	s_1 :-	
m :-	r :-	d :-	t_1 :-	l_1 :-	s_1 :-	f_1 :-	m_1 :-	

provides great difficulty for children who have not had much experience in part-singing. Yet all difficulties of intonation disappear when the progression is approached by way of canon, as in the following:-



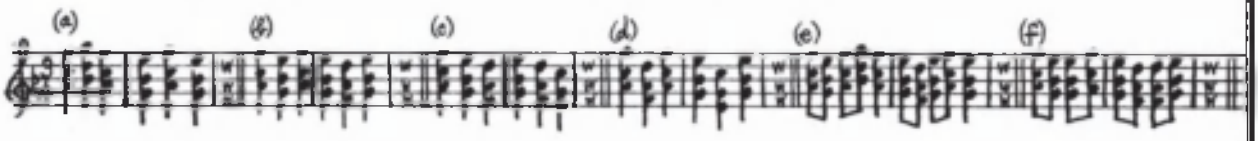
And now, suppose we ornament this descending scale, thus:

(a) {d' :r' :d'|t :d' :t} etc. (d) {d' :l :d'|t :s :t} etc.

(b) {d' :t :d'|t :l :t} etc. (e) {d't:d'r':d'|t.l:t.d':t} etc.

(c) {d' :t :l|t :l :s} etc. (f) {d'.t:t.d'|t.l:l.t} etc.

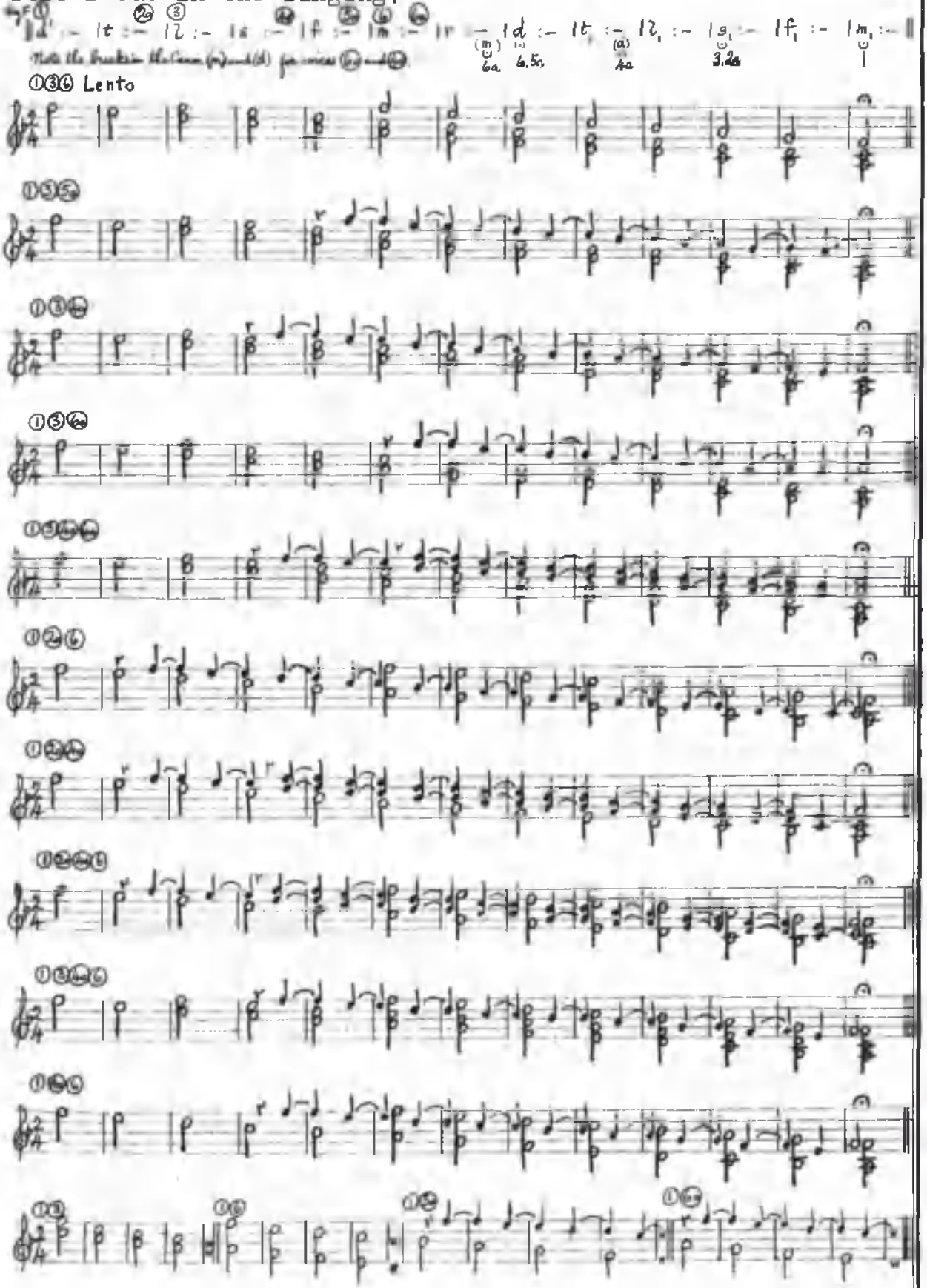
Treating the new sequence in canon form, as above, we obtain, at the entry of the last voice, the following progressions of $\frac{6}{3}$ chords, all of which will present little difficulty to school children in this form.



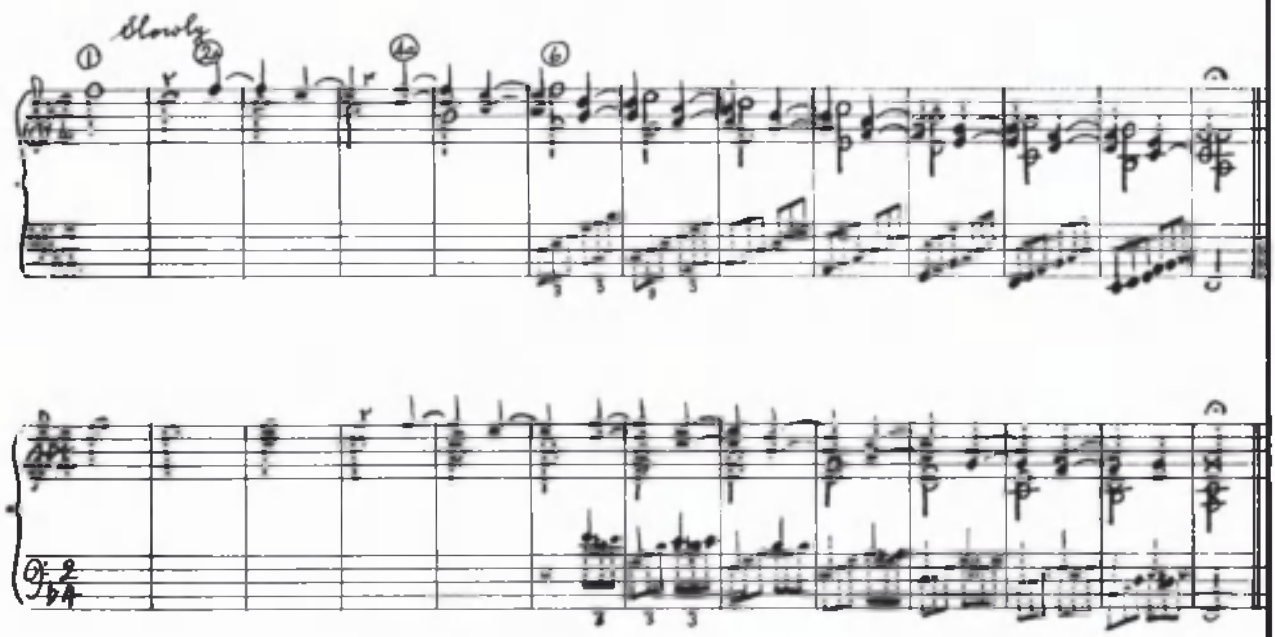
The reader will understand that any descending sequence may be sung as a sequence of 3rds, 6ths, or "six-threes" by treating it as a canon and using the entries ①③, ①⑥ or ①③⑥ respectively.

As will be seem from the examples below, much interesting material may be obtained from the plain descending scale itself. In these examples one bar only is given to each scale degree. Hence the voices entering in secondary rhythm must begin on the second half of the bar (②ª, ④ª, ⑤ª and ⑥ª). It should be noted, however, that the problem of reading the scale or sequence in primary or secondary rhythm is a notational problem which does not arise here, since the singing is done orally. As in the case of the early printed madrigal with its cross rhythms and its absence of bar lines, it will

be found that the problem of conflicting rhythms **sorts** itself out in the singing.



Although these canons for equal voices are quite complete and satisfying in themselves, a "basso obbligato" may sometimes be added with effect. This bass part may be played in octaves on the pianoforte, or sung by bass voices or by the teacher himself. We give two examples below.



As indicated in the above, single crotchets may be used in the bass part of the latter example.

At this point it may be interesting to note that in setting out these canons in a single line -

{d' :t|1 :-|t :1|s :-|1 :s|f :-|s :f|m :-} etc.

and giving code numbers, ①④, ①③⑥, ①③④ₐ⑥ₐ etc., for the solution of the various canons, we have arrived quite unconsciously at the methods of layout adopted by the early composers of canon.

There is some difference of opinion as to the derivation of the word "canon" as applied to music. Thus, according to Grove's Dictionary,

> "The word is derived from the Greek κανών, a rule or standard. A canon, therefore, is a composition written strictly according to rule."

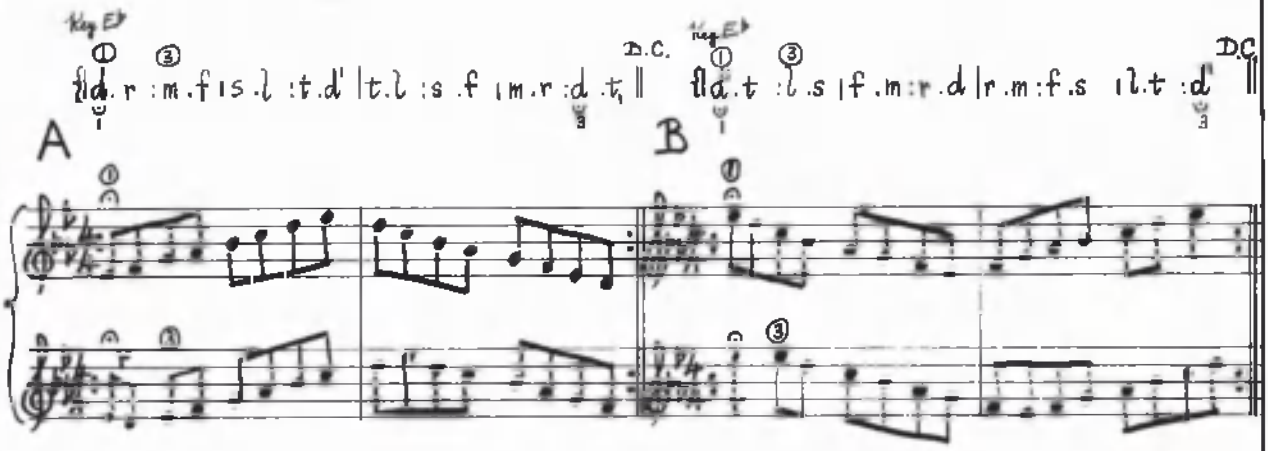
But, we may ask, what special rule can be given for the writing of canons, except that the melody must be such that it can be accompanied by itself at the same pitch or at different pitches, and with entries at various points?

On the other hand, Hugo Riemann, in his "Dictionary of Music", points out that the word "canon" refers, not to the rules for writing canons, but to the instructions or "rules" for solving or performing canons written out in a single melodic line. Thus he says:

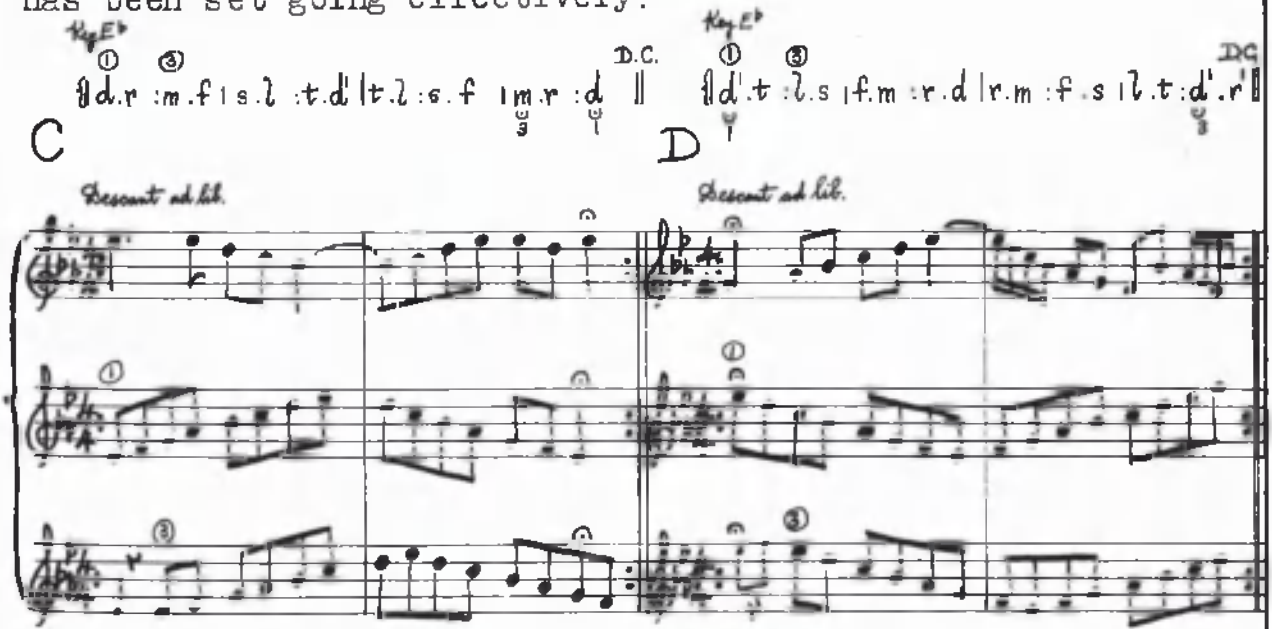
> "The older contrapuntists were not in the habit of writing out their canons in score or parts, but merely of noting down one part, and indicating the entry of the other parts, likewise pointing out the special modes of imitation by enigmatical inscriptions (Riddle Canon); this inscription was called a 'Canon', the piece itself 'Fuga' or 'Consequenza'"
> (Translation by J.S.Shedlock, London, Augener & Co

In other words, we may say, if the Canons or Rules for solving these Canonic Sequences are observed, the rest follows as a Consequence.

We shall now deal with canons for two voices based on scale passages. These will be written out in sol-fa and in staff notation.



In the following canons a slight alteration has been made and a descant has been added. These descants may be played or sung, but they should not be introduced until the canon has been set going effectively.



It should be added that these scale canons may be sung modally, i.e. beginning on different scale degrees, e.g., r, m, f, s and l.

It is not necessary to write these modal canons out in staff notation, as all that is required in order to read them modally is to change the key signatures in the staff examples A, B, C and D, above. But we shall write them out in sol-fa notation. In the first group, A, it is suggested that the final d, f_1, and s_1, in the r, s and l modes should be changed to de, fe_1 and se_1. This change, of course, is not necessary, but it is in accordance with the principles of "Musica Ficta."

A

Key	①	③	D.C.
E♭	d.r : m.f | s.l : t.d'	t.l : s.f | m.r : d	r.m : f.s | l.t : d'
D♭	r.m : f.s | l.t : d'.r'	d'.t : l.s | f.m : r.d	m.f : s.l | t.d' : r'
C	m.f : s.l | t.d' : r'.m'	r'.d' : t.l | s.f : m.r	f.s : l.t | d'.r' : m'
B♭	f_1.s_1 : l_1.t_1 | d.r : m.f	m.r : d.t_1 | l_1.s_1 : f_1.m	s_1.l_1 : t_1.d | r.m : f
A♭	s_1.l_1 : t_1.d | r.m : f.s	f.m : r.d | t_1.l_1 : s_1.f_1	l_1.t_1 : d.r | m.f : s
G	l_1.t_1 : d.r | m.f : s.l	s.f : m.r | d.t_1 : l_1.s_1	t_1.d : r.m | f.s : l

B

Key	①	③	D.C.
E♭	d'.t : l.s | f.m : r.d	r.m : f.s | l.t : d'	
D♭	r'.d' : t.l | s.f : m.r	m.f : s.l | t.d' : r'	
C	m'.r' : d'.t | l.s : f.m	f.s : l.t | d'.r' : m'	
B♭	f.m : r.d | t.l_1 : s_1.f_1	s_1.l_1 : t_1.d | r.m : f	
A♭	s.f : m.r | d.t_1 : l_1.s_1	l_1.t_1 : d.r | m.f : s	
G	l.s : f.m | r.d : t_1.l_1	t_1.d : r.m | f.s : l	

C

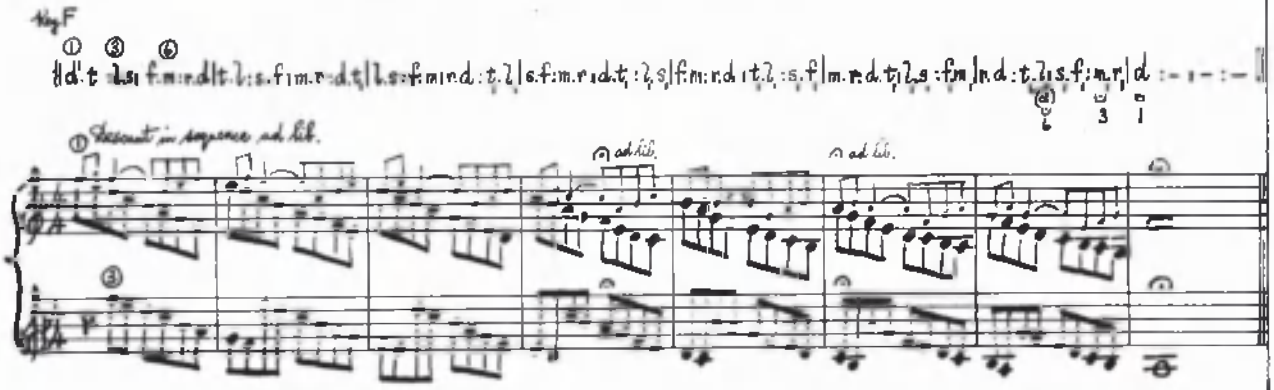
Key	①	③	D.C.
E♭	d.r : m.f | s.l : t.d'	t.l : s.f | m.r : d	
D♭	r.m : f.s | l.t : d'.r'	d'.t : l.s | f.m : r	
C	m.f : s.l | t.d' : r'.m'	r'.d' : t.l | s.f : m	
B♭	f_1.s_1 : l_1.t_1 | d.r : m.f	m.r : d.t_1 | l_1.s_1 : f_1	
A♭	s_1.l_1 : t_1.d | r.m : f.s	f.m : r.d | t_1.l_1 : s_1	
G	l_1.t_1 : d.r | m.f : s.l	s.f : m.r | d.t_1 : l_1	

D

Key	①	③	D.C.
E♭	d'.t : l.s | f.m : r.d	r.m : f.s | l.t : d'.r'	
D♭	r'.d' : t.l | s.f : m.r	m.f : s.l | t.d' : r'.m'	
C	m'.r' : d'.t | l.s : f.m	f.s : l.t | d'.r' : m'.f'	
B♭	f.m : r.d | t.l_1 : s_1.f_1	s_1.l_1 : t_1.d | r.m : f.s	
A♭	s.f : m.r | d.t_1 : l_1.s_1	l_1.t_1 : d.r | m.f : s.l	
G	l.s : f.m | r.d : t_1.l_1	t_1.d : r.m | f.s : l.t	

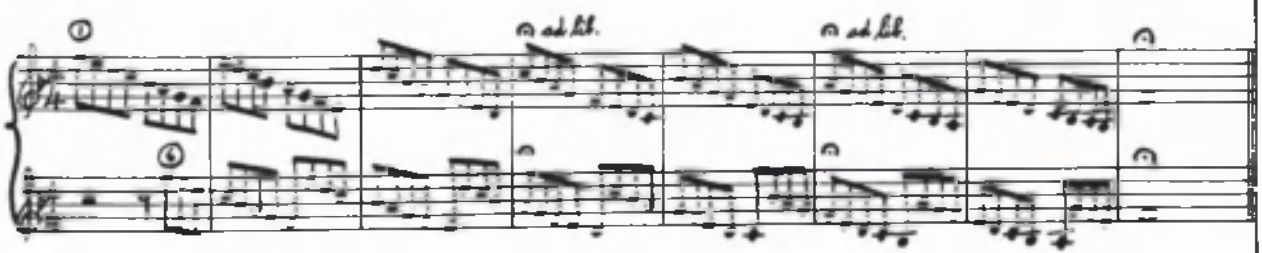
The following scale canons need no explanation. Like the others, they may be sung direct from the Sequence Modulator, reading down from the L.H.S. |① ③ 1 2 3 4 5 6 7 8|

Alternative endings are indicated by pauses.



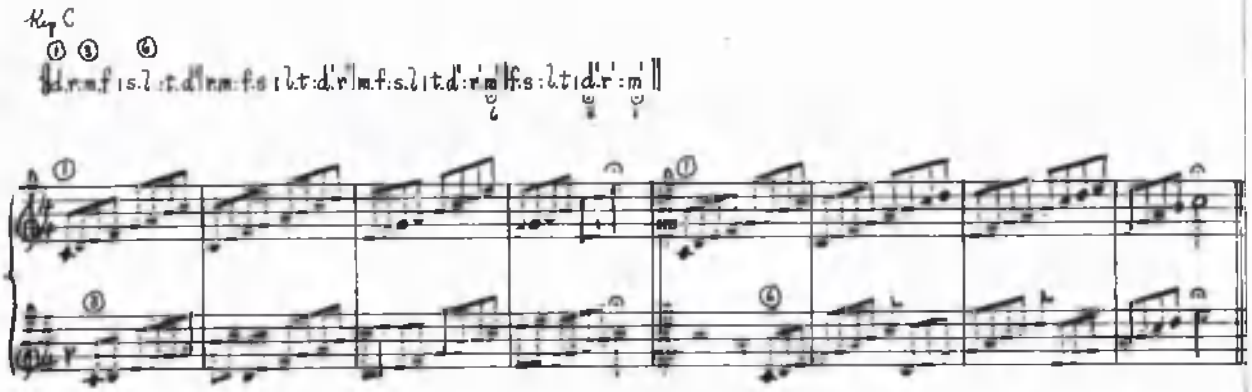
The descant may be sung if desired. It will assist the children to keep the pitch.

In the next example, we have the same scale sequence with a later entry.



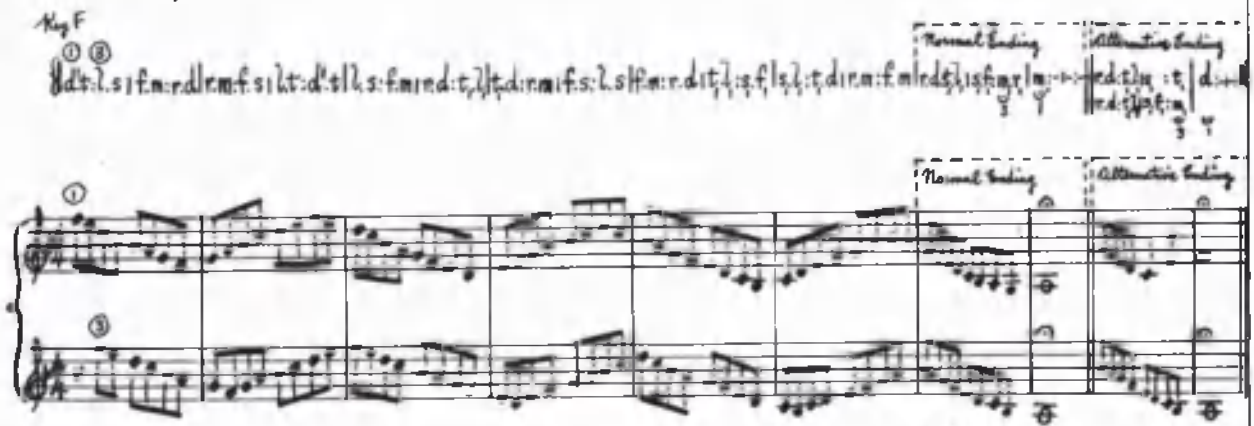
Note the alternative endings and the break in voice ⑥ at the final note where "d" is substituted for "l," in order to finish on the tonic.

We shall now give these two canons in ascending form.

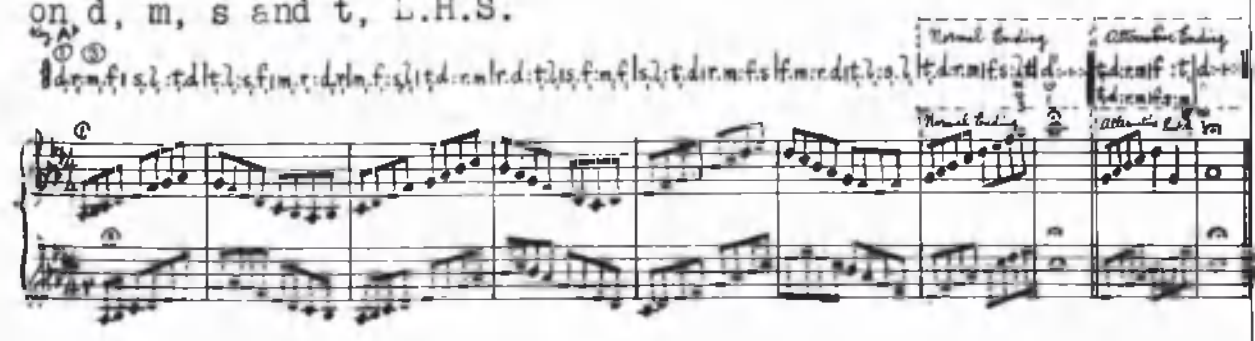


All the above canons may also be sung modally, beginning on other scale degrees, and reading from the Sequence Modulator.

The following scale canon may also be read from the Sequence Modulator. It would appear thus: ①②3 4 5 6 7 8 | 7 6 5 4 3 2 1 2 | on d', l, f and r, L.H.S.

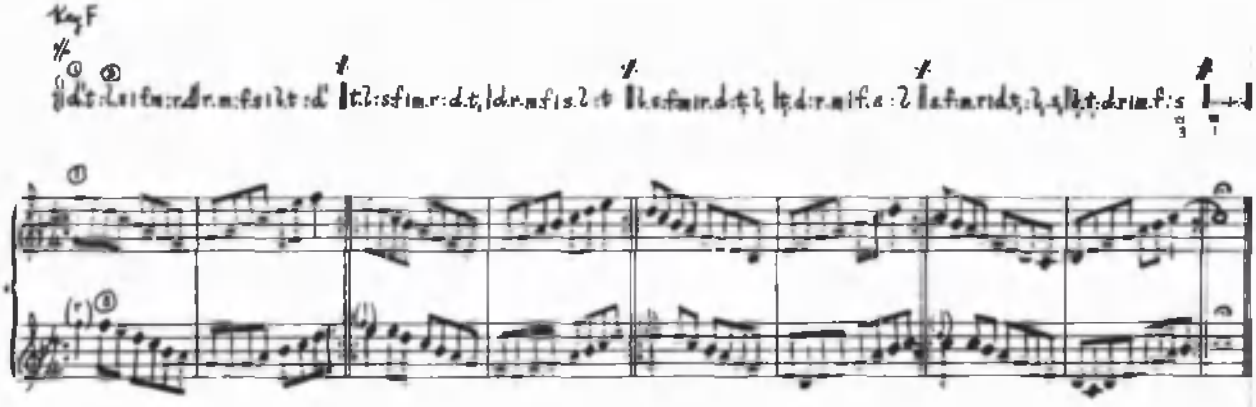


The above canon may also be inverted, thus: ①② 1 2 3 4 5 6 7 8 | 7 6 5 4 3 2 1 2 | on d, m, s and t, L.H.S.



Note the break in voice ③ at the final note.

In the following examples, each canon may be sung straight through, or the different sections may be treated as infinite canons and repeated several times, as shown.

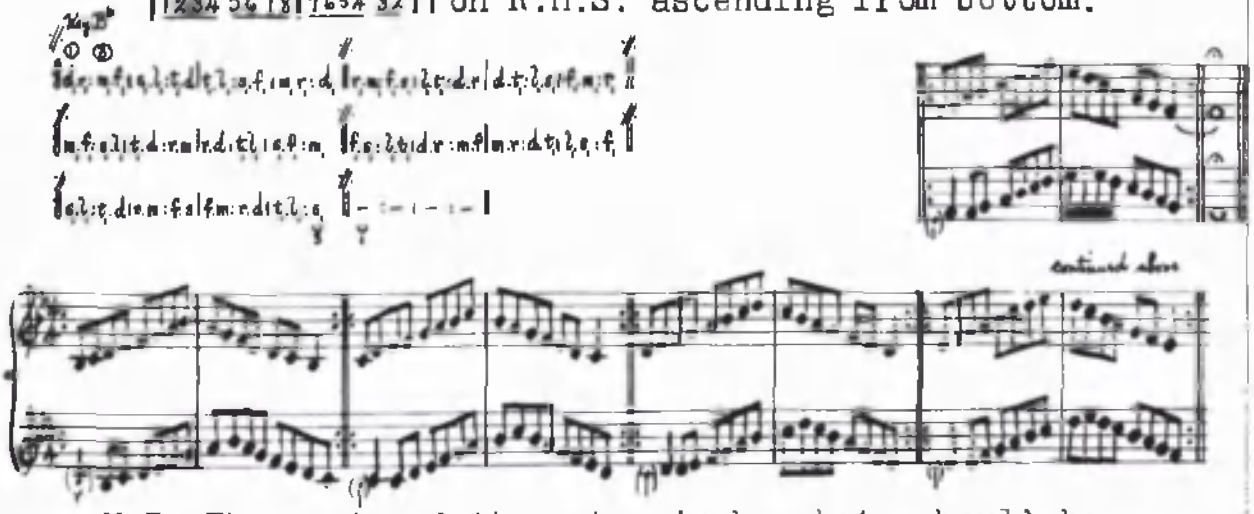


N.B. The rest and the notes in brackets should be sung the first time only, the other notes on the repetitions.

The formula for the canon on the Sequence Modulator would be | ① ② 1 2 3 4 5 6 7 8 | 7 6 5 4 3 2 1 | on L.H.S. descending.

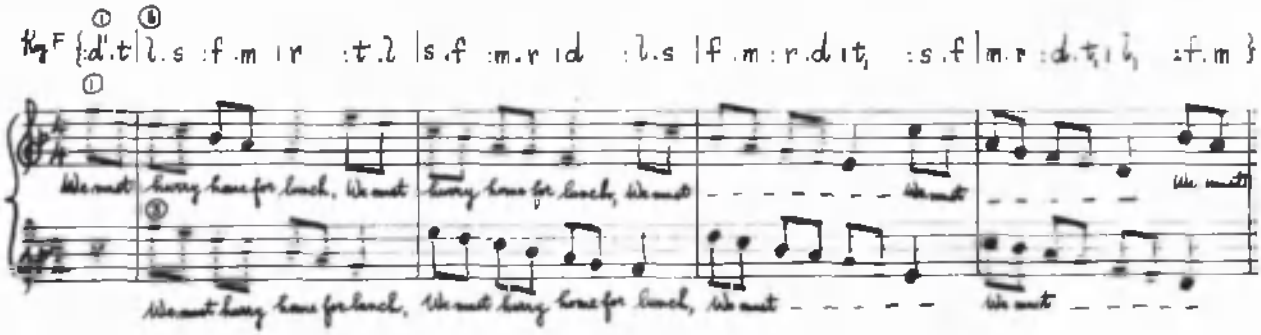
In its ascending form this canon would appear thus:

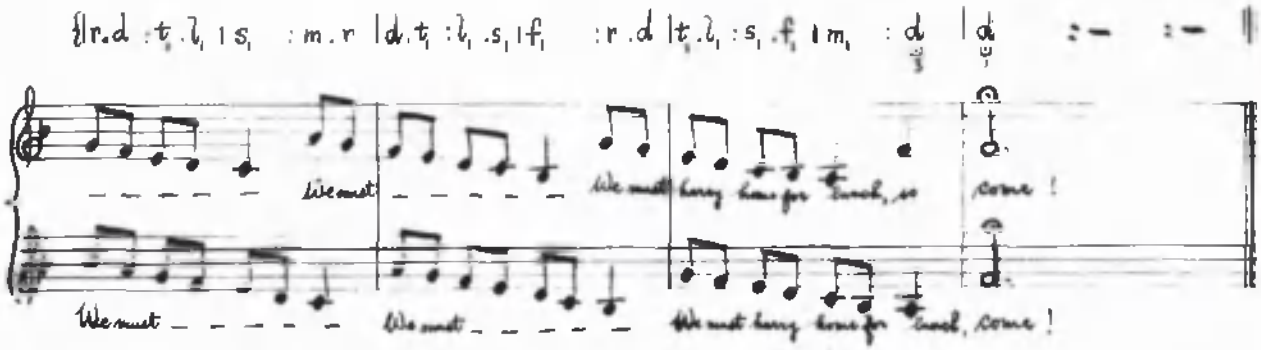
| ① ② 1 2 3 4 5 6 7 8 | 7 6 5 4 3 2 1 | on R.H.S. ascending from bottom.



N.B. The rest and the notes in brackets should be sung the first time only, the other notes on the repetitions.

The words for the following canon were suggested by pupils.

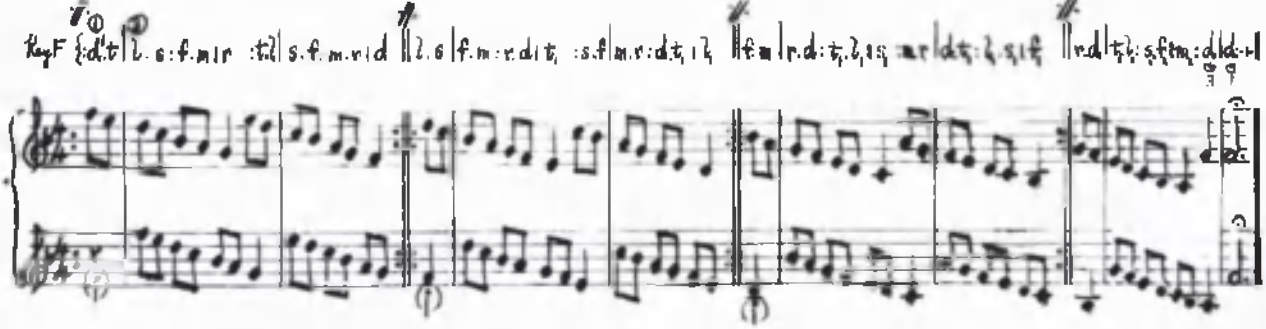




The Sequence Modulator formula for this canon would be:

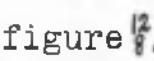
12|34 56 7

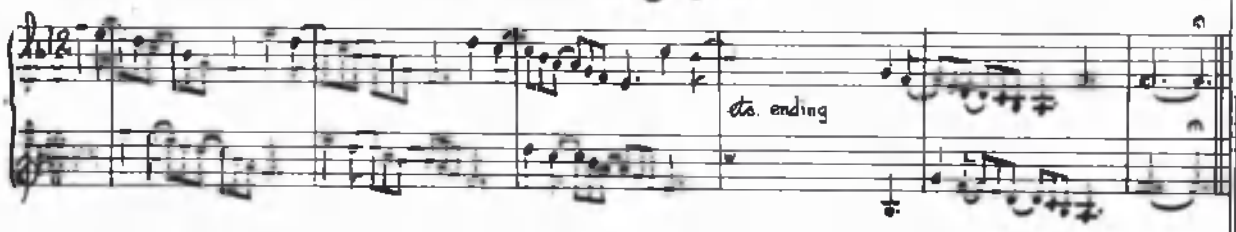
The following example shows the same canon divided into sections, which may be treated as infinite canons and repeated several times.



N.B. The notes in brackets should be sung on the repetitions only.

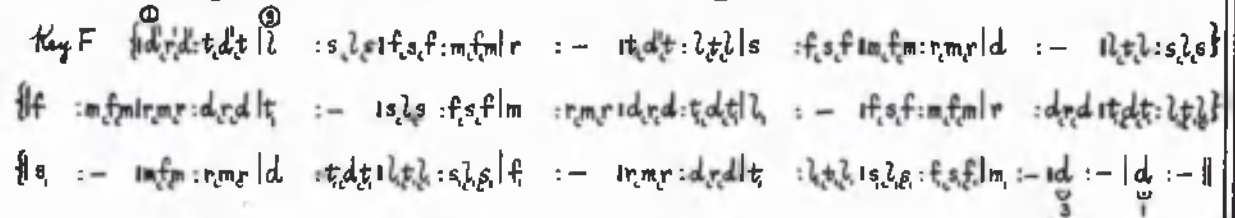
These canons may, of course, be sung with different rhythmic figures, e.g.  or  .

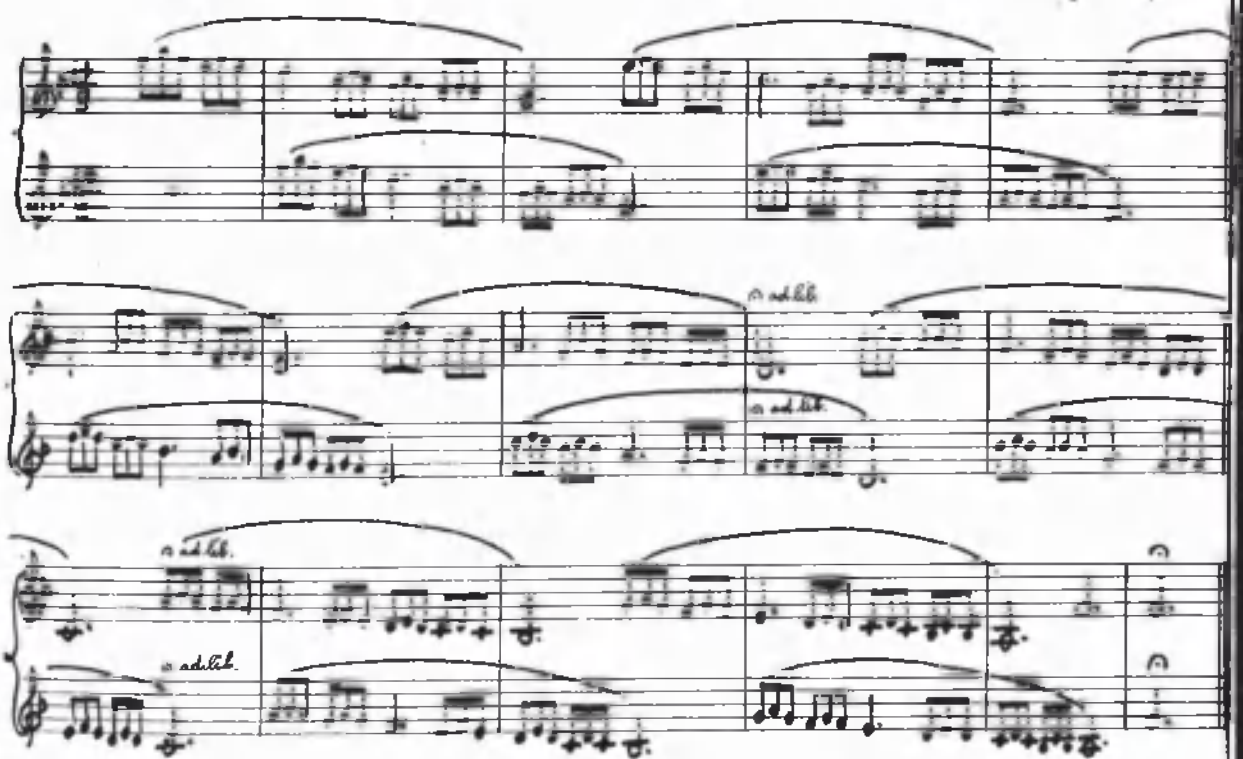
Thus, to the rhythmic figure  we have the following



All these sequences may be learned orally from the Sequence Modulator, so that no notational knowledge is required for singing these canons.

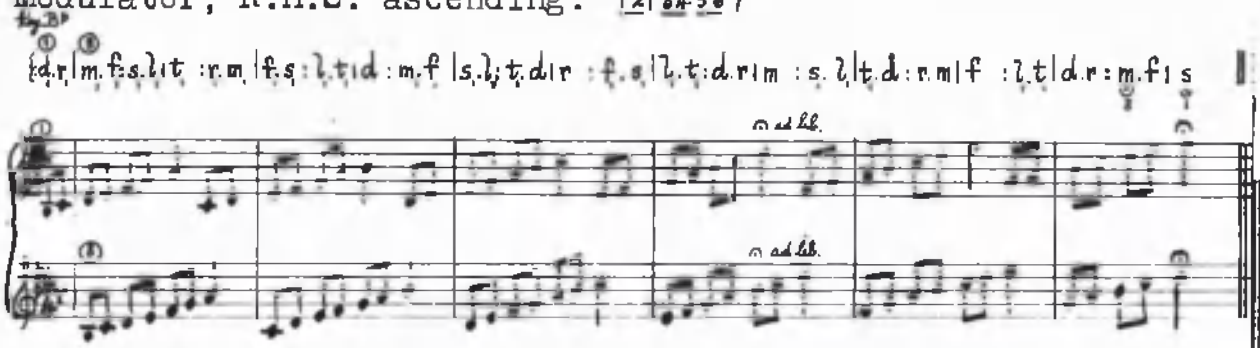
Melodic ornements, e.g. mordents, may also be applied to the sequence as in the following example.





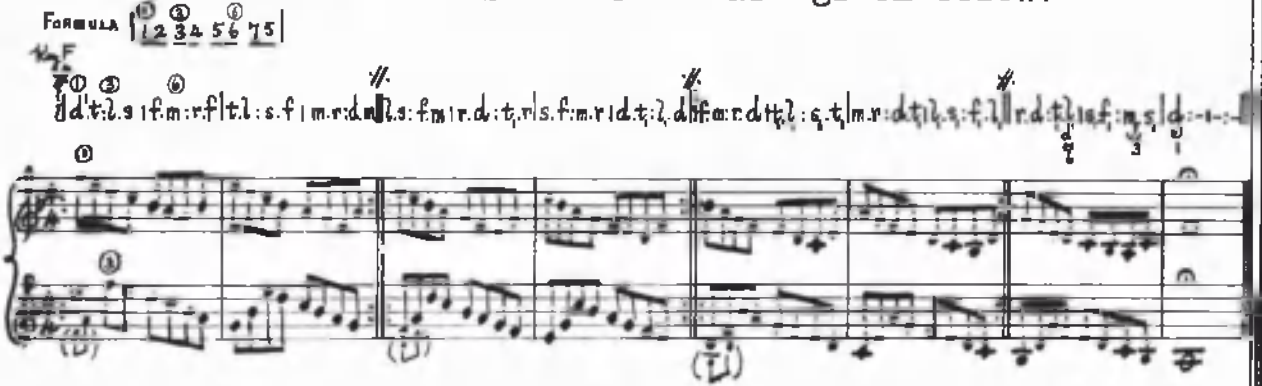
As in the previous canons, each four-bar section may be treated as an infinite canon, and repeated ad lib.

The canon may be inverted by reading from the Sequence Modulator, R.H.S. ascending: 1 2 3 4 5 6 7



Each two-bar section may be repeated ad lib.

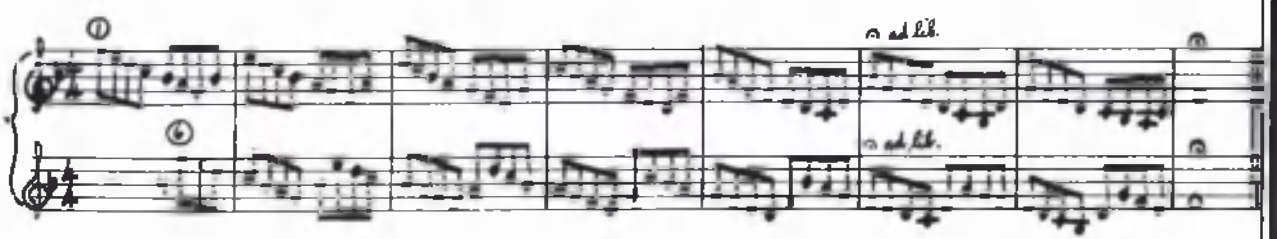
Other variants of this scale canon are given below.



Again, each section of two bars may be repeated ad lib. This repetition makes no difference to the notation in sol-fa, but in staff it is necessary to read the small notes in brackets on the repetitions.

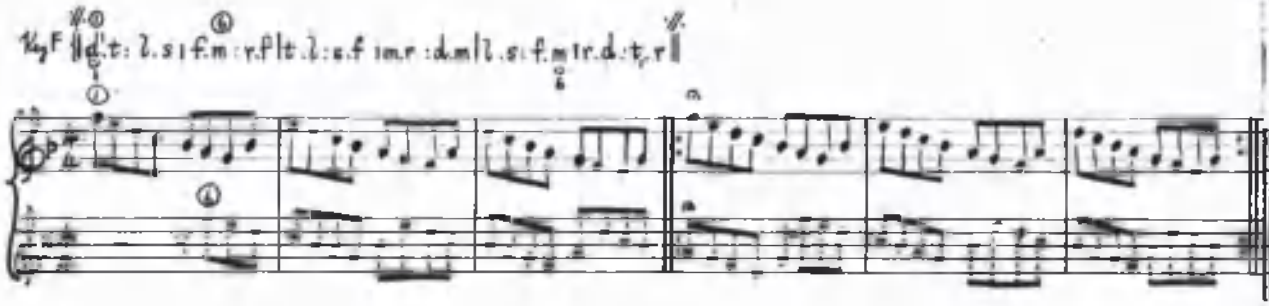
These canons may also be sung by Treble and Bass voices, beginning with either voice.

Another canon on the same sequence ① ⑥ is shown below.

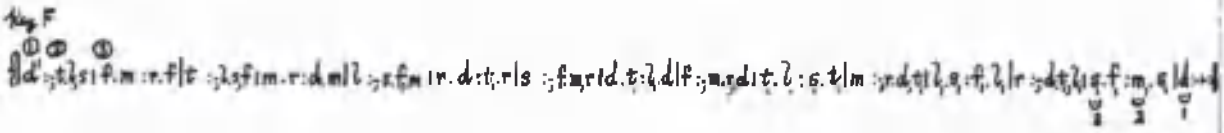


Note the break in voice ⑥ at the last note (d).
Any three bars of this canon may be used as an infinite canon, and repeated ad lib.

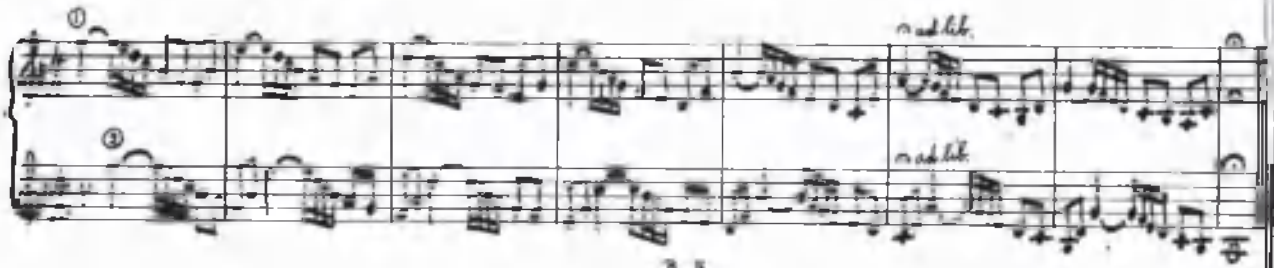
The first three bars of the previous example are treated below as an infinite canon.



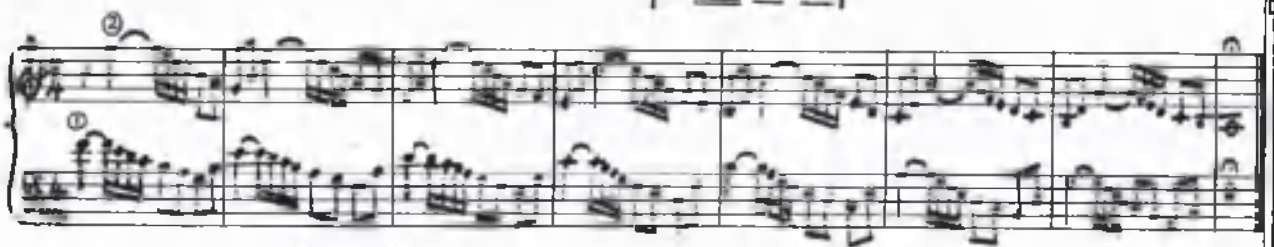
The following is a rhythmic variant of the above canonic sequence.



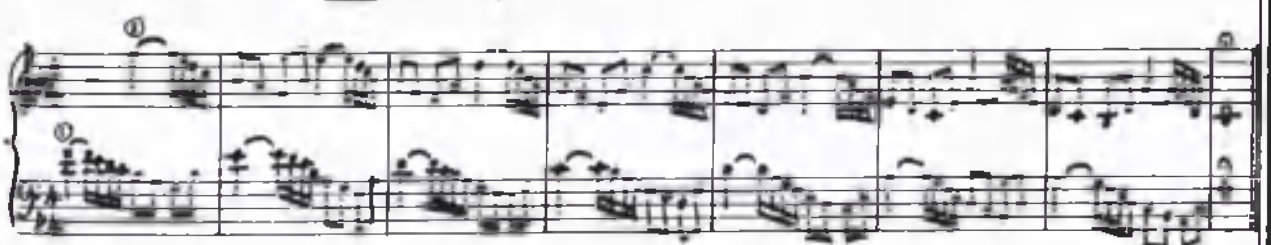
It may be treated canonically in the following ways.



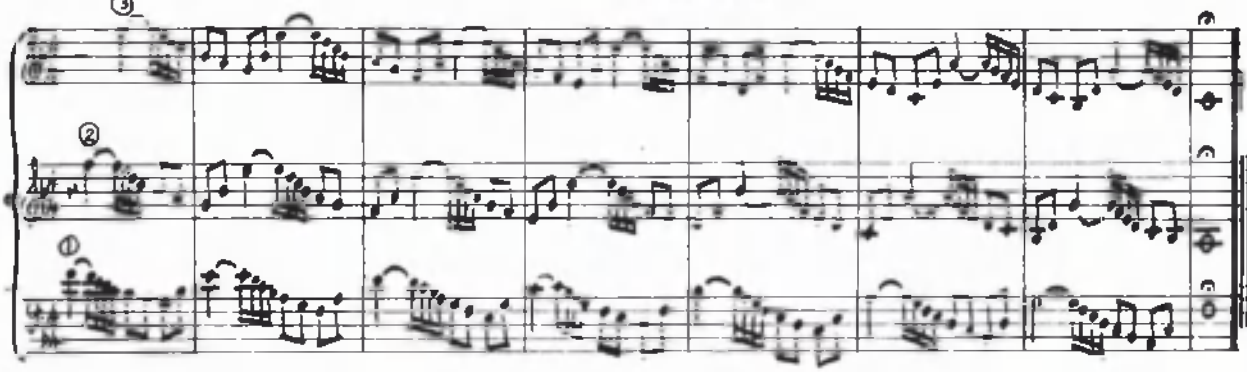
The same with Bass and Treble.



A new entry.



Three-part Canon for S.S.B. | B S S ① ② ③ | 1 -234 56 75 |



The Bass part may be played on the piano in 8ves, or sung by pupils or teacher.

As in previous examples, each of the four canons above may be divided into two-bar sections, which form infinite canons and can be repeated ad lib.

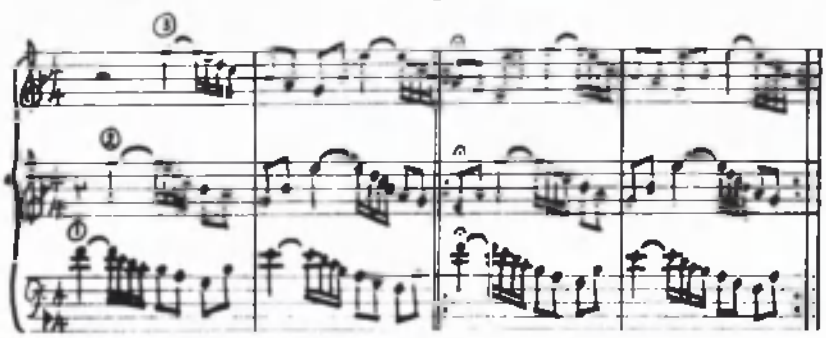
To show how these infinite canons work out in practice, we write out in full an example based on the first two bars of the last canon. This infinite canon may be sung direct from the Sequence Modulator to the formula

| B S S ① ② ③ | 1 -234 56 75 | on d' and t,

or from this line of sol-fa notation:

Key F { B S S ① ② ③ | d' :-,t.l,s | f.m :r.f | t :-,l.s,f | m.r :d.m | }

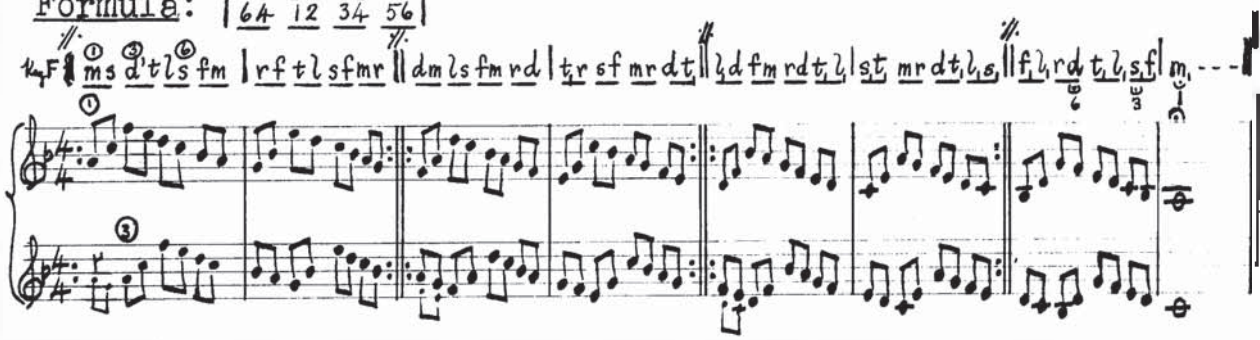
The bass voice ① begins, and the two treble voices ② and ③ enter when voice ① reaches the points ② and ③ .
If the bass voice is brought to pause on the first note d', the other two voices will pause on d and m, as indicated.



MAY ALSO BE SUNG WITH S.S.S.

The following canon is a graceful variant of the original scale canon.

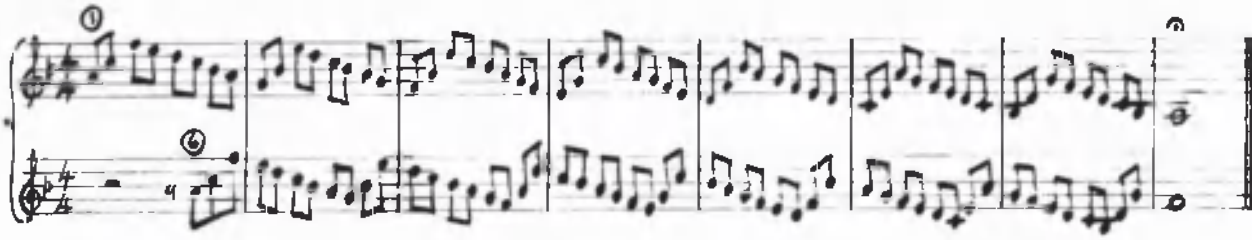
Formula: |① ③ ⑥ / 64 12 34 56|



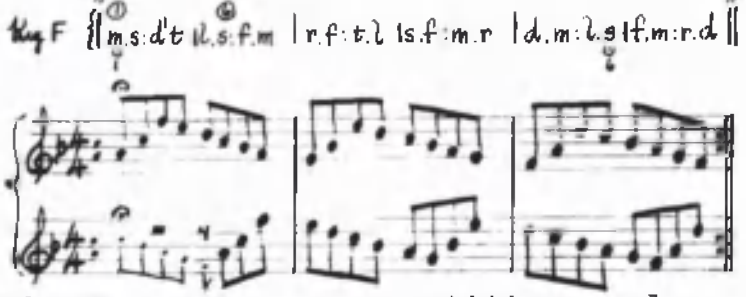
Again, this canon may be sung straight through, or each section of two bars may be repeated ad lib. In the latter case, the small notes would be read on the repetitions.

The same canon with an entry at ⑥ would appear thus:

Formula: |① ④ / 64 12 34 56|



With this entry at ⑥ it is not possible to repeat every two bars, but any three-bar section may be used ad lib. Thus, the first three bars may be used as an infinite canon.

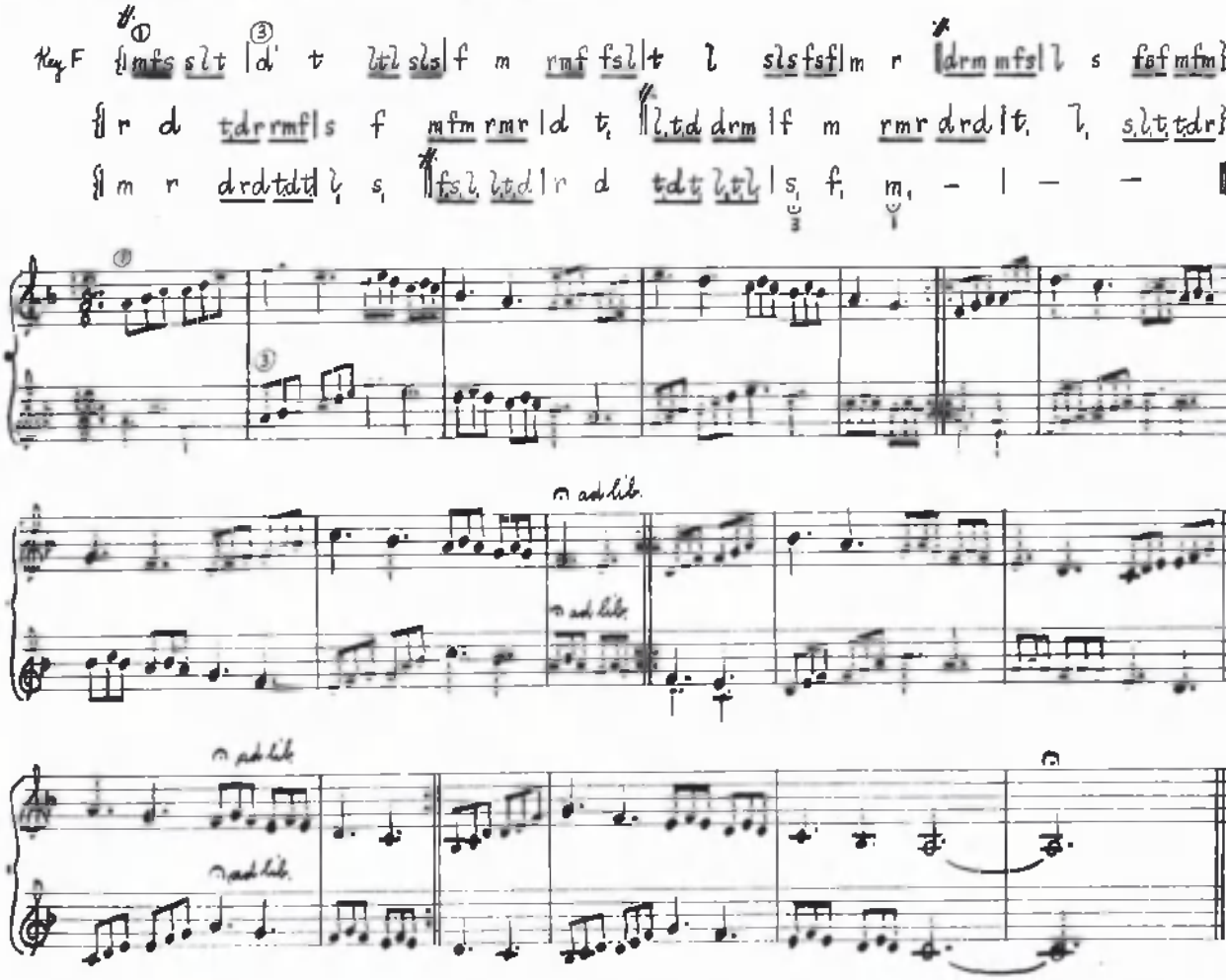


Read small notes on repetitions only.

These infinite canons are more suitable for young children because of the restricted range.

Melodic ornaments may also be added to this canonic sequence as in the following example.

Formula: 1 454 432 | 1 2 323 434 | 5 6



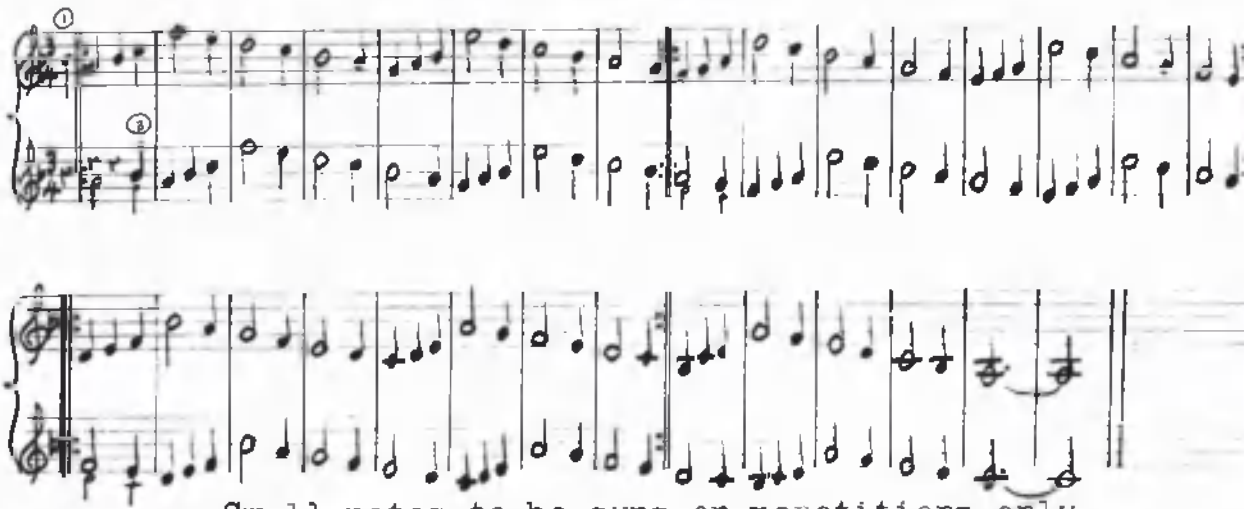
Again, any four bars of this canon may be repeated ad lib.

In the sol-fa notation lay-out, the repetition of any section does not necessitate any addition to the notation, but in the staff notation the small notes should be read on each repetition only.

All these canons may be sung also by treble and bass voices, with the first entry either in the treble or the bass.

The following variant of the same {|m.s:d'.t.l.s:f.m|} sequence has proved a great favourite with all classes. We give it first in the complete version, any 8 bars of which may be repeated.

Formula: ① 5|6 6 4|1-2|3-4|5-

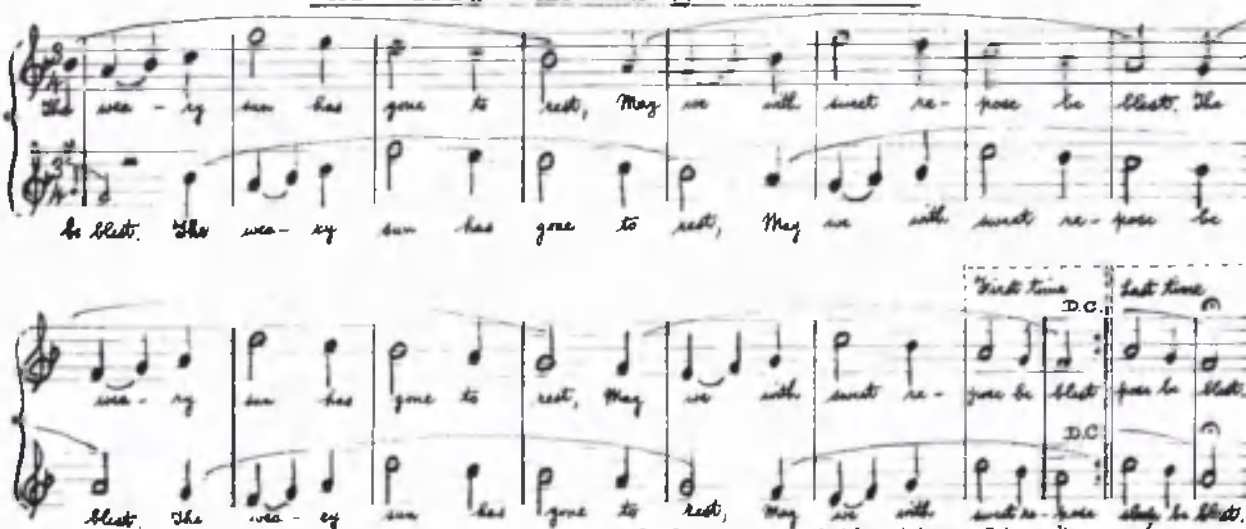


Small notes to be sung on repetitions only.

The version below may be sung as a simple canon or as an infinite canon. The words were suggested by pupils.

FORMULA: ① 5|6 5 ③4|1-2|3-4|5- ON d', t, l AND s

"The Weary Sun has gone to Rest"

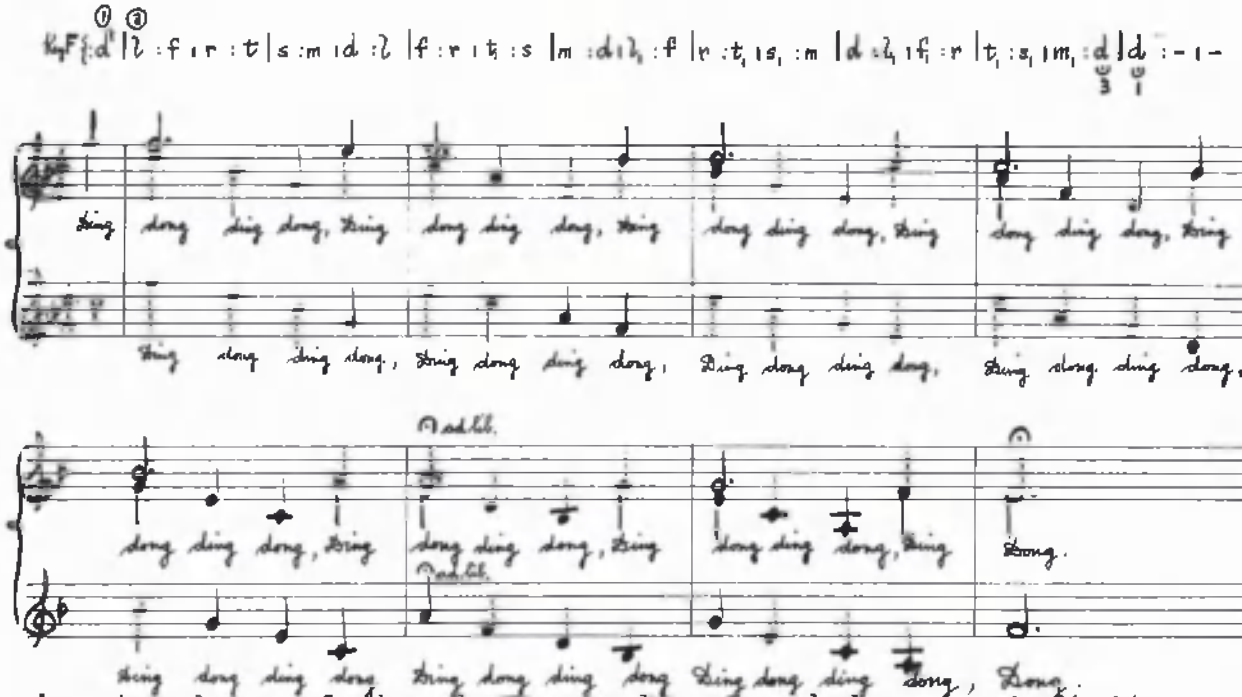


May also be sung by treble and bass, with the first entry in either the treble or the bass.

Finally, by omitting the passing notes in the original canon "We must hurry home for lunch", we obtain a canon based on the familiar Carillon sequence.

The words "Ding dong" may be used and the descant added later on.

Formula: ① ③ | | 3 5 7



Any two bars of the above may be regarded as an infinite canon, and repeated ad lib. Thus:-



Written out in two parts, it would appear as follows:



The small notes should be read on the repetitions only.

C H A P T E R XVIII

CANONS BASED ON SEQUENCES DESCENDING STEPWISE

So far we have dealt with canons based on sequences of descending thirds -

{|d' :- |l :- |t :- |s :-}

and canons based on scales or scale passages. We shall now deal with canons based on sequences that descend stepwise, e.

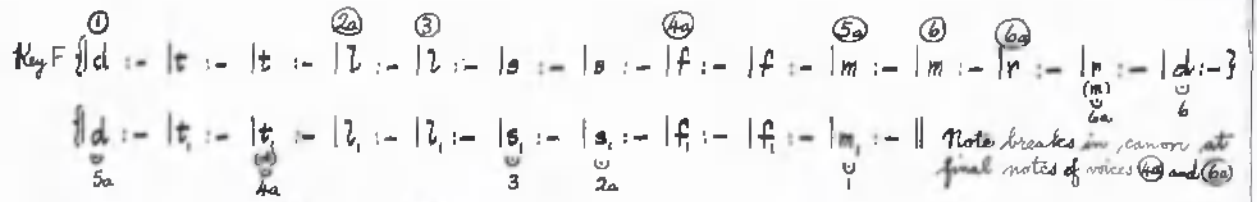
{|d' :- |t :- |t :- |l :-}

No explanation should be necessary now, so we shall write out the canonic sequence in sol-fa notation, marking the points of entry, ①④ etc., and the final pauses for the different voices. Then we shall give four bars in staff notation of the various canons from the point of entry of the last voice, and above these print the formulae or code numbers indicating the entry of the various voices. We shall then follow on with a number of canonic sequences based on this descending stepwise sequence. In all the canonic sequences in this chapter the points of entry of the voices and the canonic formulae are exactly the same in each case.

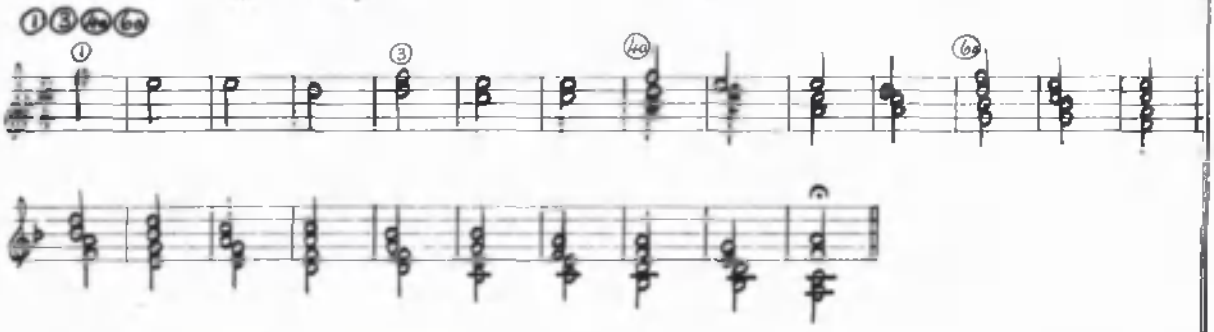
12 canons for equal voices are given under each canonic sequence in the following order:

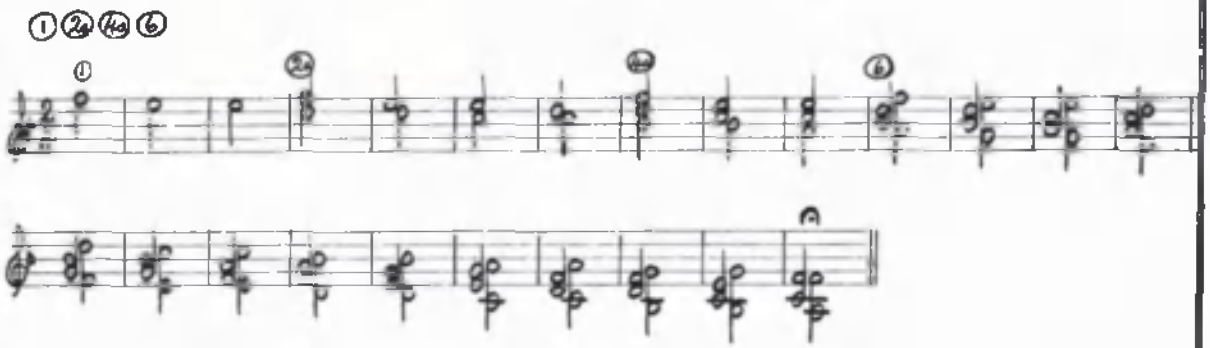
Two Part		Three Part		Four Part
① ③	①⑤	①③④	①③⑥	①③④⑥
① ⑥	①⑥	①③⑤	①②⑥	①②④⑥
		①③⑥	①②④	

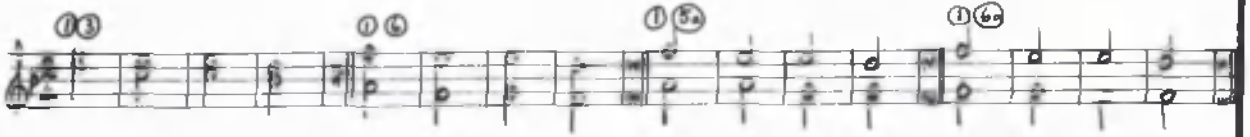
The descending stepwise bass is not so practicable as the bass that descends by 3rds and returns by steps (cf. the {|d' :- |l :- |t :- |s :-} canons). But a few examples of canons for mixed voices on descending stepwise sequences are given in this section. Others may be inferred from the canons for Equal Voices.

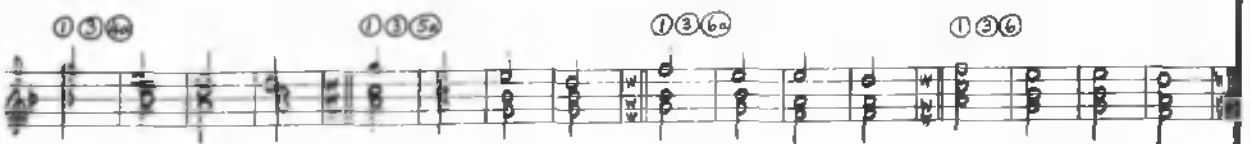


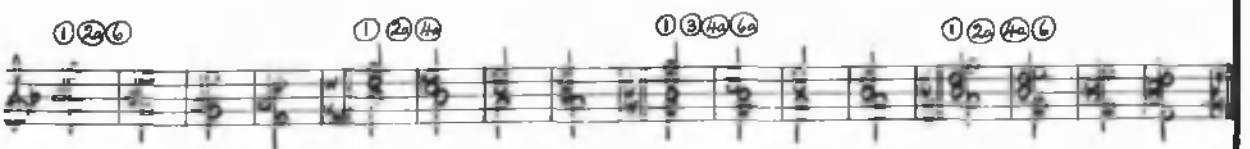
Two canons are given in full: ①③④⑥ and ①②④⑥

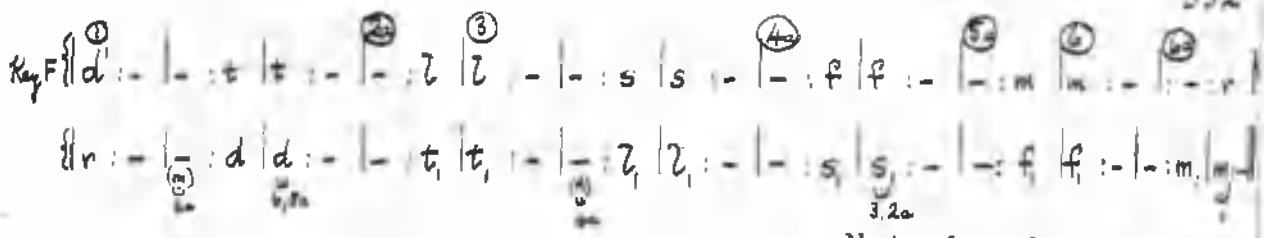






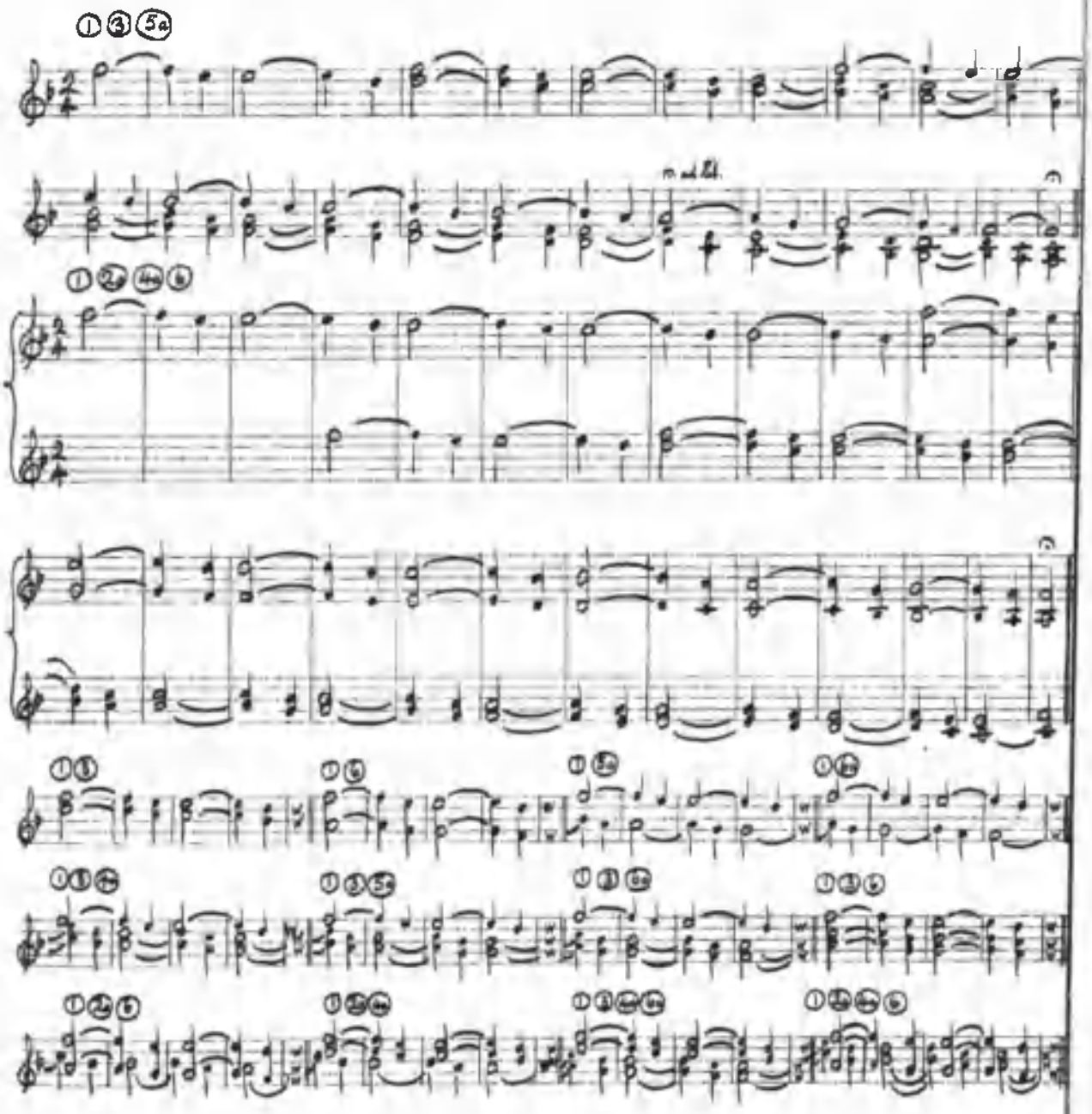


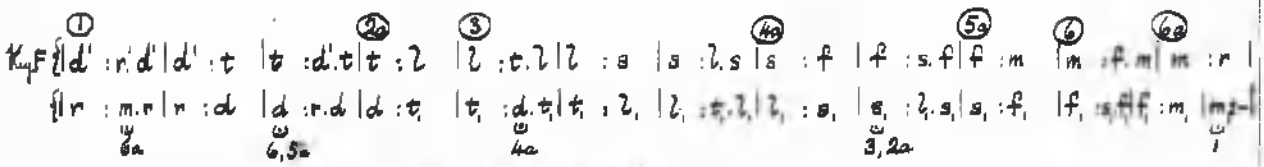




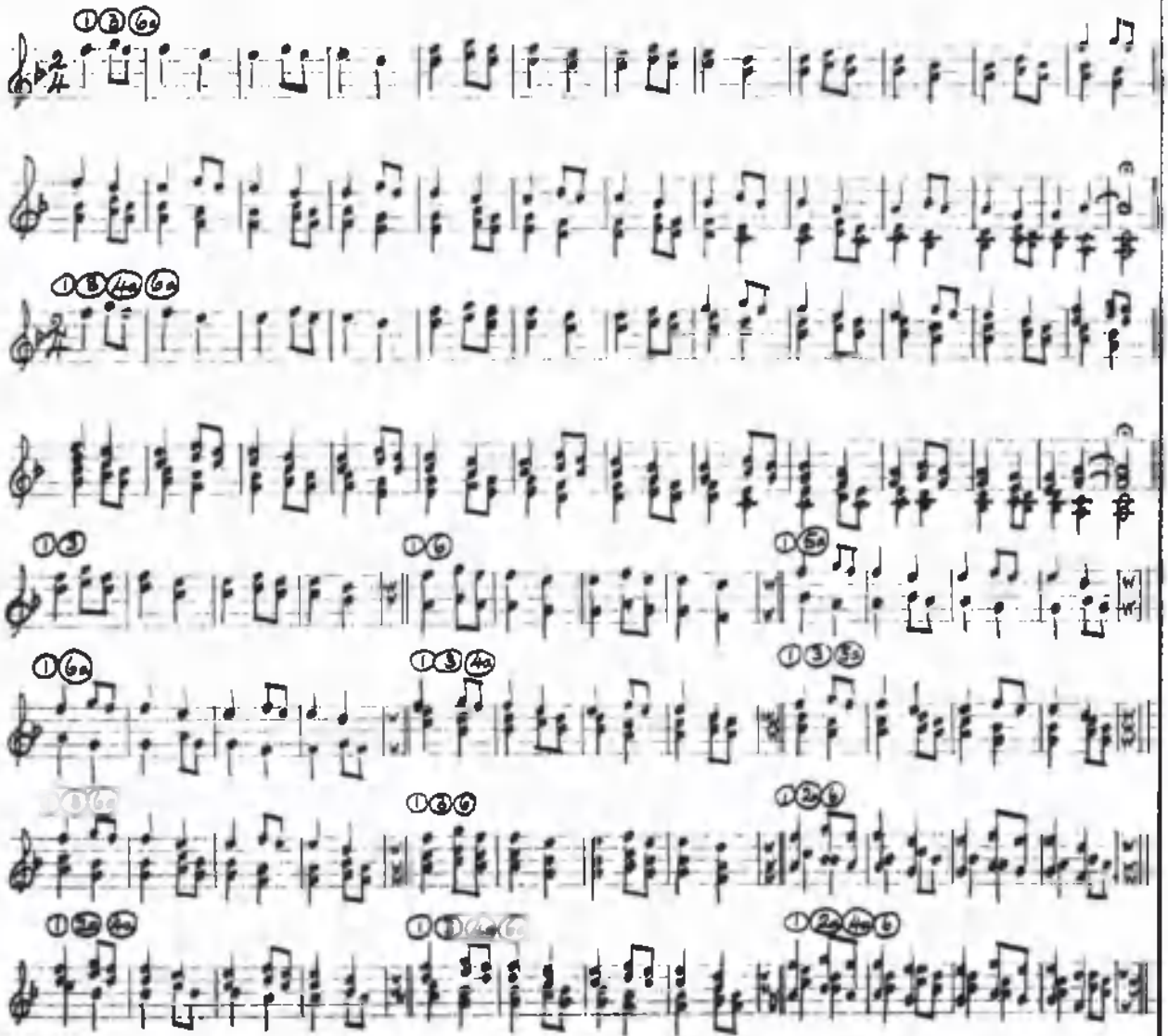
Note breaks in voices 4a and 6a

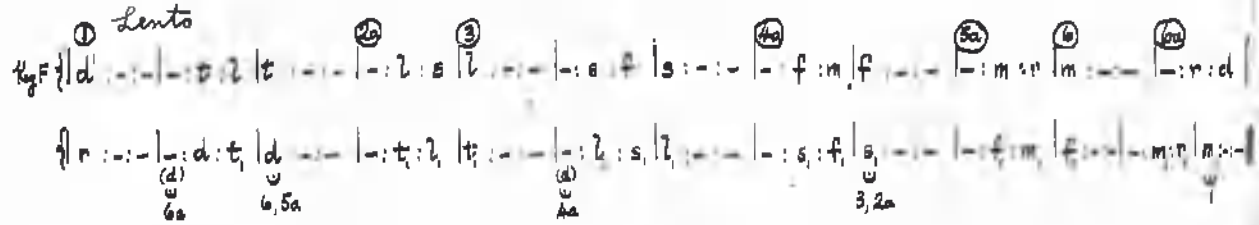
Two canons are given in full: 1 3 5a and 1 2a 4a 6.





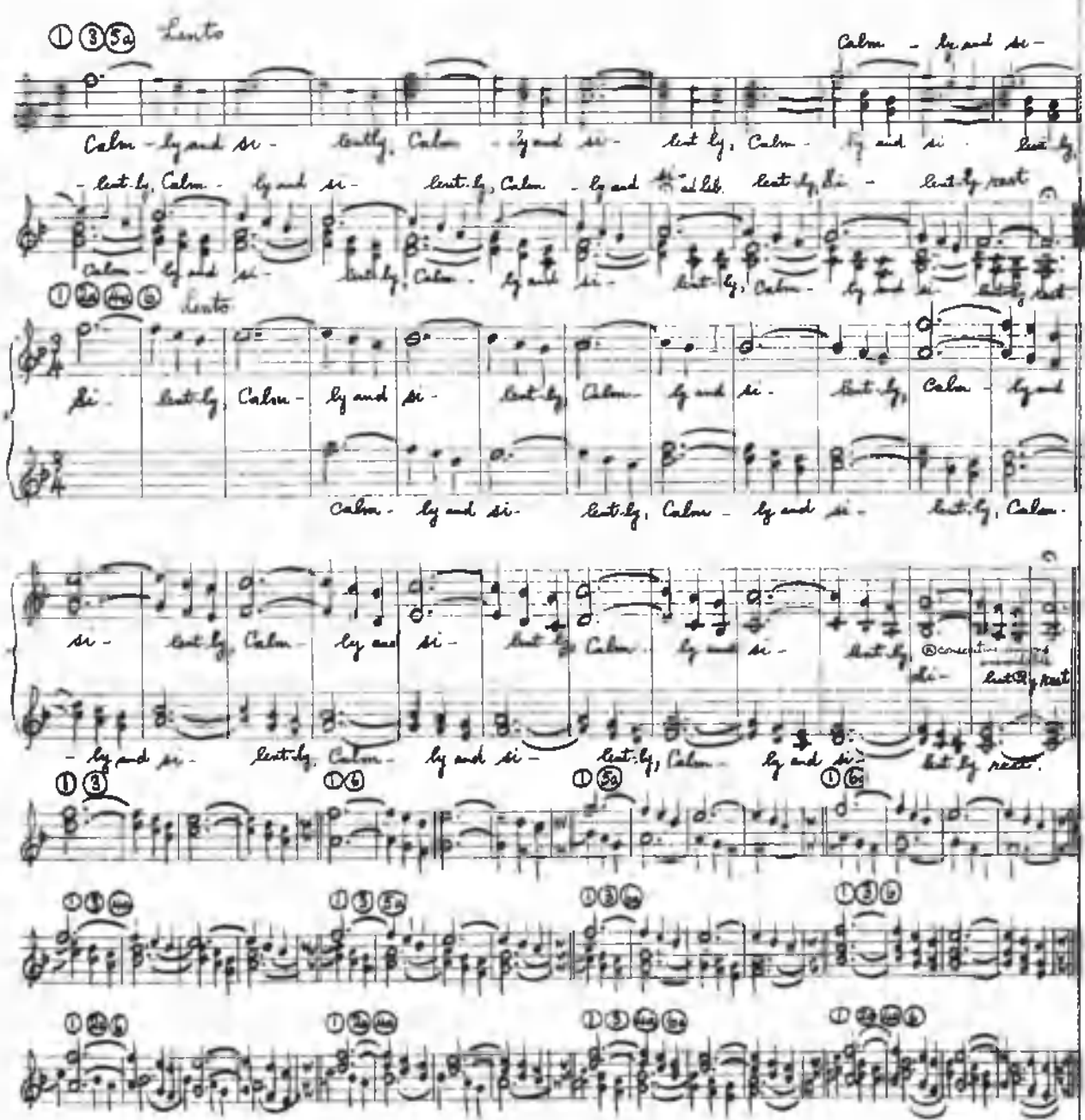
There is no break in this canon.

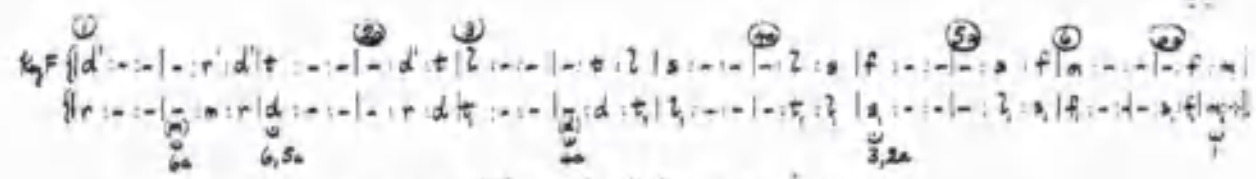




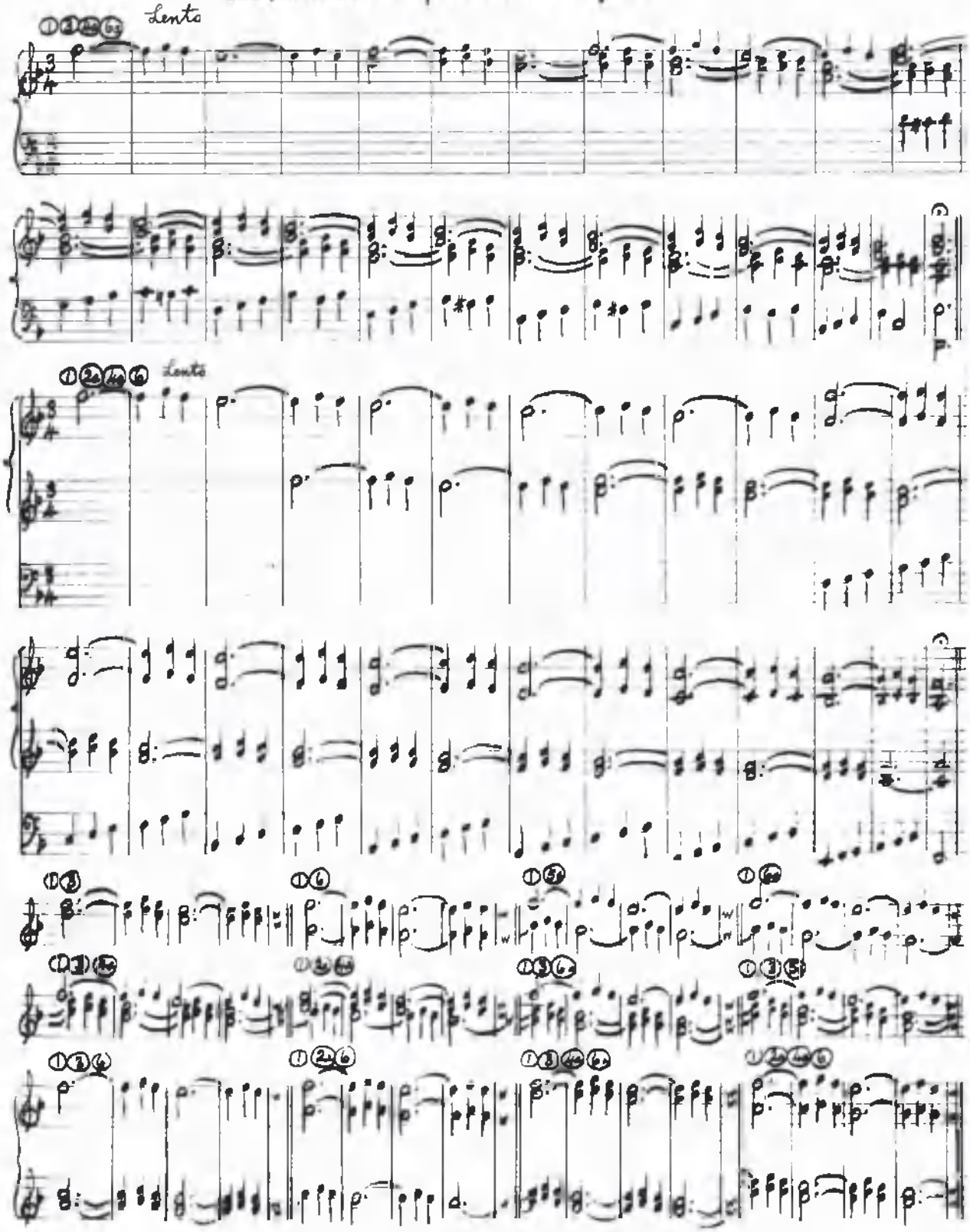
Note the breaks in voices ④ and ⑥a.
Any of these canons may be sung to the words "Calmly and silently".

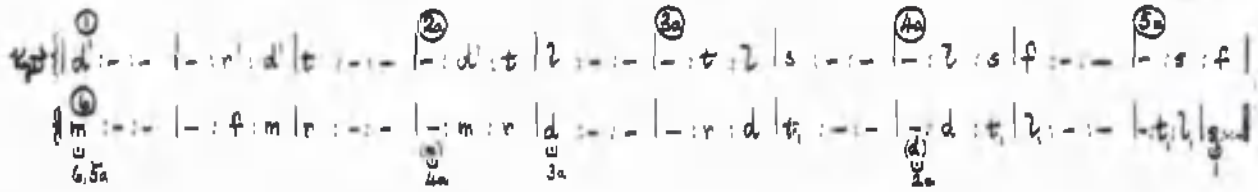
Two canons are given in full: ①③⑤a and ①②④⑥.


①③5a Lento
Calm - ly and si - lent - ly, Calm - ly and si - lent - ly, Calm - ly and si - lent - ly,

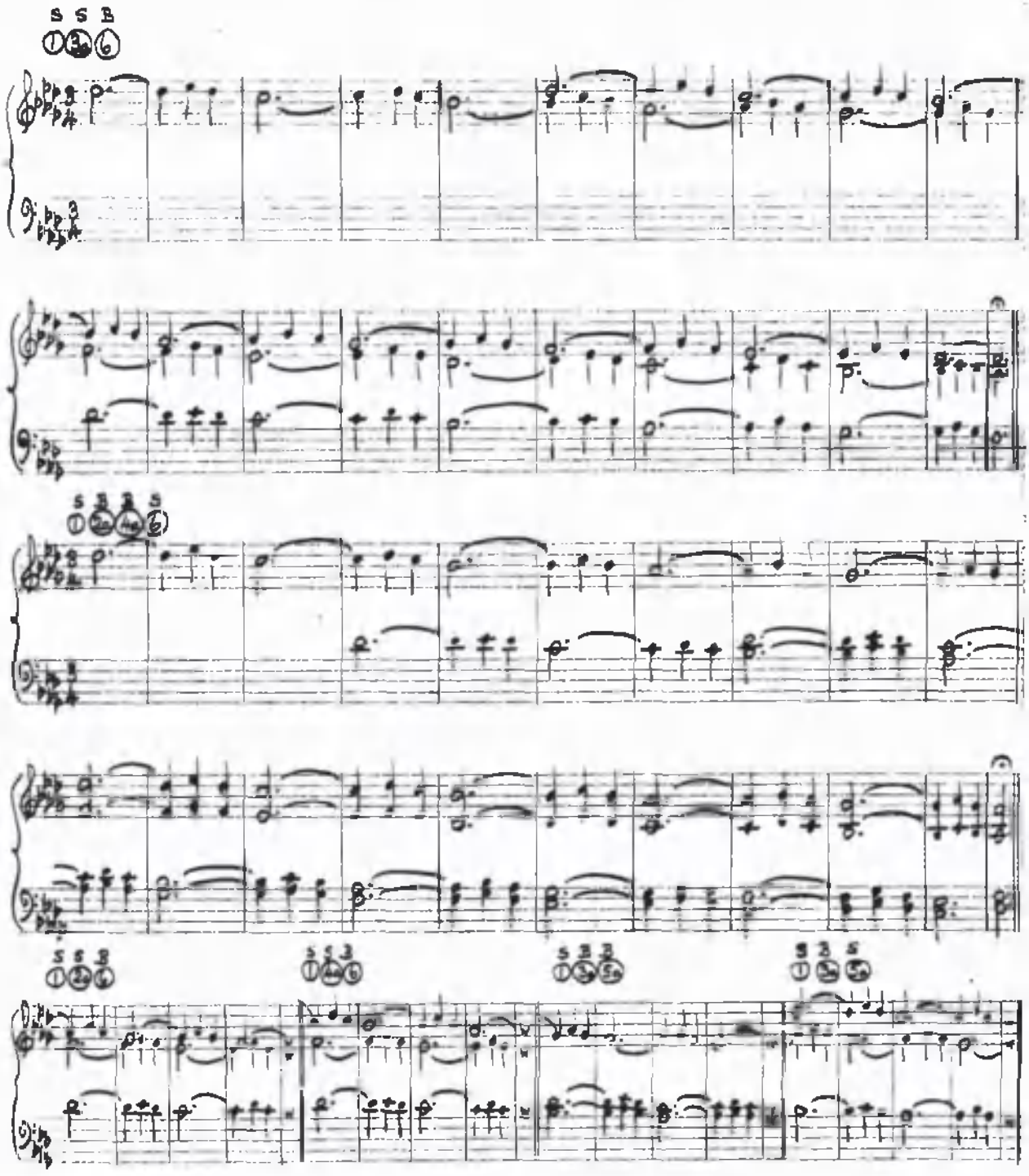


Two canons with optional bass are given.

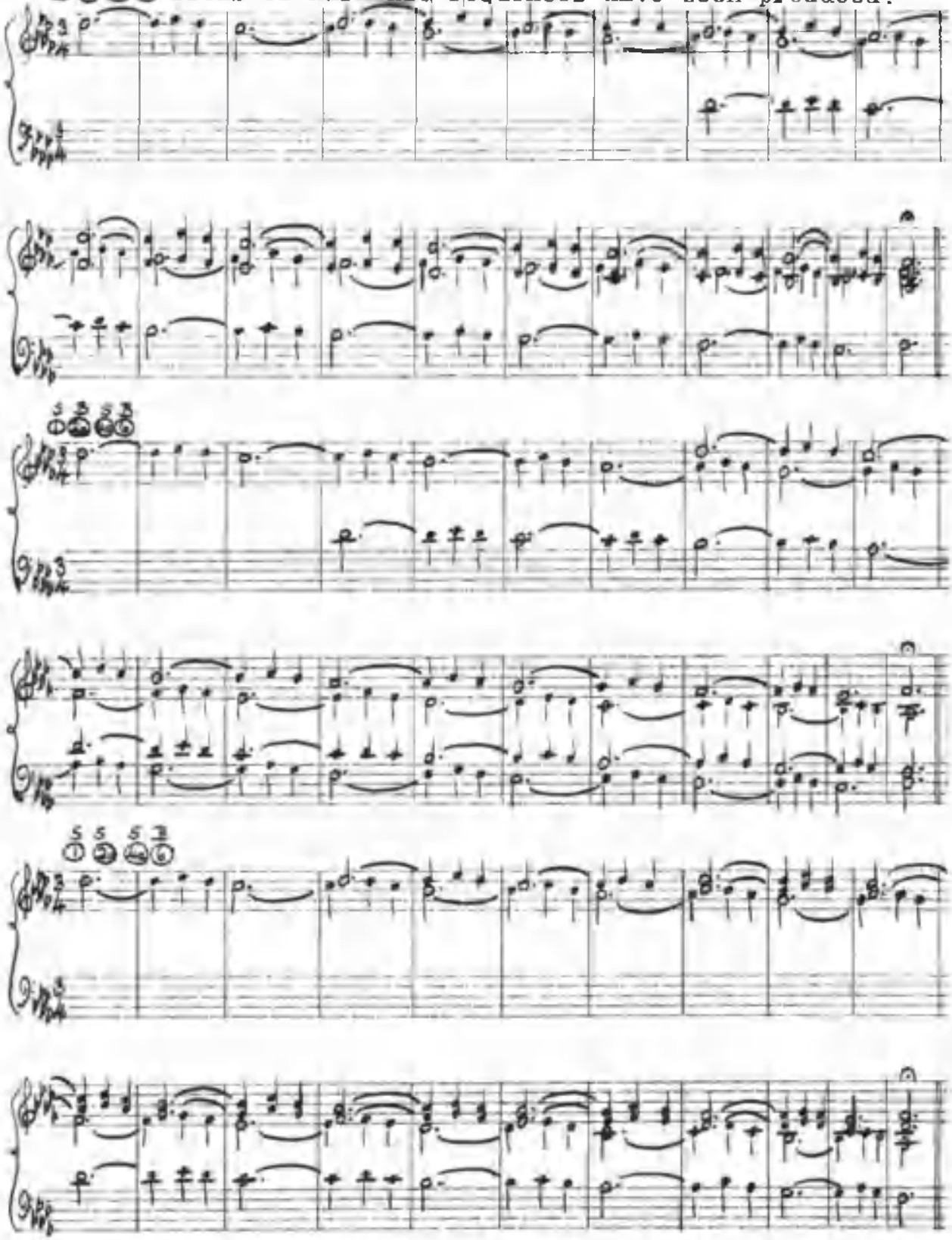




CANONS FOR MIXED VOICES ON THE SAME SEQUENCE

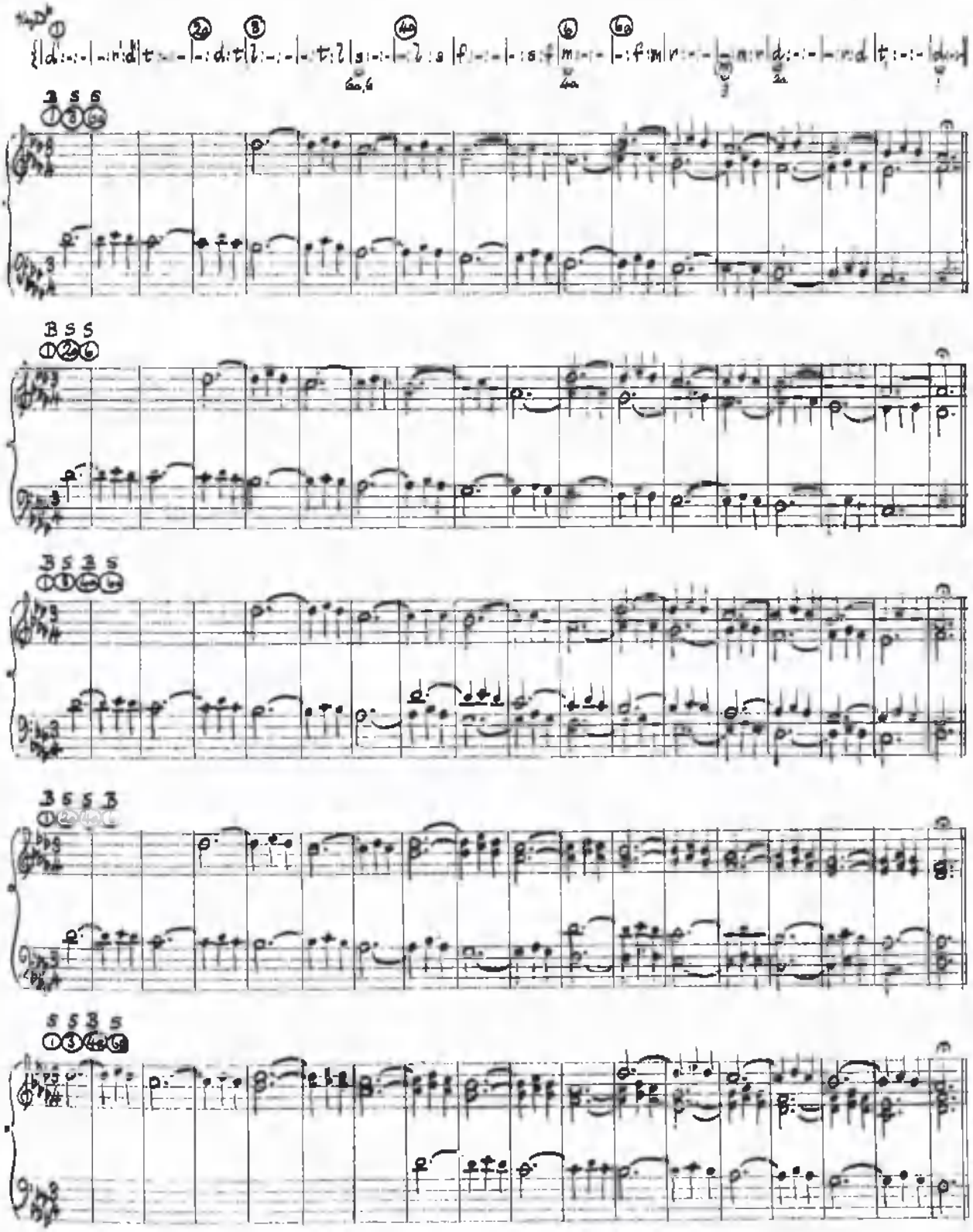


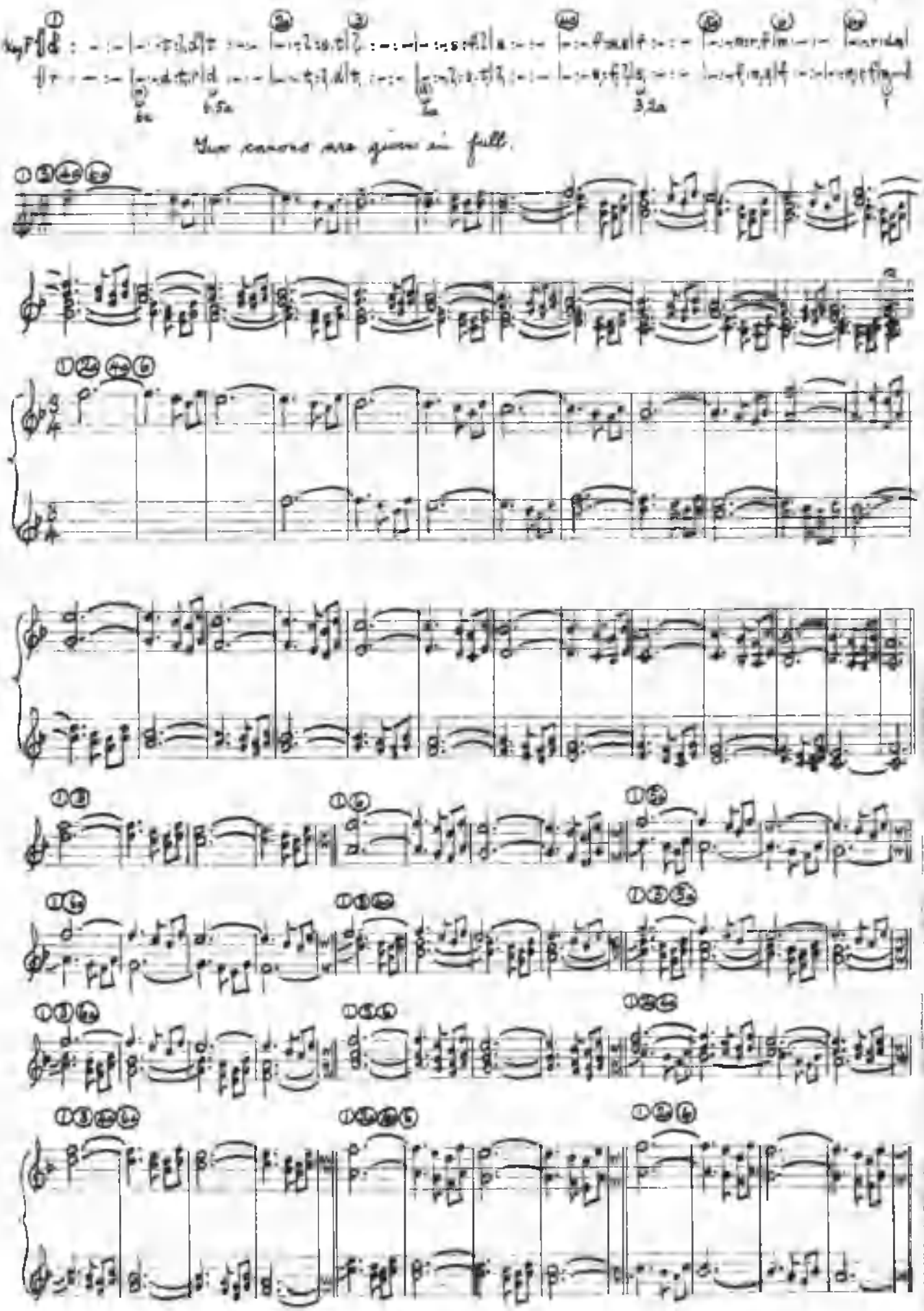
The three canons below contain the same entries ①②④⑤⑥
as the four-part canon above. Only, the order of the voices,
Treble and Bass, has been changed, and thus inver-
③ ③ ③ ⑤
① ② ④ ⑥ sions of harmonic sequences have been produced.

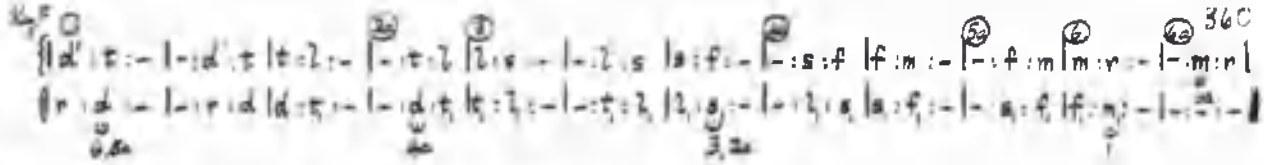


THE SAME CANONIC SEQUENCE

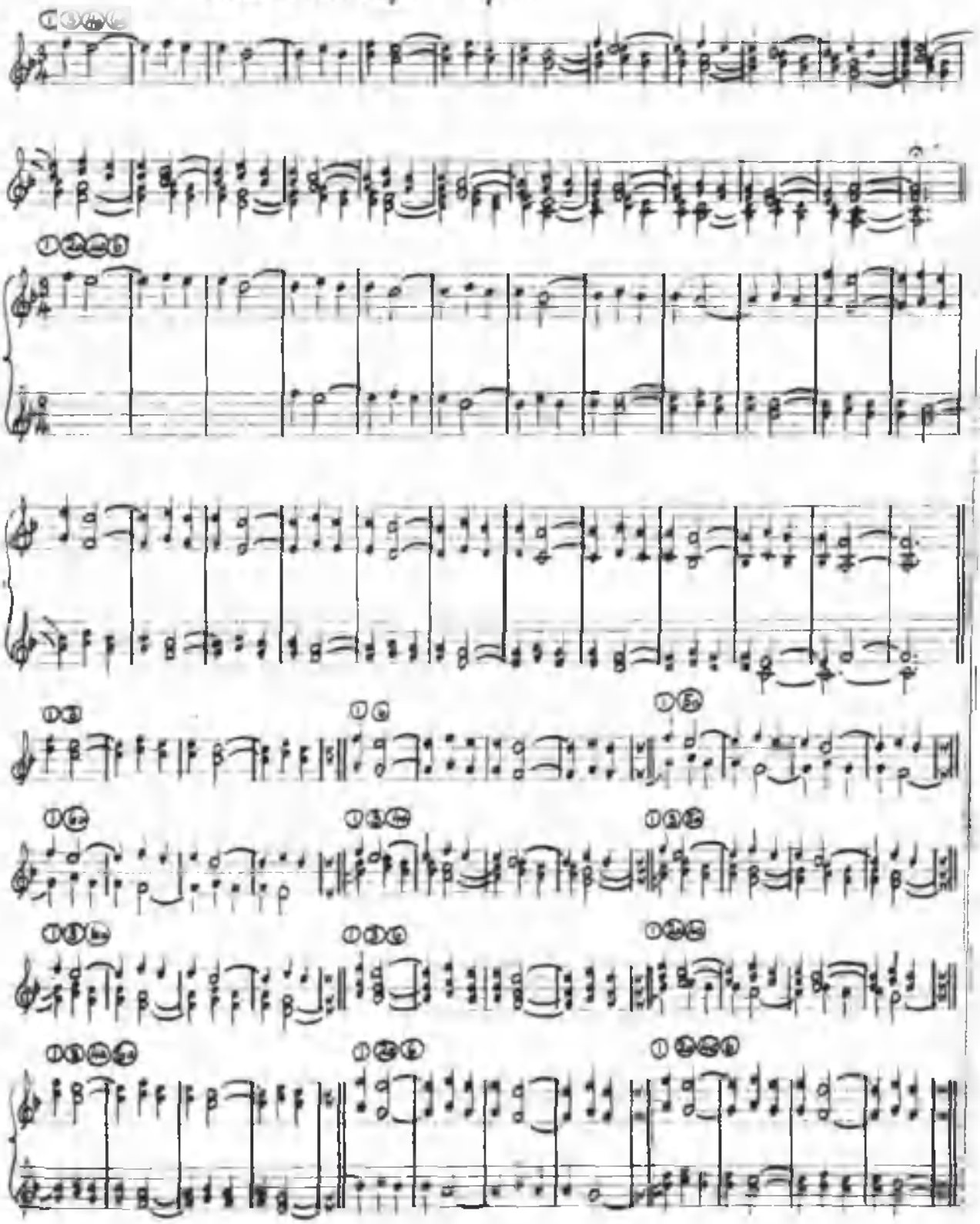
Below will be found examples of canons on the same sequence, but beginning with the Bass voice. This entry of the Bass in voice ① allows us to use a new voice ③, but it also necessitates an earlier close of the sequence on |t, :-:- |d :- :-‖

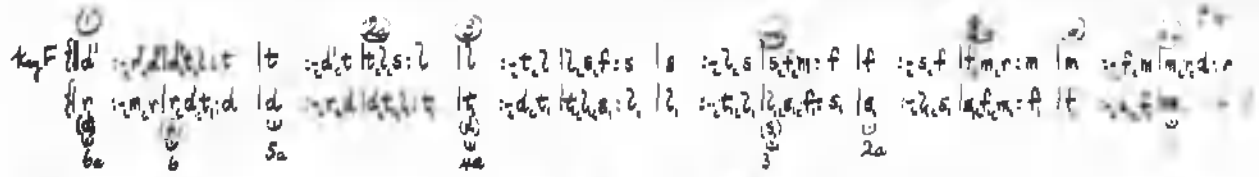



Two canons are given in full.

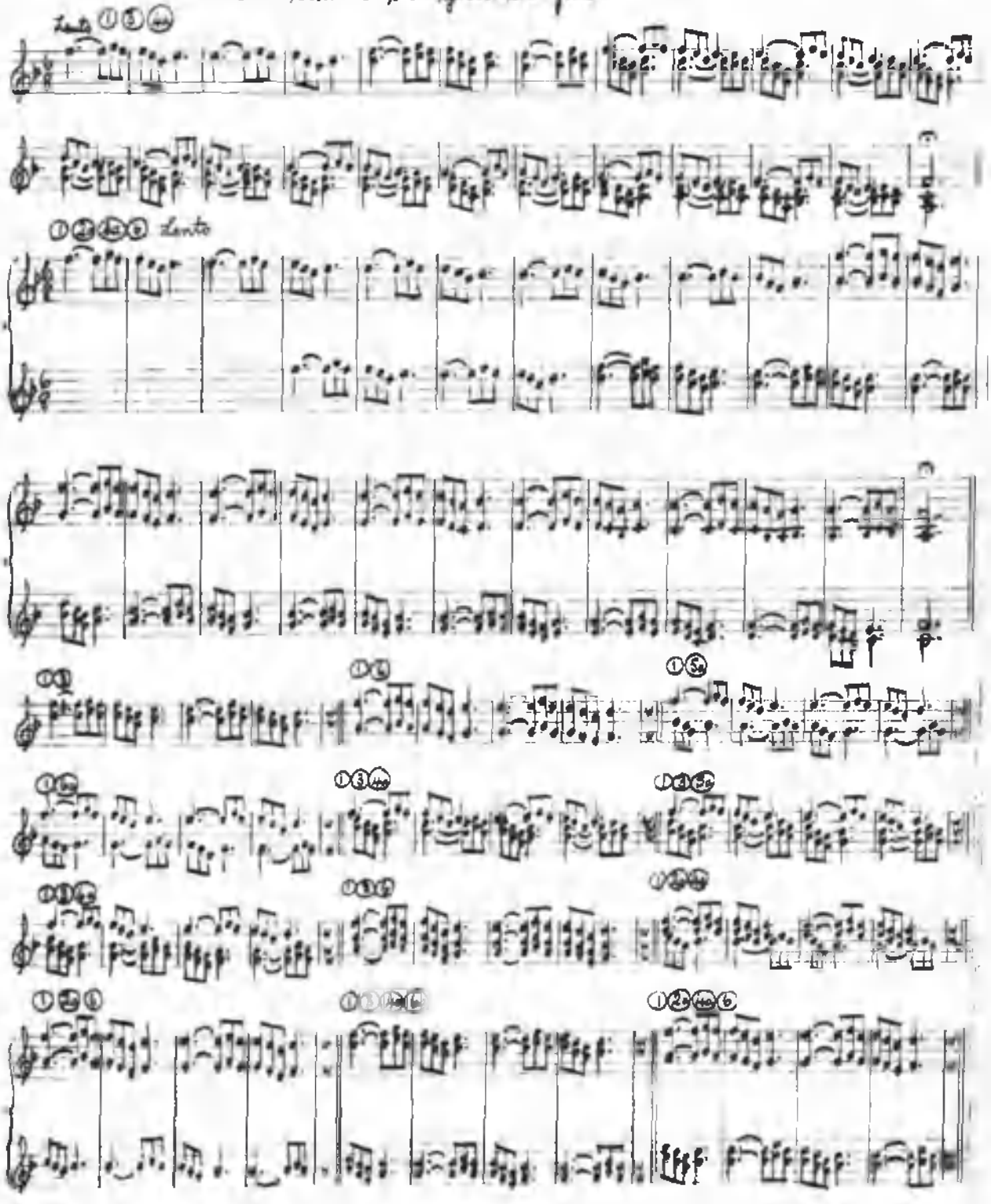


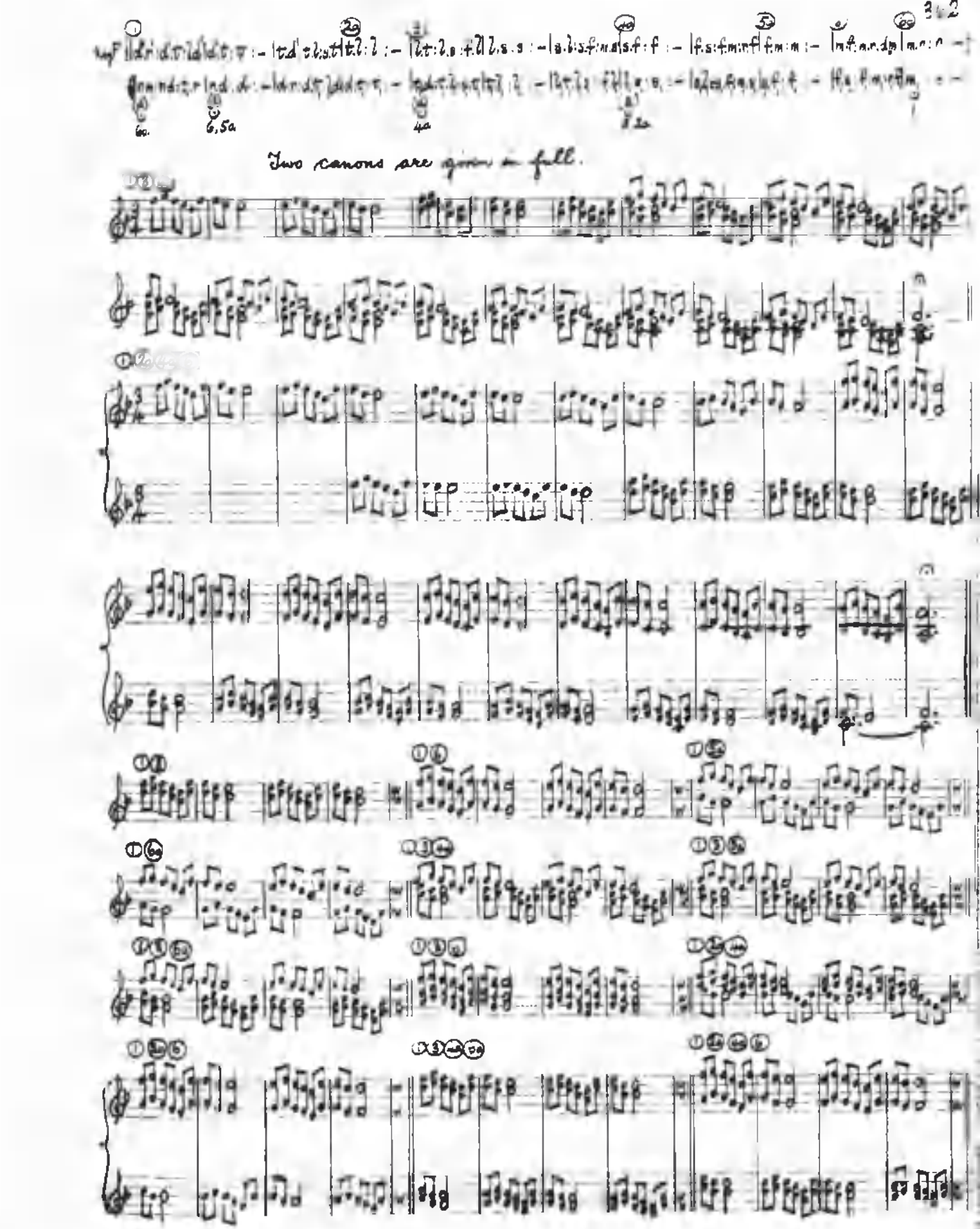
The canons are given in full.

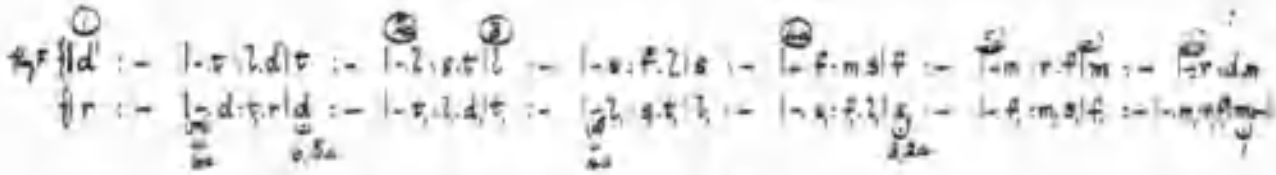




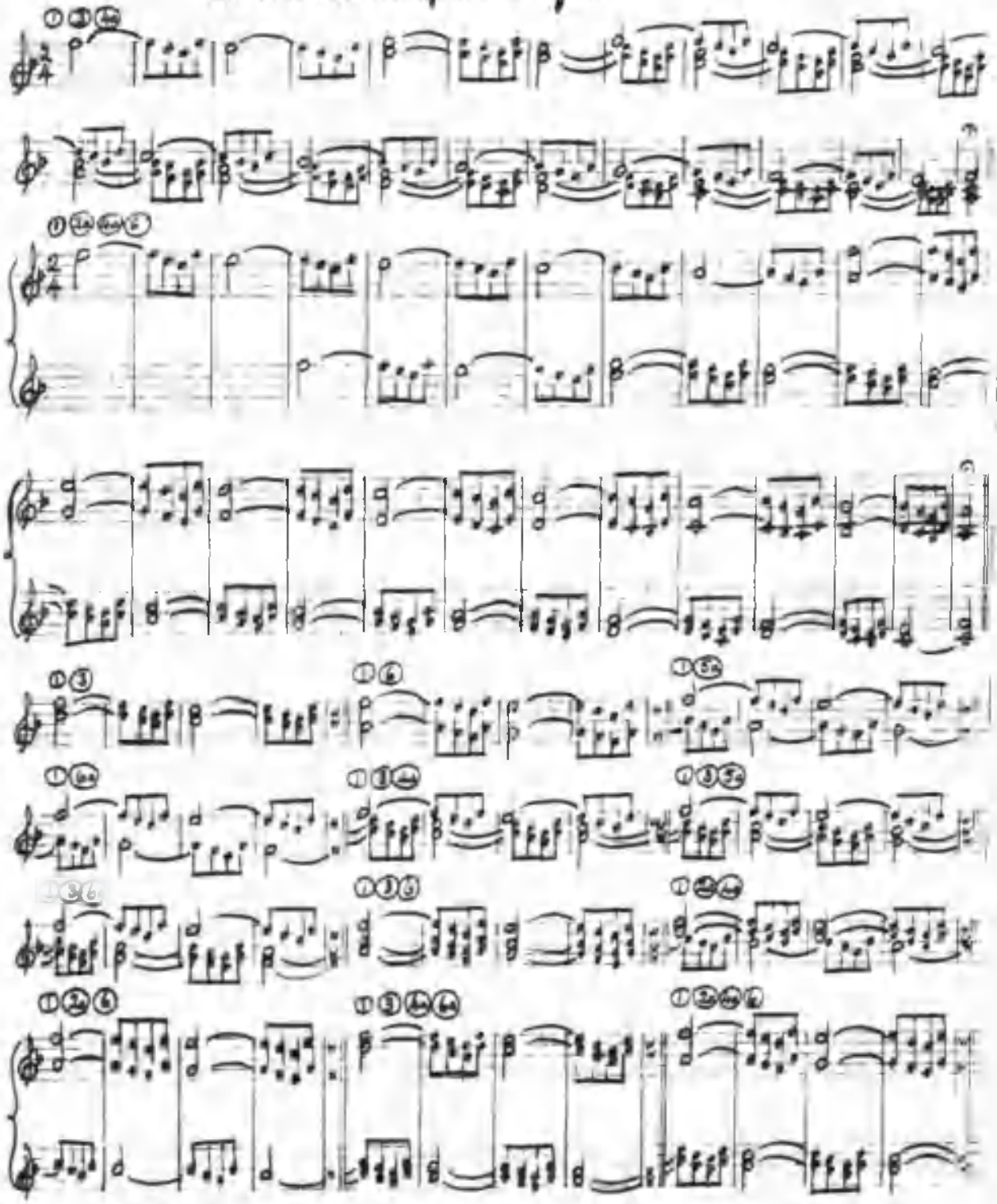
Two canons are given in full.

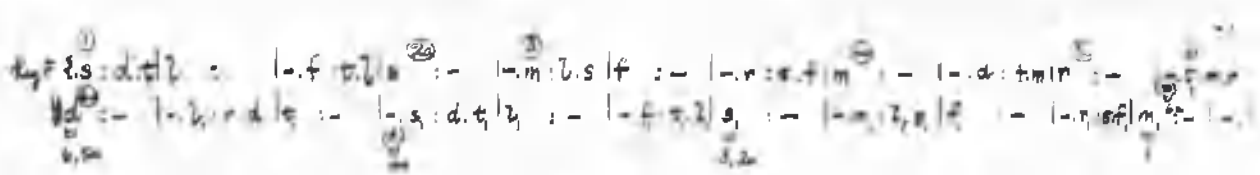



Two canons are given in full.

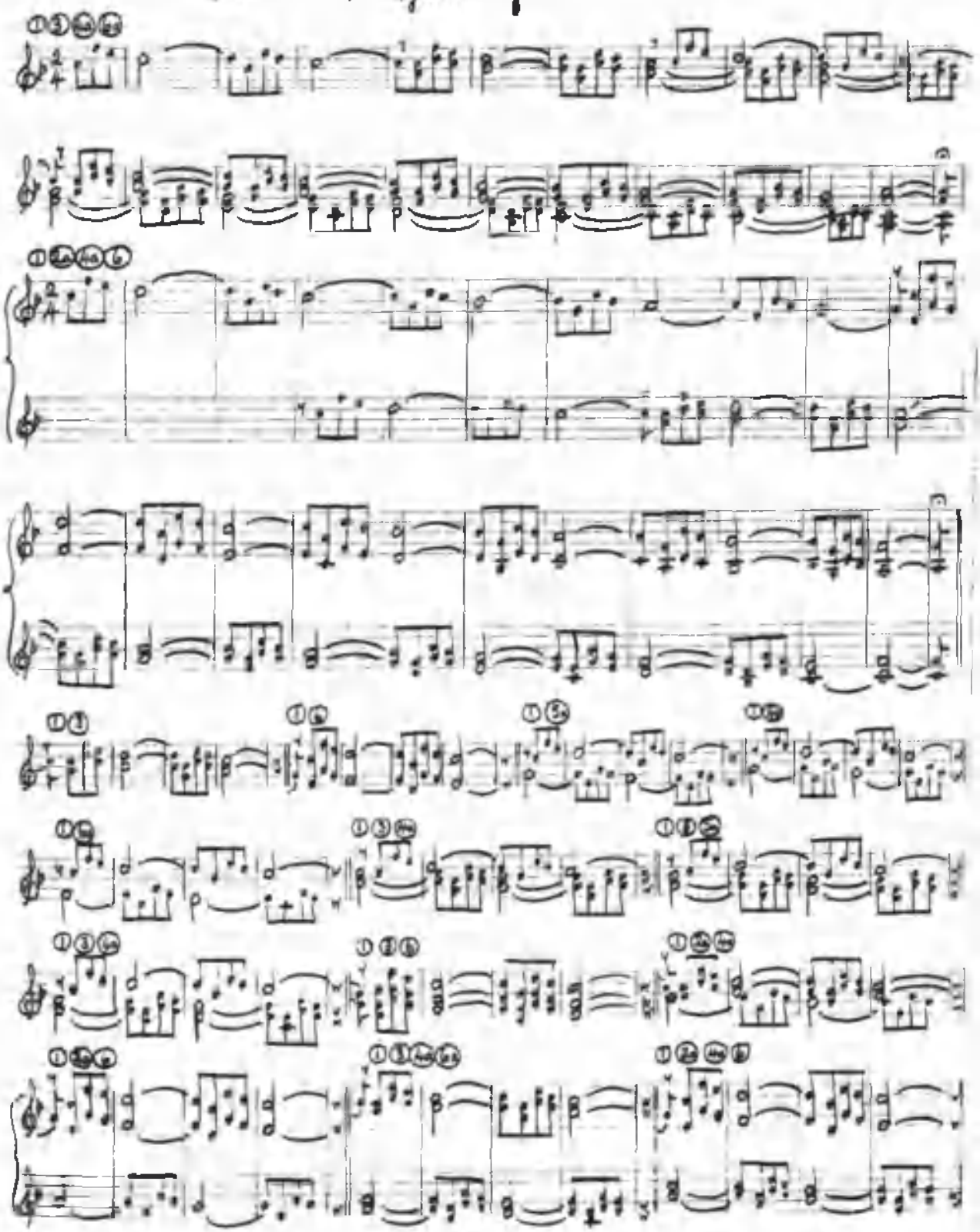


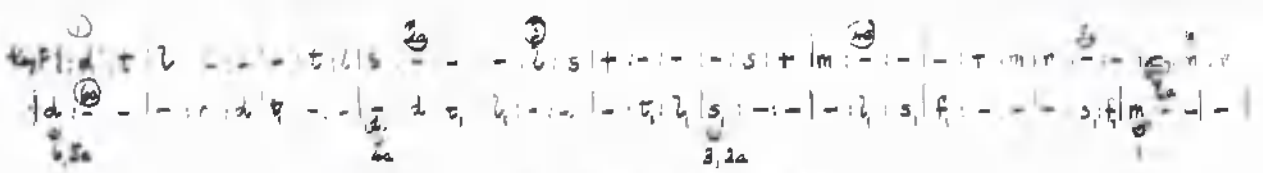
Two canons are given in full.



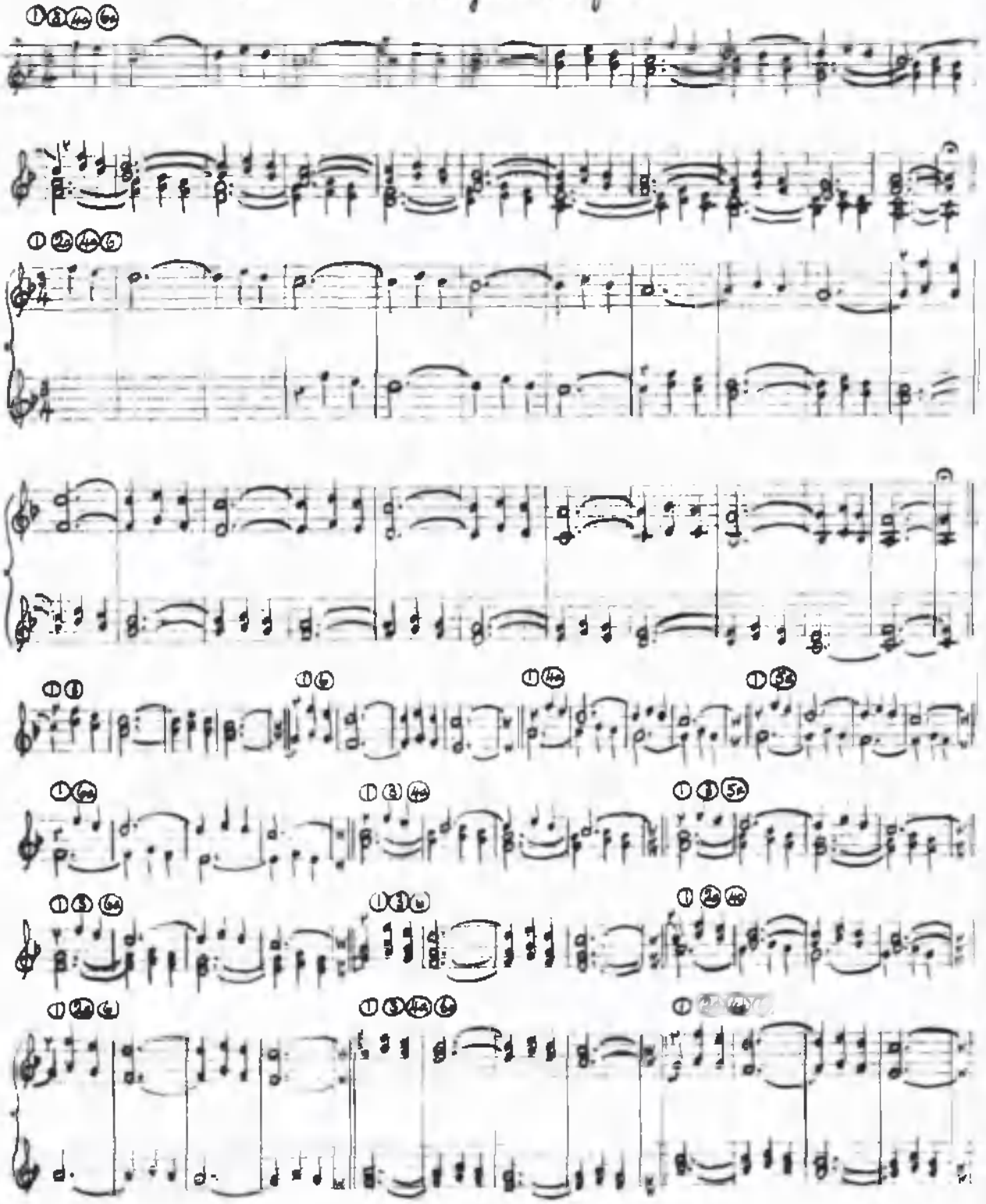


two canons are given in full.

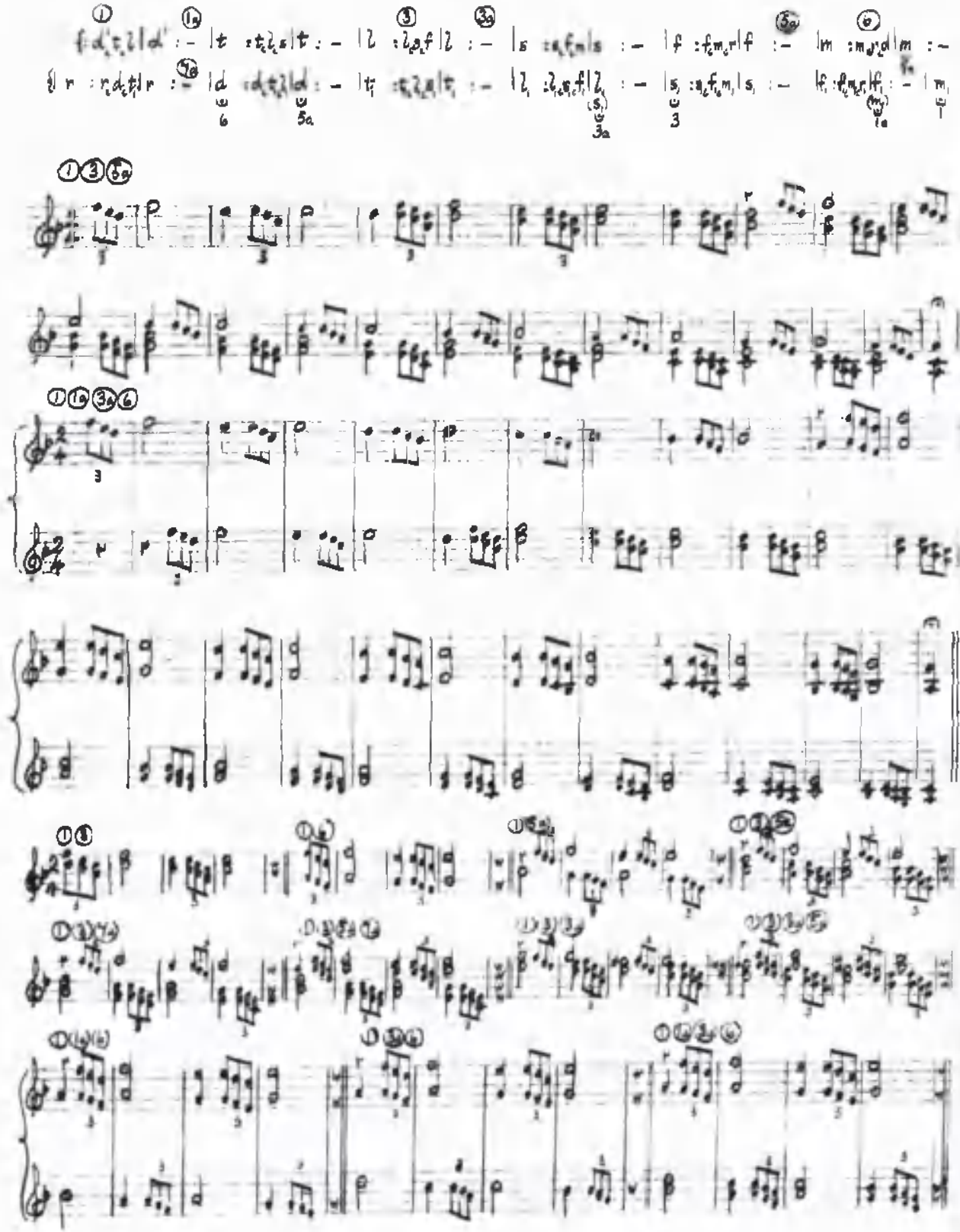




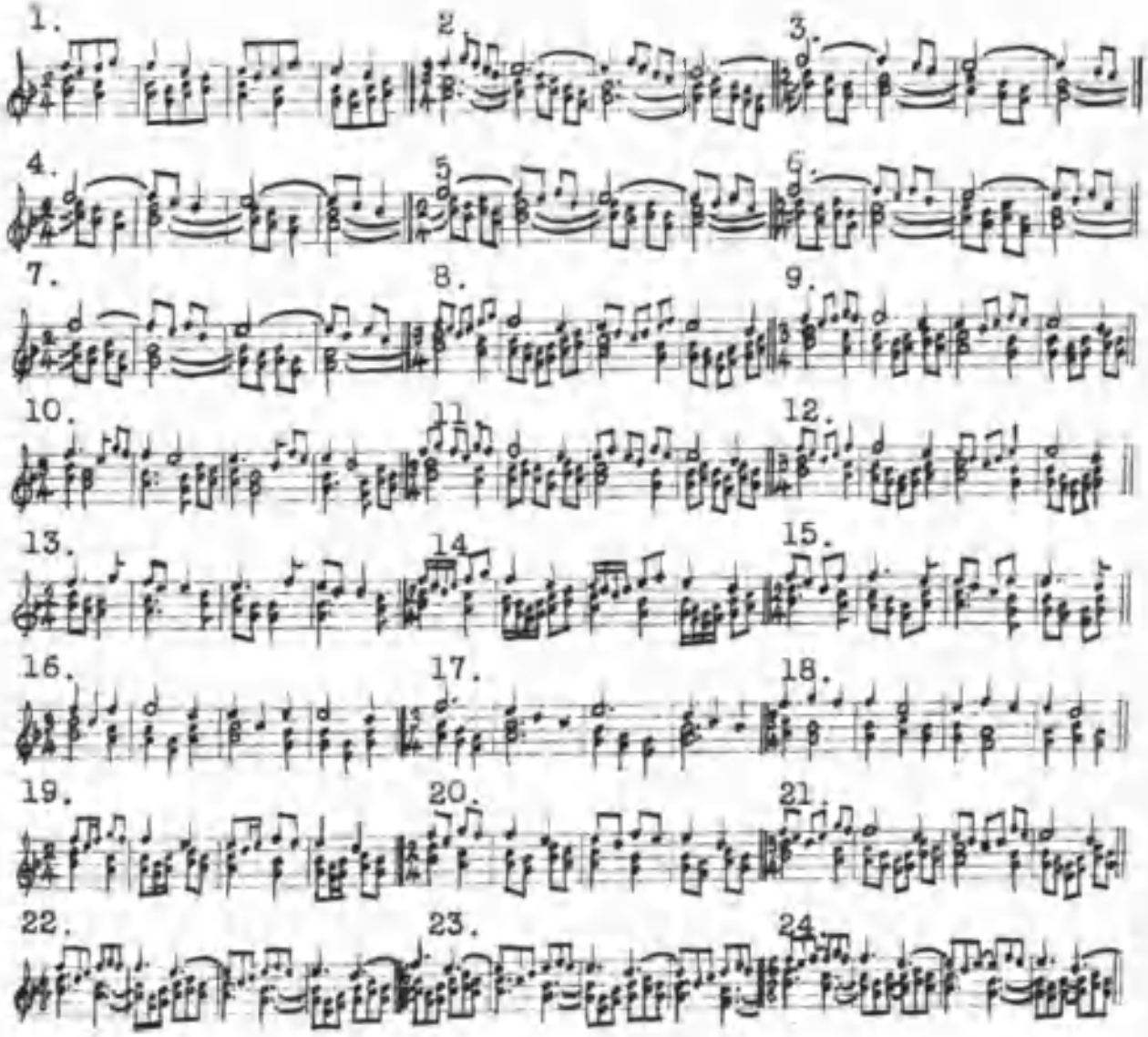
Two canons are given in full.



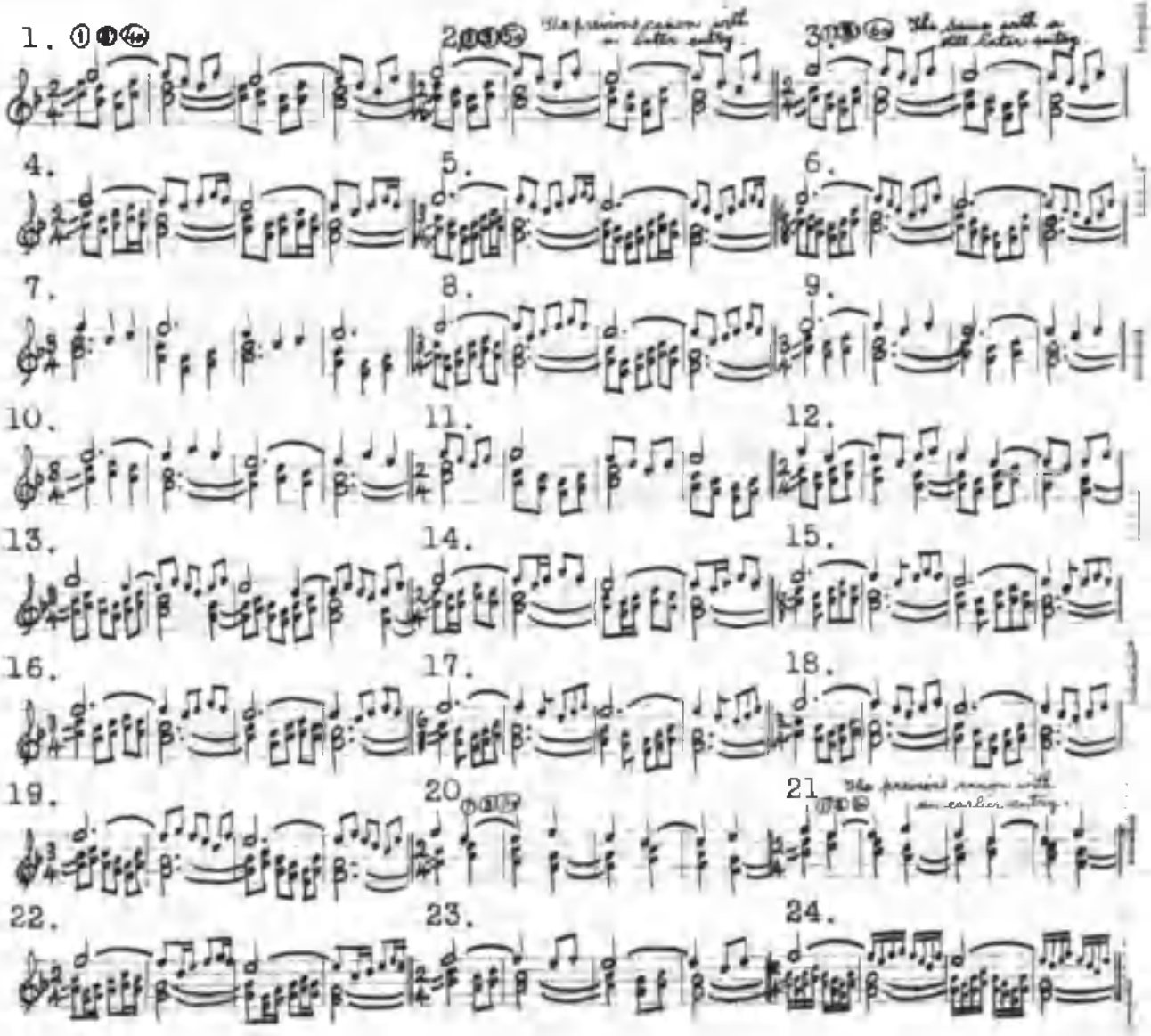
In the following variation of the preceding exercise it is noted that new entries are required.



We have by no means exhausted the possibilities of canons based on sequences descending stepwise. In the following pages we give a few selected examples of canons based on this type of sequence, beginning at the point of entry of the last voice. They are mostly in three parts, and 4 bars of each canon are given. In the Pupils' Book these would be printed in the sol-fa layout with the canonic formulae.



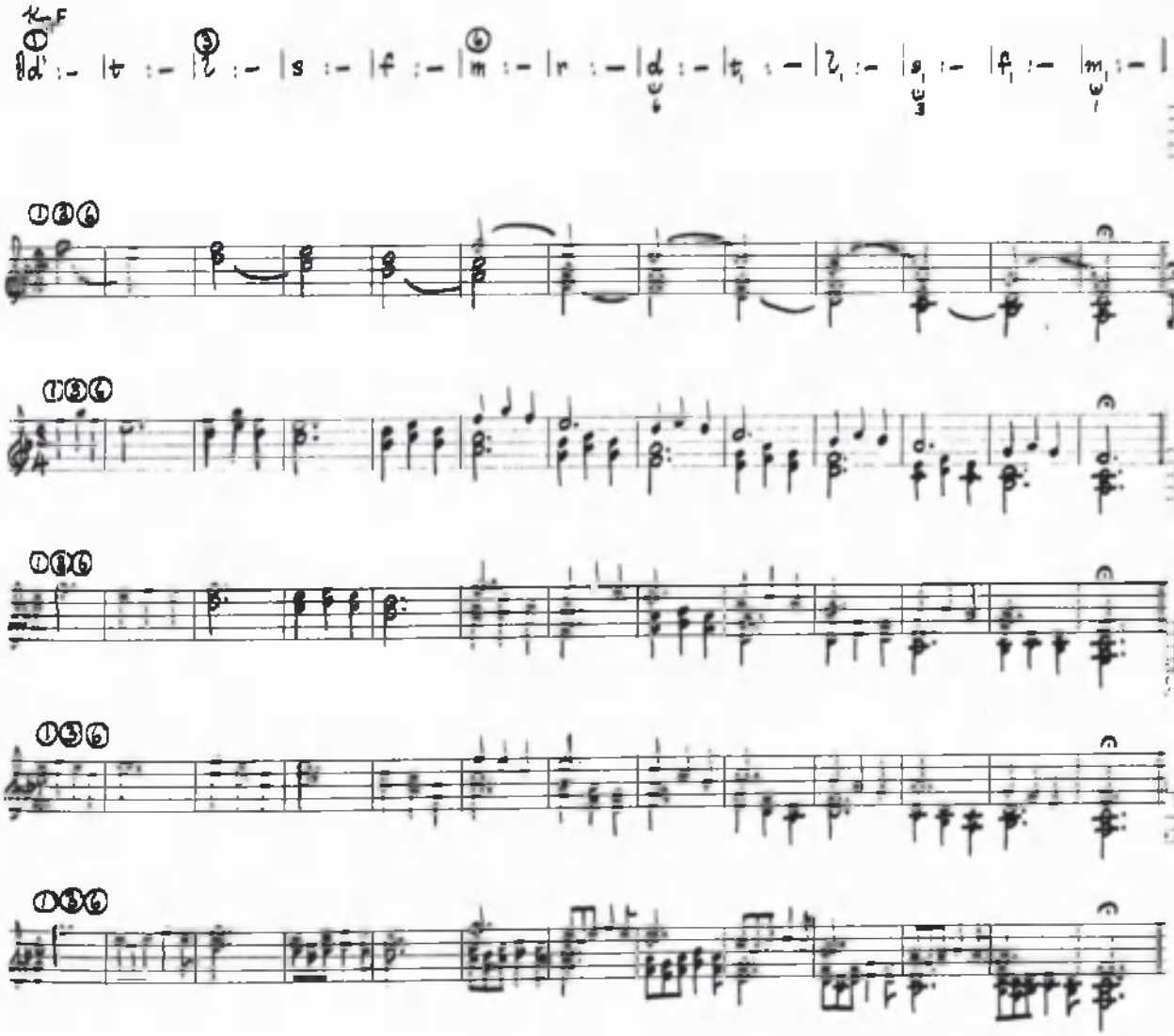
The following are examples of canons based on sequences descending stepwise, but here the sequence figure begins and ends on the same note.

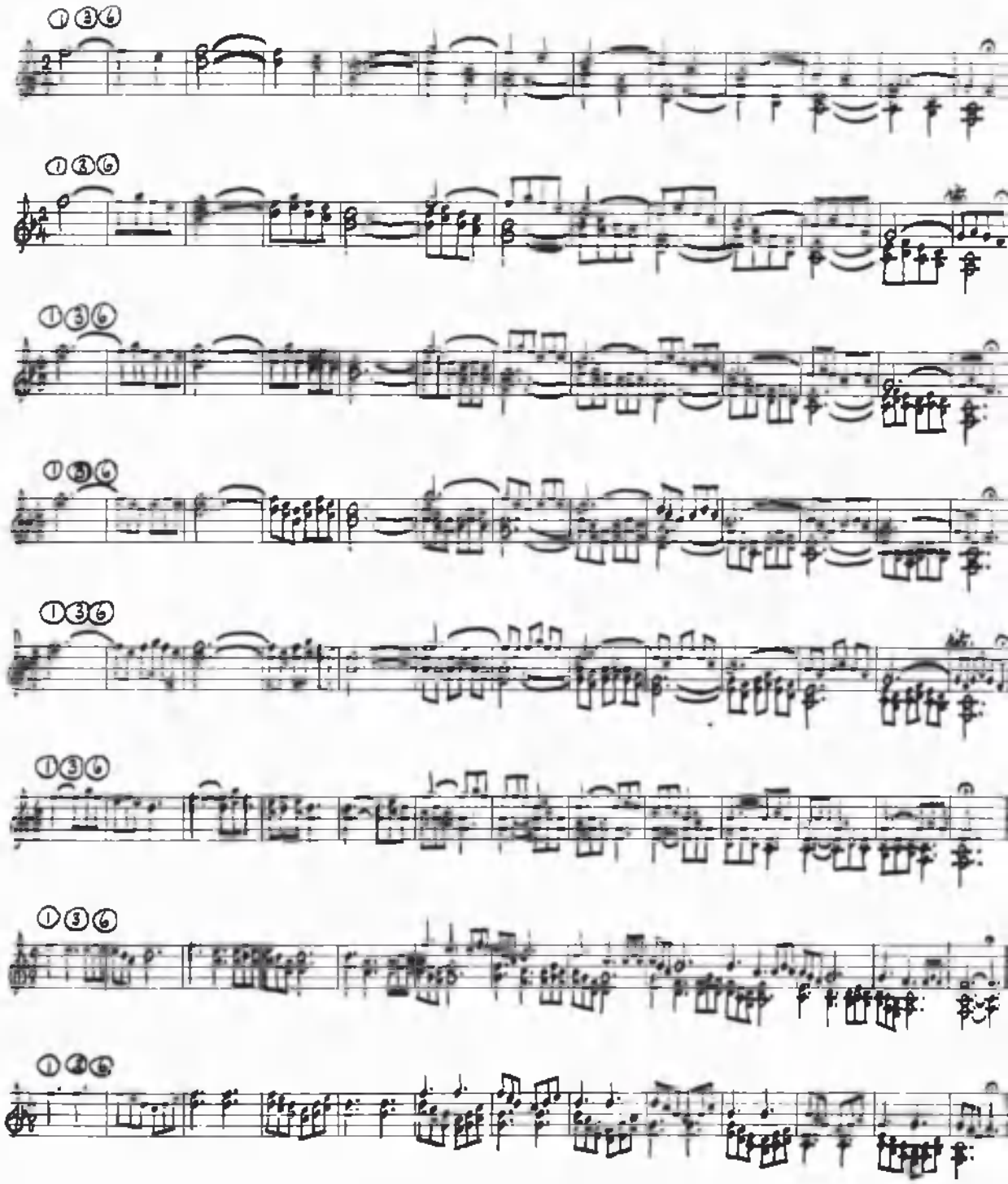


CANONIC SEQUENCES DESCENDING ON d' l f r

A new series of canonic sequences may be based on the descending scale by regarding this scale in the light of a two-note sequence figure repeated a third lower each time, i.e. on the notes d' l f r etc. We give below the canon based on this descending two-note sequence, andfollow it with a number of canons obtained by simply ornamenting the original two-note sequence figure.

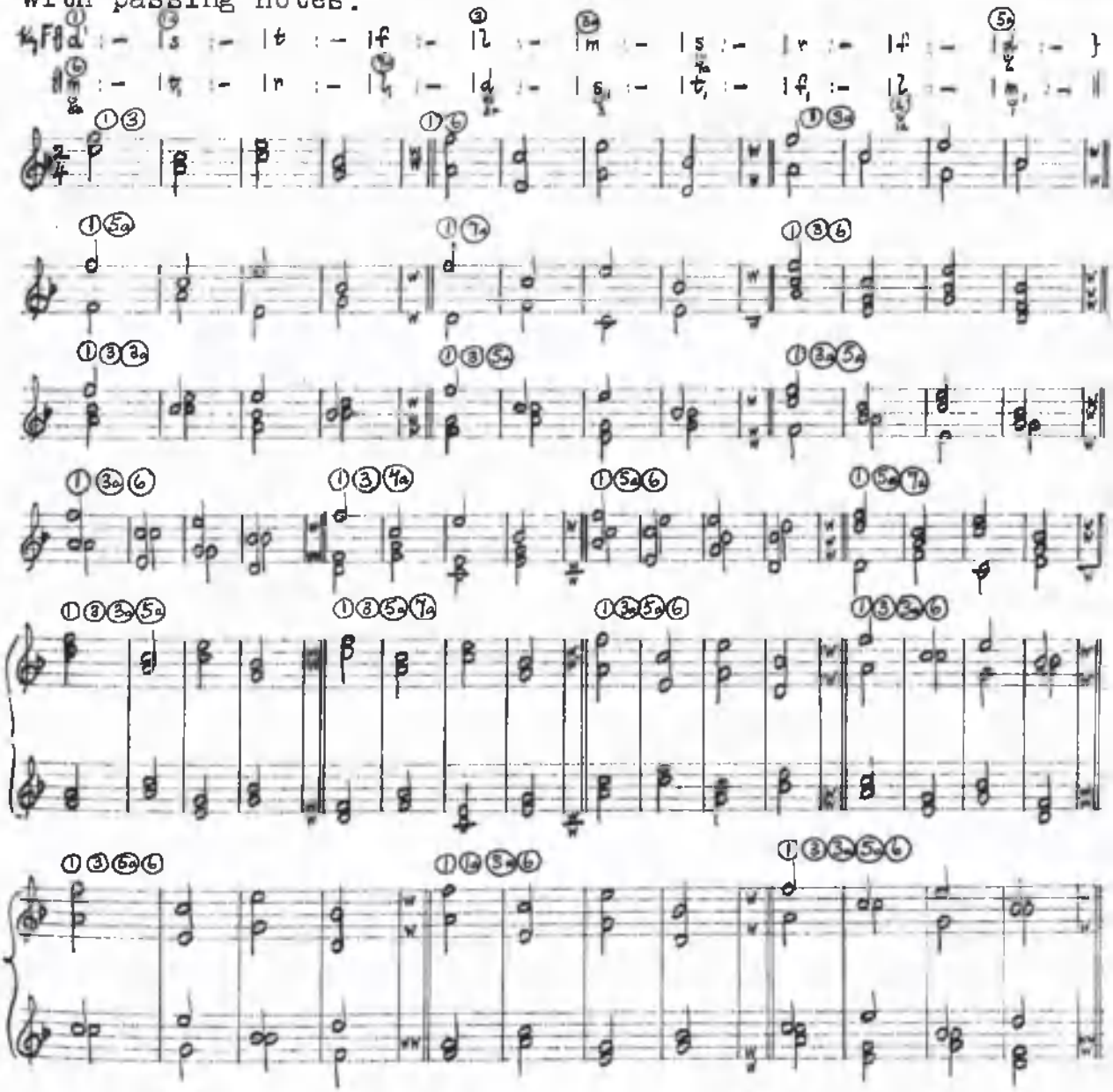
All the canons are based on the same canonic formula ① ③ ⑥ and there are no breaks in any of the voices.





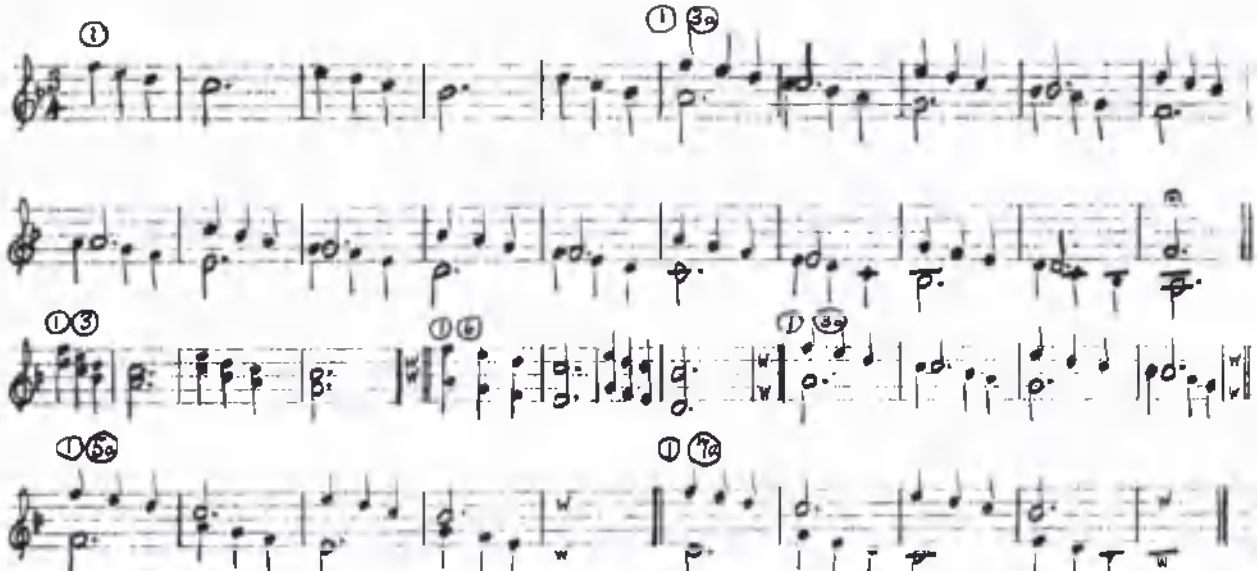
CANONS ON SEQUENCES OF DESCENDING AND ASCENDING FOURTHS AND FIFTHS

We now come to canons based on sequences of descending and ascending fourths. As in previous examples of canonic sequences in descending firsts and seconds, we shall give first a series of canons based on a sequence of bare descending fourths, and then clothe this skeleton framework with passing notes.



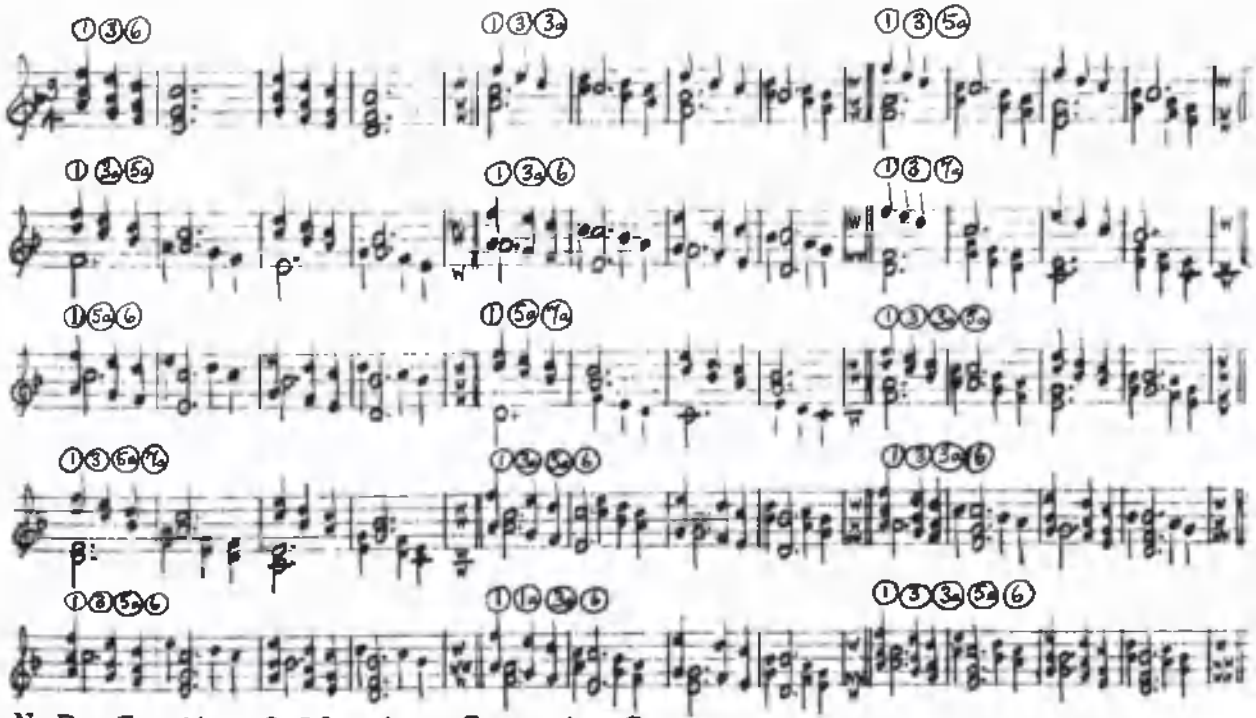
The Previous Canonic Sequence with passing notes in descent

Equal Voices, Two-Part



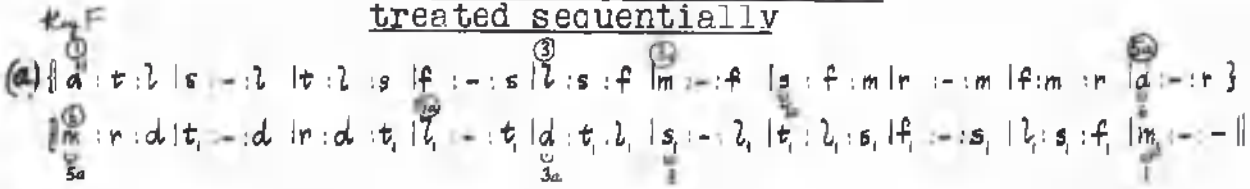
Canons for Mixed Voices on the above Canonic Sequence may be sung from the same formulae as those given on pages 376 - 378.

Three-Part and Four-Part

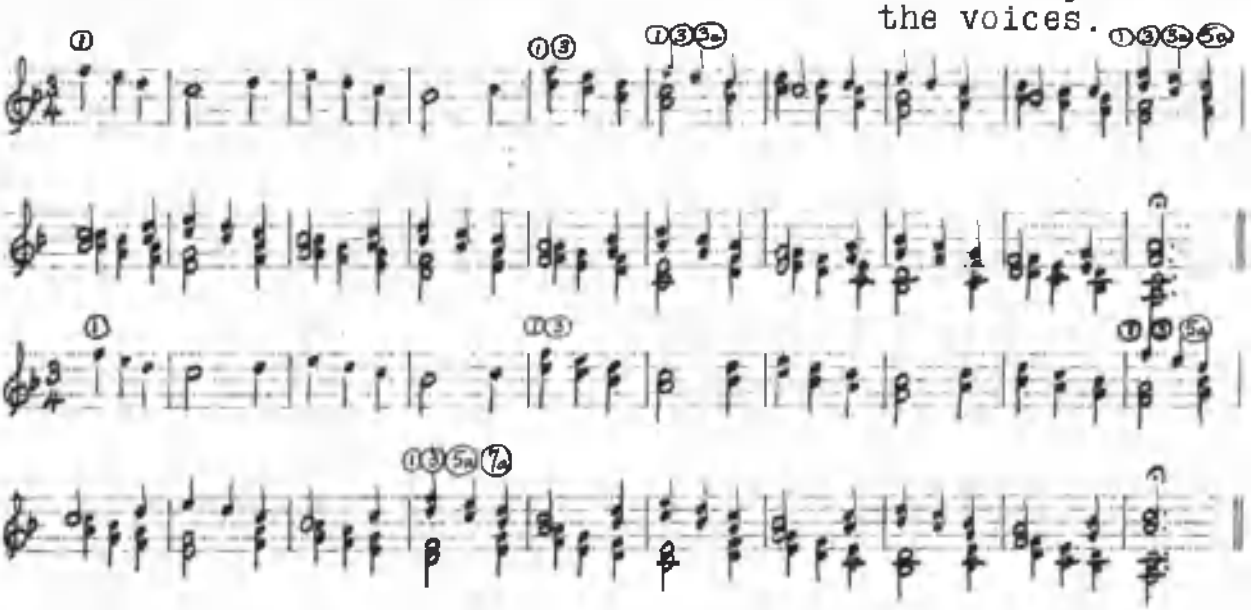


N.B. In the following Canonic Sequences one passing note has been added to the above with striking results on the contrapuntal texture.

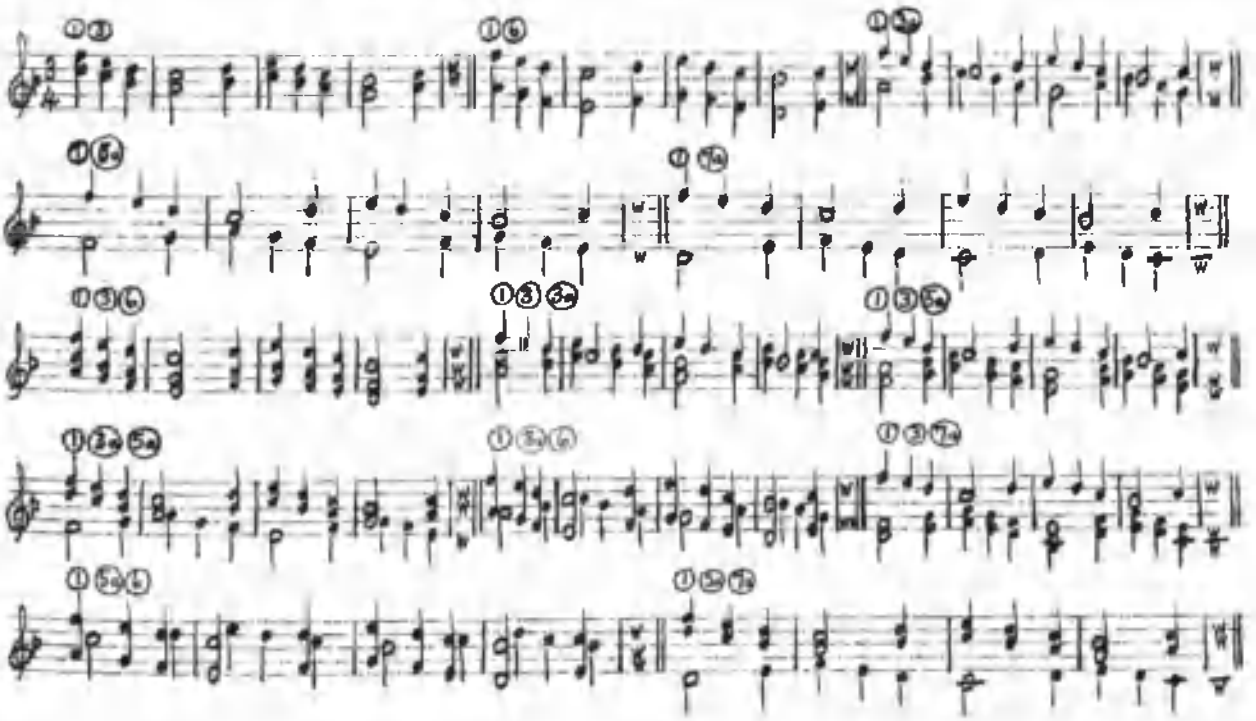
Canons on a Motif from "Parsifal" treated sequentially



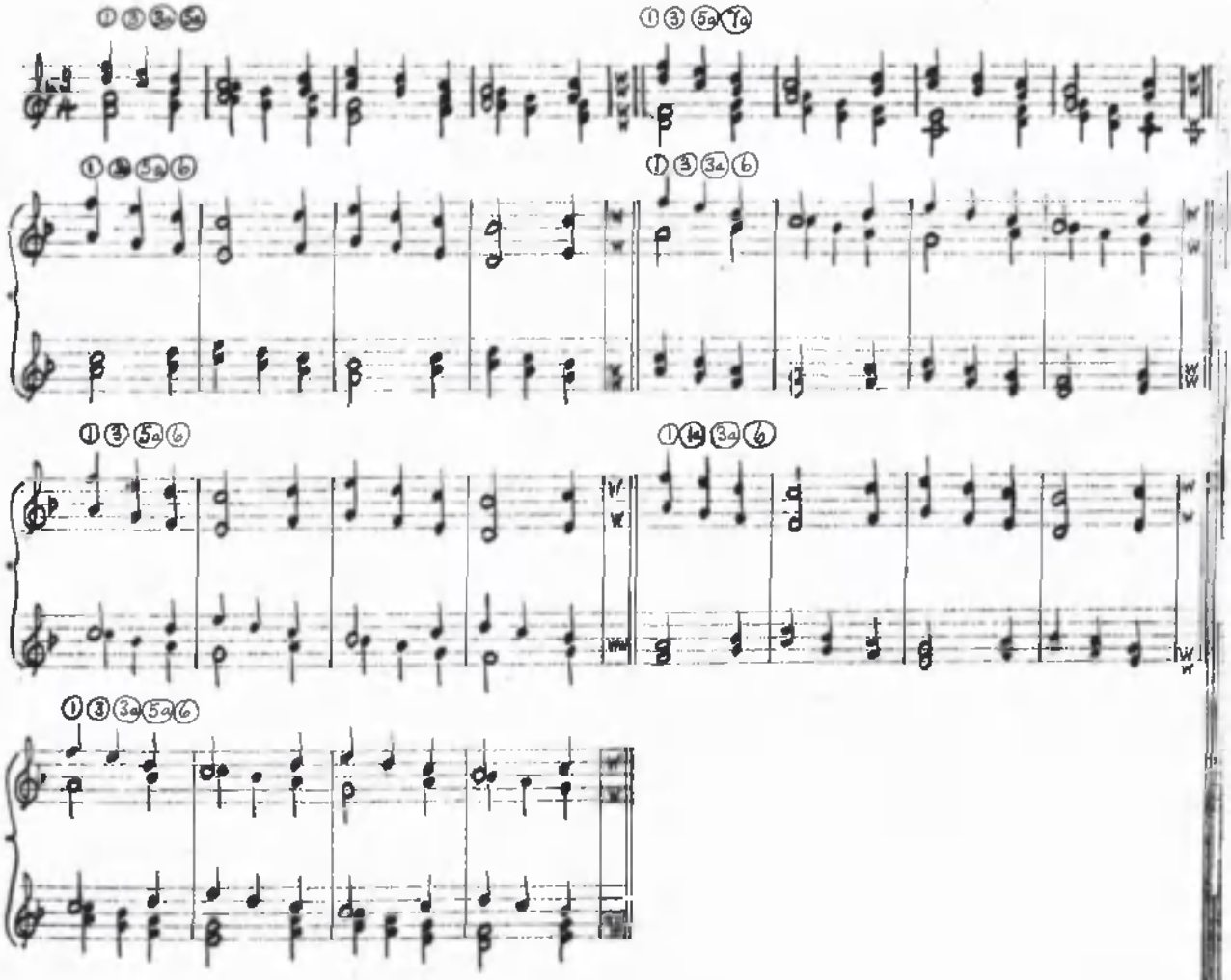
Sequence Formula |23|4-3|. There are no breaks in any of the voices.



Two-Part and Three-Part Canons for Equal Voices



Four-Part and Five-Part Canons for Equal Voices



TWO, THREE AND FOUR-PART MIXED VOICE CANONS ON THE "PARSIFAL" MOTIF

Some of these mixed voice canons finish on the tonic chord at the 15th bar, while others, owing to the disposition of the Treble and Bass Voices, finish on the tonic chord at the 16th bar.

Hence, it has been necessary to group these under two canonic sequence layouts, (b) and (c).

There are 38 mixed voice canons in all,

9 two-part

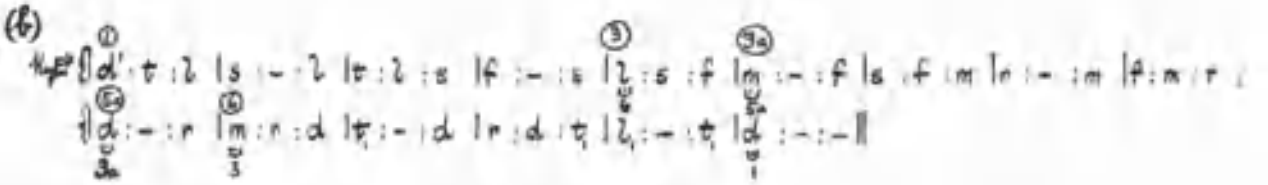
19 three-part

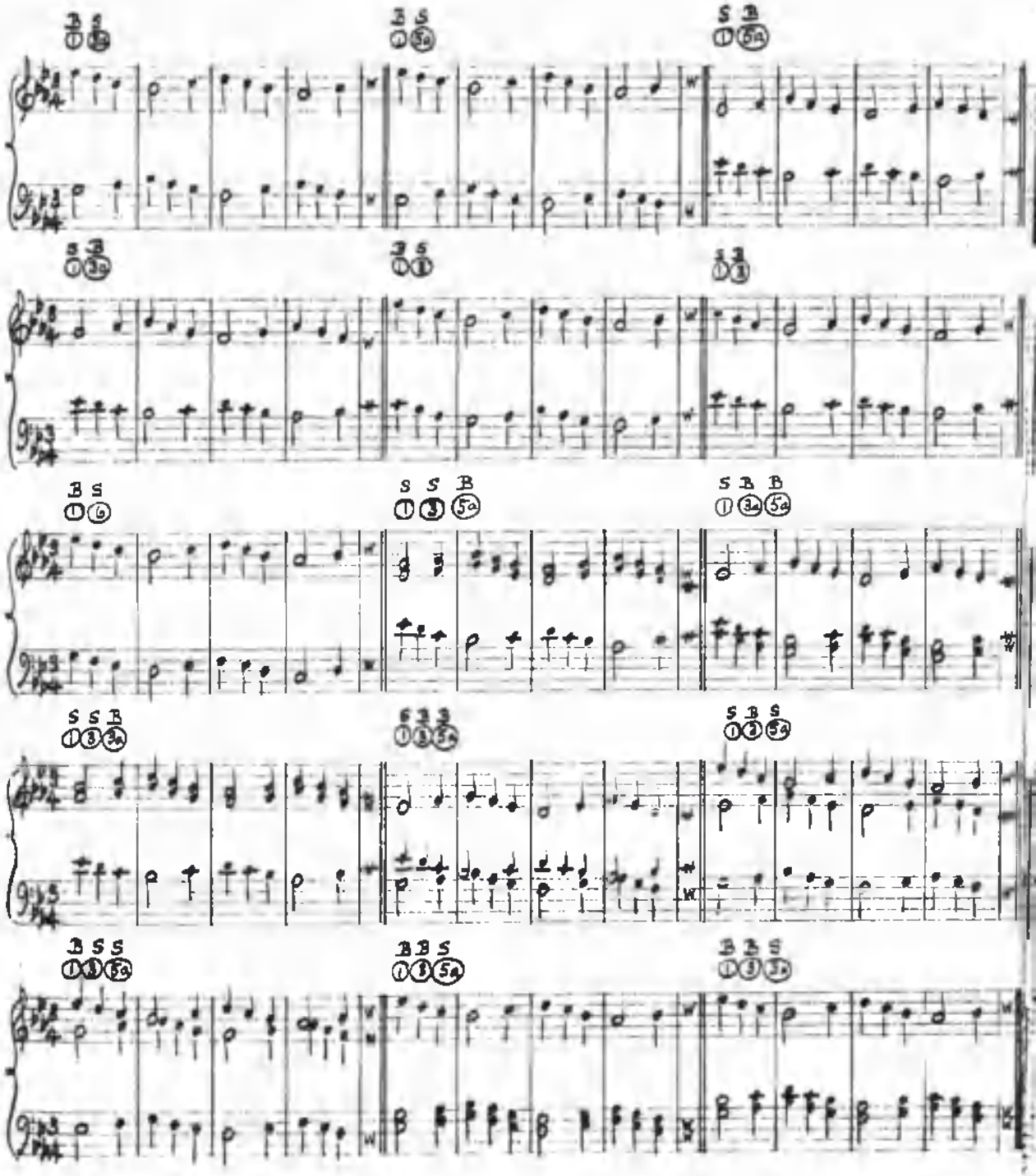
9 four-part

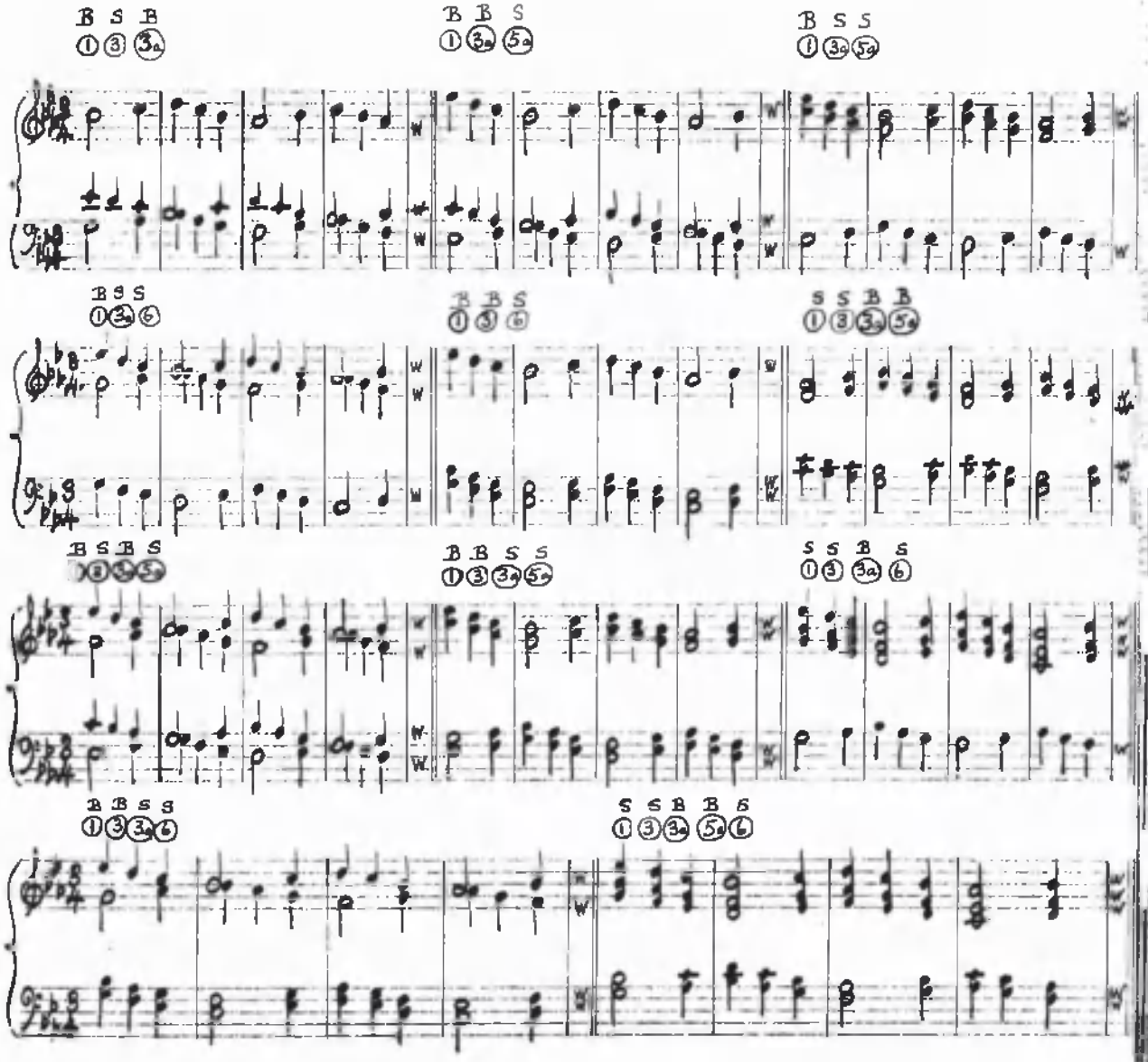
1 five-part

In the (b) layout all the canons containing the entry ⑥ finish at the 15th bar on the first inversion of the submediant chord. It has been decided to leave these as they are rather than extend the canon to the 20th bar, where they would finish on the tonic chord.

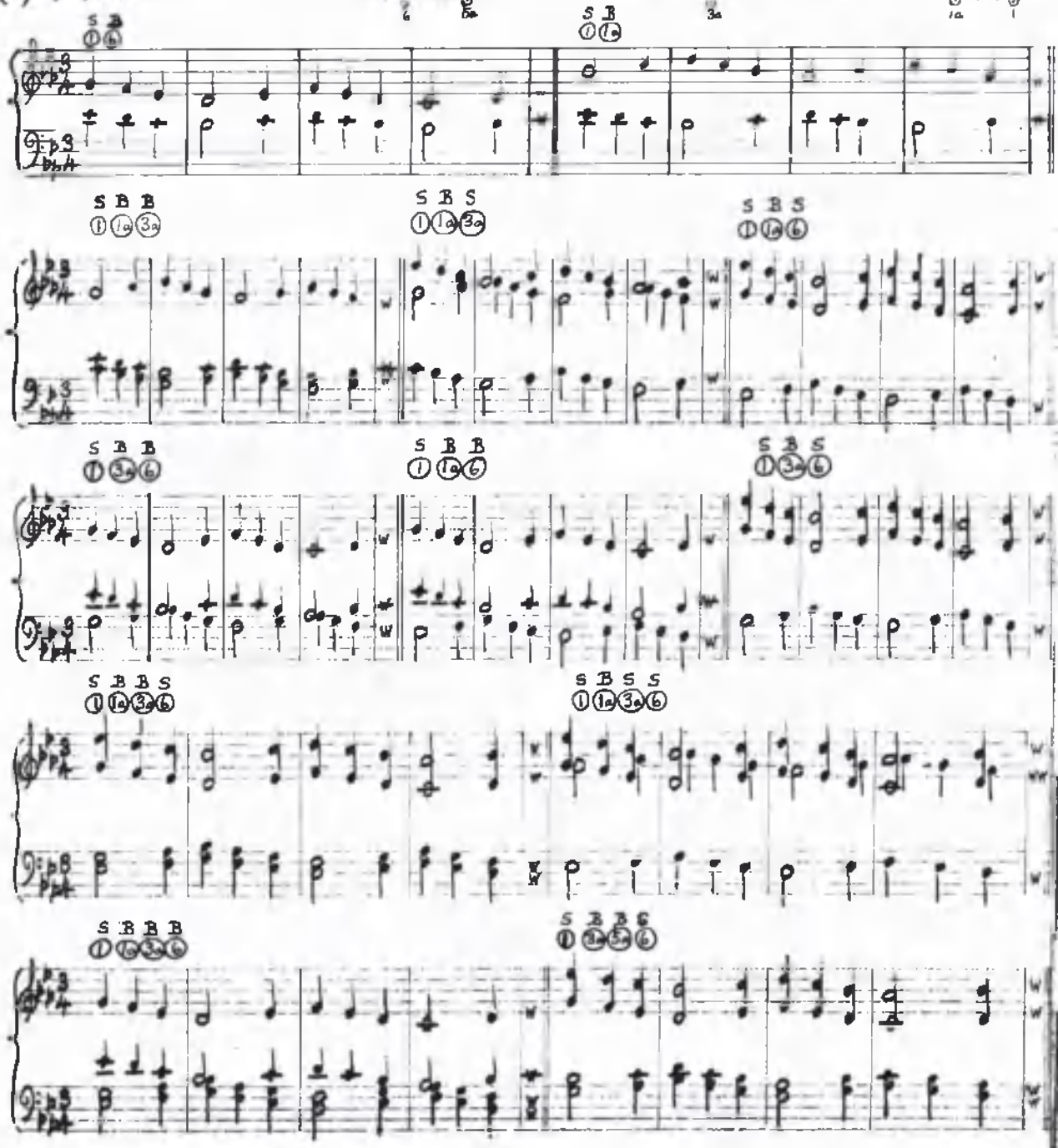
(6)





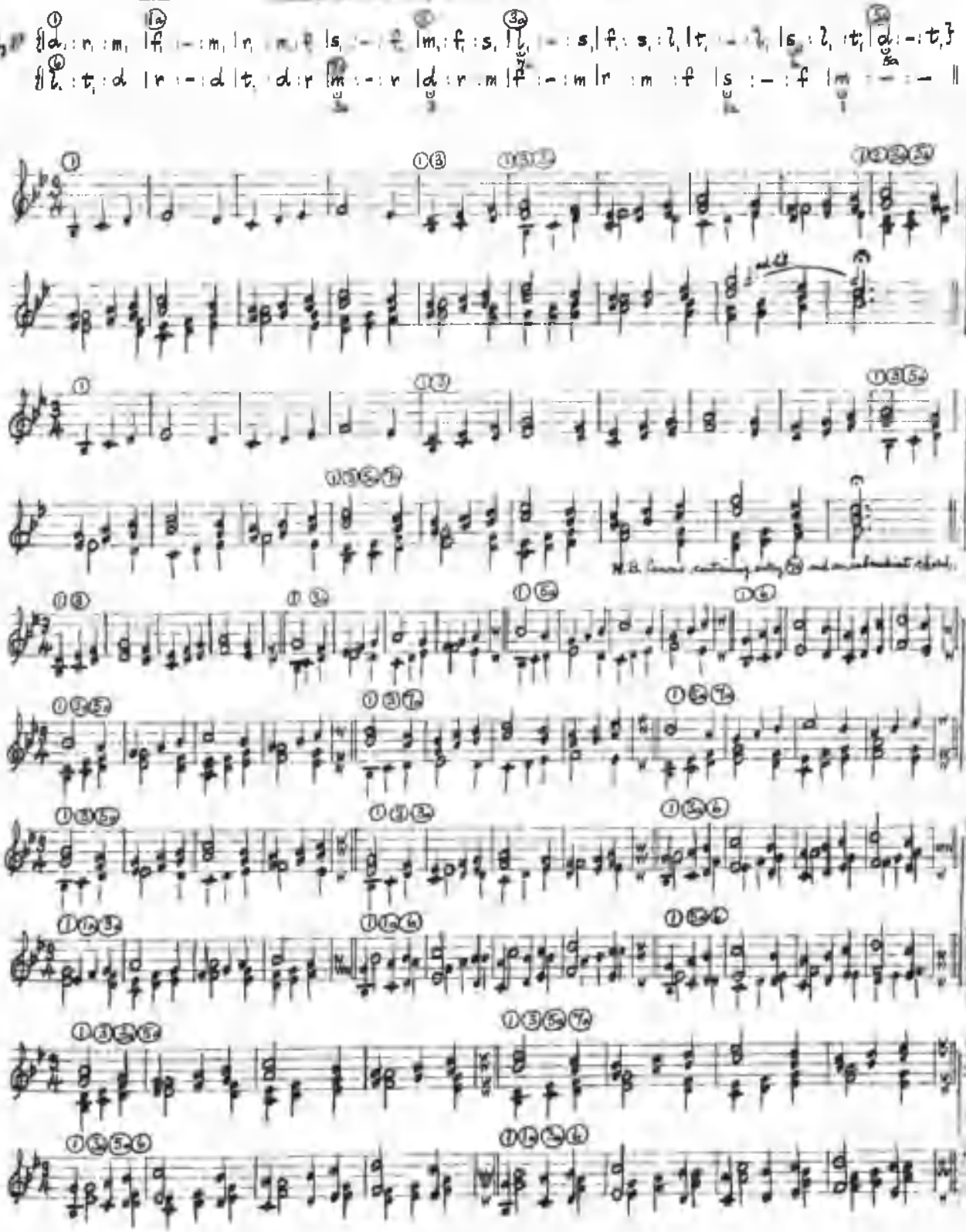


(c)



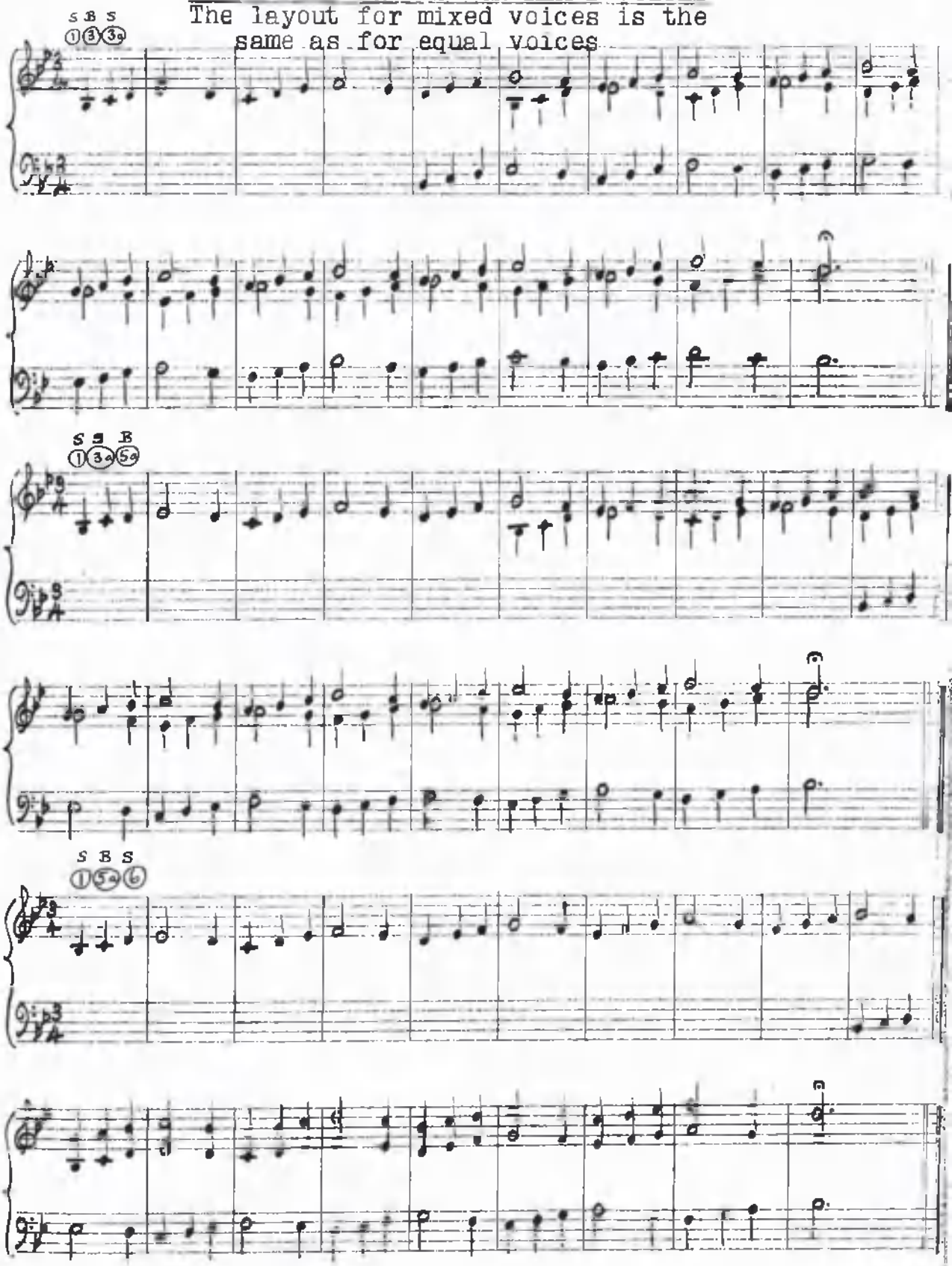
CANONS ON THE "PARSIFAL" MOTIF
INVERTED AND TREATED SEQUENTIALLY

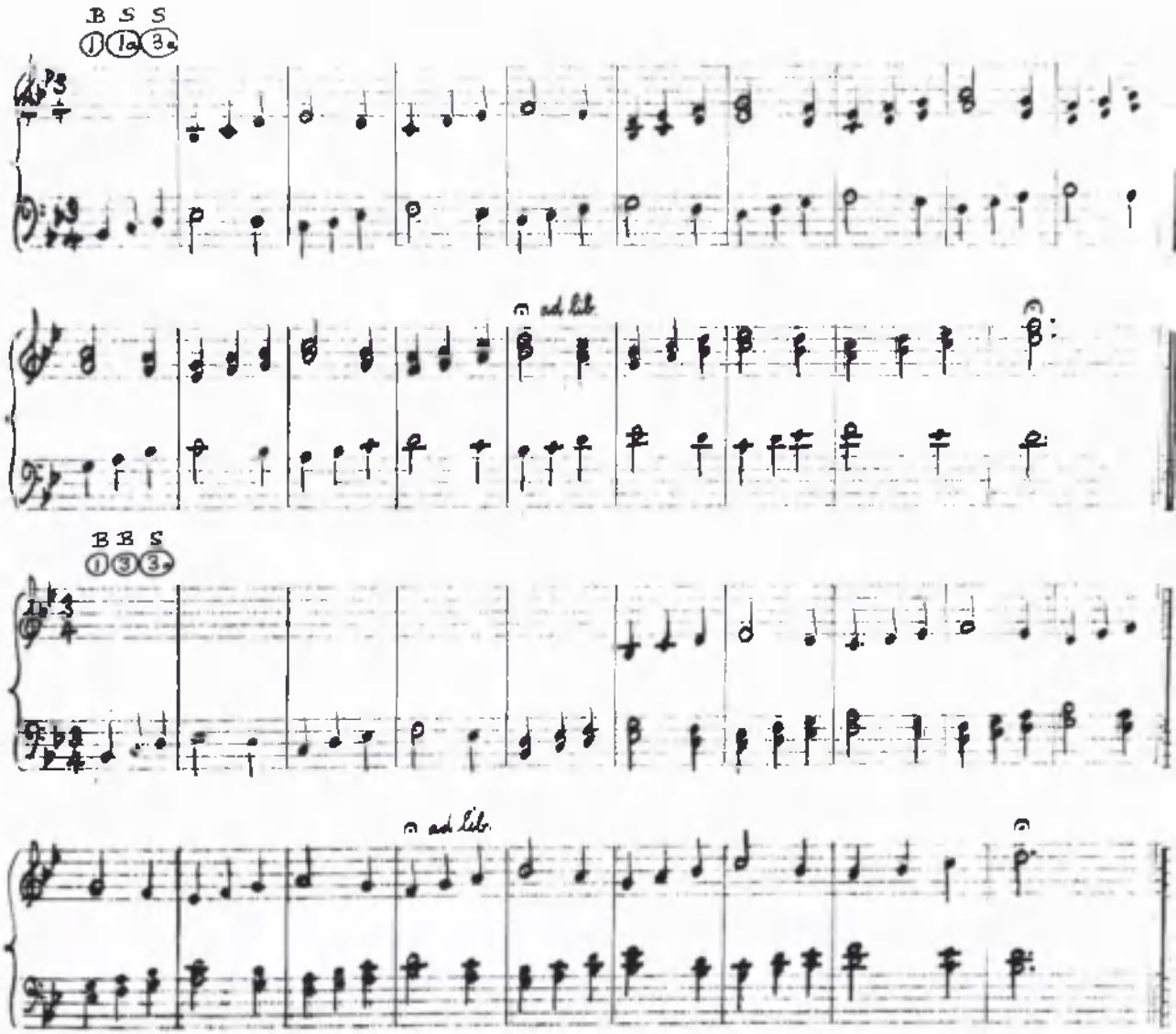
Equal voices - Two, Three & Four Part

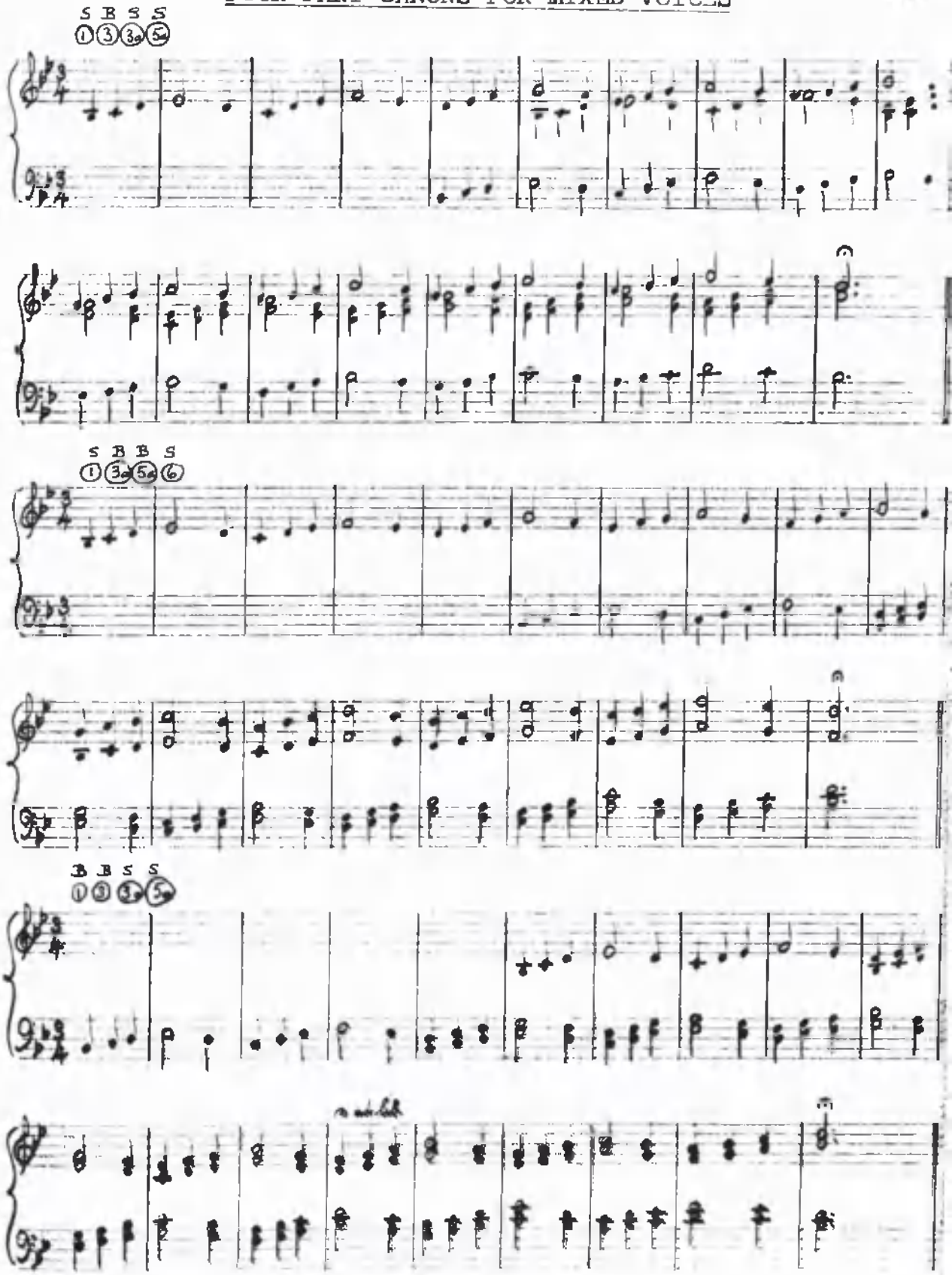


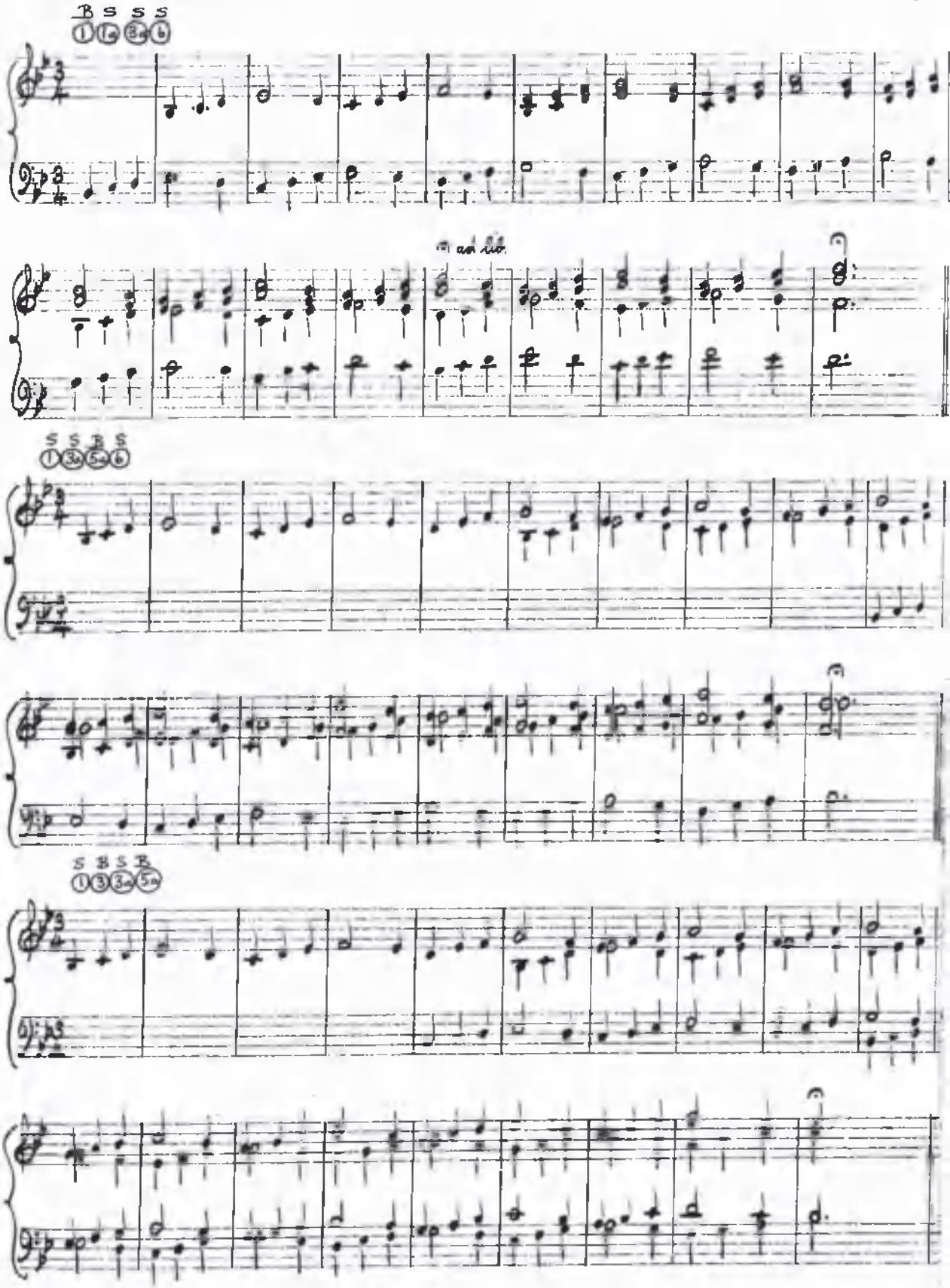
THREE PART CANONS FOR MIXED VOICES

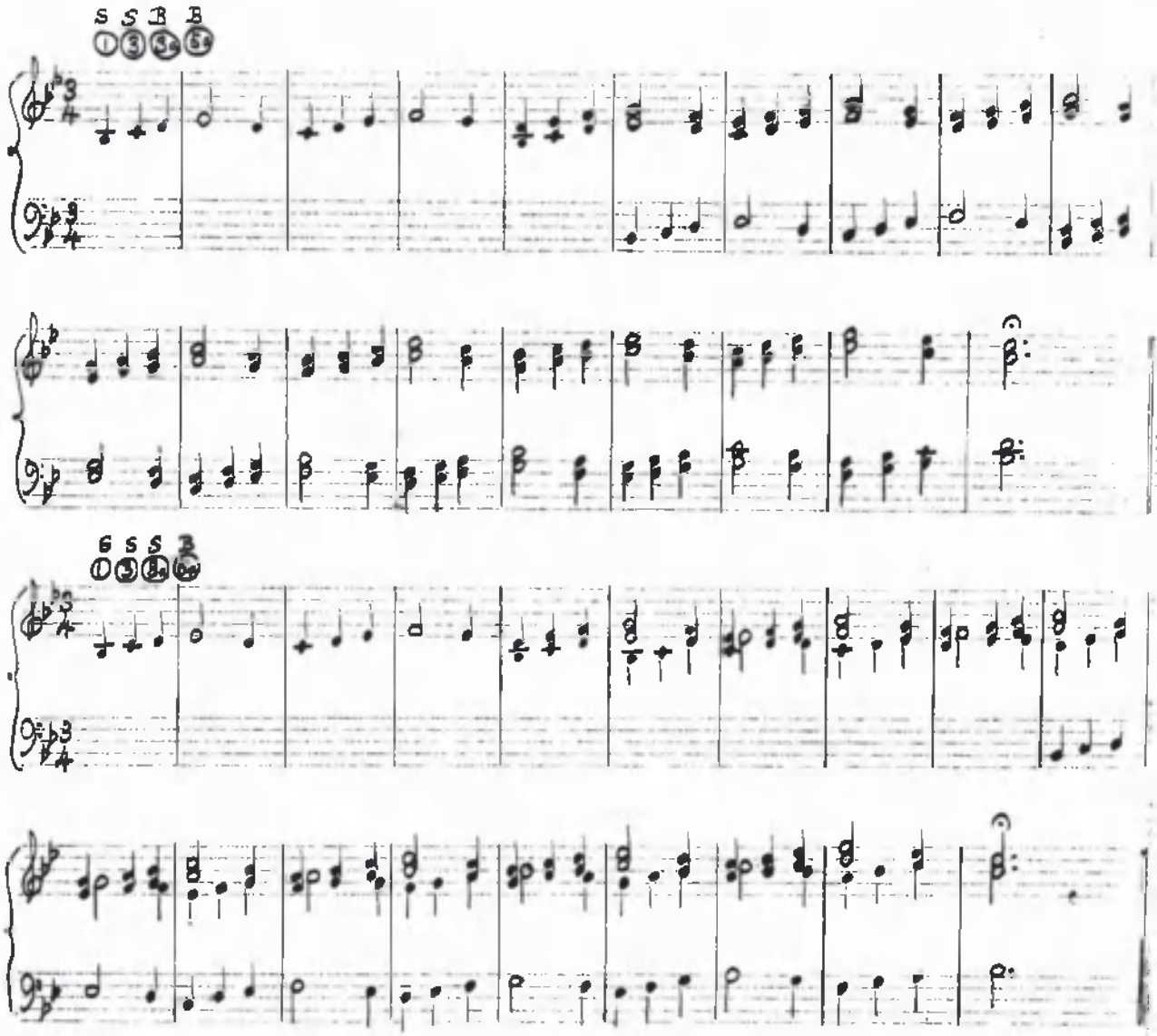
The layout for mixed voices is the same as for equal voices




B S S
1a 3a
ad lib
B B S
1 3 3a
ad lib


S B S S
S B B S
B B S S


B S S S
1 1a 3a 6
ad lib.
S S B S
1 3a 5a 6
S B S B
1 3 3a 5a



These three and four-part canons for mixed voices may all be sung from the Sequence Modulator, R.H.S., to the formula |1 2 3|4 -3| ascending.

Many more three-part canons are possible, as may be seen from the four-part canons.

Two-part canons for mixed voices may also be inferred from the three-part and four-part examples given.

There is no break in any of the canons, and they all finish on the tonic chord. The Teacher may sing or play the Bass parts, and the Tenor part may be omitted except when it begins as Voice ①.

CANONS ON ASCENDING FOURTHS DERIVED FROM THE PREVIOUS EXAMPLE

We shall write out the sol-fa layout of the first canon only. The others would be set out in the same manner.

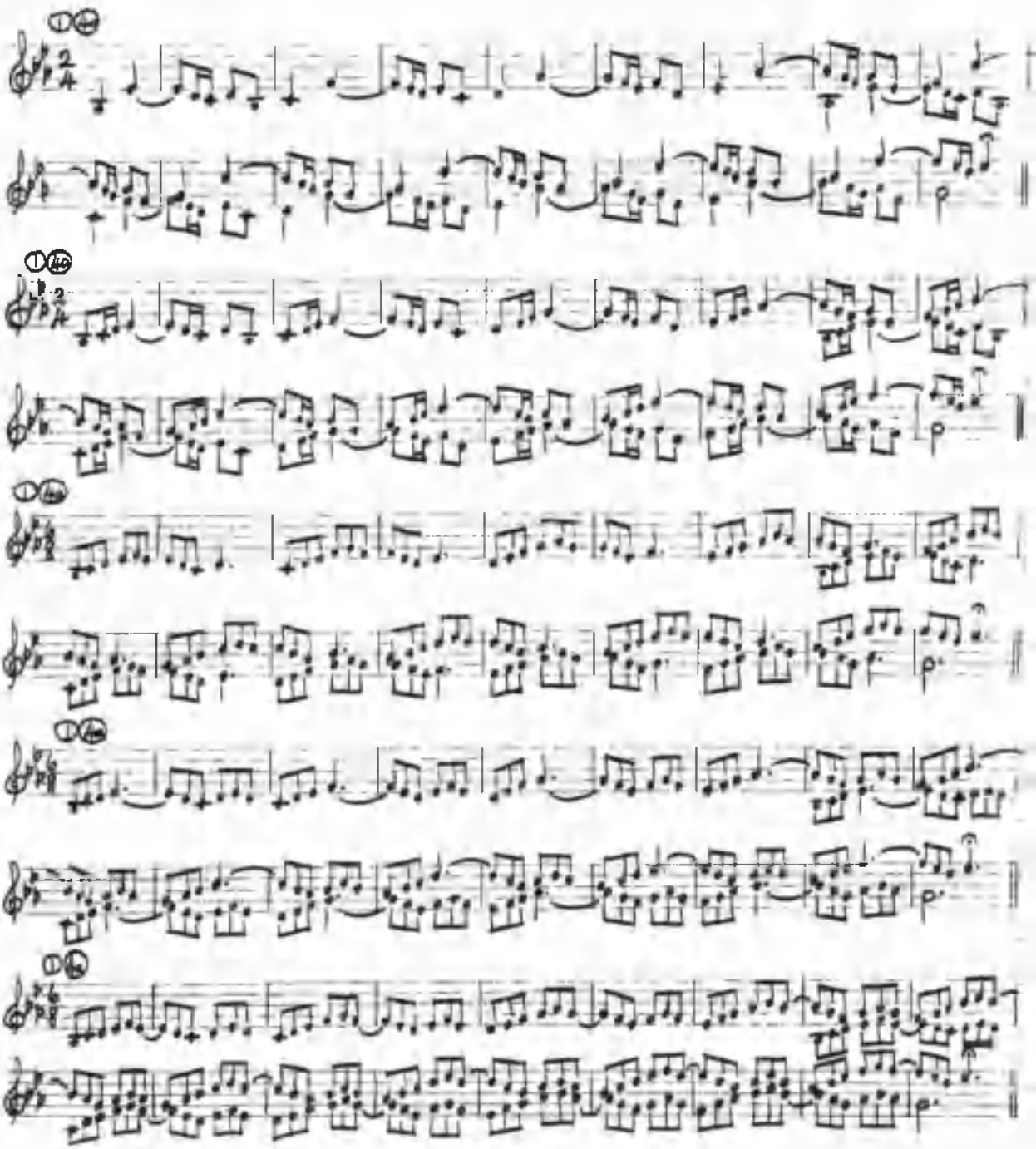
Equal Voices - Two Part

1 4a

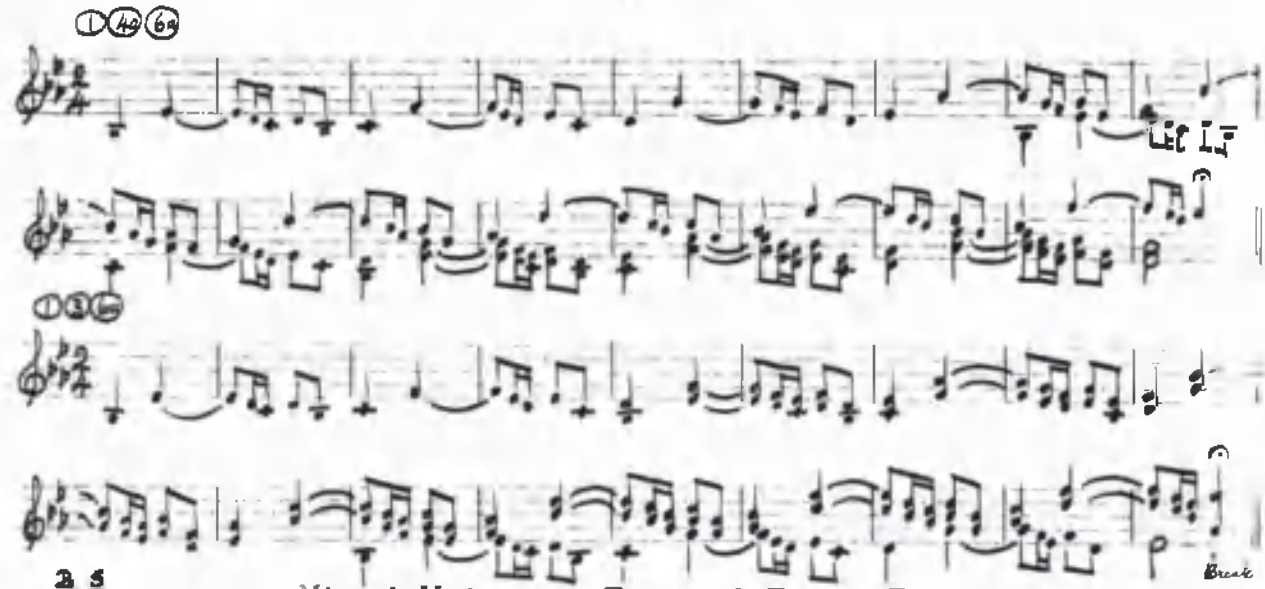
{ s, :d | -.t,l,:t,.s, | l, :r | -.d,t,:d.l, | t, :m | -.r,d:r.t, | d :f | -.m,r:m.d | r :s }

{ -.f,m:f.r | m :l | -.s,f:s.m | f :t | -.l,s:l.f | s :d' | -.t,l:t.s | l :r' | -.d',t:d' ||

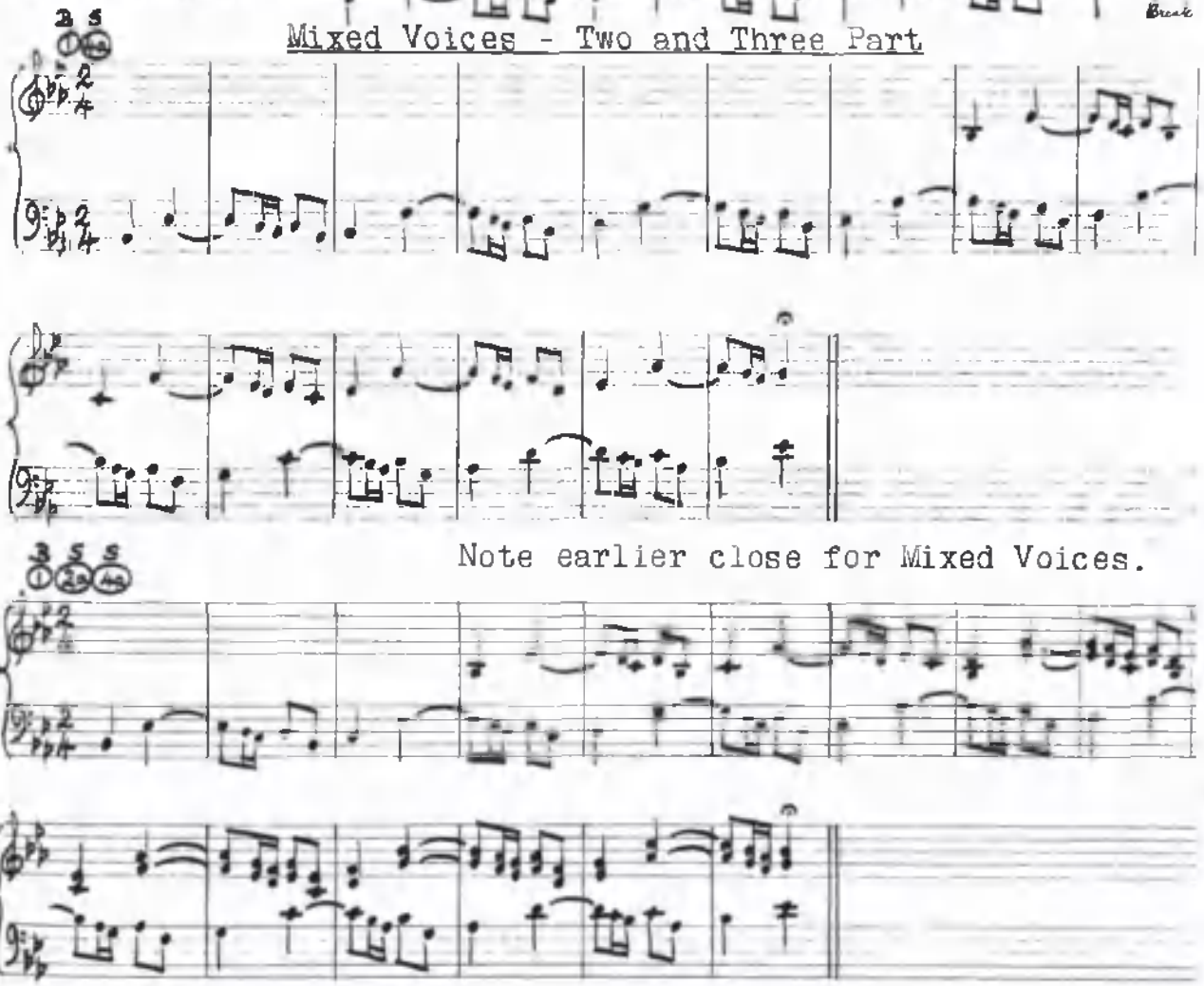
4a 4a



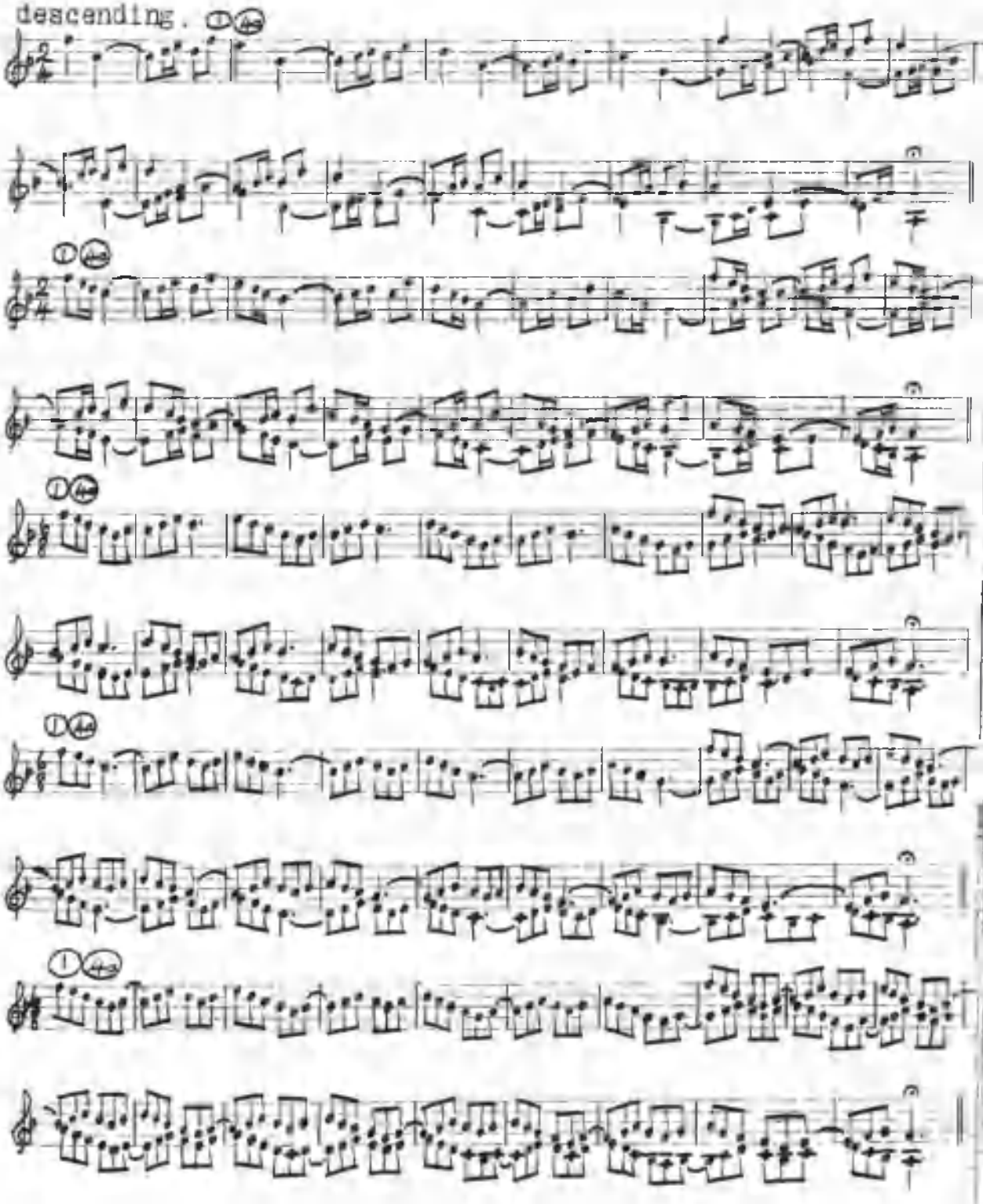
Equal Voices - Three Part



Mixed Voices - Two and Three Part

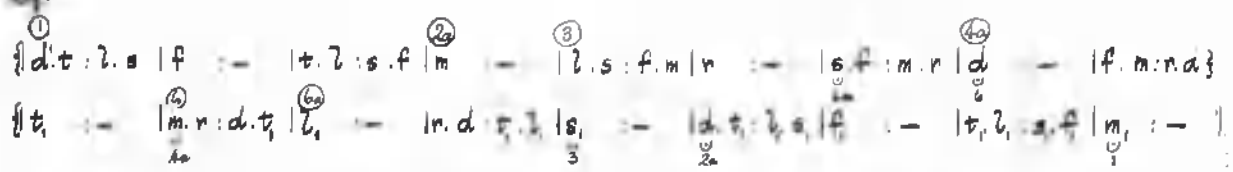


The five Two-part Canons for Equal Voices shown above now appear below in inverted form, i.e. with the sequence descending.

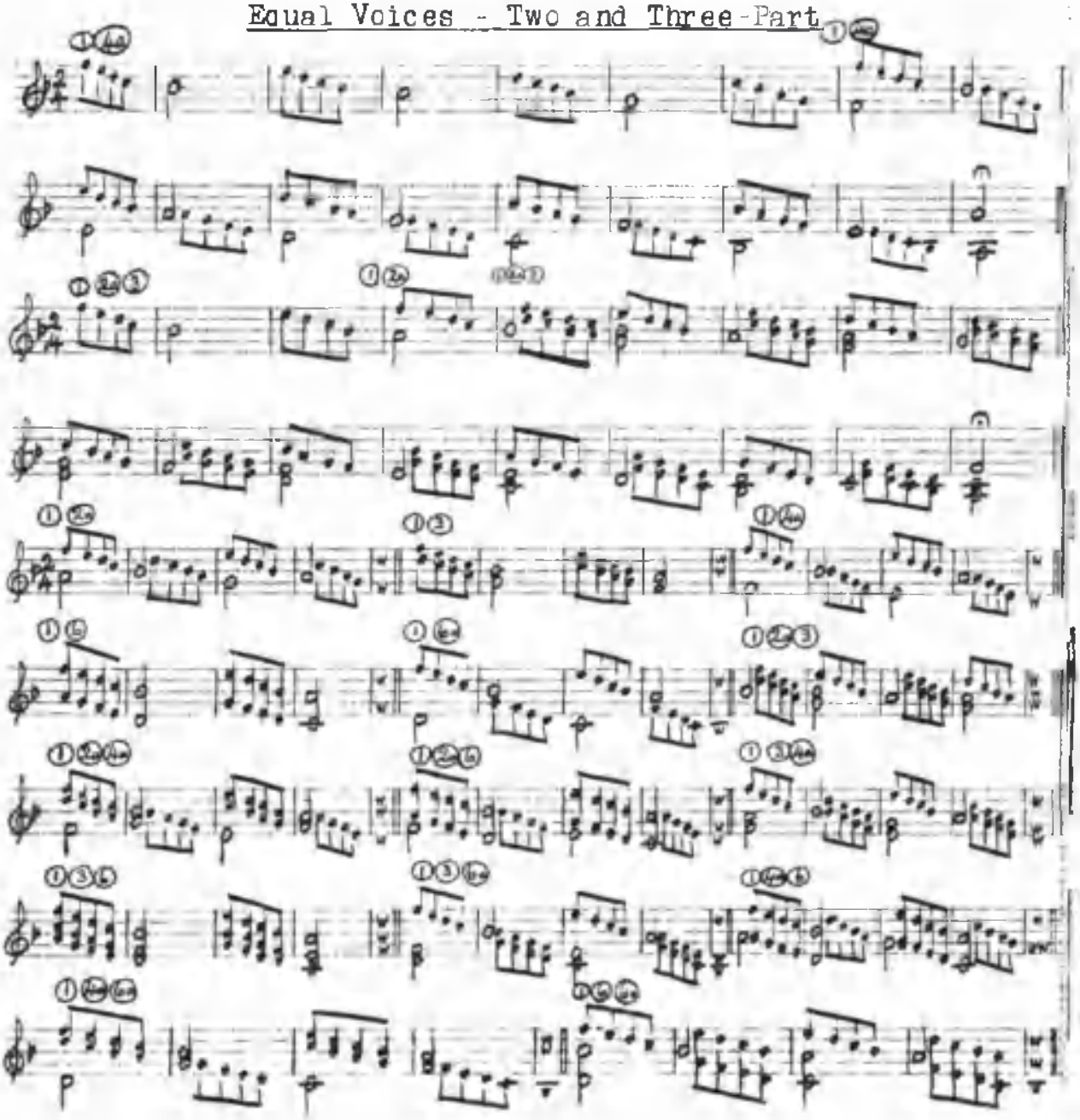


CANONS ON SEQUENCES OF DESCENDING FIFTHS

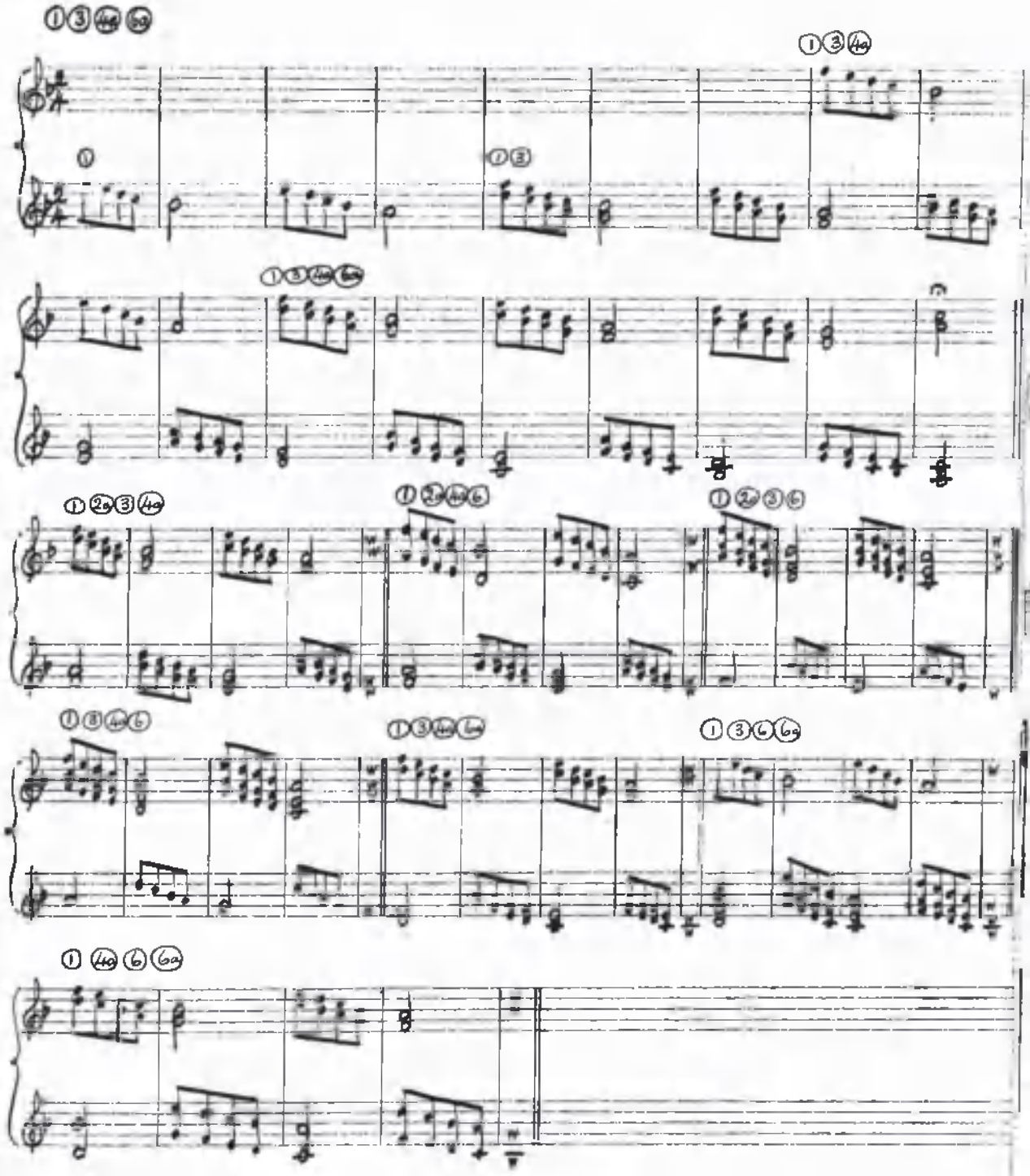
We shall not give examples of canons based on sequences of bare descending fifths. These may be inferred from the following examples. All canons finish on the tonic chord and there are no breaks in any of the voices.



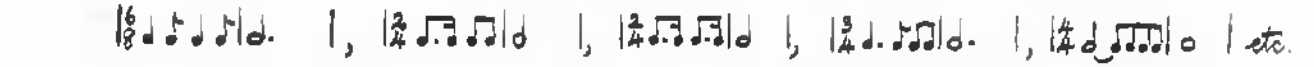
Equal Voices - Two and Three-Part

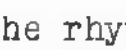


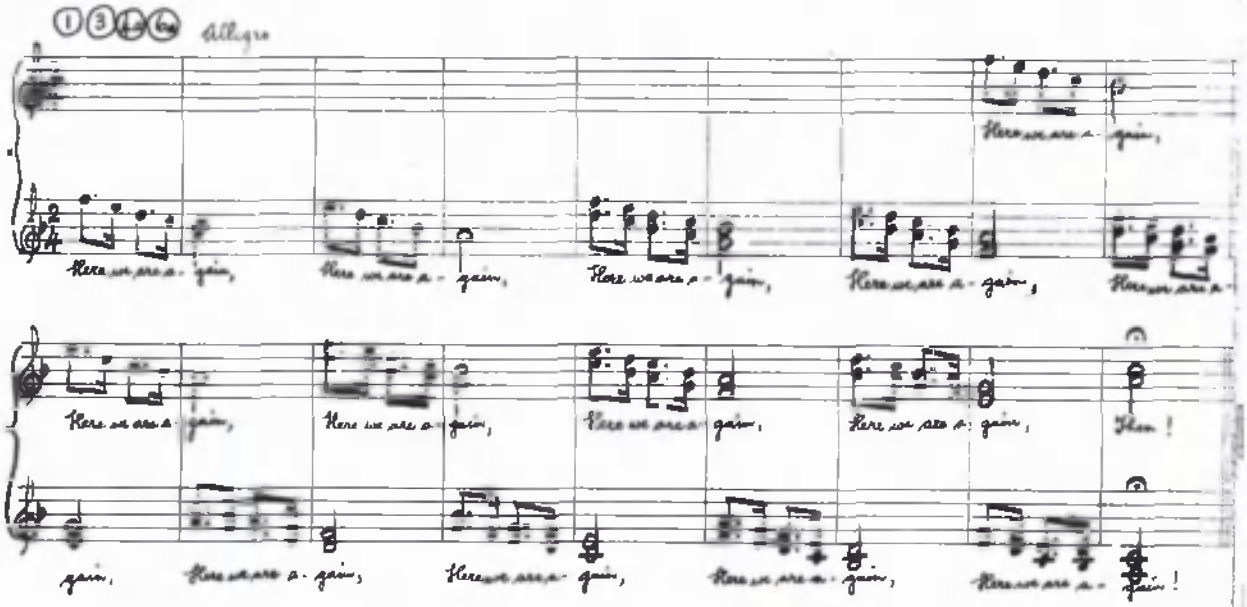
Equal Voices - Four-Part



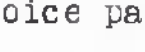
In the above canons the rhythm may be altered thus,

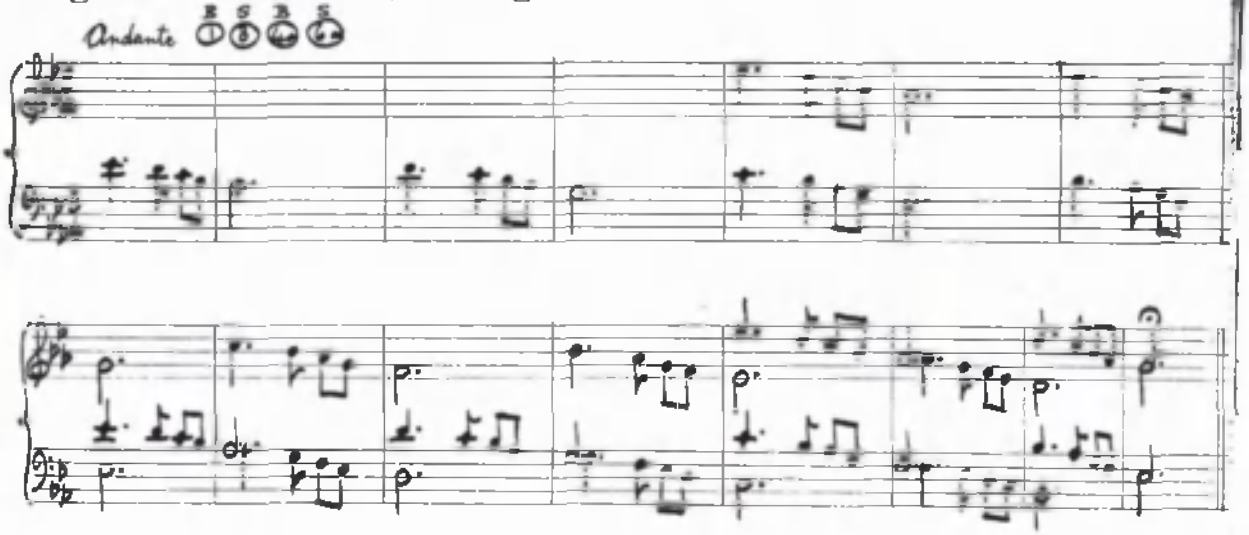


Words may also be sung to these canons. For example, to the rhythm  and the words "Here we are again", this canonic sequence will provide some exhilarating canons.

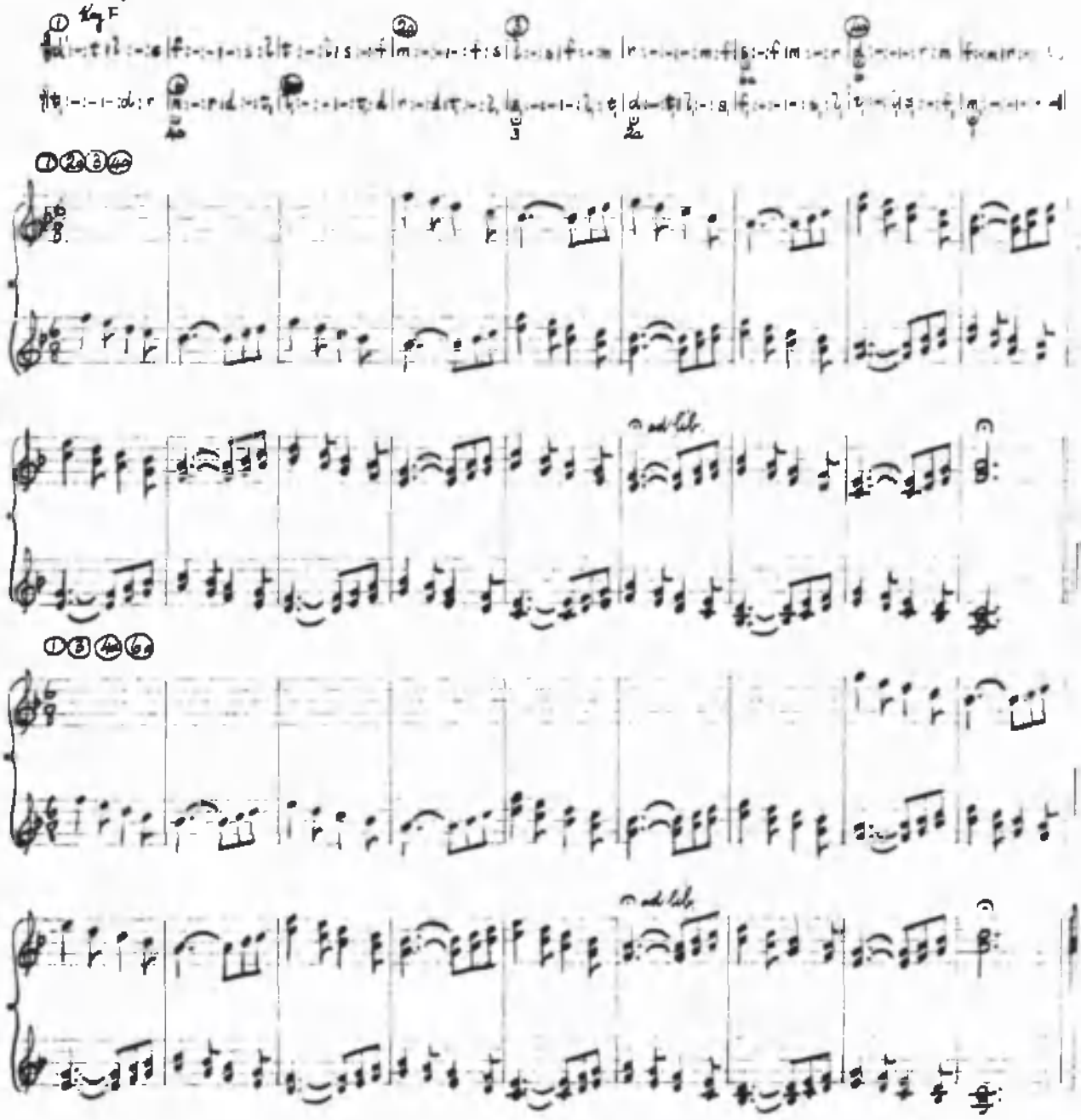


These canons in a shortened form may also be used with mixed voices and arranged for different dispositions of the voice parts.

As an example, we give the canon ① ③ ⑤ ⑧ to the rhythmic figure  ending at the 15th bar.

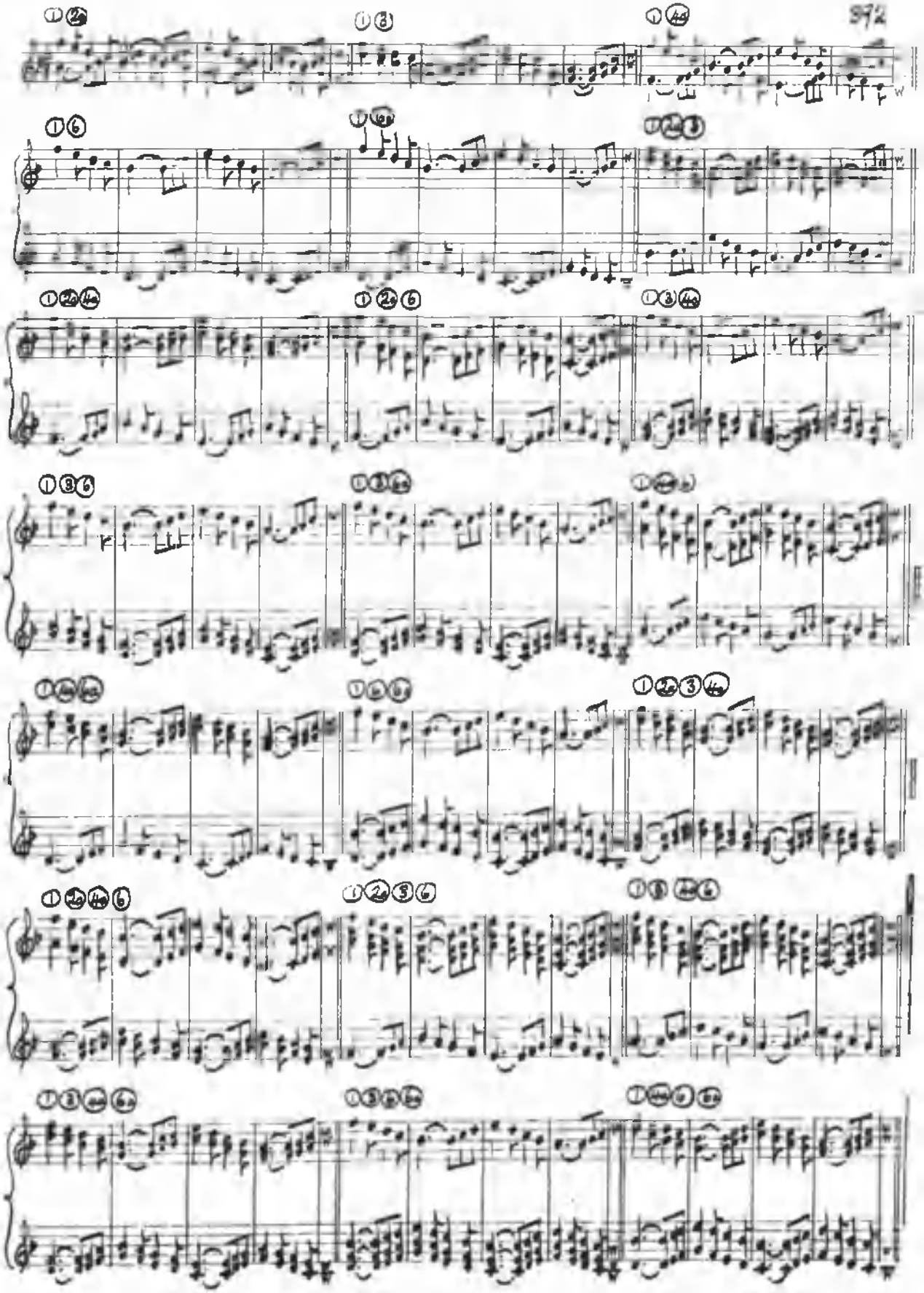


This Canonic Sequence is similar to the previous one, only Compound Time has been substituted and two passing-notes added.



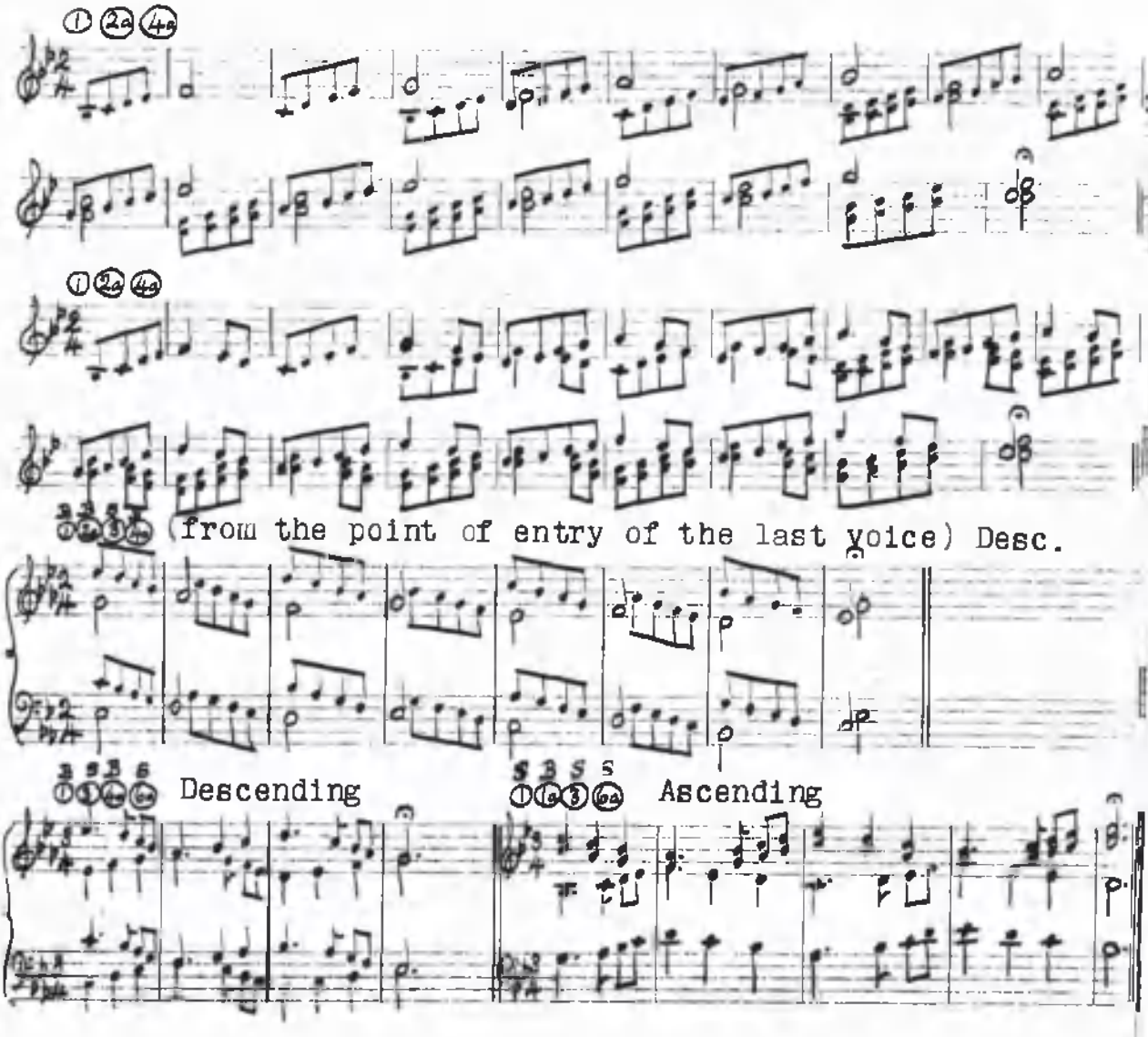
Overleaf we show the different formulae that may be used with equal voices, together with examples from the point of entry of the last voice.

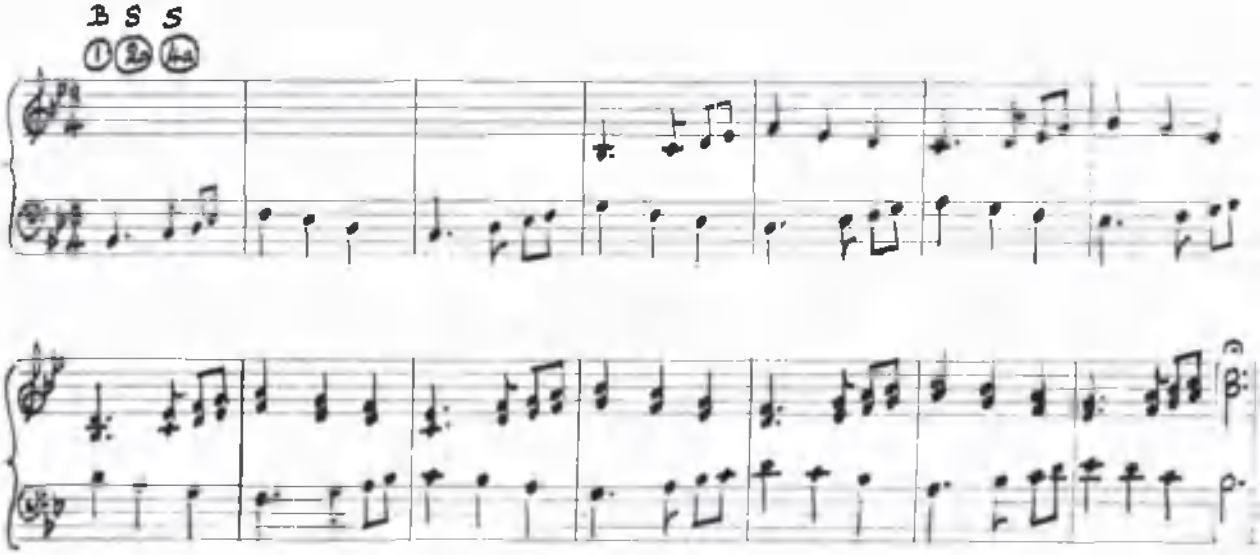
There are no breaks in any of the voice parts.



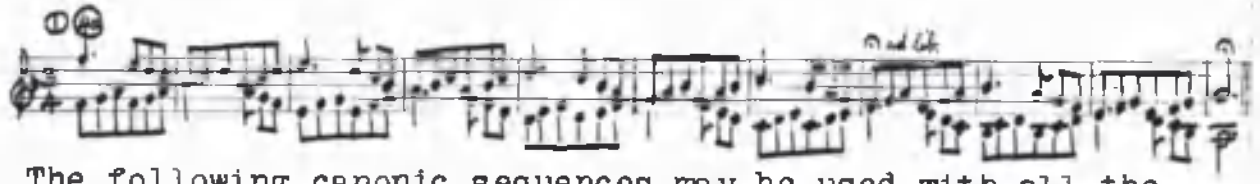
See page 75 for another example of a canon based on a sequence of fifths.

Sequences of 5ths may also appear in ascending form. We have not space here to explore all the possibilities of such canons, but we give a few examples below.

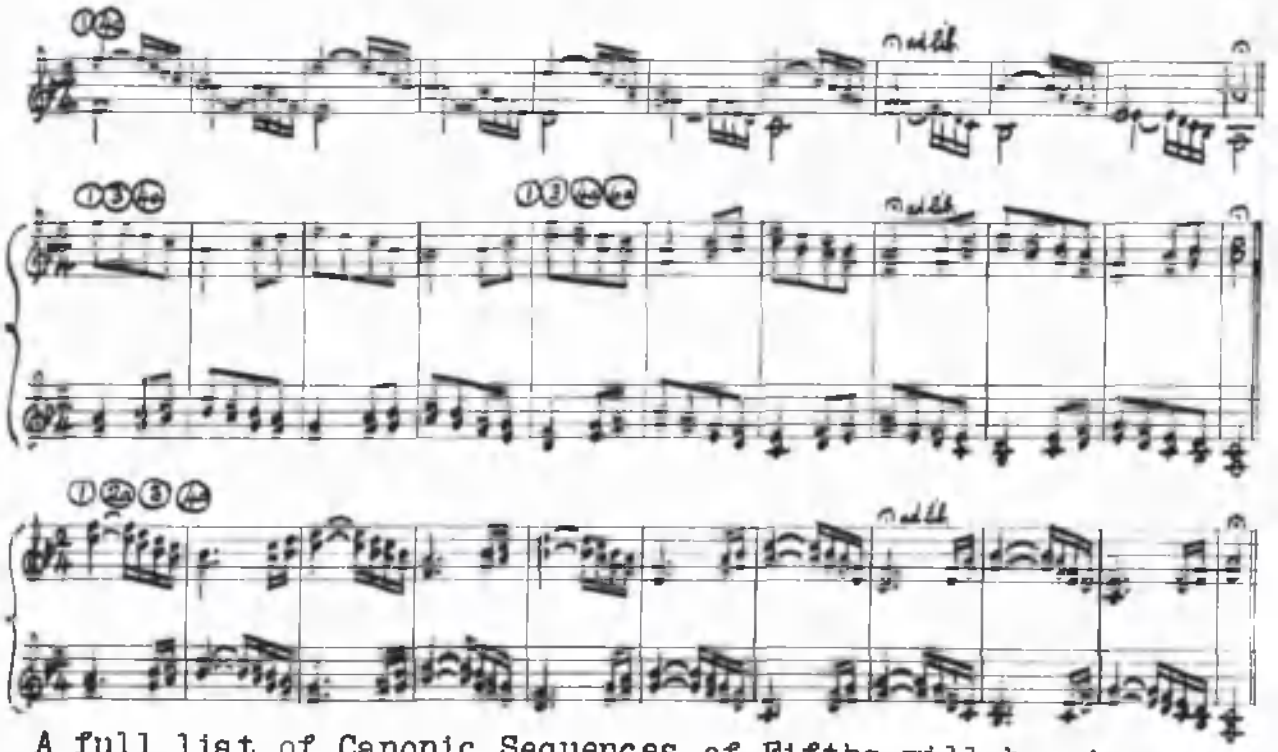




Further rhythmic and melodic variety may be obtained in canonic sequences of Fifths, e.g.,



The following canonic sequences may be used with all the 21 formulae given on page 392.



A full list of Canonic Sequences of Fifths will be given in sol-fa layout in the Pupils' Book.

CHAPTER XX

THE TEACHING OF HARMONY

We do not propose to outline a course in harmony teaching, but it may not be out of place here to put forward some criticism of prevailing methods in the teaching of harmony, and to suggest a more psychological approach to the subject.

Up till quite recently the approach to the subject was usually by way of definitions of intervals, common chords, chordal distributions and inversions, together with rules for melodic progression, lists of forbidden harmonic progressions, and suggestions for the best root progressions. This was followed by four-part exercises to be solved with or without the help of figured basses - these exercises necessitating the use of common chords in root position only, then in first inversion and second inversion, leading up to that terror of the Diploma candidate, the chord of the dominant seventh.

Then came modulation to nearly related keys, unessential discords, auxiliary notes, passing notes, anticipations and suspensions. And so on through the chord of the dominant ninth, the chord of the dominant eleventh, and the chord of the dominant thirteenth. After this came the chromatic scale, chromatic triads, and chromatic chords of the seventh, of the ninth, of the eleventh and of the

thirteenth - with a grand climax on the chord of the augmented sixth in its three forms (Italian, French and German) and Pedal Points. But after all the book usually finished "not with a bang, but a whimper". For, after this grand climax came what the compleat sol-faist must always regard as a grand anti-climax - viz. "Harmony in fewer than four parts"!

The above is a synopsis of Prout's "Harmony: Its Theory and Practice" (Revised Edition, Twentyfifth Impression, Augener Ltd.). But this well-known treatise was preceded and has been followed by other treatises on almost identical lines. In these we have the same logical division of subject-matter and the same synthetic approach that we have condemned in the teaching of other branches of music. Such methods of harmony teaching begin at the wrong end,with definitions, grammar and syntax - they should end with these. The sol-fa choralist knows the dominant seventh and the normal behaviour of its constituent parts long before he learns the names for these or the rules for their treatment.

But the most striking feature of such systems of harmony teaching is undoubtedly the fact that two-part and three-part harmony are not dealt with till fairly advanced four-part harmony has been mastered. The main reason for

this is not that two-part harmony and three-part harmony are not considered harmony proper (S.A.T.B.), although this may be a contributory reason. Rather it is because in this harmonic system two-part and three-part writing demands more musicianship, and cannot be taught to the same extent through the eye or by means of rules and figured basses. Indeed, two-part and three-part writing in order to be effective must encroach on the domains of counterpoint. And as counterpoint is still regarded as a highly esoteric and academic study, to be undertaken only by those who are possessed of an academic turn of mind or are prompted by academic aspirations, counterpoint and harmony are kept strictly apart and are dealt with in separate courses of study and in separate textbooks.

If in the world of actual music-making satisfactory results can be obtained from two-part and three-part writing, there must be something rigid and mechanical about a system in which a student possessed of a moderate amount of skill can obtain satisfactory results only from four-part writing. And, indeed, it is just because four-part harmony can be taught by formal and mechanical methods that it is taught to beginners before two-part and three-part harmony is attempted.

Counterpoint on the other hand has always been regarded as the preserve of the Academies and Universities,

and it has required much pressure from outside authorities to obtain the slight freedom from restrictions in contrapuntal writing, which are advocated under the twelve headings of the "Memorandum on Strict Counterpoint", issued in 1911 by the Council of the Union of Graduates in Music. Even then, the Memorandum states: "We cannot in any way bind our Universities, Boards of Studies, fellow examiners, successors, or any persons whatever, to the views expressed below; these views are offered as our private and unanimous opinions in deference to the assurances we have received that students and teachers fear lest Counterpoint considered good in one quarter may be considered bad in another." (See "Modern Academic Counterpoint", p.341, by C.W.Pearce, London, G. Schirmer.)

Evidently a subject which is approached with fear and trembling even by the signatories to this Memorandum, including the Professors of Music in the Universities of Oxford, Dublin, Durham and London, is not a subject for the beginner in part-writing. The present writer is among those who would uphold the teaching of Strict Counterpoint for the sake of the aural discipline in part-writing which it imposes on the student, but he feels that such a discipline should come <u>after</u> much experience in vocal work and much training in free part-writing of the type shown in

the examples of canonic sequences given in this book. We already have textbooks on "Students' Counterpoint," "Composers' Counterpoint" and "Modern Academic Counterpoint". What is required is a textbook on "Beginners' Counterpoint", in which the student, starting from two-part writing, can learn how to use successions of thirds or sixths, and from that pass on to the use of unessential discords such as auxiliary notes, passing notes, anticipations and suspensions.

But if counterpoint or harmony is to be taught, it should be taught through the voice and the ear. For the art of counterpoint and harmony is in origin a vocal art. The rules for the avoidance of certain melodic and harmonic progressions and for the preparation for and resolution of suspensions and discords are rules based on experience of such progressions in the human voice. The student cannot make these rules his very own until he "feels them on his pulse", that is, until such progressions become part of himself through his voice - not through his fingers or even through his ear only. There is no natural tendency in the fingers to resolve the third and seventh of a dominant seventh on the keyboard according to textbook rules. But there is such a natural tendency in the human voice. And if cultured <u>listeners</u> subscribe mentally to such rules it is because they have first learned to subscribe vocally to such

rules, either with the physical voice or the "mental" voice.

This physiological basis of music is apt to be lost sight of in an age when the instrument more and more dictates to the voice, and when composers compose at the keyboard. Indeed, the change that has come over the conception of music in recent years cannot be illustrated better than by quoting an authority of a generation ago and an authority of today on the question of training in composition.

C.V.Stanford, writing of the danger of improvising without method, says:

> "It aids and abets that most undesirable method of composing, writing at the pianoforte. The instrument should only be used as a test of work done, never (with one exception) as a suggestive medium for the materials of a work. That exception is the technical laying-out of passages intended primarily for the instrument.... No composer of the first rank ever wrote at the pianoforte, or hammered out melodies with his fingers."
>
> ("Musical Composition", p.179 Macmillan & Co., 1911)

On the other hand, Stanford's successor, R.O. Morris, Professor of Harmony, Counterpoint, and Composition at the Royal College of Music, says of the piano that,

> "Its rôle in the extension and development of harmonic resource has been of incalculable importance. Formerly a composer who used the piano in this way was supposed for some obscure reason not to be quite playing the game. This form of snobbery is now a thing of the past; a modern composer's obligation to his piano is no longer a matter for pride or shame, but is simply taken for granted."
>
> ("An Outline of Modern Knowledge", p.1043, London, Victor Gollancz Ltd., 1932)

Whatever may be said of the use of the piano in modern harmony and composition, it still remains true to say that the child cannot begin where the adult of a generation ago left off. A discord approached, held, or resolved on the child's voice will still be what it was to his adult ancestors, and something quite different from a discord approached, held, or resolved on the pianoforte, unless, indeed, that discord is taken up in imagination by the child mind. Before one can reach the stage of the instrumental conception of music with its successions of sevenths and its unresolved discords, one must pass through the stage of the vocal conception of music. As Ziller, in his statement of the Recapitulation Theory says,

> "Every pupil should pass successively through each of the chief epochs of the general mental development of mankind suitable to his stage of development. The material of instruction, therefore, should be drawn from the thought material of that stage of historical development in culture which runs parallel with the present mental stage of the pupil."
> (Quoted in "A Student's History of Education" Graves, New York: The Macmillan Co., 1926)

Professor Tovey in his Lecture on "The Main Stream of Music" puts forward a similar plea for this historical approach to the teaching of part-writing.

> "The only serious defects in our efforts at a renascence of musical education is that they are directed to students of the wrong mental age. In the sixteenth century, academic counterpoint was a practical matter

"for choirboys with unbroken voices. The sceptical undergraduate is definitely too old for it. And we do not solve his difficulties by combining in one process the elementary problems of the inky little schoolboy with the refinements of adult scholarship."
(From the Proceedings of the British Academy, Volume XXIV, London: Humphrey Milford 1938)

The many eminent musicians in England and elsewhere who began their musical career as choirboys are evidence of the truth of this statement.

On looking over old Dictionaries of Music and Grammars of Music, what strikes the reader most, perhaps, is the constant reference to the effect of music on the ear. Thus:

"Concords are such Intervals as are tuneable and agreeable to each other; that is, when two or more different tones sound together, so as to be harmonious and delightful to the ear."

"Discords are such intervals as are untuneable, jarring and disagreeable."
("A Musical Grammar and Dictionary" by William Tans'ur, London, 1746)

"Concord, the relation of two sounds which are always pleasing to the ear, whether applied in succession or in consonance."

"Discord, the relation of two sounds which are of themselves always disagreeable, whether applied in succession or consonance .... Discords are always brought off so as to render them delightful; for simply of themselves they are harsh and displeasing to the ear."
("Dictionary of Music" by John Hoyle, London, 1770)

"Concordantia est sonorum diversorum mixtura dulciter auribus conveniens."

(A concord is a combination of two or more sounds that strikes the ear agreeably.)

"Discordantia est diversorum sonorum mixtura naturaliter aures offendens."

(A discord is a combination of two or more sounds naturally offensive to the ear.)

"Armonia est amoenitas quaedam ex convenienti sono causata."

(Harmony is a certain sweetness caused by the coming together of musical sounds.)

("Terminorum Musicae Diffinitorium" by Johannes Tinctor c.1474)

Tinctor's definitions of perfect and imperfect concords are also interesting in that they are defined in terms of function, not in terms of notation or of acoustics. Thus:

"Concordantia Perfecta est quae continue pluries ascendendo vel descendendo fieri non potest."

(A perfect concord is one that can not be used consecutively either ascending or descending.)

"Concordantia Imperfecta est quae continue pluries ascendendo vel descendendo fieri potest."

(An imperfect concord is one that can be used several times in succession either ascending or descending.)

From the point of view of harmony teaching, surely this is all that a student need know.

In the evolution of counterpoint and harmony the early practitioners were guided at each stage by the voice and the ear, and in the teaching of counterpoint and harmony the pupil of today should be guided at each stage

by the voice and the ear.

So, perhaps what is required for beginners in part-writing is not so much a textbook in which rules and regulations are laid down, as a practical book of Materia Musica in which these rules and regulations are displayed through polyphonic music of a simple type, and from which these rules and regulations may be deduced through the vocal performance of the music by the pupils.

Moreover, following Professor Tovey's advice, we must see that pupils of the right mental age, i.e. not "sceptical undergraduates" but young children with unbroken voices, are able to profit from this part-singing, which therefore must not make too great demands on sight-reading ability.

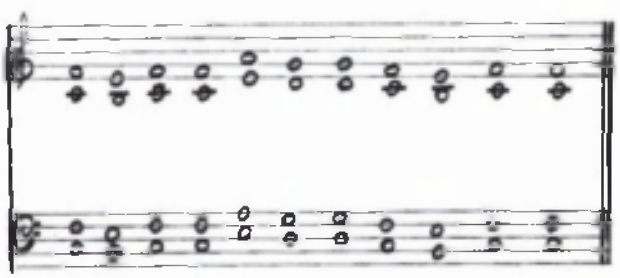
If, as has been suggested in this book, canonic sequences are used for oral practice in part-singing to the sol-fa syllables and for notational practice in part-writing to the staff symbols, then we would have pupils who could benefit from these "products of analysis", or laws for harmonic and contrapuntal progressions, which are to be found in all textbooks of counterpoint and harmony. For these laws would then have reference to something within the pupils' own experience, to which they have already subscribed with their voices, and to which they will be ready now to subscribe with their intellects. They would no

longer be the "products of analysis" of the theorist who compiled them, but rather the "products of analysis" of the pupils themselves, born of their own experience of part-singing — laws sanctioned from within, not imposed from without.

It is impossible to trace in detail the precise course of the evolution of part-singing from about the year 900 A.D. onwards. But we believe that by means of canonic sequences it is possible to reconstruct roughly and in a form suitable for the classroom the process by which our ancestors evolved the harmonic language.

The first attempts at Organum, which consisted chiefly of the combined singing in parallel motion of superimposed fourths and fifths, did not and could not lead anywhere, for one perfect fourth or fifth is like another perfect fourth or fifth:

(From "The Oxford Companion to Music," p. 400)



But with the discovery of the imperfect concords, thirds and sixths ("quae continue pluries ascendendo vel descendendo fieri possunt"), a new world of experience was opened

up to the mediaeval musicians. Thirds and sixths, by virtue of their state of imperfection, i.e. on account of their dual existence as major and minor intervals, allowed of their use in parallel motion, while the alternation of major and minor interval afforded variety of harmonic effect.

On this Tertian System of Harmony, as it has been called, the massive superstructure of vocal polyphonic music has been built.

And on this Tertian System all the canonic sequences in this book have been built.

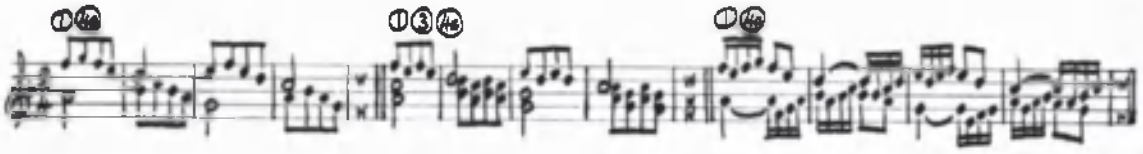
We have shown how the smooth flow of consecutive thirds and sixths



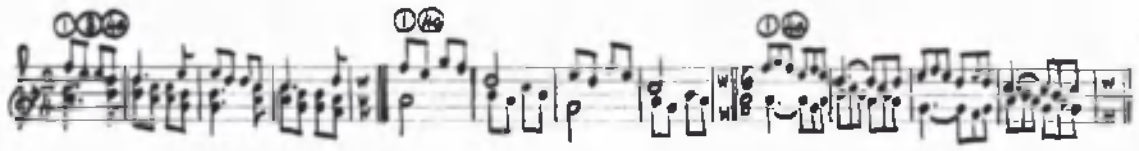
has been broken up, like white light on a prism, by the simple expedient of bringing in a voice at an earlier or later point of entry in the canonic sequence. Thus, to similar motion was added oblique motion, contrary motion and passing notes.



We have shown how auxiliary notes give character to the contrapuntal parts, and by producing friction between the voices heighten the effect of the consonances:



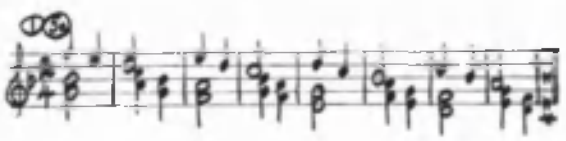
how anticipations, appoggiaturas and mordents help to keep up the movement in one or other of the parts:



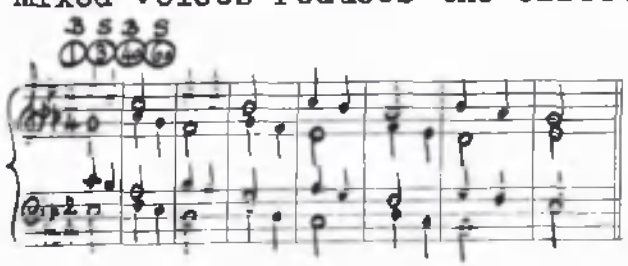
how suspensions with plain or ornamental resolutions add their poignant effect to the whole:



how unprepared discords urge the movement on:



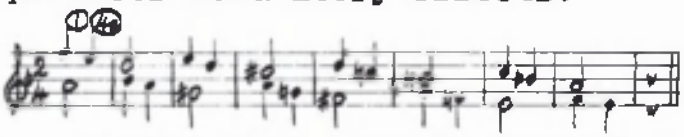
how the wider distribution of the parts made possible by the use of Mixed Voices reduces the effects of dissonances:



how the introduction of chromatic notes as melodic constituents produces new harmonic effects:



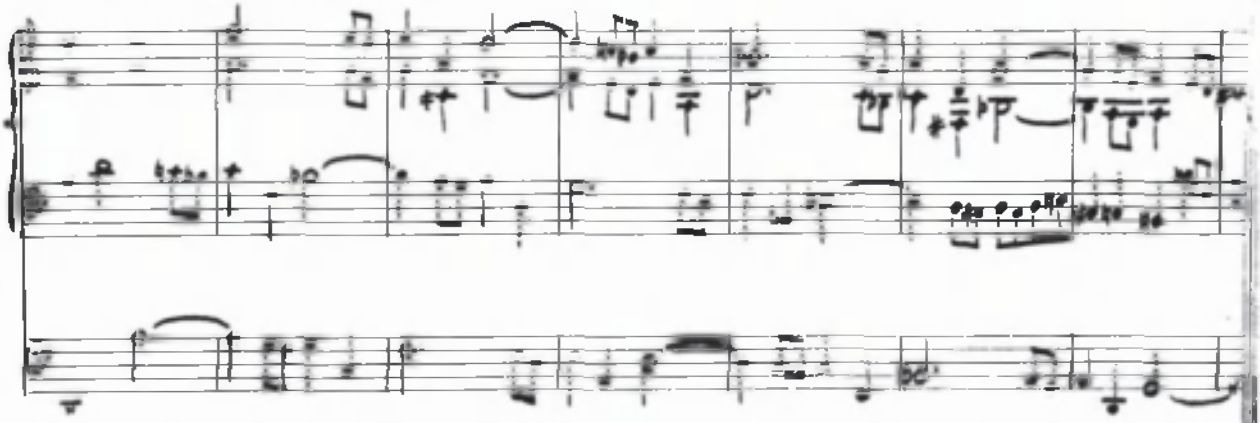
and how the introduction of chromatic notes as harmonic constituents produces modulatory effects:



All this, and much more, may be attempted in the classroom, without the aid of an instrument, by pupils who have not much knowledge of notation. For it should be remembered that while the staff examples of canonic sequences occupy a large proportion of this book, only the sol-fa layout of these canonic sequences need be printed in the Pupils' Book, and classes brought up on the Sequence Modulator Method may sing practically all these canonic sequences from the Modulator itself.

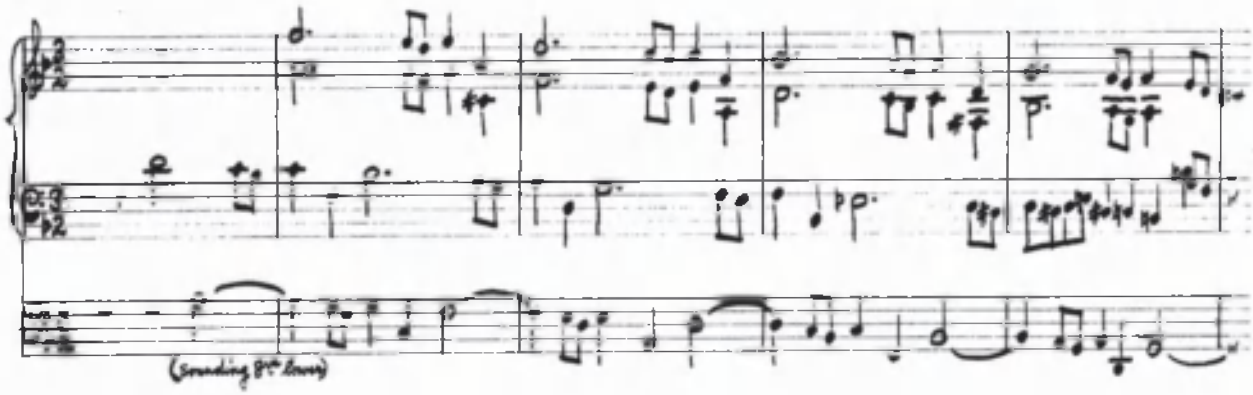
All this part-singing by means of canonic sequences is in the true vocal tradition, and employs chiefly conjunct or stepwise motion. The canonic sequences themselves can be graded to suit the capacity of classes at all stages of progress. While within each canonic sequence there is a wide choice of canons for practice in part-singing, part-writing, or keyboard harmony - all varying in respect of harmonic progression or number and disposition of the voices.

In the works of the great masters many complex harmonic sequences and stretti may be traced back to a canonic sequence, i.e. a plain sequence treated canonically. A famous passage at the close of the great "Dorian Mode" Fugue for Organ, where Bach works up a close stretto from episodal matter derived from the countersubject, has never ceased to be admired.



Probably, too, it has never been properly analysed or reduced to first principles. If this analysis is undertaken it will be found that, omitting the modulations, this stretto can be derived from a plain canonic sequence. The fugue is written in Alla Breve time (¢), but this stretto is really in triple time.

We shall re-write it thus, when the cross rhythms will be plain to the eye. We shall also put the B♭ in the Key Signature, as the fugue is really in D minor, the old masters using a flat less in all minor keys.



It will be noted that the sequential progressions above are based on what we have called the d' l f r type. That is, the sequences descend, not stepwise, but at the interval of a third at each repetition.

This canonic stretto may be worked out by means of a formula from a plain sequence in the same manner as all the canons in this book. However, since the Soprano and Tenor voices descend on the d' l f r series, while the Alto and Bass descend on the t, s, m, d, series, it is necessary to begin the sequence an octave higher in order that the voices may come in "in loco proprio".

The instructions for solving the canon might be given as follows.

Use three staves.
On the bottom stave continue for 17 bars the following sequence:



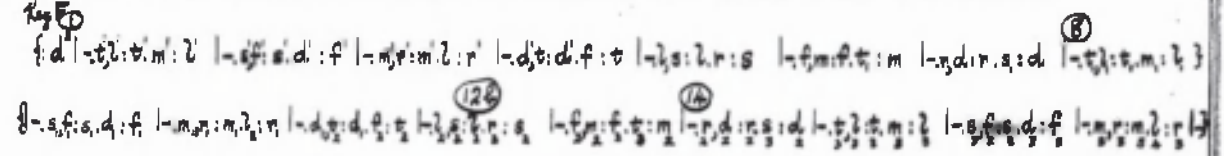
descending a third at each repetition.
At ⓕ or the 8th bar, not counting the incomplete bar, begin the sequence again on the first stave (F in Alt).

At (12&), or the second beat of the 12th bar, begin the sequence on the second stave in the bass clef, and on the third space above the stave.

Finally, at (14), or the 14th bar, begin the sequence from the fifth line of the top stave.

Continue all four parts for four bars.

The sol-fa canonic layout would be shown as follows:



Formula: (1) (8) (12&) (14)

Use three staves.

Write voice (1) on bottom stave.

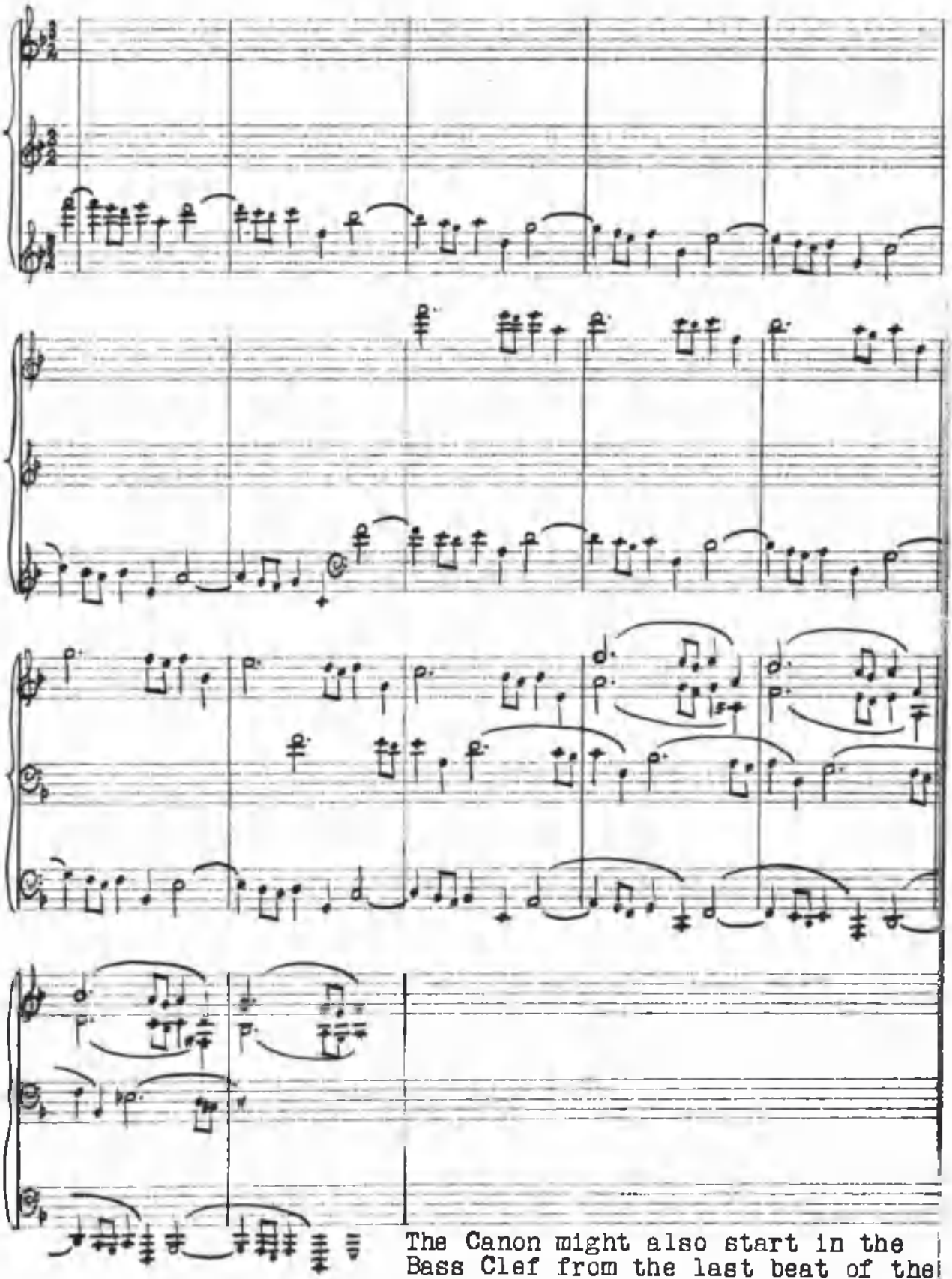
The second voice enters at (8) on the top stave.

Entry at (12&) to be written two octaves lower on second stave.

Entry at (14) to be written one octave lower on top stave.

Write in $\frac{3}{2}$ time.

We shall now write the whole canon out in staff from the sol-fa layout, following the instructions given above.



The Canon might also start in the Bass Clef from the last beat of the seventh bar.

In this canonic sequence the part-writing from the point where the voice parts are marked by phrase-marks is exactly the same as Bach's, except for the four accidentals inserted. It will be noted that the bass part is written an octave lower than it appears in the organ version, but this is as it would sound on the pedals with a 16 foot stop.

In the Bach fugue itself, the canonic writing breaks off abruptly at the point where our example stops, and the stretto, like the fugue, is written in Alla Breve time, although it would be phrased and played as in the above example.

We do not suggest, of course, that Bach worked out this stretto from first principles, so to speak, as we have done above. But we claim that pupils, trained in canonic sequence singing and canonic sequence writing on the lines indicated in this book, besides gaining a real insight into harmonic idioms and contrapuntal progressions, will in their Harmony and Counterpoint studies be quick to profit by imitation and canonic writing in the voice parts where such writing is practicable.

THE SEQUENCE MODULATOR

1	2	3	4	5	6	7	8
d'	t	l	s	f	m	r	d
t	l	s	f	m	r	d	t_1
l	s	f	m	r	d	t_1	l_1
s	f	m	r	d	t_1	l_1	s_1
f	m	r	d	t_1	l_1	s_1	f_1
m	r	d	t_1	l_1	s_1	f_1	m_1
r	d	t_1	l_1	s_1	f_1	m_1	r_1
d	t_1	l_1	s_1	f_1	m_1	r_1	d_1
1	2	3	4	5	6	7	8

1	2	3	4	5	6	7	8
d'	r'	m'	f'	s'	l'	t'	d^2
t	d'	r'	m'	f'	s'	l'	t'
l	t	d'	r'	m'	f'	s'	l'
s	l	t	d'	r'	m'	f'	s'
f	s	l	t	d'	r'	m'	f'
m	f	s	l	t	d'	r'	m'
r	m	f	s	l	t	d'	r'
d	r	m	f	s	l	t	d'
1	2	3	4	5	6	7	8

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THE DEVELOPMENT OF MUSICAL ABILITY WITH SPECIAL REFERENCE TO AURAL TECHNIQUE AND SIGHT READING

A THESIS
SUBMITTED TO THE
UNIVERSITY OF GLASGOW
FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

ARTHUR J. IRVINE

1940

VOL. III.

PART III.

VARIOUS ASPECTS OF THE MUSIC LESSON.

CONTENTS OF VOLUME III

Chapter		Page
I	Music and Leisure...	417
II	The Percussion Band - A New Orientation. ...	423
III	Music-Teaching in Relation to the Recapitulation Theory...	454
IV	The Approach to the Sol-fa Syllables	462
V	A Comparison of the Principles Underlying the Tonic Sol-fa and the Staff Notation. ...	470
VI	The Visual Approach to Staff Sight-Singing..	495
VII	The Order of Difficulty of Keys in Sight Singing...	509
VIII	The Formal Layout of Music Type	538
IX	An Experiment to ascertain the effect of the formal layout of music type on Reading performance.	577
X	Frequency of Intervals in Melody	586
XI	Method in Relation to Content in the School Music Reader	612
XII	Conclusion..	652
	Appendix - Sample sheets used in Class for testing and for pitch and rhythm spelling practice	675

MUSIC AND LEISURE *

Of all the arts, music has the most direct and universal appeal. It is the one social art, and, in this age of leisure, it is a factor which must be reckoned with. For if we will not live with good music, we must live with bad music - we can hardly escape from music altogether. Indeed the best measure of the influence of music on the community is the fact that it is the only art that is being exploited commercially.

In the history of music, there have always been two main streams, art music and folk music, each equally sincere and satisfying to its exponents, and each reacting on the other. But to-day, with the disintegration of the home and social life, folk music is rapidly disappearing. Commercial interests - the radio, talkies, jazz bands, celebrity concert agencies, etc. - provide the entertainment which in former days the masses had to provide for themselves. Indeed, they no longer try to express themselves in music or song. They remain content with a vicarious self-expression, purveyed for them by these external agencies.

* Reprinted from an article by the writer in "The Challenge of Leisure", Edited on behalf of the New Education Fellowship by William Boyd, M.A., B.Sc., D.Phil., London, New Education Fellowship, 1936.

It is the curse of the modern world, in music as in other spheres, that, as Matthew Arnold pointed out as long ago as 1869, our civilisation is to a large degree "mechanical and external, and tends constantly to become more so." So much is done for us that we do little for ourselves. We accept everything uncritically, and are inclined to remain more or less passive listeners and spectators, instead of being active participants. The machine which has brought us leisure has deprived us of the power to enjoy it through active self-expression.

The law of natural selection, which is essential for true progress in art, no longer operates in an age when selection is dictated and controlled by vested interests. We are thus faced with one more vicious circle.

Let us state the problem briefly:

(1) "An accurate taste in poetry, as in all other arts, as Sir Joshua Reynolds has observed, is an acquired talent, which can only be produced by severe thought and a long continued intercourse with the best models of composition" (Wordsworth).

(2) The adult masses of to-day, in their pursuit of musical entertainment, ask for something which will have an immediate appeal, and which will not make any deep demand for a creative response on the part of the listener.

(3) Commerce, which must inevitably be on the side of the big battalions, produces therefore an increasing supply of superficial music, demanding a cheap response from the listener, who is thus deprived of the main condition of spiritual progress in art, namely, "a long continued intercourse with the best models of composition." (There are, of course, commercial agencies which stand for the highest in art, but these do not reach the masses as the others do.)

How are we to break through this vicious circle without an Act of Parliament or a Philosopher-King? The original association of "school" with "leisure" suggests that we should consider that ideal age of leisure - the age of childhood.

The normal child, of course, is not leisure-conscious. But if he has no such word as "leisure" in his vocabulary, and no such adult notion as "time hanging on his hands," is it not because nature has so fitted him for this period of carefree growth that he is conscious of nothing so much as an insatiable thirst for new experiences, wherein he can project himself, try himself out, and thus achieve self-realisation? No child would willingly listen to music if he could himself sing or dance or otherwise take an active part in it. The listener-spectator attitude is foreign to

the child. He himself must always be at the centre of activity.

The school, it is to be noted, does not furnish this driving power, this urge for self-expression, but it must reverently and wisely take advantage of it and direct it into channels which, without dissipating or vitiating it, will lead the child upwards to ever higher levels of response.

The home cannot be depended on nowadays to play its traditional part. Indeed, what used to be the centre of a people's culture is rapidly becoming a loud-speaker for the dissemination of commercialised music and cheap entertainment. Cradles have gone out of fashion, and with them the traditional nursery rhymes and lullabies. Parents no longer sing folk songs or recite folk tales or ballads.

It rests with the schools, then, to lay the basis for the national culture, and to bring the child into contact with the national inheritance in music and literature, without which the years of enforced adult leisure will seem "weary, stale, flat and unprofitable."

It has been noted that the problem of leisure does not exist for the child, because in his urge for self-expression he cannot find time enough to do all the things that he is interested in. But the problem

remains for the adult because he has lost this power of self-expression. He prefers to be passive rather than active. Such an attitude of "impression without expression" is fatal to all progress in art, and leads only to the familiar present-day craving for new excitements.

What then can be done to solve the problem of adult leisure? We cannot change adult human nature; but, by directing the energies of childhood, we may generate an artistic momentum which will carry over into the adult stage, where the spiritual satisfaction it produces will ensure its continuance.

Above all we must try to provide the child with the power to read and write music. In this age a musically illiterate community is at the mercy of those who have this power; and, as we have seen, those who make most use of this power, the disseminators of jazz and low-brow music, have not the true interests of music or the listener at heart. Furnished with this power, the child will be able to think for himself and to seek in books what he cannot receive through the ether.

One of the most remarkable leisure movements of last century was the Tonic Sol-fa Movement. In the sixties and seventies its active adherents were to be numbered by the hundreds of thousands. It owed its

success to the fact that, for the first time in history, adults who had been deprived of an early musical education were enabled, after a short course of study, to come into immediate personal contact with music and to share in actual music-making. For them the problem of leisure was solved.

The only satisfactory attitude to art is one in which the art lover seeks to project himself into the art work. And this is essentially the attitude of the child to things which interest him. There exist to-day many societies for fostering this attitude in the adult - musical festival associations, folk song and folk dance societies, orchestral and choral societies. Many of these show their weakness by the fact that they are partly dependent on subsidies from public funds, like the Carnegie Trust, which has recently voted £30,000 for the encouragement of amateur choral and orchestral societies. But on these societies we must depend until the sense of values of the subjects on the school curriculum has undergone a complete change, and the schools have the opportunity to develop in the child that capacity for the things of the spirit which will enable him in adult years to work out his own artistic salvation.

CHAPTER II

THE PERCUSSION BAND
A NEW ORIENTATION

Von Bulow is reported to have said: "In the beginning was Rhythm". Biologically speaking, however, it would be more correct to say: "In the beginning is Rhythm". For with every child born into this world we have a re-incarnation of this manifestation of the spirit through the flesh which we call Rhythm.

Of the two elements that go to make up music, namely, pitch and rhythm, the latter is the one that first shows itself in the young, and that persists throughout life, even though the pitch sense may remain more or less undeveloped.

Bodily or outward response to rhythmic stimuli is natural in normal children and in primitive races, and the musical pilgrim's progress is simply the progress from this animal (or jazz band) stage of crude bodily response to that higher stage, where these gross responses become organised in a subtler kind of response whereby man can enjoy or react to musical stimuli without "wanting to make a beast of himself".

However, this outward or bodily response to music must not be repressed in the young, for, as the old tag says, there is "no impression without expression". Indeed, it would be well to regard this stage of bodily response

as the oral stage in rhythm, corresponding to the oral stage in thought, the lip movement stage in silent reading, or the finger counting stage in arithmetic.

If a child hears a joke or sees something funny, he will laugh, not with his facial muscles only, but with his whole body. The bodily response is merely nature's safety valve, for if the child did not laugh "he would burst". But when an adult sees or hears the same funny thing, he may not move a muscle of his face, or betray any outward signs of his having appreciated the humour of the situation. Yet he may have seen the humour of it, even more so than the child. In this case the emotional response has been sublimated. We cannot say there has been no "expression" as a result of the "impression", but we can say that the expression has, at any rate, not been outward via the body. It has been short-circuited. The same thing is found in music. A musical critic will listen to a fine performance of "The Ride of the Valkyries" without literally "turning a hair." He will even listen to a wretched performance, lacking rhythm or vitality, or vitiated by distorted rhythm, without in the least showing any signs of the vitriolic nature of the feelings which he will later translate into words for his notice in the morning paper.

But this stage of sublimation of bodily responses is a comparatively late one in the history of the race and

of the individual. With young children the track from impression to expression is a direct one. There is here no sidetracking or short-circuiting of emotional responses. The child has not yet acquired that social veneer which inhibits frank outward self-expression. It has been said that the whole man thinks, and certainly it is true to say that the whole child feels.

Our endeavour, then, must be to canalise this natural energy of the child, to harness these crude responses and to guide them into channels, where they may be brought under proper discipline and made use of for educational ends.

So far as music is concerned this is the function of the Percussion Band - to co-ordinate the feeling for rhythm, or the rhythmic sense, with bodily responses of the grosser type.

The young child will want at first to beat his drum or hit his triangle in season and out of season, so to speak. He does not see why he should beat his drum only on the first beat of the bar, while others strike their instruments on every beat of the bar. But in teaching him to mark only the strong accents on his instrument, and to remain silent while the weaker instruments mark the weaker pulses, we are appealing to his slowly awakening team spirit, and incidentally giving him his first lesson in citizen-ship.

Besides this, we are teaching him one of the first principles of Rhythm, namely, that while a steady pulse runs through all music, some of the pulses are stronger than others. Otherwise, instead of having a regular recurrence of graded accents or a time pattern, we would have a monotonous series of beats without order or significance.

Few then, will dispute the educational value of a training in percussion band playing. It gives an opportunity for organised musical activity at a stage when part-singing in the school choir or instrumental performance in the school orchestra is quite out of the question, an organised musical activity, moreover, which from the aesthetic point of view may compare favourably with later choral and orchestral activities.

The adult musician, who has never played in a Band or Orchestra of some kind, counted his "bars out", and made his small contribution towards the general effect, is so much the poorer a musician for it, if not indeed so much the poorer a citizen. For music is pre-eminently a social art, and the orchestra or the choir, with its philosopher-king wielding the baton with benevolent authority, is the ideal democracy, in which the self-seeking of the individual is gladly sacrificed to the good of the whole.

Yet, the percussion band is usually grouped among the "frills" of the music class. It may add a touch of colour to the lesson, and is useful for bringing out on a speech day along with our best clothes and our best manners! But, like all frills, it is felt to be too expensive for the humdrum routine of the ordinary workaday lesson where we must "get things done". And it would be wise to admit this frankly, if we would seek out ways and means by which the percussion band can be made to pay its way in the music class.

As we have seen, children may obtain, at first hand, excellent rhythmic experience, which at this stage cannot be got elsewhere, and they may develop their sense of form and expression through taking part in percussion band work. But, under the present system, where each piece of music requires its own separate orchestration, the children must develop considerable powers of reading, or be content to devote a whole term to one or two show pieces. And, since the ability to read a single orchestral line, with no melodic interest and containing often more rests than notes, is one that is beyond the powers of very young children, the latter are therefore doomed to devote a whole term to these few show pieces.

This is the waste of precious time and energy that must be condemned. The percussion band should not be used

primarily as an instrument for developing reading ability in young children. It is an error to stress rhythm reading at a stage when there is a natural craving and a genuine need for rhythm experience. Mastery of rhythm symbols may be attained later on much more quickly and effectively through the rhythm names and the voice.

> (cf. Dr Geoffrey Shaw in his address to the first General Meeting of The Percussion Band Association:
> "From very early stages - as soon as possible - children should read from proper orchestral parts. Sight-reading should form an important part of percussion band work."
> "Music in Schools"(Novello) April, 1939)

The error here is due to an "idée fixe", which is responsible for great wastage in the music class, namely, the idea that the different branches of music training should always be correlated at each stage.

Thus, some educationists would try to correlate song teaching with sight reading at each stage, with the result that the songs taught must remain far below the level of song singing that children are capable of attaining.

Others would correlate melody-making, the musical equivalent of sentence-making or speech utterance, with notational knowledge and music writing, to the detriment of melody-making, which like song singing should be done spontaneously on the oral plane.

Again, the attempt to correlate staff notation reading with the tonic sol-fa method of aural training (with its special order of procedure in the introduction of the scale degrees - d s, d s d', d m s, s t r', f l d' , etc. -) leads to the absurdity of asking children to read from the stave fifths and thirds, before they are allowed to read stepwise progressions. Staff notation reading is concerned with visual problems which do not enter into sol-fa notation at all, and to try to correlate the two methods of approach is to confuse the separate issues involved in aural training and sight training.

In the case of the percussion band, as in all the above cases, the error is due to an attempt to correlate two subjects involving separate abilities that mature at quite different stages of growth in the individual. Here, it is the practical or performing ability, i.e. the ability to keep time and to beat percussion band instruments in time, on the one hand, and, on the other, the theoretical or reading ability or the ability to interpret rhythm symbols in terms of rhythm facts. This error of blind adherence to the principle of correlation is due to ignorance or neglect of another and more important principle, that of maturation. Briefly, to act in accordance with the principle of maturation is to introduce the various branches of learning at the psychological moment when pupils are

ripe for these - in other words, to gather all fruits in their due season and not to go looking for "nuts in May". Of the two principles, that of maturation has the prior psychological claim on the teacher.

It is evident that the ability to perform on percussion band instruments matures earlier and develops much more rapidly than the ability to read percussion band parts. In fact, it may be said that the ability to read these parts depends on the practical experience of the facts of rhythm gained in playing parts in a band, just as the ability to read pitch symbols depends on the practical experience of tonality gained through oral singing.

Again, there is no real biological urge in children to learn to read and interpret letters or musical symbols. They can express themselves fully in speech and song, or with percussion instruments, without having recourse to symbol interpretation.

At the most, we may say that there is only a cultural urge to master the intricate notations of language and music; but this cultural urge, with its emphasis on far-off ends, is not strong in childhood, and requires to be fostered in the young by parent and teacher.

Maturation depends on the maturing of the nervous system with reference to specific responses and abilities. It develops from within, and instruction and training cannot make up for its absence in the nervous system.

When we display impatience before a class of young children trying to read from staff notation at an age when they are not psychologically mature or ready for staff reading, we should reflect that our time and their time, too, would be better employed in musical activities for which they are mature. There is an age for the coarser adjustments of the nervous system and an age for the finer adjustments of the nervous system. And the aural and oral observance of the facts of language or of rhythm and tonality, fine as these are, must be classed among the coarser adjusments, when compared with the interpretation of these facts by means of abstract symbols.

What young children require most is sense training in music, not mental training in the interpretation of musical symbols. We have an oral stage in language and in vocal music or song singing, and we should have a corresponding oral stage in percussion band playing, where the children can impersonate or act out the rhythmic elements in music without having to interpret rhythm symbols from paper at each step. But how is this to be done?

Unless we teach by rote, as in fact is usually done in the end even although the children have the parts in front of them, a certain amount of reading ability in rhythm symbols is necessary, if the children are to have that varied and extensive experience of rhythm in music of

various types, on which their further progress in reading will depend.

So the problem is, to make the most of this minimum of reading ability - that is, to reduce the reading material as much as possible without reducing correspondingly the rhythmic experience that may be got through the interpretation on percussion instruments of music of various types.

There should be an end of this spending of weeks or months over an 8 bar or 16 bar tune, only to put the parts away and to get up new parts for the next 8 bar or 16 bar tune. We must shift the emphasis from the orchestration or the reading of notation to the instrumental practice or the rhythmic experience, which is the all important desideratum with children at this stage.

This leads us to ask the question whether, instead of starting from orchestrations made to the measure of specific tunes, it would not be better to start from tunes made to the measure of specific orchestrations? That is to say, instead of starting from standard pieces from the literature of music and making suitable arrangements of these for percussion band, as is done at present, why not start from standard arrangements or orchestrations for percussion band, and select suitable pieces from the literature of music to fit these arrangements or orchestrations? If "made-to-measure" orchestrations are found to be

too expensive for young children, why not try "ready-made" orchestrations?

This idea is quite feasible in the percussion band class, since, from the broad rhythmic or structural point of view, nearly all nursery rhymes, lullabies, folksongs, suite dances, marches, etc., can be grouped under a few 8 bar or 16 bar rhythmic formulae in duple, triple and quadruple time.

Thus, a simple 8 bar percussion band orchestration or formula may be used for dozens of nursery rhymes in 2/4 or quick 6/8 time. Similarly, a 16 bar formula, or two 8 bar formulae, may be used for all kinds of folksongs, marches or suite dances in 4/4 or 12/8 time.

An 8 bar formula in slow 6/8 time may be used for lullabies or folksongs in this measure, and an 8 bar formula, or a series of 8 bar formulae, in 3/4 time may be used for all triple time movements such as minuets, sarabandes, waltzes, cradle songs and folksongs in this measure.

Thus, once the children have mastered the notation for one short piece, they can immediately put this notational acquisition to use with dozens of other pieces. And, even although the same notation is used for each piece, their notational knowledge will be deepened and enriched by each new tune in which this notation is saturated, so to speak. That is, the rhythmic staff patterns will be acquiring greater connotation from each new tune.

Considerable experience with such percussion band formulae has shown that, from the variety of effect that may be got through the imposition of different melodic material on the same rhythmic matrix, it would be difficult to guess that the same score parts were used each time.

Besides, this system saves the tremendous expense of printing piano parts along with the percussion band scores. Any Nursery Rhyme and Folksong Collection or Classical Album may be used in connection with these percussion band formulae, and it does not require much ingenuity on the part of the teacher to see which tunes fit in best with the various formulae.

We give below, in score, a series of such percussion band formulae, which have been tried out with complete success, and we also give a selection from the many nursery rhymes, folksongs and classical pieces that may be used with these. The tunes are classed under the numbers of the rhythmic formulae with which they can be used.

After the method has been explained and the score parts mastered, it is sufficient for the teacher to sit at the piano and call out: "Number One", "Two", "One and two", etc. at the beginning of each piece played.

With regard to extended movements, like waltzes, mazurkas, rondos, etc., the teacher would simply announce beforehand the numbers of the formulae and the order in which they are to be played.

For example, Mazurka in C, Op. 33, No.3, by Chopin, may be played to the following:

(6 + 7) + 8 twice + (6 + 7)

So the teacher would announce: "Play 6 and 7, then 8 twice, and then play 6 and 7 again". (For concert purposes the pupils would receive slips of paper with the formulae for the various pieces written out as above.)

To take another example, Mozart's well known "Rondo alla Turca", from the Piano Sonata in A, contains 176 bars of 2/4 time, including all repetitions but omitting the Coda which is somewhat irregular in structure. This movement will be found to be admirably accommodated by 88 bars in common time, made up from formulae 3 and 4 in the following manner:-

3 + 4 twice + (3 + 4) + (3 + 4) + (3 + 4) + (3 + 4)

All that need be said to the class is: "Play 3, then 4 twice, and then continue playing 3 and 4, 3 and 4, till the end, taking the cues for expression from the conductor or from the piano".

It will have been noted that expression marks do not appear on the score parts. These, of course, are not practicable with ready-made scores. But we submit that, in the early stages, expression should be taught aurally and empirically, and that the children should learn to base their expression on that of the music itself, or to take

their cues from the conductor. The necessity for such things as expression marks will then be brought home to the children, who will appreciate their raison d'être and will be prepared for interpreting them from the conventional signs - pp, p, f, ff, cresc., dim., accel., rit. <> etc. The maturation stage for expression marks comes after children have realised that expression belongs to the face of music just as surely as it belongs to the face of humanity.

With some movements of irregular structure, it may be necessary at a certain point to play only 4 bars or 6 bars of a certain formula. But, once the formulae have been mastered by the children, this can be easily explained and will be promptly acted upon.

Thus, for example, the familiar Waltz in $A^{\flat}$, Op.39, No.15, of Brahms, would be played to the following:-

6 + 7 + (6 bars of 8 + 7) twice.

The following list of pieces is merely a suggestion of what may be played, for practically all folksongs, suite dances, etc., may be fitted out from these eight short ready-made formulae. It may be claimed for these, too, that although they are ready-mades, they fit better and show off the melodic lines and the form of the music to greater advantage than many expensive (both from the point of view of money and time) made-to-measures.

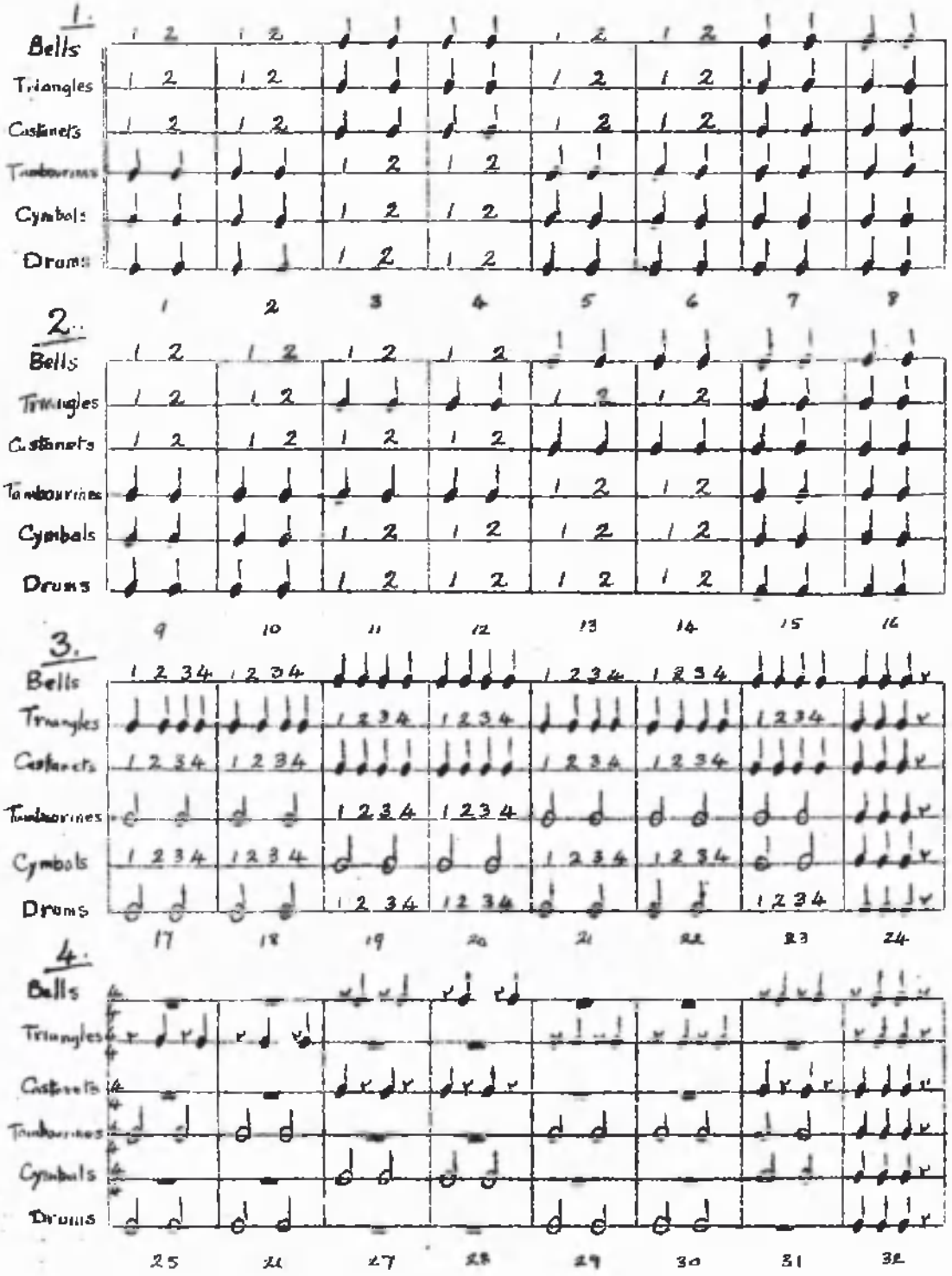
It will be noted that all the arrangements here are for six instruments. This may be considered too many by some teachers who have had experience of teaching young children to read their parts. And, in the case of made-to-measure scores, the criticism would be quite just. However, in the present system, where the same 8 bars or 16 bars can be made to do service in a number of different pieces, this argument does not hold; for while the children's experience of the music accompanied is extensive, their reading experience in following the same score parts is intensive.

And, since variety is the very spice of percussion band playing, we should use every means within our power of procuring it.

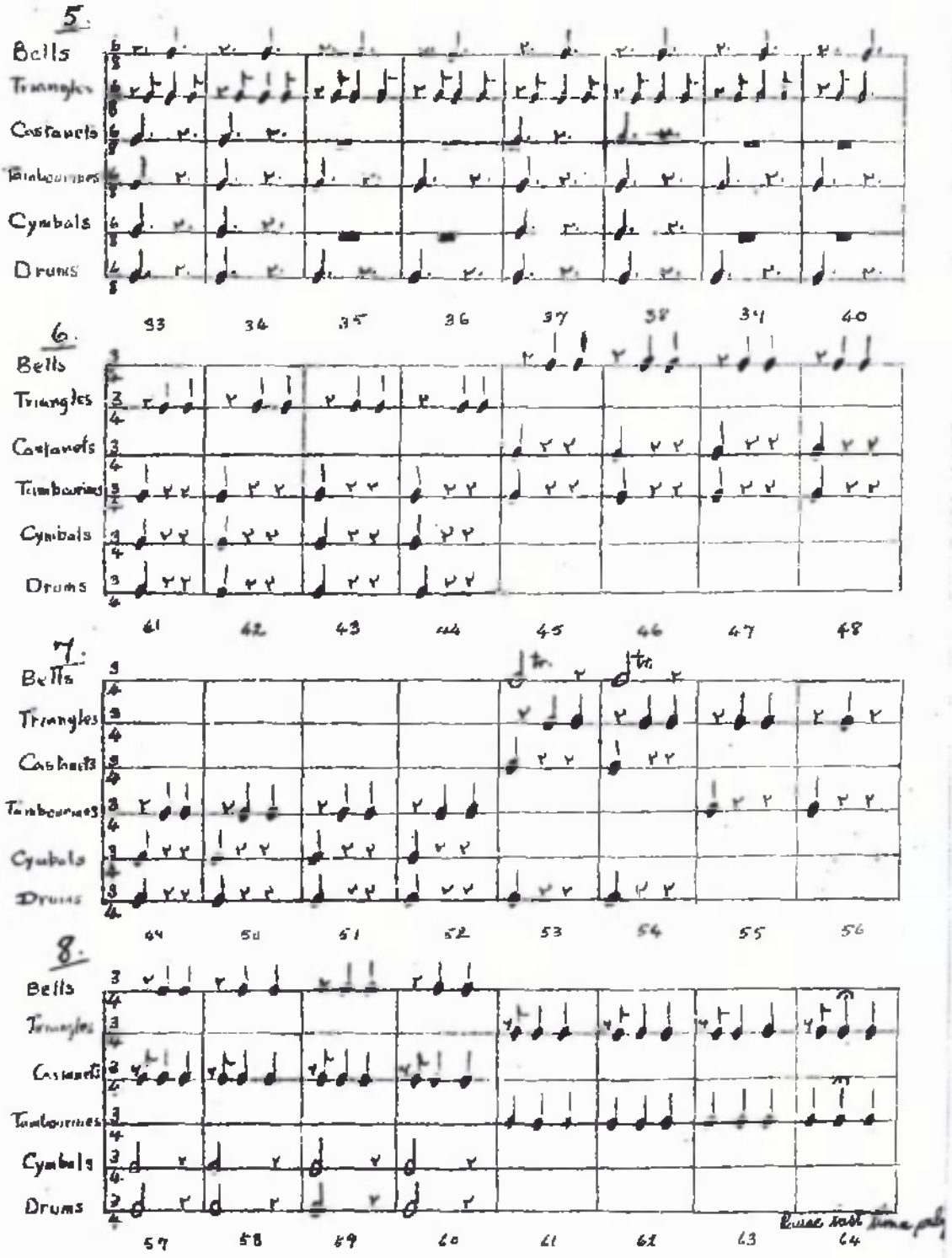
We now append the Percussion Band Scores along with a selection of suitable music for use with these, and we shall conclude with some examples of scores complete with melodies of various types written underneath.

These Percussion Band Score Formulae may be regarded as providing for beginners with little reading ability a kind of oral stage in Percussion Band playing, thus preparing them for the later notational stage when made-to-measure orchestrations may be profitably used.

Percussion Band Formulae



Percussion Band Formulae



Selection of Tunes for use with Percussion Band Formulae

1 or 2

Boys and Girls come out to play
Here we go round the Mulberry Bush
Hickory Dickory Dock
Humpty Dumpty
Broken bridges falling down
Polly put the kettle on
This old Man
Sing a Song of Sixpence
Jack and Jill
Little Bo Peep
Little Jack Horner
Lucy Locket

1 + 2

Pop goes the weasel
Sing a Song of Sixpence
O Dear, What can the matter be?
Bobby Shaftoe
Lightly Row
The Piper o' Dundee
The Wild Horseman (Schumann) (1 + 2 + 1)

3 or 4

This Old Man
Bobby Shaftoe
Sing a Song of Sixpence
O Dear, what can the matter be?
The Piper o' Dundee
Pop goes the weasel
Yankee Doodle
I had a little nut tree
Kelvingrove
Early one morning
John Peel (3 + 4)
The Minstrel Boy (3 + 4)
Lightly Row (3 or 4)
The Harmonious Blacksmith (Handel) (3 + 4 twice)
The Lass of Richmond Hill (3 + 4 bars of 4)
Schubert's Cradle Song (4)
The Road to the Isles (3 + 4 + last 4 bars of 4)
All through the night (3 + 4 or 4 twice)
March from "Scipio" (Handel) (3 twice + 4 twice or (3 + 3) + (3 + 4))
Soldiers' March (Schumann) (1 + 1) + (2 + 1)

5

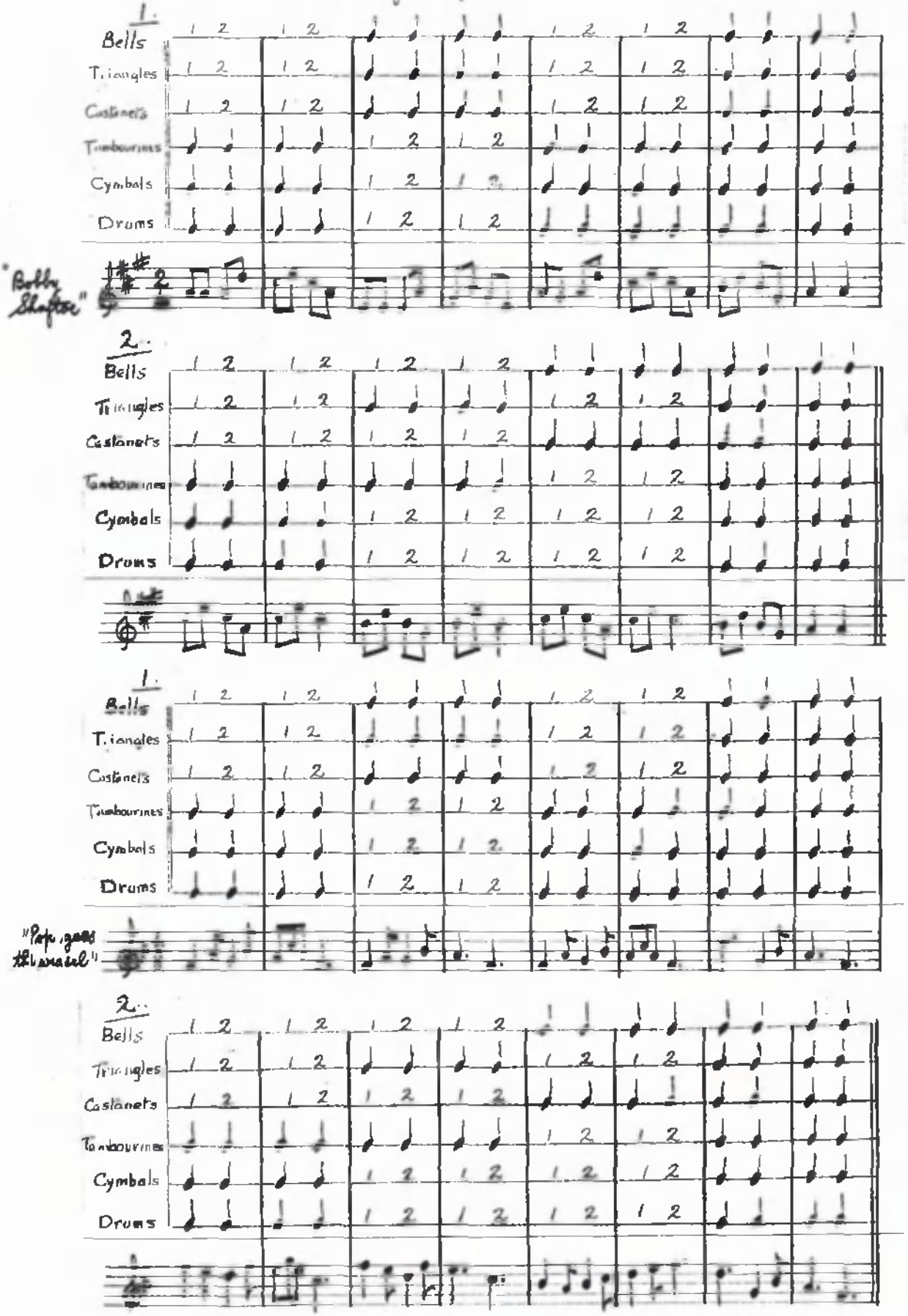
6/8 Lullabies etc.

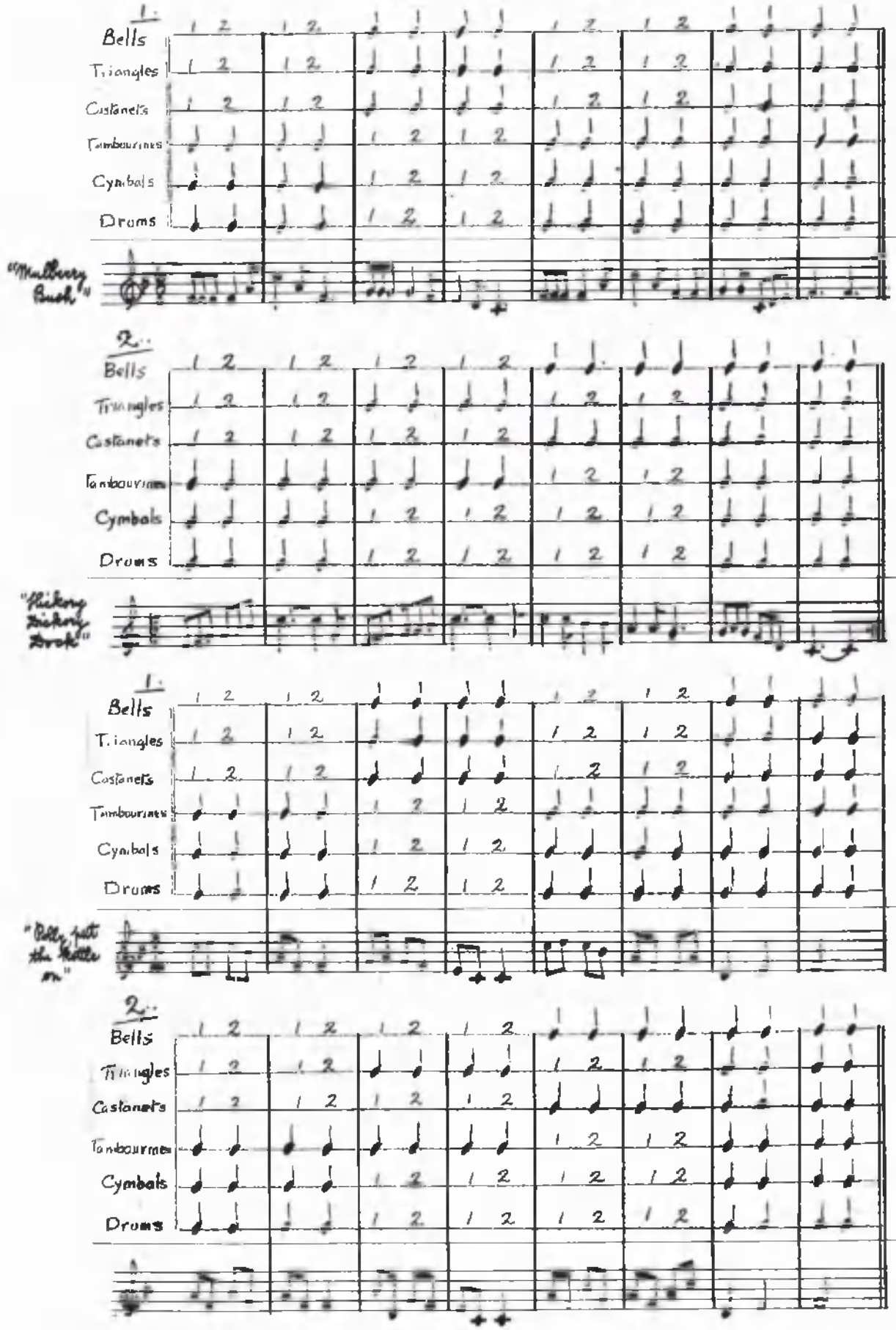
I left my baby lying here
Hush a bye baby
Turn ye to me (5 twice)
Dream Angus
Soridh
There were three little kittens

Selection of Pieces for use with Percussion Band Formulae

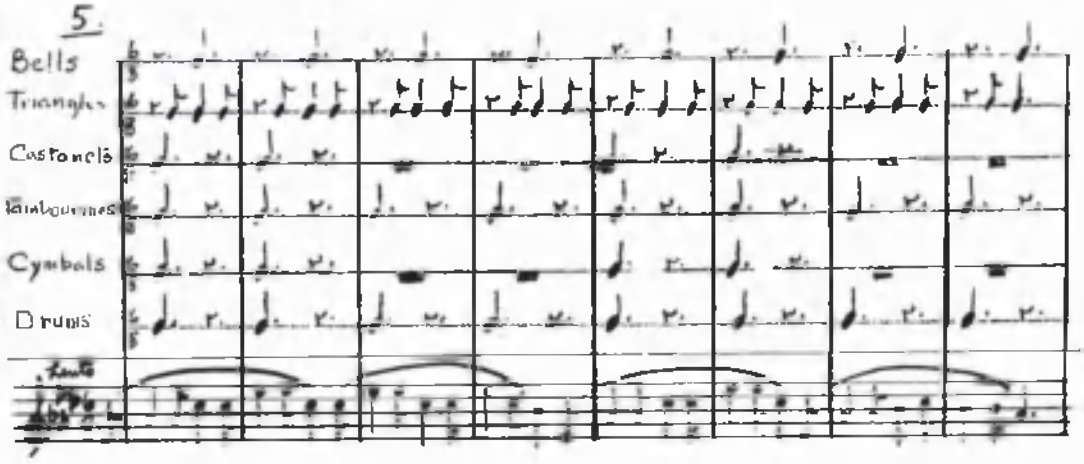
6, 7 and 8

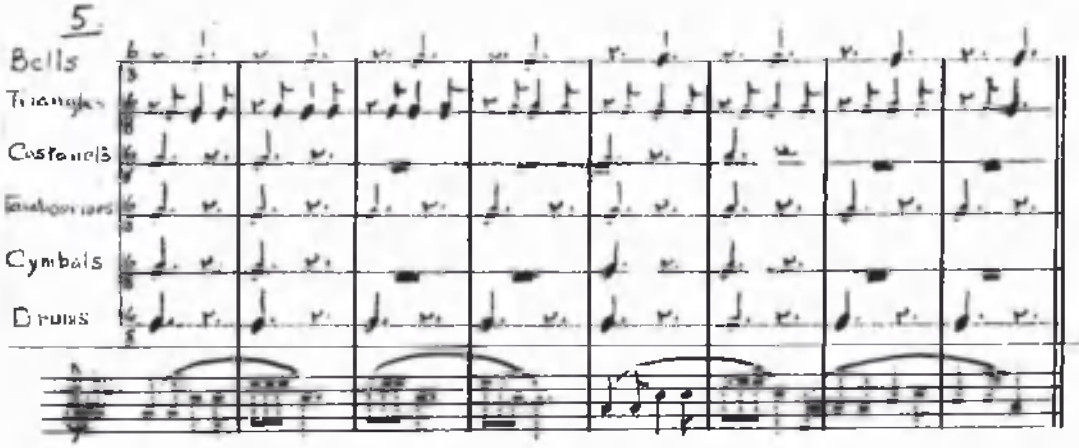
Brahms' Cradle Song ('Roses whisper') (without introduction)	6+7, 6+8, 7+8, 8 twice
The Ashgrove	6+7+6+7
Golden Slumbers	6+7, 6+8, 7+8, 8 twice
Criskay Lovelilt	6+7+8
Ye banks and braes	6+7+6+7 or 6+7+8+7
Waltz in E (Brahms) {:s|m:-.s:s|f:-.s:s}	6+7+(8+7) twice
Waltz in A♭ (Brahms) {|m:-.d:d.m| % }	6+7+8 (6 bars) + 7+8 (6 bars) + 7 i.e. 6 + (7 + 6 bars of 8) twice + 7
Minuet in D minor (Bach) {|m:d':t:l.se|l:m:f}	6+7+8+7 or 6+7+8 twice
Prelude in A (Chopin) {:s,|m,f:r:r|r:-}	6+7
Minuet in G (Beethoven) {m.,f|s,fe:s.,fe:s.,fe|s:-}	(6+6)+(7+7)+(8+8)+(7+7)+(6+7) i.e 6 twice + 7 twice + 8 twice + 7 twice + (6+7)
Rondo alla Turca (Mozart) {:t,l,se,l|d':r,d',t,d'|m} (without Coda)	(3+4)+4+ (3+4)+(3+4)+ (3+4)+(3+4)
Sarabande in D Minor (Bach) {|m:f.m:se,l|r.m:f:-}	(6+7)+8 twice
Valse Lente in A♭: Op. 90 (Schubert) {:s,:fe.s,|m:r:d|t:l,:l,}	(6+7)+(8+8) or (6+7)+(6+7)
Minuet from "Don Giovanni" (Mozart) {|s:s s:s.s|s,d':s:-}	6 twice + 7 twice
Mazurka in C (Chopin) {:s|r':m':-.r'|d',t:d':-.de}	(6+7)+(8+8)+(6+7)
Minuet in G (Bach) {|s:d,r:m.f|s:d:d}	(6+6)+(7+7) or 6 twice + 7 twice
Minuet from "Don Giovanni" (Mozart) {|s:s.s:s.s|s,d':s:-}	(6+6)+(7+7) or 6 twice + 7 twice
Minuet from "Orphée" (Gluck) {|s:m.f:s.d|d':t:l}	(6+7)+(8+4 bars of 8+7) twice
Minuet from "Berenice" Handel {|m:-:r|f:-:m}	(6+7)+(8+6+7) twice


1.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums
"Bobby Shafto"
2.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums
1.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums
"Pop goes the weasel"
2.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums

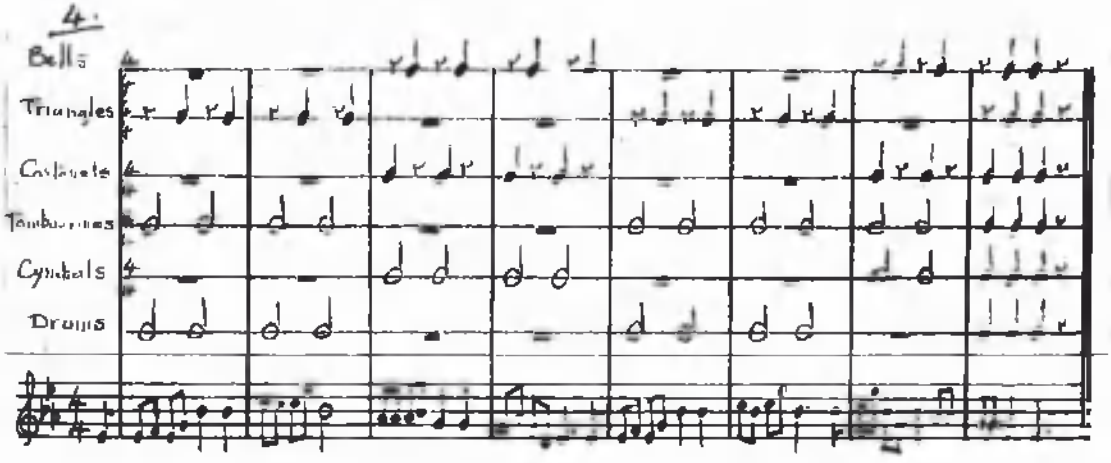

1.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums
"Mulberry Bush"
2.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums
"Hickory Dickory Dock"
1.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums
"Polly, put the kettle on"
2.
Bells
Triangles
Castanets
Tambourines
Cymbals
Drums

"I left my baby lying here"



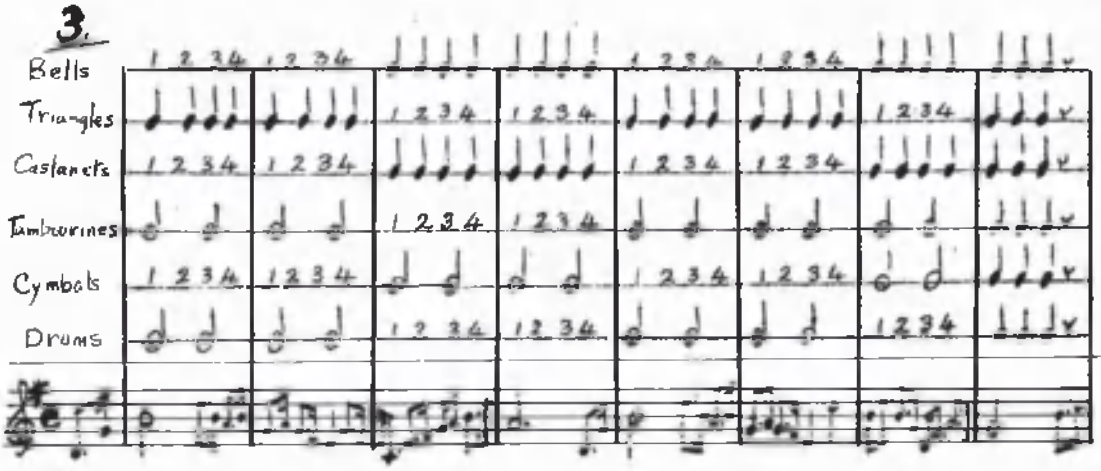


"I had a little nut-tree"



"The Road to the Isles"

3.



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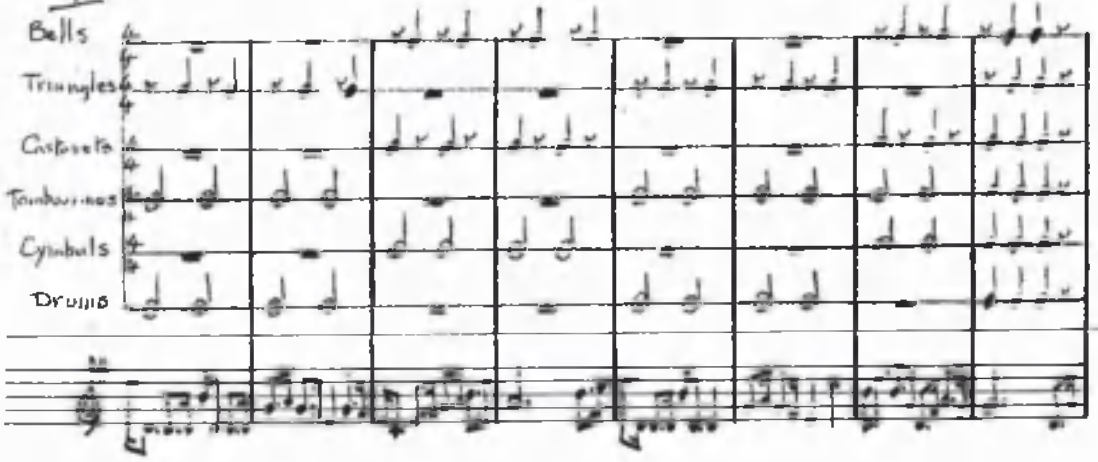

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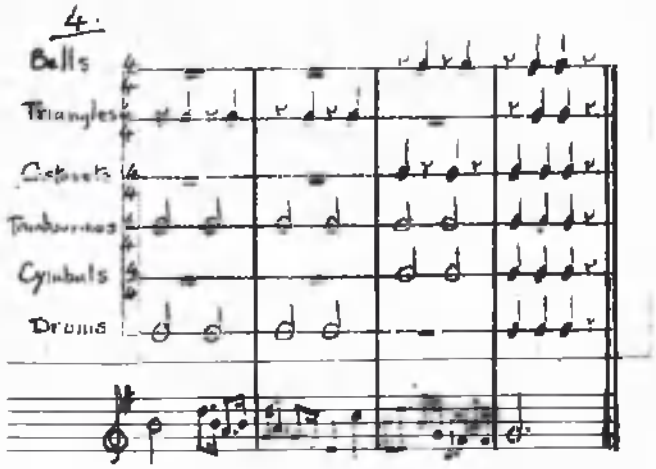
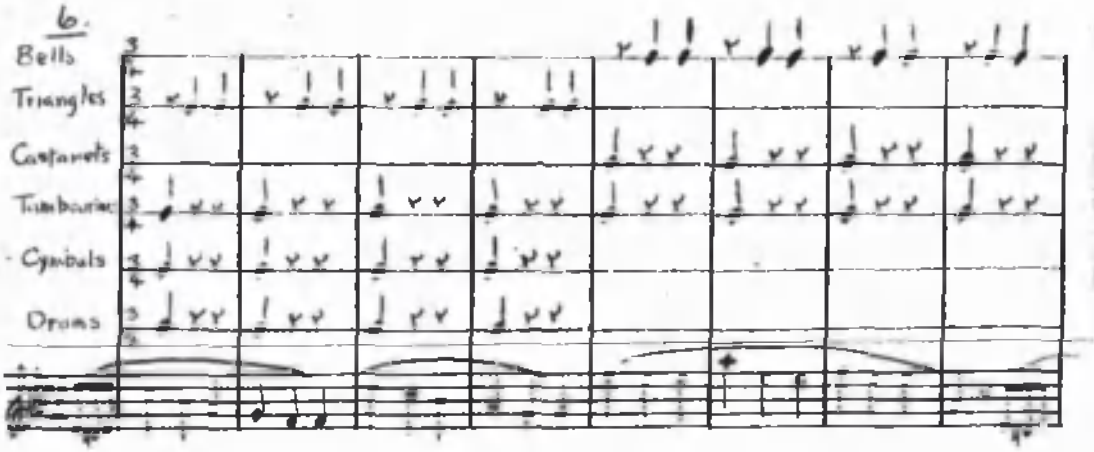
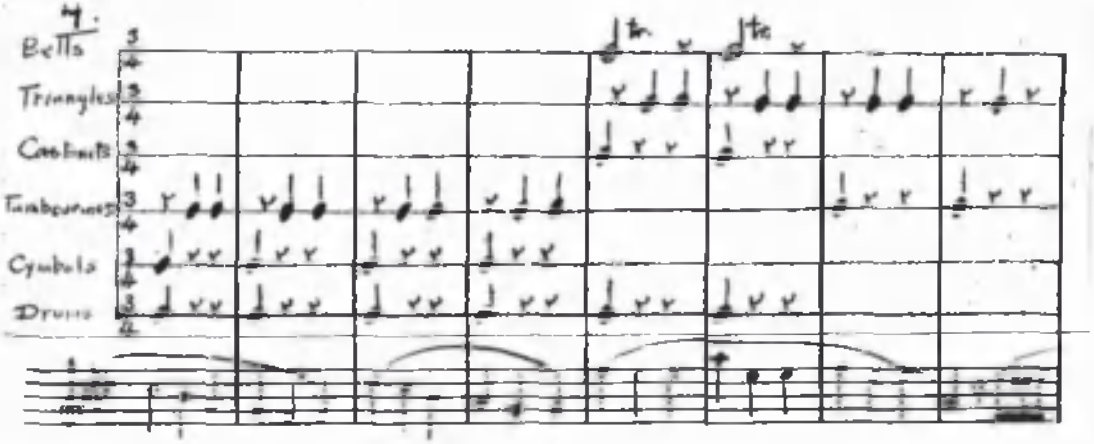
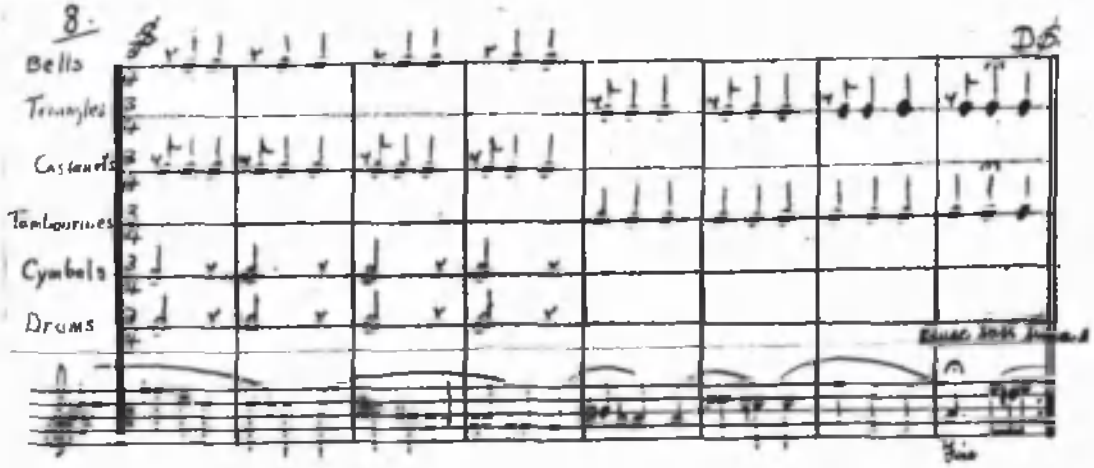
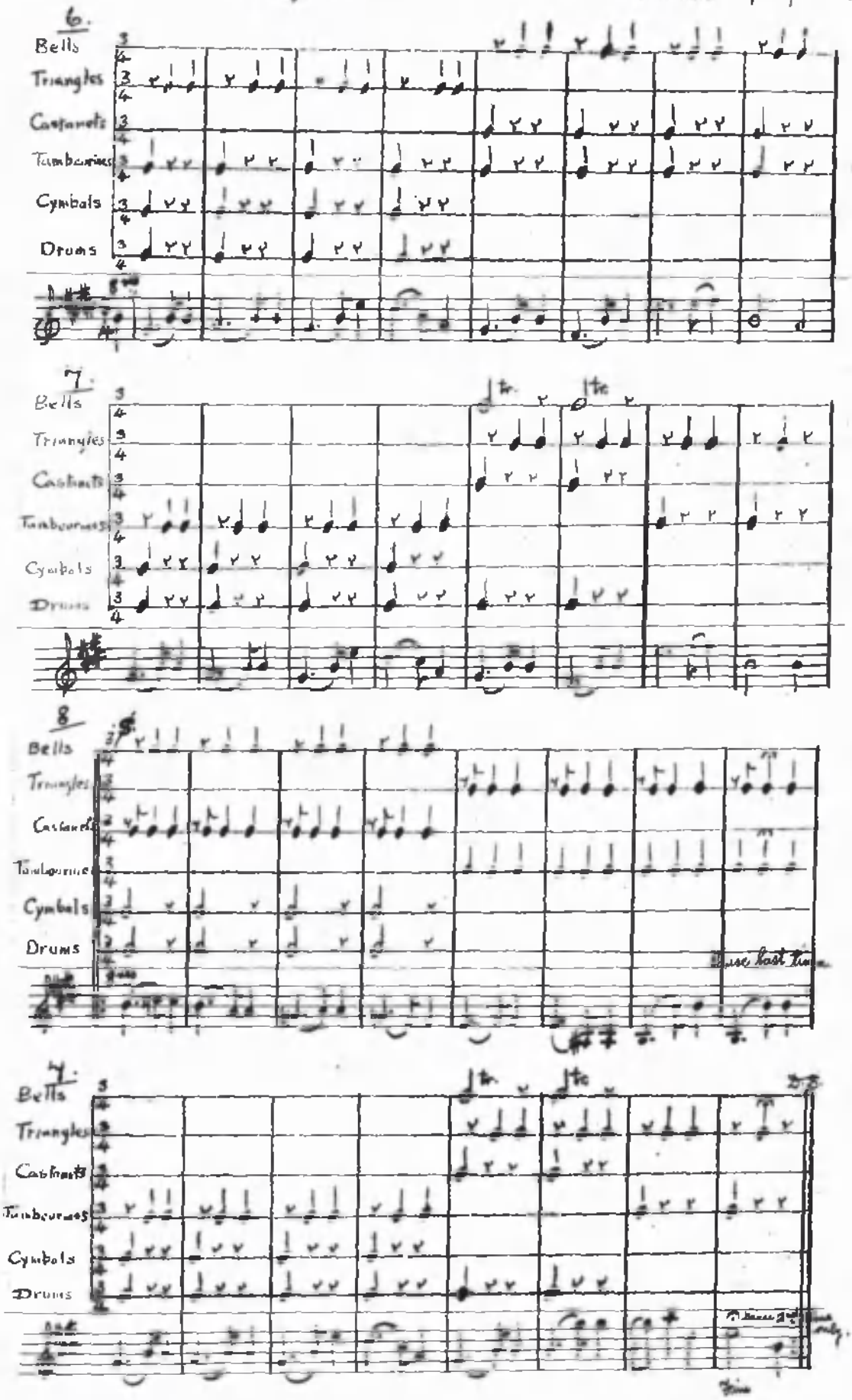


"Waltz in A♭" (Op. 9a) Schubert





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Bells
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Tambourines
Cymbals
Drums
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Bells
Triangles
Castanets
Tambourines
Cymbals
Drums
use last time
7.
Bells
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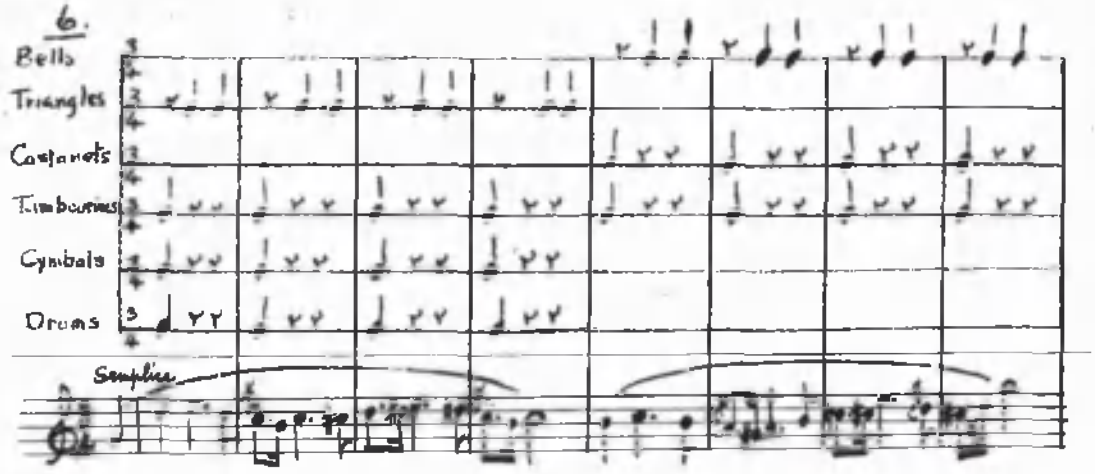
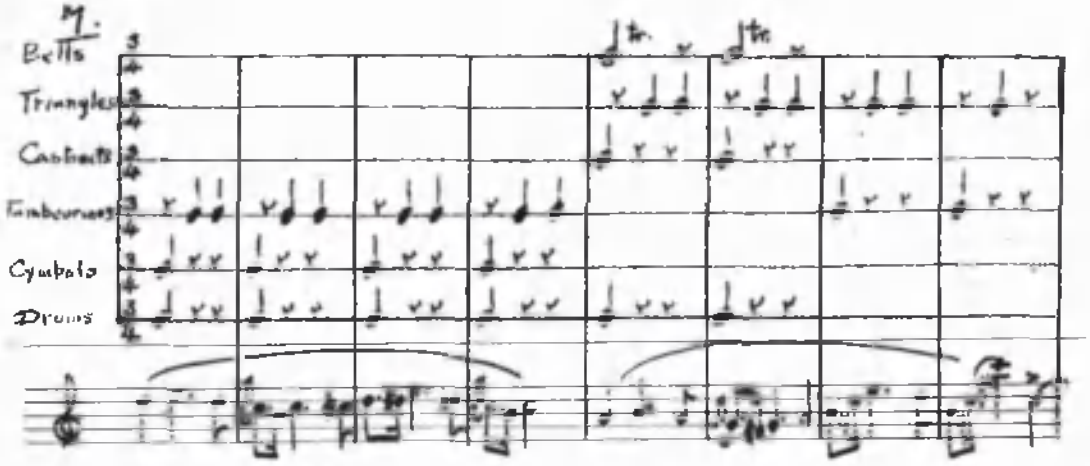
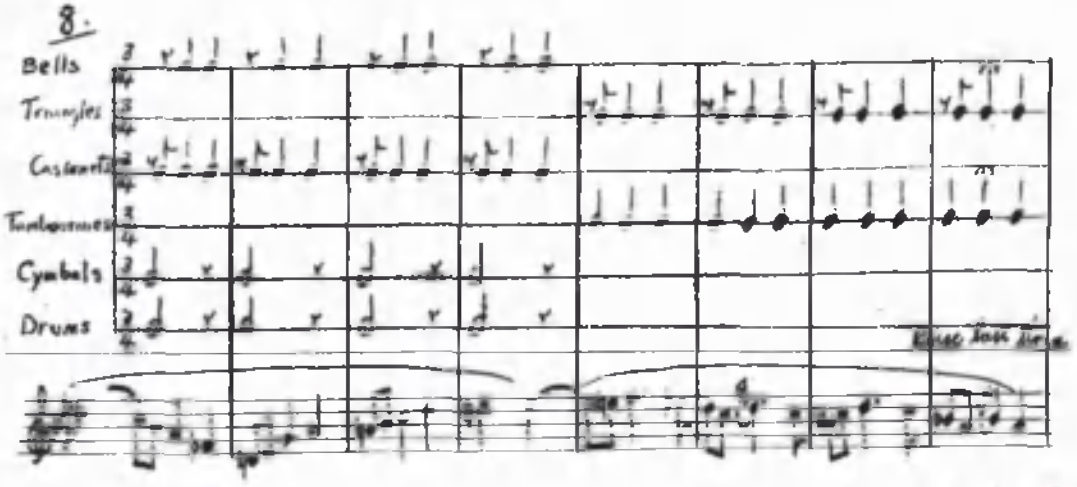
Castanets
Tambourines
Cymbals
Drums

"Mazurka in C"

Chopin
Op. 33, No. 3







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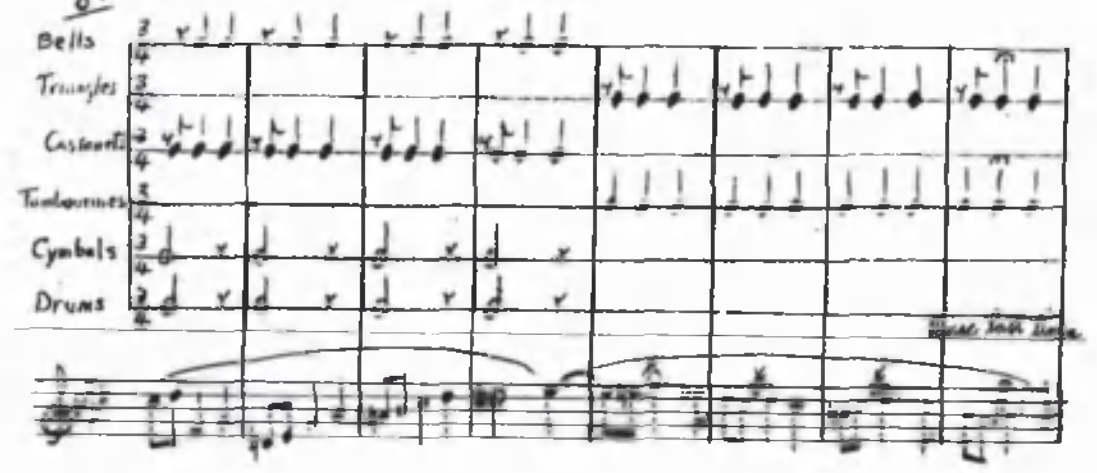
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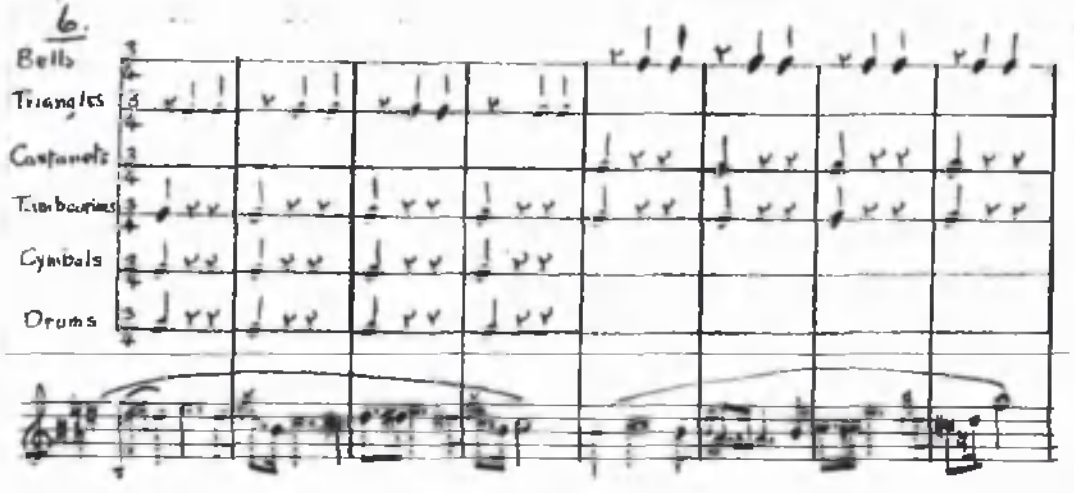
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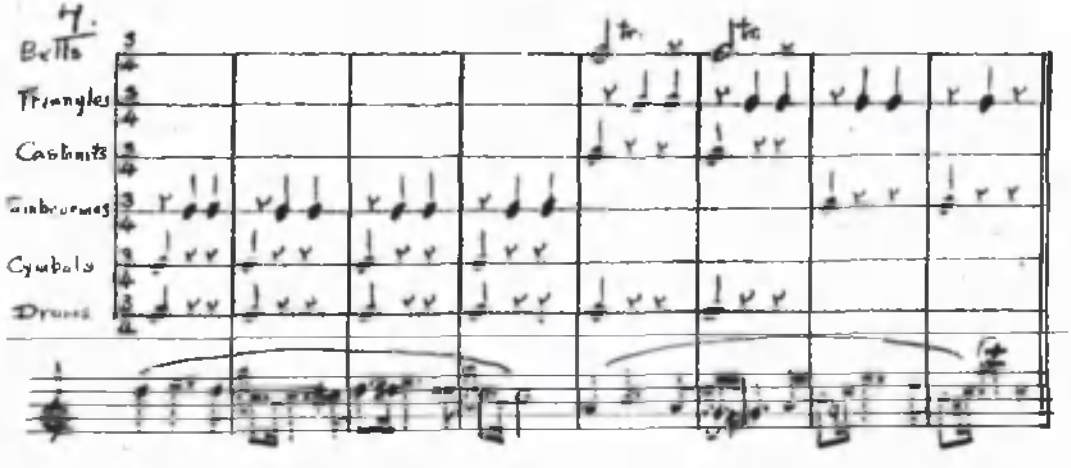
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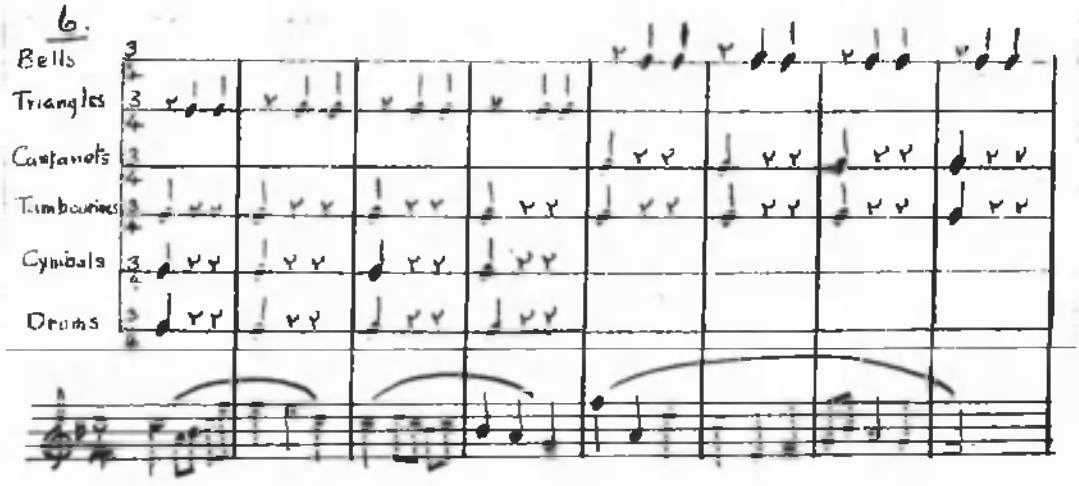
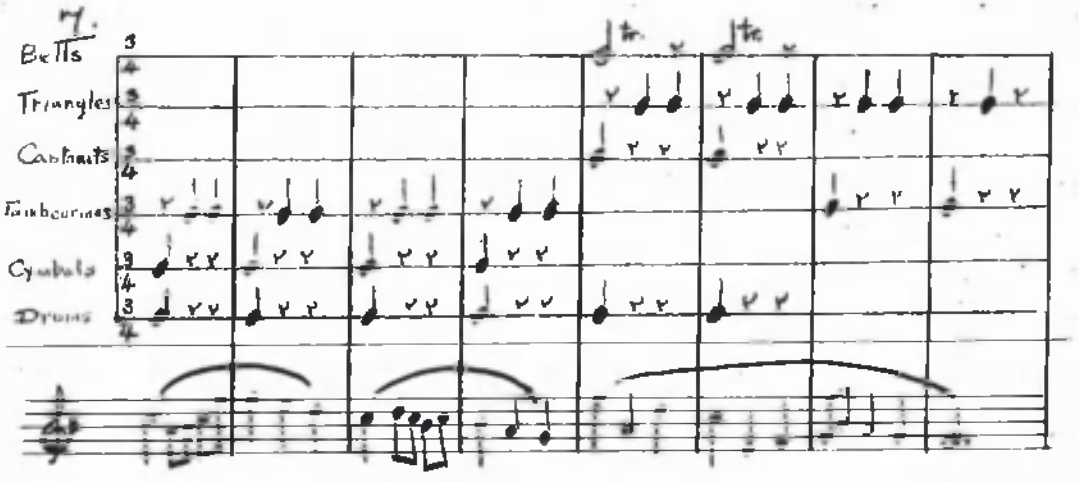
Minuet from "Orfeo" — Gluck





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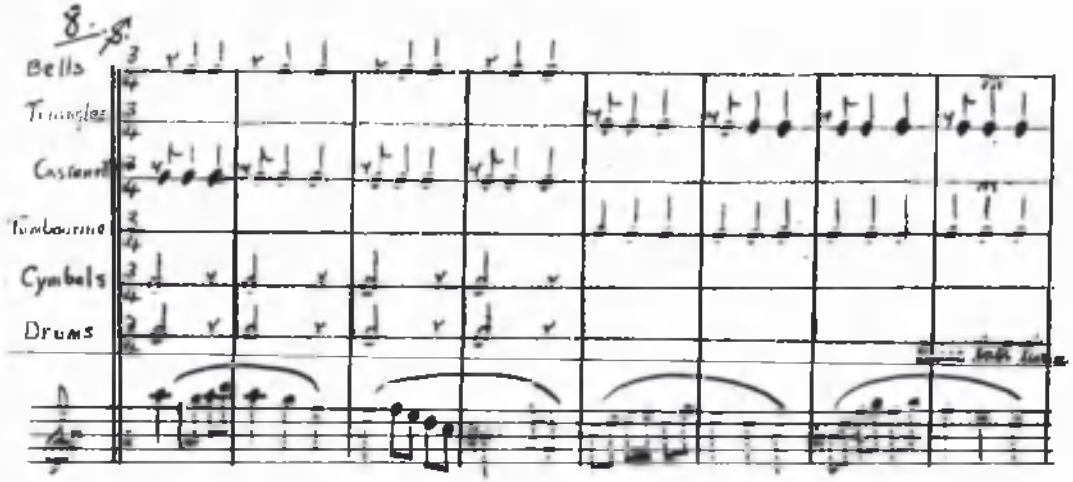
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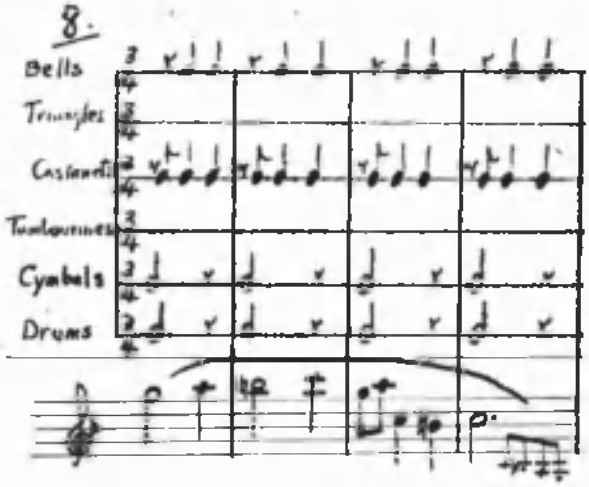
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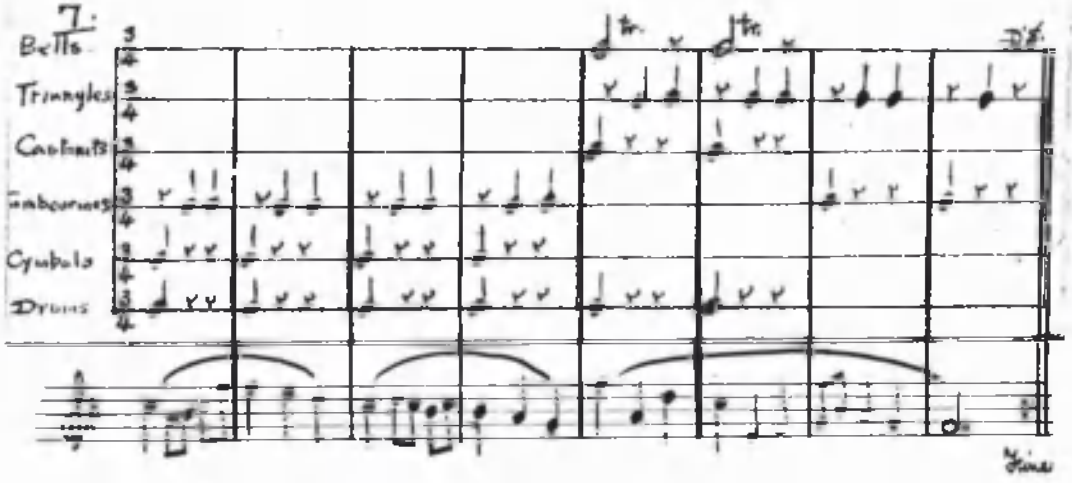
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Minuet from "Berenice" (Handel)

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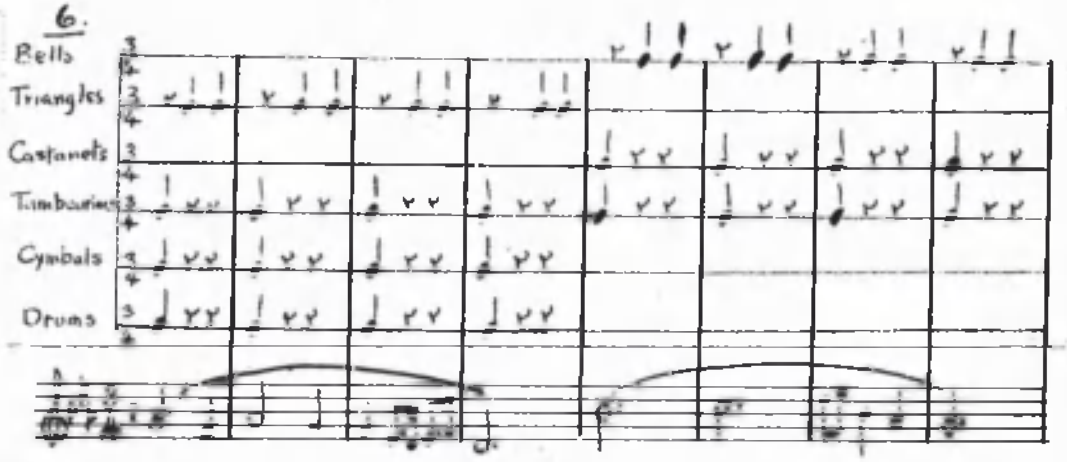

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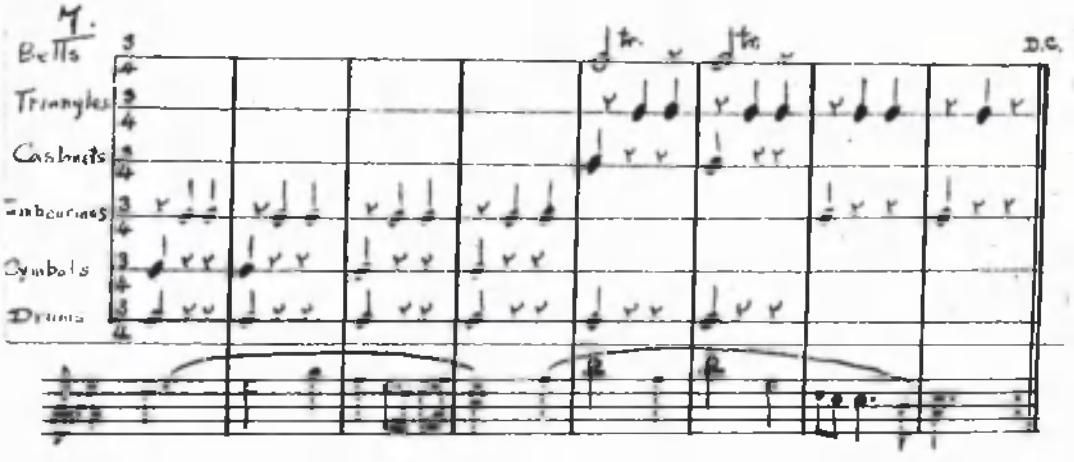

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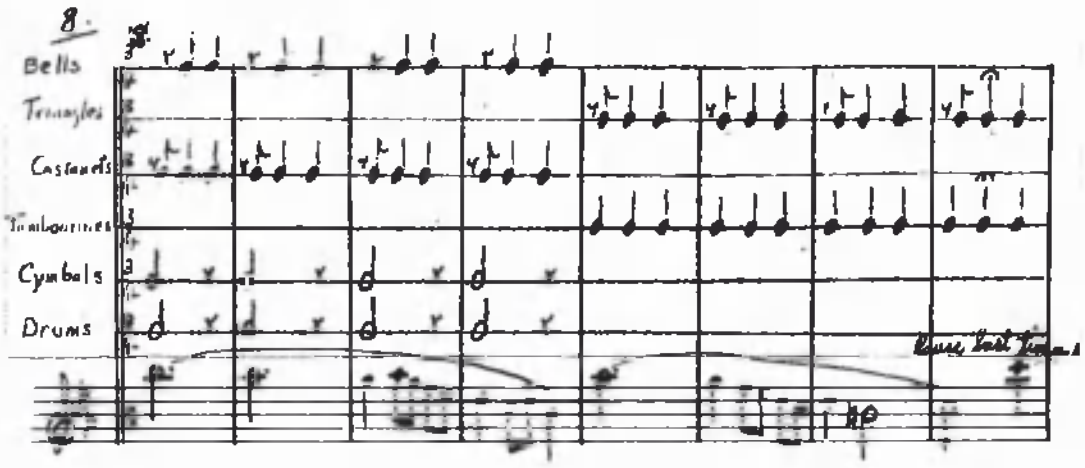
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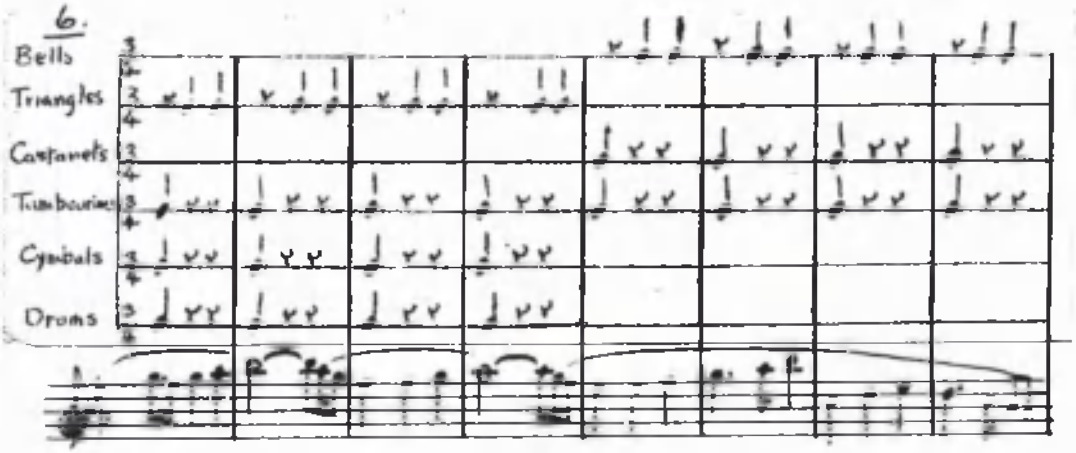
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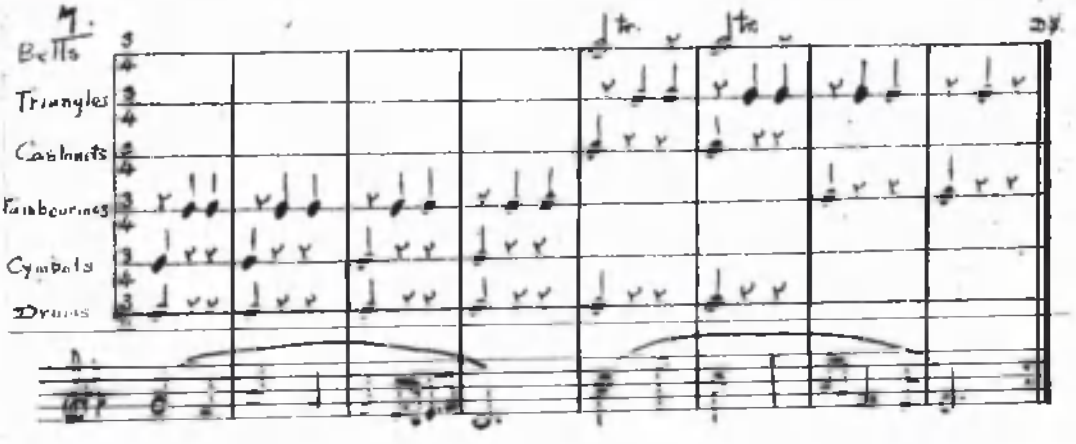
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CHAPTER III

MUSIC-TEACHING IN RELATION TO THE RECAPITULATION THEORY *

All educationists are familiar with the Recapitulation Theory, or, as it is sometimes called, the Culture Stages Theory. This theory, which seeks to "parallel the development of the individual with that of the race," and holds that each child should recapitulate in his own experience the successive cultural experiences of the race, was foreshadowed by Herbart, and is thus formulated by his disciple, Ziller:

> "Every pupil should pass successively through each of the chief epochs of the general mental development of mankind suitable to his stage of development. The material of instruction, therefore, should be drawn from the thought material of that stage of historical development in culture which runs parallel with the present mental stage of the pupil". †

This Recapitulation Theory has been subjected to much criticism, and, indeed, like analogies and allegories, it must not be stretched too far, or it will break. However, as a guiding principle in pedagogical matters it has its value, in that it encourages us to consider the subject-matter from the historical point of view.

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* From an article published in "Music in Schools" (Novello) May, 1939.

† Quoted by Graves in "A Student's History of Education."
New York: The Macmillan Company, 1926.

The late Sir John Adams used to remind his pupils that the verb "to teach" requires a double accusative or has two objects, and that, for example, "to teach John music" we must know not only all about music, but also all about John. But the Recapitulation theorist would say that this is not so simple as it looks. To study a book on the theory of music and a book on boys, and then to expect to be able to "teach boys music," is (in the classical example) like looking up in an encyclopaedia the article on "philosophy" and the article on "China," and expecting to be in a position to write an article on "Chinese philosophy." He would add that, in order to understand John in his relation to music, and to know how John will react at various stages of growth to the various phases of an art like music, one must study the reactions of John's ancestors throughout the ages to this art, and note the order in which the various aspects of music appeared in the history of the art. This historical approach to music will guide the teacher in drawing up a scheme of work, as it will indicate the order of priority of interests in the various aspects of the art, which the normal child is likely to follow.

In the light of the history of the musical art, let us consider a few of the implications of this theory, and see how they affect the teacher of music in schools.

The Three Stages in Musical History

The history of music, which is simply the history of the reactions of human beings throughout the ages to music in its various aspects, has sometimes been divided into three stages:

(a) The Drum Stage (Rhythm);
(b) The Pipe Stage (Melody);
(c) The Lyre Stage (Harmony).

(See "The Scope of Music", p.30, by Percy C. Buck, Oxford University Press, 1924)

This would imply, then, that the young child, like his far-off adult ancestors, will be interested primarily in the rhythmic aspect of music rather than in the melodic aspect of music. Hence, we should not expect him to sit still, like the modern man, during the performance of music, but should rather encourage him to give outward expression to his rhythmic impulses by allowing him to beat time, clap, march, or take part in rhythmic games or percussion-band work. For, as the old tag says, "No impression without expression." The third or Lyre Stage reminds us that the aim of every child should be to take his share in organized music-making, either in orchestra or choir.

Music as an Oral Language

A long oral stage in music, during which all music was handed down orally from generation to generation, preceded the present symbol stage. Hence, much rote-singing should precede note-singing. This is sometimes forgotten by the staff enthusiast in the Infant and Junior classes, with the result that, in the matter of vocal expression or song-singing, some classes never seem to get going at all. The first care of the child - and he will see to it himself if he only gets the chance - is to get hold of a good working vocabulary, and this applies to music as well as to language. This oral language is the foundation on which the teacher must raise the superstructure of the written language. To concentrate on the latter to the neglect of the former is to build on sand.

Sol-faing

The first great step forward in the noting of music came with the invention of the sol-fa syllables about the year 1100. It was not till several centuries later that the first crude attempts to represent pictorially the sounds in the tonal system crystallized into the complicated system of staff notation that we know today.* No greater mistake could be made than to imagine that the sol-fa syllables were the invention of Miss Glover of Norwich or the Rev. John Curwen of

*"With the 'Ars Nova' period of the 14th century the system (of staff notation) grew into something colourably like that of to-day". *Oxford Companion to Music*. pp 618-19.

Plaistow. Hence, every child should go through a long stage of sol-faing before his view of music is obstructed by that (to him) five-barred fence which we call a stave. For, until the child is perfectly familiar with the sol-fa syllables, the stave must be regarded as an obstruction and not as a pictorial aid.

Sight-singing - Stepwise and Chordal Progressions

In examples of early music, and indeed in all vocal music, there is a great preponderance of stepwise progressions over chordal progressions, the latter belonging properly to the harmonic and instrumental era.

Hence, in teaching sight-singing we should not begin with chords. At the same time, we need not confine the children exclusively to stepwise progressions, as this is bound to lead to monotony. An occasional leap is quite in keeping with the vocal tradition, and will not give the child much trouble, provided that it does not violate the laws of melodic progression.

The Laws of Melodic Progression

The laws of melodic progression were formulated by theorists and practitioners of the Vocal Era in the interests, no doubt, of the performers, and they were observed by the composers of the day. These laws were really based on an observance of the natural tendency

of the human voice with respect to certain intervals and progressions. But the only place today where they exact a certain amount of respect is in the university examination hall. This is a pity, as children of today learning to read are in much the same position as adult readers of, say, four or five hundred years ago, and, when dealing with beginners, the natural tendencies of the voice should be respected. Many of our artificially constructed sight-readers are crammed with unvocal and forbidden progressions. If one must provide synthetic foods for growing children in the form of artificially constructed sight-reading exercises, one should first of all make a close study of the Laws of Melodic Progression. But better it were if the editor of such music readers should seek to provide his musical fodder from the rich harvest of classical and folk music of all ages and all countries.

Leger Lines and Key C

Leger lines are always a source of trouble to beginners. Anyone who has done much music-writing will surely agree that the C clefs were used in the olden days of the music-copyist simply in order to avoid leger lines.

In the early stages of sight-reading it is especially necessary to avoid leger lines. Yet, when we start with Key C in the introduction to staff sight-reading, we

are asking children to find their tonal bearings from a tonic which, when present, occupies a leger line, and, when absent, presupposes a leger line.

Part-Singing - Canons

"Strict canon, in which the voices imitate each other exactly and for long stretches, is an older device than free imitation of a fragmentary kind"* Hence, the introduction to part-singing should be by way of round-singing and canon-singing, to be followed later by descant-singing. Further, care should be taken to see that the descant does not belie its name, but is a real "cantus" or tune, and not simply an alto "part" transposed an octave higher and bolstered up by a piano accompaniment.

Parts are always more difficult to grasp than wholes. That is why rounds, canons and descants, with their emphasis on whole tunes, are easier to master than alto "parts" with their emphasis, not on the horizontal line of counterpoint, but on the vertical column of harmony.

Counterpoint and Harmony Teaching

As counterpoint preceded harmony, so, today, counterpoint teaching (not of the academic type but

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*Prof. E.J.Dent in The Listener, June 10,1936.

rather of the trial and error type) should precede harmony teaching. But, as the laws of counterpoint and harmony were formulated as a result of experiments with voices in combination, so these laws should be taught to pupils of today through their own voices and not through the keyboard or through rules of figured bass.

On the keyboard, or on paper, there is no natural compulsion to resolve a dominant seventh in the orthodox manner, the leading note rising and the seventh falling. In the human voice there is. That story of Mendelssohn hurrying downstairs from his bedroom to resolve a dominant seventh, which someone had struck on the piano and left unresolved, does not disprove this. It merely shows that Mendelssohn, like a true musician, had taken that poor unresolved discord to heart. Others, unfortunately, are more heartless in these matters. That discord would awaken no sympathetic resonance in their heart, for they have not yet taught their heart to sing.

It cannot be emphasized too strongly that music is primarily a vocal art, and, therefore, all music-teaching should have a vocal basis.

The motto of the modern teacher of counterpoint and harmony, as it was the guiding principle of the early experimenters in counterpoint and harmony, should be - Solvitur Cantando.

CHAPTER IV

THE APPROACH TO THE SOL-FA SYLLABLES *

Suppose you had to teach someone to build a house: where would you begin? With the bricks and mortar? Surely not! Bricks and mortar must remain mere bricks and mortar to the beginner, until he knows their place and function in house-building. And he cannot possibly know this until he studies their place and function in actual houses. So, if you would teach house-building, you must start from the idea or concept of "house," and come down from this to the bricks and mortar.

Likewise, suppose you had to teach children to read music by means of the sol-fa syllables, where would you begin? With the bricks and mortar of music, i.e. the scale degrees and intervals with their names, "d s," "d s m," "d d' s," etc.? Surely not! Scale degrees and intervals must remain mere scale degrees and intervals to children, until these children know their place and function in melody-building. And they cannot possibly know this until they study their place and function in actual melodies. So, if you would teach children to read melodies from the sol-fa syllables, you must start from the idea or concept of melody, and come down from this to the scale degrees and their sol-fa names.

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* Reprinted from an article in "Music in Schools", March 1938, Novello & Co.Ltd.-

Memory Tunes

Most children know dozens, perhaps hundreds, of tunes - nursery rhymes and jingles, hymn tunes and folk-songs - and these will provide us with a point of contact, from which we may venture out from the concrete and familiar land of melody into the abstract and unknown region of symbols, with the full assurance that we are carrying the children along with us at each step. Ask the children, then, to sing these familiar tunes to the sol-fa syllables from the blackboard or from pattern, and try to get them finally to sol-fa them from memory. They need be told simply that they are learning to call the notes by their proper names. Even young children are capable of sol-faing from memory dozens of these little tunes, for the process of memorizing to the sol-fa syllables is cumulative in effect: the more tunes they learn to memorize, the easier the process becomes. Here, for example, is a tune which most children know, and which they will find little difficulty in memorizing to the sol-fa syllables:

Key E♭

{d :d | s :s |l :l |s :- |f :f |m :m |r :r |d :- }

{s :s | f :f |m :m |r :- |s :s |f :f |m :m |r :- }

{d :d | s :s |l :l |s :- |f :f |m :m |r :r |d :- ‖

Let us suppose the children have memorized this. In doing so, they have learned to sol-fa the complete hexachord of Guido, "d" to "l", and the interval "d s" in this particular context.

Analysis

We may now proceed to analyse this tune from the point of view of scale degrees associated in memory with their sol-fa names. This step, from the whole to the part, from the concrete to the abstract, is a most difficult one for children, and much practice should be given in it with different memory tunes.

First of all, write down all the notes that are used in this tune, explaining, of course, that d stands for doh, s for soh, etc. These notes will all be found in the first line - d s l s f m r d. By means of questioning, let the children find out their position with regard to each other from the point of view of pitch or height, remembering to have patience here, as differences in pitch are not actually differences in height. However, the children will probably feel that in this tune "l" is the highest note, and that from "l" the tune descends step by step to the note from which it started, namely "d". After the children have felt this for themselves, let them see it on the blackboard, by making a stair modulator, and pointing the tune from it:



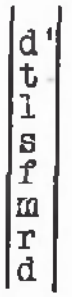
Synthesis

These "products of analysis" - d, s, etc. - are now shown in their proper relation to each other in the scale ("scala" means stair or ladder) of sound; and we have arrived at the abstract idea of scale or modulator, by a process of analysis, from the concrete idea of tune. But analysis and synthesis are complementary processes which illumine each other, and so the children should be taught to get back to the tune again, by a process of synthesis, through pointing to the syllables on the modulator.

We have thus proceeded from the known tune to the unknown sol-fa syllables, from the simple and concrete melody to the complex and abstract scale or modulator and back again, i.e., from house to brick, and from brick to house.

Of course, it must not be thought that the children will arrive at the idea or concept of scale, or will become familiar with the sol-fa syllables, from this one tune. The above process should be gone through with dozens of little tunes, so as to show the scale degrees in as many different contexts as possible. The children could each have their own modulator and point while singing these memory tunes; and the modulator could be extended upwards and downwards, as necessitated by the analysis of these memory tunes.

After much practice in this, the children should be introduced to the more abstract sol-fa ladder modulator:



Tonic Sol-fa Notation

Then, fluency in the use of the syllables should be gained by practice in reading from the tonic sol-fa notatio Much has been said against the use of the tonic sol-fa notation in schools, but much more could be said in favour of its use with young children. We need only note here that the criticism of this notation as a needless preparato discipline for reading from staff does not usually emanate from the classroom. Most music teachers in secondary schools would have little cause to worry if the incoming pupils of eleven to twelve years of age could not read staf at all, provided that they could read fluently from tonic sol-fa notation. The writer, for one, would regard the visual problems of staff, which he would have to tackle, as of little account compared with the aural problems of sol-faing which had been successfully mastered in the elementary school; for his experience is that most of the time devoted to staff reading is taken up with aural problems and not with visual problems.

The proper stage to begin reading from the staff notation will vary from school to school, but in every case it will be found that this stage is reached only when the children are thoroughly familiar with the sol-fa syllables. And it is doubtful if this thorough familiarity with the sol-fa syllables will ever be attained by school children without the abundant practice in the use of the syllables which comes from extensive and intensive reading practice in the tonic sol-fa notation.

On the following pages we give examples of cyclo-styled sheets of Spelling Tunes (mostly familiar nursery rhymes) used with Infant and Junior Classes.

The titles were omitted from these Spelling Tunes on purpose.

1. (Key F)

s .l s f	m f s	r m f	r m f
.....		d m	r d

2. (Key D)

d d .r	m d -	d' d'	d' s -
f f f	m s m d	r r s	s : s
d d .r	m d -	d' d' d'	d' s -
f f f	m s m d	r d	d -

3. (Key E)

d d m	s, s, l,	d .td r	m -
f f l	s m r d	r .mr d	l, -
d .dd m	s, s, l,	d .td r	m -
f .sl d'	s m d r	m .fm r	d -

4. (Key G)

m .rd	l, d r	m - -	s - -
m .rd	l, d r	m - -	- -
m s - s	l .l l	d - r	m -
mm s m r	d l, s,	l, - -	d - -

5. (Key G)

d .rd	m - m	r .dr	d - -
m .fm	s - s	f .mf	m -
d d .rd	m - d	t, - d	r - -
d - r	m - -	r - m	f -
f s d r	m s f	m - r	d - -

6. (Key F)

d d - d	d - l	s - f	m - -
r m f	m - -	r m f	m -
d d - d	d - l	s - f	m -
s l s f	m r d	r - -	d -

7. (Key E)

d-m s-d' s-m	d-- t-d	r-r d-r	m-m
.....		r-f m-r	d--

8. (Key G)

dr m-m m-d	f-f f-r	m-m m-d	r-r r-
.....	fsf	m-d r-t,	d-- --

9. (Key G)

s, d r m f	s l f	m r	d .
Repeat.....			
s .f m s	f m r	s .f m s	f m r
d r m f	s l f	m r	d .

10. (Key E)

m s f s	m s r s	m s f r	d t, d -
Repeat.....			
d' t d' s	f r m s	d' t d' s	f r d -
Repeat.....			

11. (Key G)

m d f	m d r	mfsm f mf	s s, d -

12. (Key G)

|d r m d |d r m d |m f s - |m f s - |
|sl sf m d |sl sf m d |d s, d - |d s, d - |

13. (Key G)

s l s f	m d d -	r m r d	t, s, s, -
s l s f	m d d m	l, - t, -	d - - -
m d f r	m d d -	f l, r d	t, s, s, -
m d f r	m d d m	l, - t, -	d - - -

14. (Key A)

d d d f	m s m d	s, s, s, d	t, r t, s,
d d d f	m s m d	r f r t,	d - d -
m s m d	m s m -	r f r t,	r f r -
m s m d	m s m -	r f r t,	d - d -

15. (Key F)

|s m s |s m s |l s f m |r m f |
|s d ddd |drmfs |s r r f |m r d |

16. (Key A)

ss|d d ss|d d rr|m m rr|m m
s |s - s |s - sf|m m sf|m m

17. (Key A)

s, |dddd m |d d m |rr r m |d -
Repeat.....
s |m - s |m s |fff s |m -
Repeat.....

18. (Key D)

s |d' t f |l s m |s f r |f m
s |d' t f |l s s |s l t |d' -

19. (Key G)

|s s m m |f mf r r |m mm s m |r - -
s,|l, t, d s, |l, t, d f |mmm r rr|d - - -|

20. (Key C)

|m - s |f - l |s l t |d' - - |
|m - s |f - l |s m d |r - - |
|m m s |f f l |s l t |d' -
r' |m' - d' |f' - m' |r' d' t |d' - - |

21. (Key G)

d r m	s, - s,	f - m	r - -
d r m	s, - s,	l, - -	d - -
d - m	s - m	l - f	s - m
d - m	s - f	m - -	s - -
l - f	r m f	s - m	d - -
d r m	s, - s,	l, - -	d - -

23. (Key E)

|d m s |s m s |l d' l |s m d |
|d m s |s m s |l - - |d' -
d |d m s |s m s |l d' l |s m
d |d m s |s m s |l - - |d' - - |

CHAPTER V

A COMPARISON OF THE PRINCIPLES UNDERLYING THE TONIC SOL-FA AND THE STAFF NOTATION

Both tonic sol-fa notation and staff notation are musical notations but they are based on totally different principles. They can by no means be regarded as interchangeable. This means, then, that our method of approach to these notations will be different in each case and also that there may be an age when the child is mature for one notation but not for the other. Each notation may have its place in the educational scheme, but we shall not understand what this place is until we make a psychological analysis of the principles underlying these notations. We propose, therefore, to discuss briefly the respective merits and demerits of these notations and we shall deal first with the pitch aspect.

Until quite recent years practically all Western music has been based on a definite system of tonality, of specific relationships between the notes of the scale and between one scale series and another. Where this relationship or relative pitch aspect of music is not grasped by the mind, the music must remain meaningless, without relation to the mental content of the listener. And it is just here, in the indication of relative pitch, that the weakness of what is affectionately, but not quite accurately, known as the "old notation" is revealed. The principle underlying the staff notation is that of a system of symbols or

lozenge-shaped notes arranged in spatial order on lines and spaces. This system makes its appeal primarily to the eye, the sense organ, which today is probably most generally and most highly developed.

The principle underlying the production of pitch in musical instruments is also, for the most part, one of spatial relationships. To produce the correct sound, one must know exactly where that sound is produced on the instrument. On the most mechanical of all instruments, keyboard instruments, the problem is simply one of correlating a certain order of spatial relationships on the staff with a corresponding order of spatial relationships on the keyboard. Here, the whole thing, so far as pitch is concerned, can be worked out in spatial terms in the light of common day. It should, of course, be said that some instruments require a good deal of mental checking or what is called "ear work". But, in the main, because of the technique of staff reading and the technique of instrumental playing, the staff notation is the ideal one for the instrumentalist.

When we come, however, to sight-singing or reading proper, we find that this system of notation based on spatial relationships does not work so well. The reason, as we have already pointed out, is that spatial relationships, based on sight or touch, do not enter into the production of pitch sounds in the voice. We cannot tell where a certain pitch sound may be produced in the larynx. Here, it is rather a question of delicate muscular tensions

within the voice-box itself, and these require to be so finely adjusted that we can produce the required sounds only by the aid of a highly developed muscular sense co-ordinated with a highly developed relative pitch memory by means of relative pitch syllables like the sol-fa names.

Now, in the staff notation we have fixed letter-names and fixed positions on the stave to represent sounds which may be fixed or absolute in the physical sense, but which, as we have seen, are not fixed or absolute in the psychological or musical sense, i.e., in their mental effects. The same pitch sound may represent any scale degree.



Thus, before the singer (without absolute pitch) can produce the required sound, he must first translate the fixed pitch staff symbols into the relative pitch sol-fa syllables. For, in the end, the staff notation is a fixed pitch notation used to represent sounds which are meaningful only when apperceived in their relative sense, and the movable doh method of singing from staff does not alter this fact but merely serves as the only method of overcoming it.

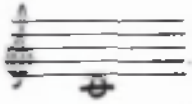
In mathematical language we might say that the relative pitch element in staff notation is a function of a keynote, which is a function of the key signature, which again is a function of the clef. And, indeed, in all

cases of modulation without change of key signature, the relative pitch element in staff notation is not even a function of the clef, key signature or keynote, but rather of all these plus the chromatic symbols which change the centre of tonality.

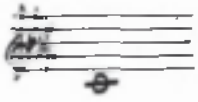
Thus,



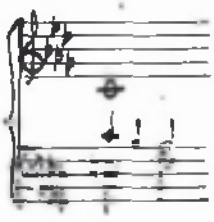
means nothing whatever to a musician so far as pitch (relative or absolute) is concerned.



means something definite, viz., Middle C and, in the absence of any key signature, the tonic of the key of C major or the mediant of A minor.



means Middle C, the leading note of D major, or the supertonic of B♭ minor



means Middle C, the dominant of F minor.

Again, the chromatic element in staff notation is represented by external signs (♭ 𝄫 ♮ ♯ 𝄪) placed before the notes, another spatial arrangement like the arrangement of the clef and key signature. That is to say, the chromatic element is not incorporated in the note itself, as it is in the sol-fa syllables (f fe s se l la s), where the "altered" sound in the music has its psychological counterpart in the "altered" shade or tone colour of the syllable name. (The word "chromatic" means "coloured"). At the same time, these staff chromatic signs, being placed before the notes and not being in or of the notes

themselves, require to be contradicted, should the diatonic note reappear in the same bar. Again, sometimes a natural sign (♮) raises the pitch a semitone and sometimes it lowers the pitch a semitone and sometimes it merely acts as a courtesy sign to remind the reader that, although a note was "altered" in the previous bar, it now assumes the status quo. Thus, while there is only one way of writing this simple phrase

‖ d.m : s.fe | s.f : m ‖

in the sol-fa notation, there are fifteen ways of writing it in staff in the Treble Clef alone, and if we add to this the Bass Clef we get thirty ways of representing this short phrase. How could it be otherwise where fixed pitch symbols are used to represent relative pitch sounds!

Moreover, when the child has grasped all the intricate details and learned to make allowance for all the anomalies of the staff notation, and is at last able to translate the fixed pitch staff symbols into the relative pitch sol-fa names at any required speed - a visual spelling process which may take years of study - he has merely arrived at the stage from which the sol-fa reader starts. For he has still to deal with the translation of these sol-fa syllables into the required sounds, a real psychological problem of visual-into-auditory, compared with which the translation of visual staff symbols into visual sol-fa names is comparatively easy.

Coming now to the tonic sol-fa notation, we find

that the problems of clefs, key signatures and modulation do not enter into the question at all. The musical editor has smoothed out all these difficulties for the reader, who is left simply with the relative pitch elements, as shown by the sol-fa syllables. These relative pitch elements in sol-fa notation reside in the characteristic shapes and names of the notes (d, r, m, etc.), and as these letter-shapes are quite familiar to all children through language training, their message to the eye is direct and unequivocal. No child ever misnames a sol-fa syllable in reading. Thus, the sol-fa reader is freed from the necessity of translating fixed pitch symbols into relative pitch symbols and can, therefore, concentrate on the problem of correlating relative pitch syllables with relative pitch sounds. This is very important for the beginner in music reading, as it enables him to concentrate on each separate note, and does away with the danger of "laa-ing" or guessing, which is so fatal in a language in which each element has one value and one value only. For, in an art like music, which is based on a definite system of pitch relationships between the parts, and in which all the parts hang or fall together, the insistence in the early years (and this has reference to mental rather than to chronological age), should be on the observance of the exact aural relationships between the sounds themselves, as in sol-faing, rather than on the observance of the exact spatial relationships between the note symbols on the

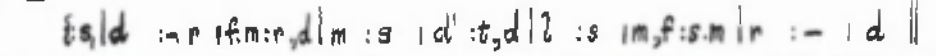
stave as in staff reading And anything which aids the exact observance of pitch relationships or ear-work and economises visual effort or eye-work should be welcomed as a useful pedagogical tool in the early stages of reading.

So, the chief virtue of tonic sol-fa notation is that it provides for beginners a synthetic approach to music reading, and in the early stages music reading should be approached synthetically, for each pitch element in the notation has one value, and one value only, and the whole hangs together or falls with the parts. The pictorial basis of the staff system of notation, on the other hand, encourages an analytic approach to music reading. The relative pitch element in the staff notes is apperceived through the relationships of notes to each other and to the tonic on the stave.



Thus, it is the very absence of this pictorial element in sol-fa notation which is its chief merit from the point of view of the beginner in music reading.

Key E



For pictorial or graphical representations, without the power of apperception or interpretation gained through first-hand experience of the subject-matter over a long period, must necessarily remain vague and misleading and must encourage the formation of bad habits and wrong

associations.

Thus, by means of sol-fa notation even young children can attain a good speed in reading music in all keys and in a variety of time and rhythm. Chromaticism is easily mastered, modulation presents very little difficulty, the minor mode follows naturally from the major mode, and compound time is no more difficult than simple time.

(a) ‖m :f :s |s :l :t |d' :- :- |- :- :- ‖ (b) ‖m :f :s |s :l :t |d' :- :- |- :- :- ‖

When we consider that in typical child music, like nursery rhymes, more than fifty per cent of the tunes are in compound time, and that modal music, chromaticism, modulation, variety of time and intricacy of rhythm are essential features, it is surely putting the cart before the horse to insist on staff notation from the beginning, with the inevitable result that the singing lesson is taken up with visual notational problems, and the child may leave school with a very meagre vocabulary and before reaching the minor mode, chromaticism, modulation or compound time.

On the other hand, the aural experience gained in the fluent reading of sol-fa notation can be drawn upon for the mastering of the visual problems of the staff notation, and thus a solid foundation in ear language may be laid, on which the superstructure of the eye language may afterwards be safely built. In the end, the staff notation owes its unique position as a singer's notation to the fact that it can, with the aid of the movable doh system of sol-faing, be made to incorporate the aural

advantages of the sol-fa system while still preserving the visual advantages of the staff system. But, psychologically it must yield priority to the sol-fa notation in the learning process.

But, now we must openly admit that, as the chief merit of sol-fa notation from the point of view of the beginner is its lack of the pictorial element, so its chief defect from the point of view of the reader, who wants to extend his eye power over the printed page, is just this lack of the pictorial element. From the nature of the notation, the sol-fa reader must concentrate on letter-shapes, and no matter how much he practises he cannot extend his eye span and his reading rate beyond a certain limit.

Whether the music rises or falls, he must move step by step along a straight line of letter notes. Thus he cannot see the wood for the trees,

key F || .d : m .d : s .d | d' t, l : s, l, s, f : m, f m, r | d.

just as the staff reader, who has not mastered the movable doh system of staff reading cannot see the trees for the wood.



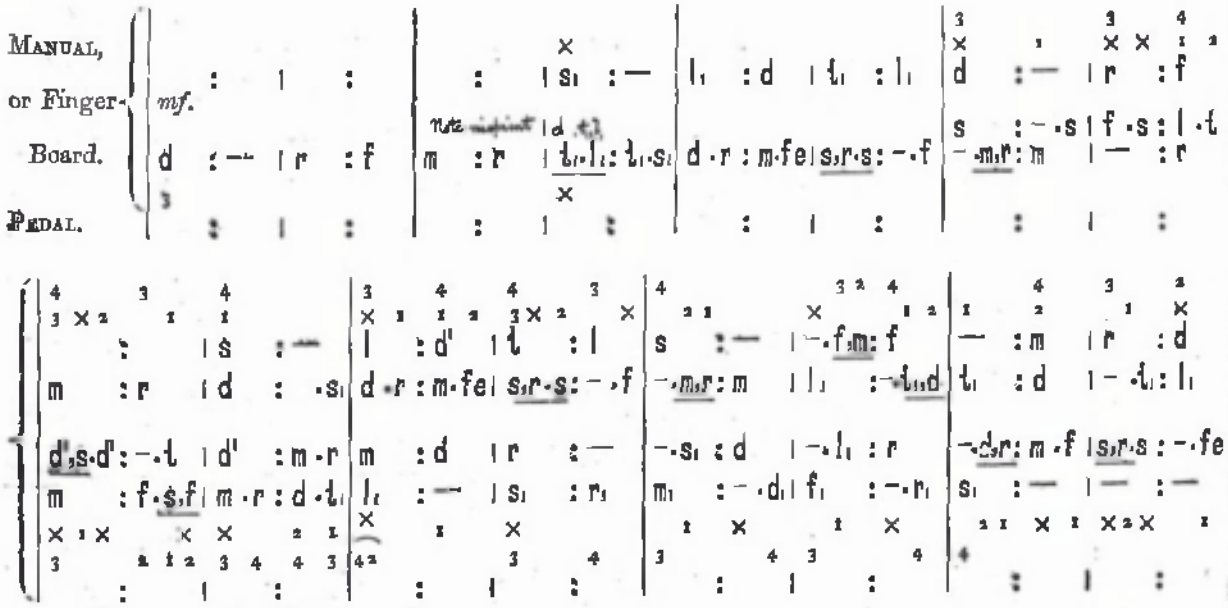
Reading for the sol-faist must remain to the end more or less a synthetic process. No matter how much he practises he must still move along like a horse in blinkers, never perhaps making a false step or a mistake in detail in

his somewhat limited range of vision, but still never taking in his surroundings, and never attaining to that freedom and eye command which practice in staff reading ultimately develops.

158. FUGUE. *J. S. Bach*

N. B. This piece can be played on instruments either with or without Pedals. In the latter case the two lower lines must be played with the left hand. For this reason no fingering is given in the left hand when the Pedals are played.

KEY E.

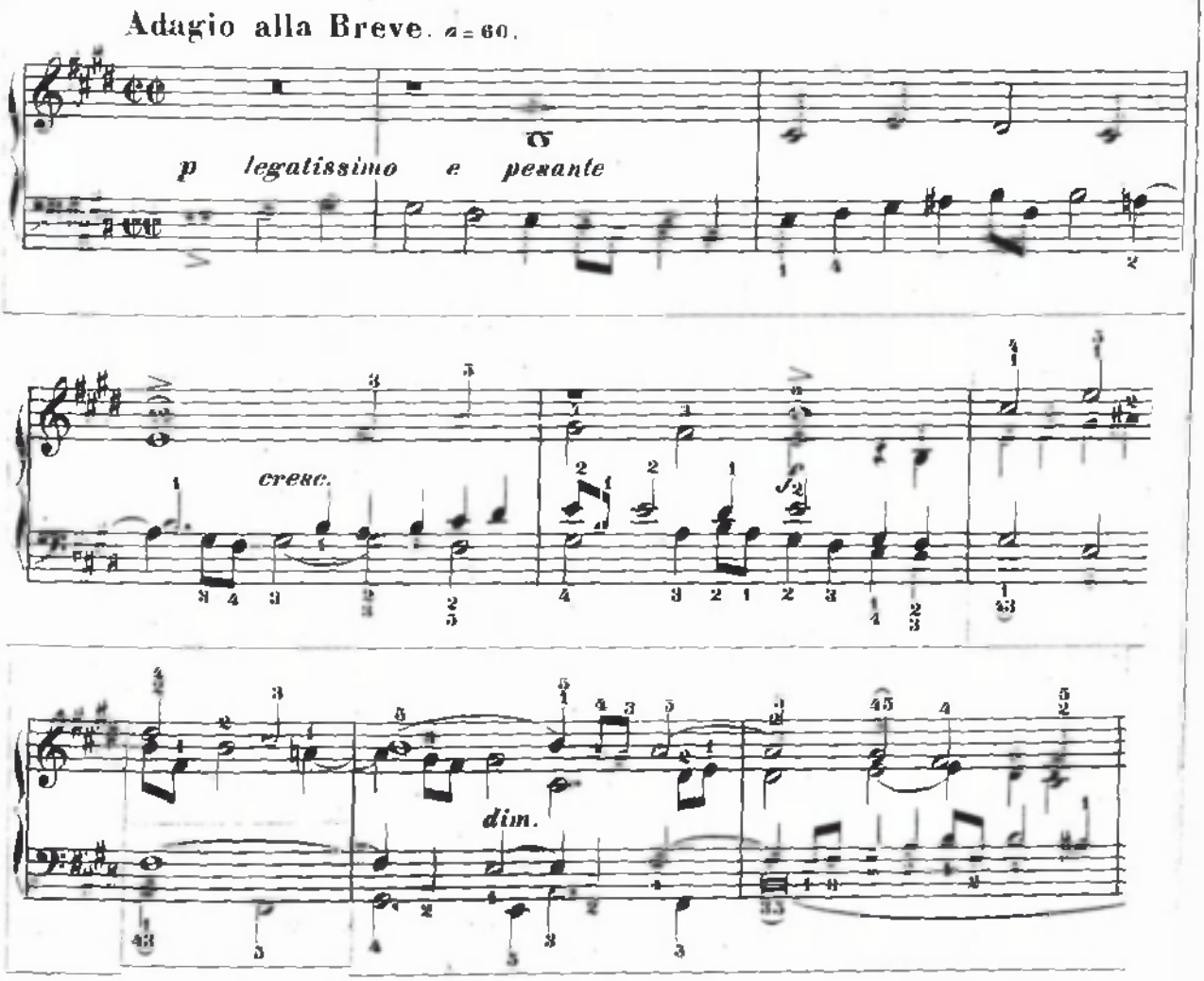


Harm. and Org. Book.

From "The Harmonium and Organ Book for Tonic Sol-fa Pupils", by John Curwen and Ebenezer Prout. 1863. Tonic Sol-fa Agency, London.

While for the movable doh staffist, who is not troubled with note shapes like d r m f and can therefore concentrate on note relationships on the stave, reading becomes with

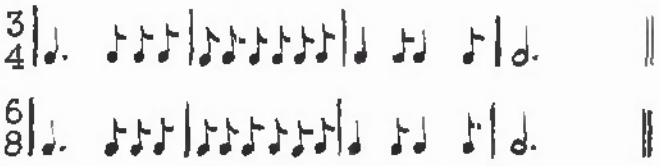
practice a highly developed analytic process, in which he takes in at a glance whole melodic lines, chords and contrapuntal passages in different voices and staves, analysing the details as he goes along - this process of analysis being slow and uncertain at first, but possessing great potentiality of development, and being capable of becoming almost photographic in speed and in power over detail.



To sum up, we might compare the sol-fa notation to a bare list of statistics and the staff notation to the graphical presentation of this list of statistics. No one will deny that, to one who can interpret graphs, the graph of statistics conveys much more accurate detail in a shorter space of time than the list of figures on which the graph is based. But at the same time it must be admitted that, if the meaning of the statistics cannot be apprehended from the bare figures themselves, it would be quite futile to expect their meaning to be apprehended from the graphical presentation of these figures. Or, to use another analogy, we may regard sol-fa as the arithmetic of musical notation and staff as the mathematics of musical notation; and the same order in teaching should apply to the one pair of cognate subjects as to the other.

We do not wish to enter deeply into the respective merits of the system of time notation in sol-fa and staff, but we would point out that the staff time system is purely graphic and symbolic, and has therefore the merits and the defects of the staff pitch system. For example, a four-beat note (𝅝) occupies about the same amount of space as a quarter-beat note (𝅘𝅥𝅯). The beat itself may be represented by almost any note, e.g. 𝅗𝅥 , ♩ , ♪ or by a dotted note, e.g. 𝅗𝅥. , ♩. , ♪. . A dot is sometimes equal to two beats as in 𝅝. , and

sometimes equal to a quarter-beat as in ♪. . In a dotted crotchet (♩.) the dot represents a half-beat in simple time and a third-of-a-beat in compound time, while the same arrangement of note values within the bar may produce entirely different "mental effects" when prefixed by a simple or a compound time signature, e.g.



and

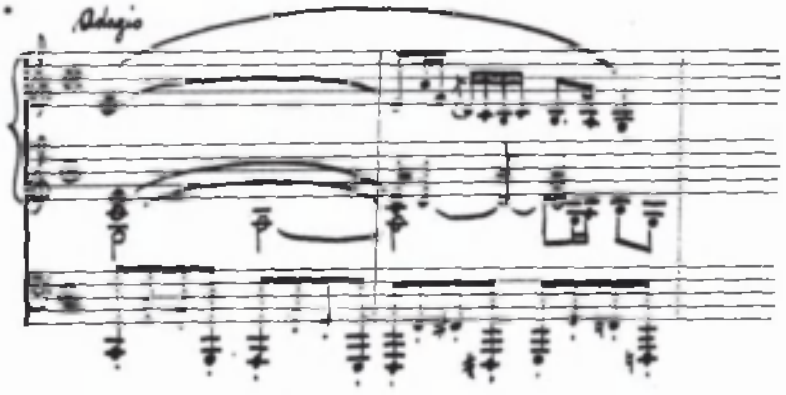
Young children notice absurdities more readily than adults, and it is the chief merit of the tonic sol-fa time system that such absurdities have no place there.

This much maligned tonic sol-fa notation is based on a definite system of spatial relationships, and is thus very easy of apprehension; for time and space are closely related in the mind. In our daily life we are constantly interpreting the one in terms of the other.

So, in the tonic sol-fa time system, a four-beat note, |d :- ⊦ :- | occupies four times as much space as a one-beat note |d ⊦ . And, what is very important when dealing with children, each beat of the four-beat note is clearly articulated or jointed. That is, each beat has something to show for itself, so that the child can <u>see</u> as well as <u>feel</u> each beat of the note - a thing which is quite impossible in the symbolic staff time system, where the

time element resides in the note shape and not in the amount of space occupied by the note (𝅝 𝅗𝅥 ♩ ♪ 𝅘𝅥𝅯).

The importance of this articulation of the beats in a sustained note-symbol lies in the fact that a four-beat note, for example, is not in effect a note held on four times as long as a one-beat note. There is an inner life or pulse in a four-beat note, which the composer usually defines or articulates clearly in one or other of the accompanying parts or voices, and which is given expression where possible by the performer, and felt by the trained listener even in the absence of any accompaniment. Let any one sing the first bar of the melody of the "Air on the G String", and he will realise at once what is meant by this.



Now, in the early stages of sight-singing there is only one vocal line, so that it is essential to get the children to feel this inner pulse in the sustained notes, and there is no better way of showing this inner pulse on paper than that adopted by the tonic sol-faists.

d :-|m : f|s :-|l: t|d' :-|t :l|s :-|-:-‖

A note four times as large as a one-beat note will not do it; it must be a note occupying four times as much horizontal space and showing the four joints or articulations.

We need scarcely add that in this time system there are no anomalous pulse values - $\frac{4}{2}$, $\frac{4}{4}$, $\frac{4}{8}$ and $\frac{4}{16}$ time are all represented by the same four-pulse measure. That is to say, the sol-fa notation has a fixed-pulse system for the one thing that is fixed or constant in all music, namely the pulse or beat, and a relative pitch syllable system for the one thing that is relative in all music. Whereas the staff notation has a relative-pulse system for this same constant element in music, in which the pulse or beat value, e.g. 𝅗𝅥, ♩, ♪ or 𝅘𝅥𝅯 , varies in relation to the prefixed time signature, e.g. $\frac{4}{2}$, $\frac{4}{4}$, $\frac{4}{8}$ or $\frac{4}{16}$, and a fixed pitch letter or stave system for this one relative element in music, in which the mental effects of the staff pitch symbols vary in relation to a prefixed key signature and clef, and, in modulations, to all these plus prefixed chromatic signs.

Likewise, in the sol-fa time system there is no confusion of simple and compound times, and there are no tied notes and no anomalous dots.

However, we must freely admit that in the end the staff system of time notation is the ideal one, which all

children should be led up to from the tonic sol-fa time system. For, while the tonic sol-fa notation, with its series of external dots and dashes, demands little of the eye or the imagination, it fails, for this very reason, to develop in the reader any great perceptual power of the eye or of the imagination. Whereas the staff time notation, with its incorporation of the time element in the pitch element, and with its increasing demands on the eye and the imagination, tends to develop the higher and higher analytic powers of which the mind is capable.

The musical editor, in abstracting the relative pitch elements and setting these out in spatial order in an effort to assist the reader as much as possible, has actually done too much for the reader!

So we come back once more to the two processes of reading which we saw at work in the discussion of the pitch problems of sol-fa and staff notation, namely synthesis and analysis. And we come to the same conclusion here with regard to the time notation as we did with regard to the pitch notation. In tonic sol-fa time notation we have an excellently devised system for approaching music reading by means of synthesis; and in staff time notation we have an excellently devised system for cultivating music reading ability by means of analysis.

Yet, when all is said and done, children must learn to "creep afore they gang", and, from the point of view of beginners, there is no doubt as to the easier system of notation. Children in counting learn to deal with individual objects, (|d :- :- :- | = 4 beats) before they learn to deal with abstract figures (o = 4 beats). In fact, the ease with which the sol-fa notation is learned is one of the reasons why some educationists would forbid its use entirely. Their argument is tantamount to saying that if you do not allow children to sing from the sol-fa notation, but show them only the staff notation, then they are bound to learn to sing from the staff notation all the more readily. We would answer such arguments by citing the proverb about the horse and the well.

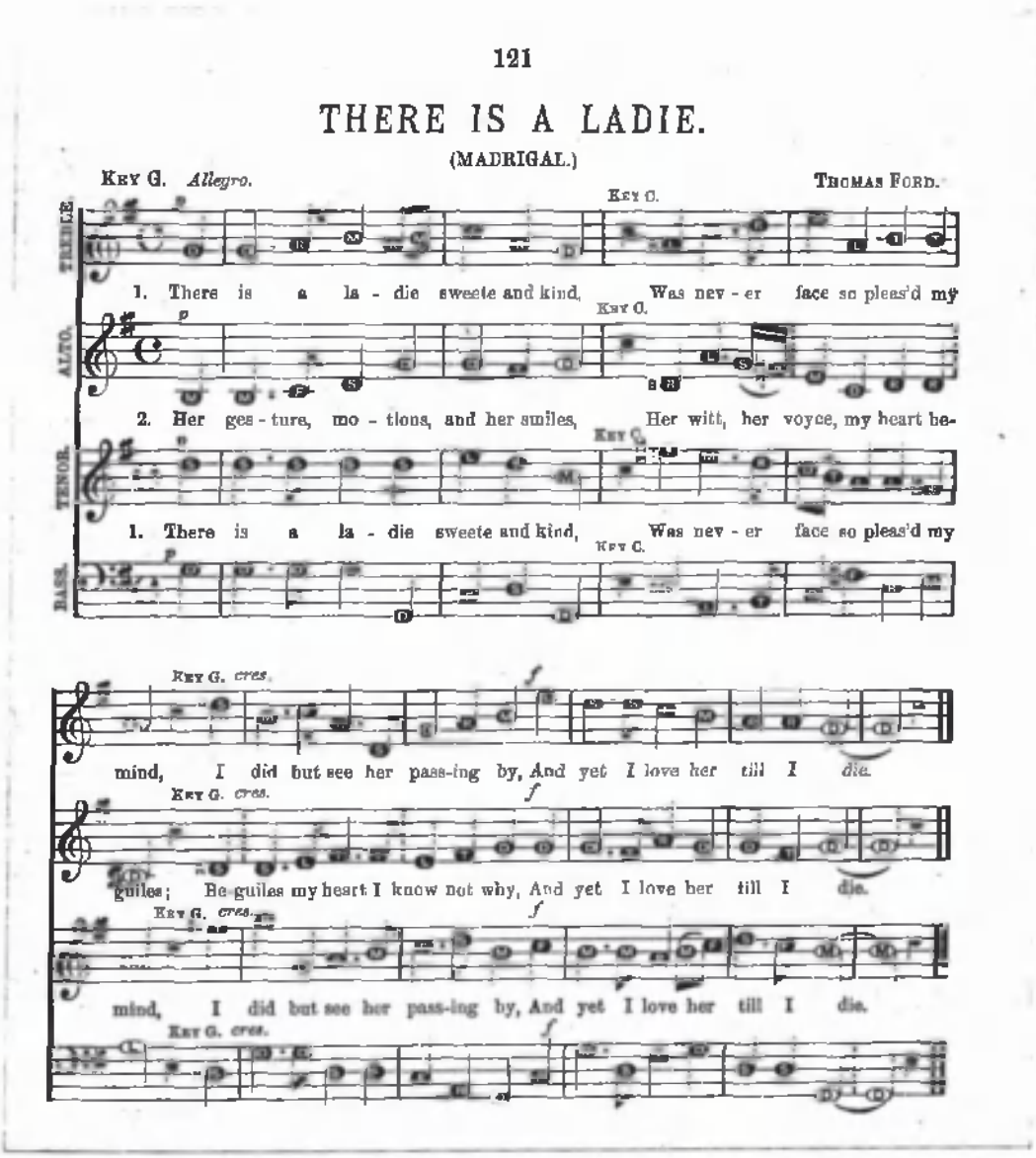
But, even assuming that the sol-fa syllables only, and not the sol-fa notation, are taught, it is very doubtful if these syllables will ever be mastered by the average child without the abundant scope for their use which is provided by the practice of reading from the tonic sol-fa notation. No doubt there are hundreds of thousands of adults who did not get the necessary eye-training in staff reading when they were young, and who are now quite content with the letter notation, and show no desire to learn the staff

notation. Middle-aged horses, which have already drunk from a shallow trough, and which can still satisfy their moderate thirst in this way, will feel no inclination to drink from a well, more especially if that well is as deep as the problems of staff notation undoubtedly are. We must not, therefore, prohibit the use of the trough and condemn them to die of thirst, but must just leave them to their old-fashioned ways. But we must see that the young colts, after preliminary practice with the trough, are trained to drink from the well too, for, after all, if the well is deeper, so also is the satisfaction to be had therein. Let us regard the two notations, then, not as antagonistic but rather as complementary systems, each with its own specific merits and its own specific method of approach, and each with its task to perform in the educational scheme.

NOTE ON COMBINED NOTATIONS.

Attempts have been made at various times during the last century to combine in the one notation the advantages of both the movable doh and the fixed stave or of sol-fa and staff.

Perhaps the most popular of these attempts was that made by Hamilton in his "Patent Union Musical Notation". We give examples of this below:



121

THERE IS A LADIE.

(MADRIGAL.)

KEY G. *Allegro.* THOMAS FORD.

TREBLE. ALTO. TENOR. BASS.

1. There is a la - die sweete and kind, Was nev - er face so pleas'd my

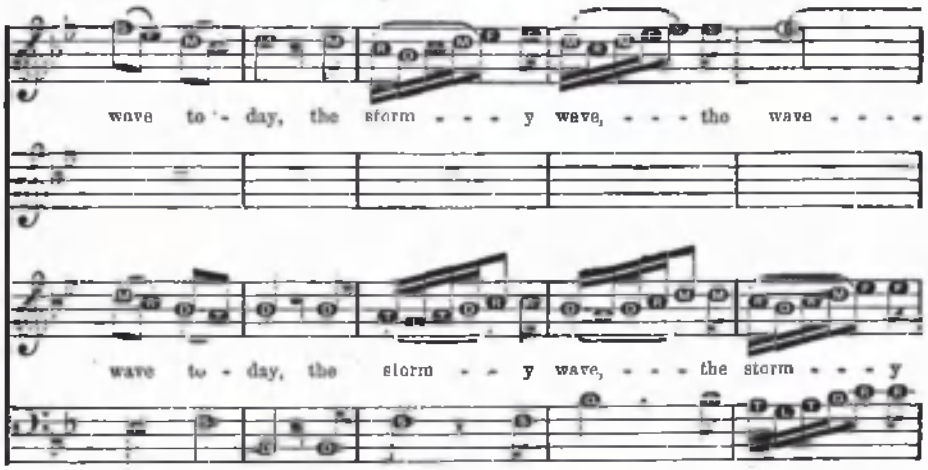
2. Her ges - ture, mo - tions, and her smiles, Her witt, her voyce, my heart be-

1. There is a la - die sweete and kind, Was nev - er face so pleas'd my

mind, I did but see her pass-ing by, And yet I love her till I die.

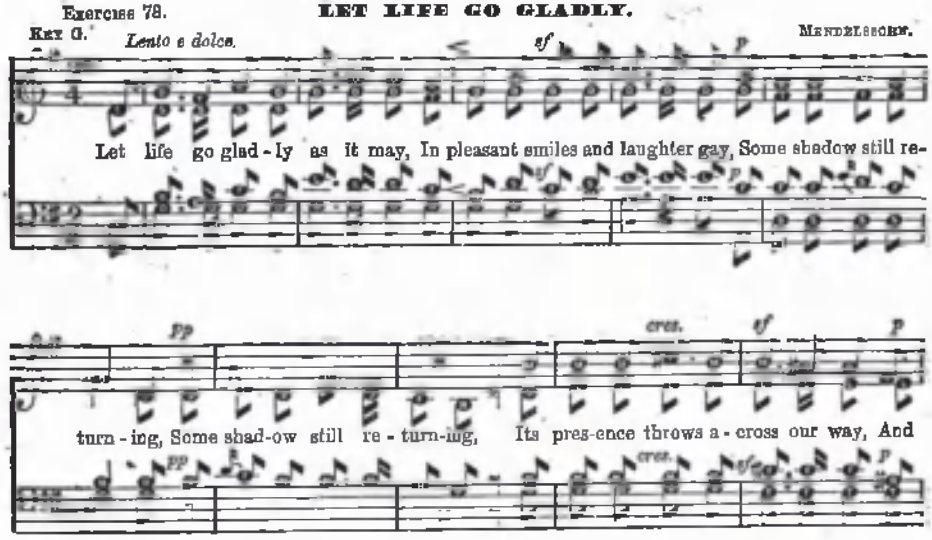
guiles; Be-guiles my heart I know not why, And yet I love her till I die.

mind, I did but see her pass-ing by, And yet I love her till I die.



Exercise 78. **LET LIFE GO GLADLY.**

KEY G. *Lento e dolce.* MENDELSSOHN.



(Glasgow, Wm.Hamilton, Music Publisher. 1871)

Such an attempt at mixing oil and water was bound to fail for the reasons which we have given above. If the eye is to take in note-shapes, i.e. letters like d r m, then these letters had best be placed in a straight line as in sol-fa notation. For the arranging of these letters in patterns on a stave makes their recognition much more difficult for the eye, more especially as the time element

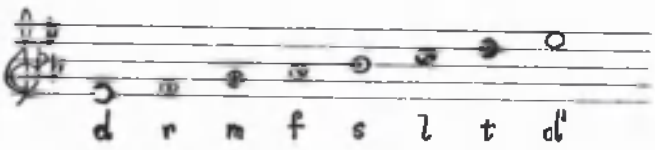
in this notation is not based on a spatial order as in sol-fa, and yet is not embodied or incorporated in the notes themselves, i.e. the letters d r m.

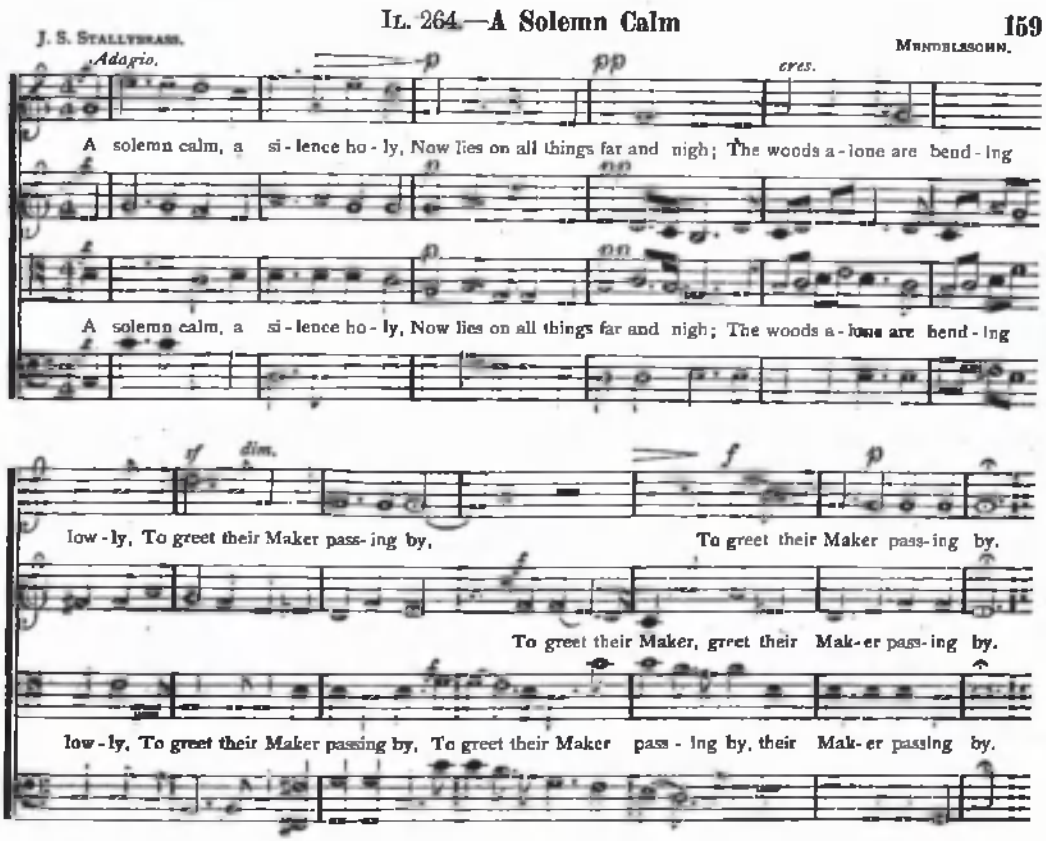
On the other hand, if the reader attacks the notation from the staff side by attempting to take in note relationships or note-patterns, then he will not be able to take in note-shapes.

As we have already said, the processes involved in the reading of sol-fa notation and staff notation are entirely opposed to each other. The taking in of note-relationships or note-patterns on a stave is hindered by the taking in of the individual note shapes (d r m), and the taking in of these note-shapes is hindered by the attempt to combine these with note-patterns in space. Patterns involve relationships and relationships involve analysis. Hence staff reading becomes an analytic process. On the other hand, shapes do not involve relationships in space. Different shapes are recognised by their own individual shapes. Hence sol-fa reading must remain more or less a synthetic process.

The following examples show a similar attempt to combine the movable doh with the fixed stave. They are taken from "Harmony Simplified" (Philadelphia, John J. Hood, 1882).

Here the sol-fa or relative pitch element in the notation is represented by a series of seven signs which are incorporated in the staff note. Thus:



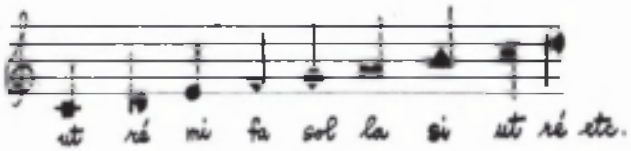


Various other attempts have been made both in Europe and America to arrive at a compromise between the movable and the immovable.

Édouard Jue, a disciple of Galin, saw the disadvantage of the figures 1 2 3 4 5 6 7 used in Galin's system to indicate relative pitch, and attempted to embody this relative pitch element in the note-head of the staff symbols. He invented a new music type in which the lozenge-shaped staff notes are replaced by seven differently shaped notes, each note-shape standing for a scale degree or a sol-fa name. This "méloplaste monogammique," he claimed, "réduit toutes les gammes en une seule." (reduces all the scales to one scale.)

("La musique apprise sans maître," 2o.édit, Paris, 1838)

This scale is shown below.



He adds further on that one must always come back to the ordinary staff notation, and that his system is meant simply to pave the way for this.

Jue came to London later to establish his system but had no success there. As David and Lussy say; "Qui connaît aujourd'hui le 'Méloplaste Monogammique'?"

(Vide "Histoire de la notation musicale depuis ses origines," par Ernest David et Mathis Lussy, a l'Imprimerie Nationale.1882)

The American "buckwheat notation" is based on the same principle, with differently shaped heads to indicate the various scale degrees, thus:



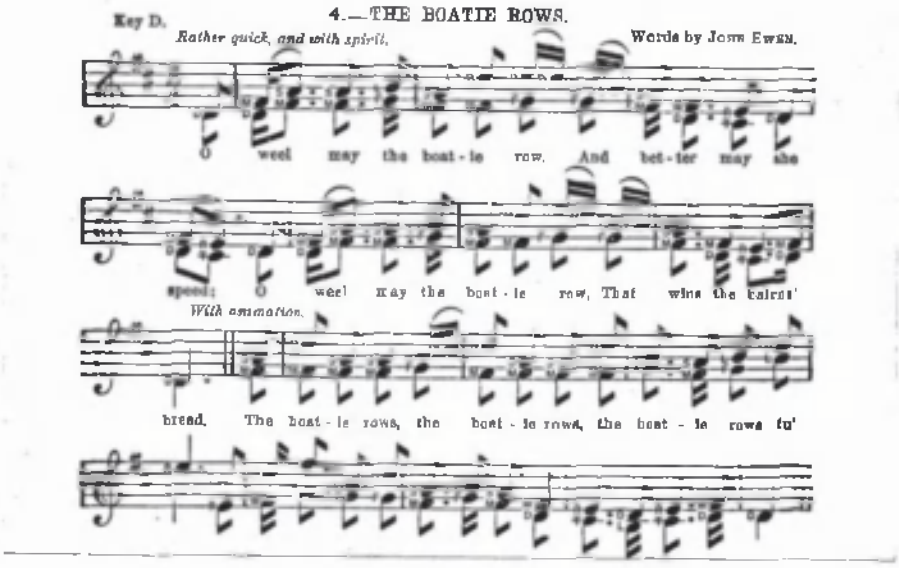
(See "Oxford Companion to Music" p.507)

David and Lussy remark with surprise that most of the innovations in musical notation have been concerned with the representation of pitch, and not time or rhythm. But this should surprise no one. The pitch problem will always be the main problem for the music teacher.

The early Protestant Reformers were the first to attempt to combine the sol-fa system and the staff system. "Bourgeois had already grappled with this difficulty as early as 1550, by placing sol-fa syllables by the side of each note, thus rendering all study of the hexachordal system unnecessary."

(See a Lecture by Sir John Stainer "On the musical introductions found in certain Metrical Psalters," in Proceedings of the Musical Association, 1900-1901)

In the following example from "Standard Songs arranged for two voices: In the Combined Notation", by H. Lillie (Edinburgh, John Menzies & Co. 1882) we find exactly the same plan as that adopted by Bourgeois to solve the unsolvable problem.



In his Preface, Lillie says:

> "The Musical Notation herein employed has added considerably to the cost of production, but its excellence is great, combining, as it does, the advantages of the Old Notation and of the Sol-fa System."

This claim we dispute. It is quite a different matter when the sol-fa notation is printed in a straight line below the staff notation as in the new Church Anthem Book published by the Oxford University Press. But to attempt to combine the straight-line notation with its synthetic appeal to the eye with the up-and-down graphic notation with its analytic appeal to the eye is to attempt to mix oil and water. The oil, like the sol-fa notation must come to the surface and remain on the level. No compromise is possible. Both notations have their contribution to make to music reading, but they must make it in their due season, in their own way and by their own means.

CHAPTER VI

THE VISUAL APPROACH TO STAFF SIGHT-SINGING *

Analysis of the Reading Process

Sight-singing from staff notation by means of the movable doh method of sol-faing involves three separate and distinct spelling abilities.

(a) First, the child must spell the fixed pitch staff symbols in terms of relative pitch symbols or sol-fa syllable-names.

(b) Secondly, he must spell these sol-fa syllables in terms of relative pitch sounds.

(c) Thirdly, he must spell the rhythm or time symbols in terms of relative stress and duration, giving the sounds resulting from (b) the requisite accentual and durational values indicated by the staff time symbols.

Any measure of sight-singing ability must take all the above three processes into account, as weakness in any one of them means weakness in staff sight-singing itself. It follows, then, that spelling-drill in each of these three separate spelling processes should be given as a preparation for the final act of sight-singing, in which all three are combined simultaneously.

But what do we usually find in the singing class?

The second process, (b) or relative pitch spelling (i.e., the association of sound and syllable), is

* Reprinted from an article published in "Music in Schools" (Novello) July, 1938.

provided for by means of sol-faing practice in modulator work, sequence singing, memory tunes, &c.

The third process, (c) or rhythm spelling, is provided for by means of "taatai-ing" or rhythm drill with the French Rhythm Names.

Visual Technique in Staff-reading

But, apart from actual sight-singing and staff dictation, the first process, namely, the translation of staff symbols into sol-fa names, and vice versa, is seldom provided for in the singing class, although, from the point of view of pitch, this is the only step that stands between sol-fa notation and staff notation. Also, of the three processes, this is the one that lends itself most readily to speeding up, since we are here moving in the visual field all the time, translating from the spatial order of the stave or staff ladder



into the spatial order of the modulator or sol-fa ladder

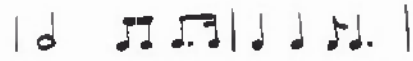
s
m
d

and vice versa; whereas in (b) we are translating from a spatial order of visual signs

d m s

into an auditory order of conventional tonal relationships; and in (c) we are translating from a visual order

of rhythm symbols



into a temporal and dynamic order of "rhythmicized" sound (if we may coin the word).

Indeed, the first process of translation from staff symbols into sol-fa names, and vice versa, is the only one of the three that may be accomplished by the tone-deaf and the rhythm-deaf, since no musical element need enter into the process at all, any more than a literary element need enter into typewriting from a script.

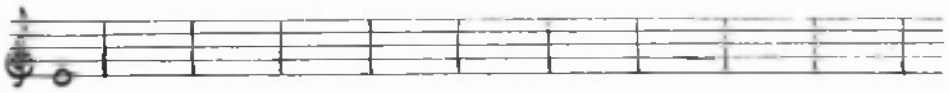
It is true that children are sometimes asked to fill in an odd moment in a lesson by writing the sol-fa letters under the staff symbols, but this exercise has not much pedagogical value, as it neglects the time or speed factor, which is an essential element in all music-reading. And, since the first process of "staff symbol into sol-fa name" must have priority in all staff sight-singing, and since its converse, "sol-fa name into staff symbol," is essential in all staff dictation, it is surely of prime importance to drill the class in this practice.

Visual Staff-spelling

If the following method of Visual Staff Dictation is followed out, it will be found to be admirably suitable for class work, and practice in it will lead to rapid

progress in visual spelling from sol-fa pitch symbol to staff pitch symbol, and vice versa.

The class should be asked to draw a number of bar lines, about a quarter or three-tenths of an inch apart, on a stave. At the beginning of the stave they should insert the treble clef and a semibreve note to indicate "doh," on any line or space named by the teacher, thus:



The teacher then dictates, without pitch and at a uniform metronomic rate, a number of sol-fa names, beginning with the doh which is already inserted, thus, for example:

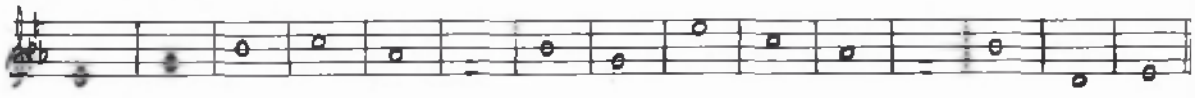
|doh |me |soh |lah |fah |ray |soh |me |high doh|
|lah |fah |ray |soh |low te |doh |

and, during this recitation, the pupils insert semibreves on the lines or spaces indicated by the spoken sol-fa syllables.

There must be no hesitancy on the part of the teacher, once he has decided on a "tempo," and only one note must be inserted in each bar by the pupils, as in this exercise we must try to approach as near as possible to the actual conditions of sight-reading from staff, in which the eye must move continuously along the printed stave. Where a pupil is not sure of the position of a note, he must be told to leave a blank bar and to pass on

to the next note. Only by this means can the teacher be sure that he is not correcting a note which belongs to another bar. The pupil should not be encouraged to make wild guesses, as these are apt to set up wrong associations and to discourage clear thinking. Besides, blank bars are more easy to correct, from the point of view of the teacher, and are more reproachful, from the point of view of the pupil.

The following would be the solution to the above test:



Of course, the procedure should be demonstrated fully on the blackboard beforehand, and much preliminary practice should be given. It causes much amusement to a class, and spurs them on to their best efforts, to see a classmate at the blackboard hesitating over the positions of "fah," "lah," &c., or referring back to the "doh" in the first bar and counting up from the "doh" position, while the teacher's voice goes on inexorably, reciting syllable after syllable, "till the last syllable of recorded time."

Importance of Written Work

The whole lesson provides a comic illustration of

Omar Khayyam's lines:

"The moving finger writes; and, having writ,
Moves on: nor all thy piety nor wit
Shall lure it back to cancel half a line,
Nor all thy tears wash out a word of it."

And let us hope that it enforces the same moral, namely, to "look before you leap." For, while a slip of the tongue is just as serious as a slip of the pen, the former is apt to fade away into the limbo of the past, while the latter is always with us. Truly, "Writing maketh an exact man."

To begin with, then, the exercises should be short, say eight or ten notes in length, as the mental strain is sometimes considerable, and we do not wish pupils who "get lost" in an exercise to be too heavily penalized, or to be too long "unemployed."

The aim of the exercise is, of course, to get the pupils to develop a visual sense of "key," to carry the tonic position in their mind, and to gauge the positions of the other scale degrees by reference to this tonic or to some other scale degree in the key. The position of the tonic should be changed from exercise to exercise, and the teacher should vary the order and quality of the intervals and the metronomic rate of dictation to suit the ability of the class. Thus, it is quite easy to adapt this visual spelling exercise to the capacity of any class, from infants to adults, by

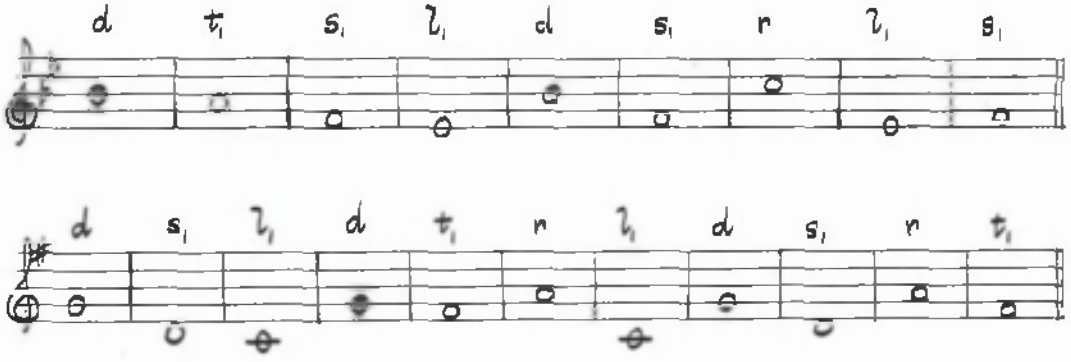
simply altering the "tempo" and the kind of intervals used. In connection with the speed of dictation, it is useful to have a pocket metronome of the tape-measure type (issued by Weekes & Co.), as this makes no sound and is quite unobtrusive, and it allows the rate to be advanced gradually from about thirty notes (two swings of sixty) to eighty notes (two swings of one hundred and sixty) per minute.

Classification of Errors - the Subjective Type

The writer devised this Visual Staff Spelling Test some time ago, and employed cyclostyled sheets with staves, clefs, bar lines and keynotes, all complete and ready for the pupils' entries. He used the test along with an ear test and a rhythm test in order to assess reading ability in an experiment, which he was carrying out with some first-year secondary classes; and in marking the papers he was struck by certain types of errors that were continually being made by pupils. These errors could be grouped into two classes.

In the first class of error, which we might call the subjective type, he found that one pupil would make the same mistake each time a certain note or interval appeared, no matter what the key was, while another pupil would make another mistake each time another note or interval appeared.

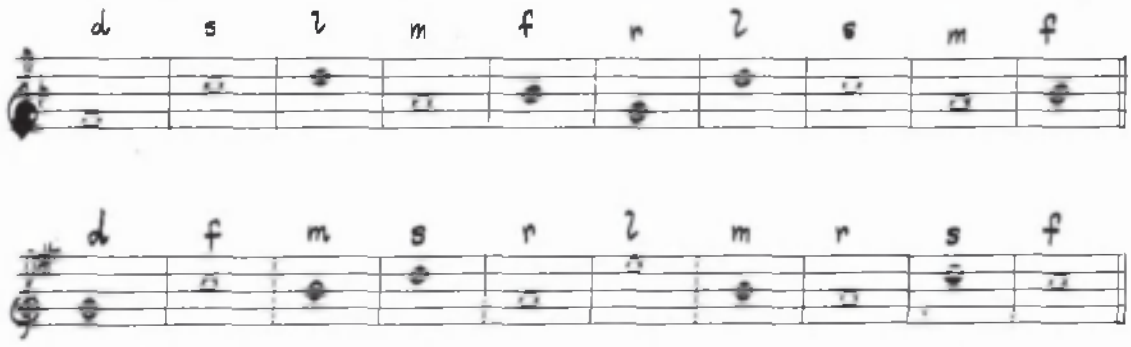
For example, one boy (aged twelve) consistently entered a "fah" for every "lah" in a series of short tests in different keys, all beginning with "doh" and ranging from "ray" above down to "soh" below. Here is an exact transcription of two of his answers, with the sol-fa syllables, which were called out, written above:



It will be seen that out of eighteen notes which he wrote (the first note being given), four were wrong, and these four all contained the same error, namely, "fah" for "lah". One might suspect from this that the error was due to a certain defect of hearing. But, strangely enough, he placed "lah" correctly in a similar series of tests which he had just written on the same page; only, this time, the test began on "doh" but ranged upwards from "doh" to "lah."

Here is a transcription of his answers to the first and sixth tests on the same page, all correctly

answered, as will be seen:



Remedial Action through Diagnosis

Probably the error was due simply to the fact that the boy thought of "lah" as coming after "soh", with the result that, if he were descending at the time, he put "lah" below (i.e., after) "soh," and if he were ascending at the time, he put it above (i.e., after) "soh."

Can we blame him? Are not some teachers guilty of singing the scale, to the sol-fa syllables, upwards for the most part? And are we not all guilty of rapping out, somewhat testily: "Come on, now! What note comes after soh?" "Lah." "Correct!" At any rate, out of sixty-three notes in that series of descending tests, John Cairns of Class I Fc wrote "fah" for "lah" ten times, and yet he had forty-two notes correct!

In connection with this point, we might note that it is the average pupils from whom we can learn most. The very bright ones need no physician, and the

very poor ones sometimes defy all the efforts of the physician to diagnose their ills. But the average pupils make excellent subjects for diagnosis.

Another very common type of error, which might be classed under the subjective type since it appeared in all keys, was the writing of "lah" for "soh" in the interval "high doh" to "soh" or "doh" to "low soh", i.e. descending from "doh" to "soh."

Thus,  and 

would be found written over and over again for "high doh," "soh". And surely the reason is not far to seek. For do not we teachers din it into the pupils that

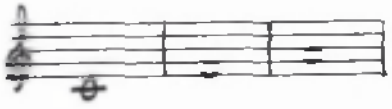
If doh is on a space, soh is on a space:
If doh is on a line, soh is on a line.

Such errors, of course, would appear just as frequently in sight-singing tests; but where the sight-singing is a community concern, it is much more difficult to diagnose the errors, and it is so easy to dismiss them as "stupid mistakes." It is only when one can sit by the fireside, and study in black and white the individual efforts of the class, that one can diagnose the errors of individual pupils and of types of pupils. It will be seen, then, that these visual music spelling tests are invaluable for remedial purposes, as well as for testing purposes.

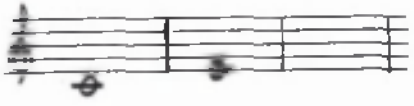
Objective Type of Error

We now pass on to the second class of error in these tests, which we might call the objective type of error. Here the error is not due to a particular weakness or idiosyncrasy on the part of individual pupils, but is due rather to something inherent in the nature of the material itself, e.g., the position of the keynote in certain keys.

Undoubtedly, the most common and the most serious error made by the nine classes of first-year secondary pupils under observation in these tests was due to the confusion which existed in the minds of the pupils between Key C and Key D. In tests written in Key C, beginning with "doh" on the first leger-line below the stave, a great number of pupils wrote their answers partly, and sometimes wholly, in Key D, "doh" "me" "soh" being written



and "doh" "ray" being written

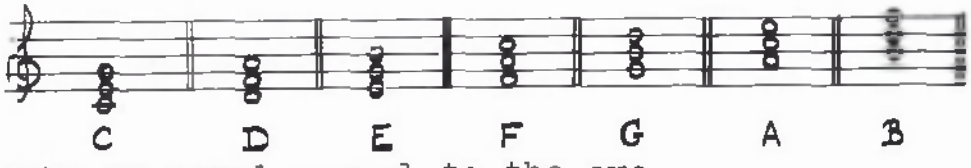


Even a superficial examination of the results showed clearly that Key C scored lower marks than any other key. This led the writer to consider the question

of the order of difficulty of the various keys - C, D, E, F, G, A, B - from the visual standpoint in sight-singing. So, in the meantime, he took no remedial action, and did not hand back the papers to the pupils, but devised a large-scale experiment in order to test the potentialities of the various tonic positions on the stave, as aids or otherwise in sight-singing.

Order of Presentation of Keys in the Introduction to Staff-reading

A little thought should convince anyone that, since children are taught in the movable doh method to recognise the various scale degrees from the position of the tonic on the stave, the actual position of the tonic must be of extreme importance, especially with young children. It is not likely that the seven different positions on the stave, in which the tonic may appear,



will make an equal appeal to the eye.

For example, does a tonic on a line make exactly the same appeal to the eye of a child as a tonic on a space? It is not likely, for differences are bound to beget differences. String players prefer sharp keys to flat keys, and brass players prefer flat keys to sharp keys, while the beginner on the piano likes key C, and

dislikes key C sharp and key C flat. But this is solely on account of the technique of sound-production on these instruments.

However, with beginners in sight-singing it is not the technique of the instrument or voice that matters - children will reproduce a phrase with equal ease in C flat, C natural, C sharp, D, D flat, E flat, &c. What matters, rather, is the technique of the eye, involved in the recognition of the various scale degrees in the different keys. For example, what is the effect, from the visual point of view, of the lower leger-line in key C, which literally converts a five-line stave into a six-line stave, with the lowest line existing for the most part, like the line of the equator, in imagination?

From an examination of school music readers in use, and from arguments in and out of the press, it is evident that there are two schools of theorists with opposing views on the question of the order of presentation of keys in the teaching of sight-singing. Some authors of school music readers begin with key C, and follow on with G, F, D &c.; while others, disregarding key signatures, begin with "doh" on the first line, or the first space, &c.

It is important that this problem of the order of presentation of keys in the introduction to staff sight-

singing should be settled by experimental methods, as it is evident that it will never be settled by argumentum ad hominem methods. The importance of the point lies in the fact that the teacher and the class must follow the method adopted by the author of the music reader in use, for, in the end, the Reader is the Method.

CHAPTER VII

* THE ORDER OF DIFFICULTY OF KEYS IN SIGHT SINGING

(An experiment to ascertain the order of difficulty of the various keys from the visual point of view in sight singing)

In the previous chapter the writer dealt with "The Visual Approach to Staff Sight Singing", and pointed out that, apart altogether from aural and pitch problems, there were visual problems involved in the act of sight-singing, which often escaped the notice of the music teacher. The latter is too often inclined to be content with pressing home maxims like "If 'd' is on a line, 'm' and 's' are on lines", etc., and to leave it at that, trusting that things will sort themselves out with practice. However, experiments in Visual Staff Dictation (i.e. the writing by the pupils of notes on a stave to the dictation by the teacher of sol-fa syllables) proved to the writer that pupils, who had already had several years of practice in staff sight-singing, still persisted in making the same visual errors in all keys, and that much time and effort would have been saved if these errors had been diagnosed and corrected in the early stages.

Further, these experiments showed that the various positions of the tonic in the keys C, D, E, F, G, A, B, did not seem to be of equal value to the pupils as visual aids in gauging other intervals in the key. From the nature of

* Published in "Music in Schools" (Novello & Co. Ltd.) May & June 1941, and July & August, 1942.

things, it is not likely that all tonic positions will be equally favourable to beginners in staff sight-singing. This has, indeed, been recognised by music educationists for the most part. However, except for the fact that one section of theorists advocates following the order of the keys - C, G, F, D, etc. - in the introduction to staff reading, w hile another section denounces this order and favours the order of the lines and spaces - E, F, G, etc. - nothing, so far as the writer is aware, has been done on experimental lines to find out which are the favourable tonic positions from the visual point of view, and which are the unfavourable ones.

In the following test the writer has endeavoured to raise the problem once and for all above the plane of subjective judgement or bias, and to treat it on the plane of objective scientific experiment. The experience gained in previous testing of this type was drawn on, in order to reproduce as faithfully as possible in the test the conditions under which sol-faing from staff notation takes place; and every endeavour was made to control the conditions of the test as rigidly as possible, so as to approximate to the laboratory type of experiment.

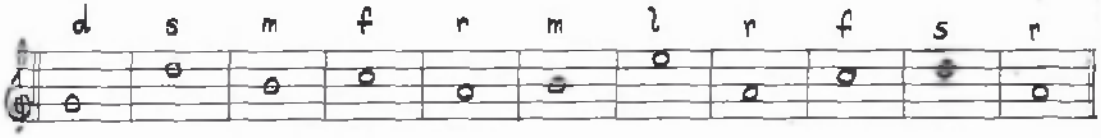
In all sight-singing by the movable doh method the pupils must first translate the staff notes into sol-fa

syllables before they can sing the correct note. This is a purely visual concern, and it is this aspect of the sight-singing process that has been isolated and analysed in this test.

But one essential factor, which must be taken into account in any test of sight-singing ability, is the time factor. In ordinary language reading, one may choose one's own rate of reading, and one may pause over words or phrases without distorting the meaning of the whole. Not so in music reading! For all melody is a proportion of three elements - pitch, time and intensity. If any one of these elements is distorted out of proportion, the meaning of the music as a whole is so far distorted. Hence, an essential factor in all sight singing by the movable doh method is the ability to translate from staff symbol into sol-fa syllable instantaneously.

One might attempt to measure this ability with the aid of a tachistoscope, but as this would not be suitable for use with large numbers of pupils, the complementary test of translation from sol-fa syllable into staff symbol was used. The advantage of this method is that the answers can all be written down on music staves without the pupil having to raise his eye from the page.

With the aid of a Gestetner cyclostyle, foolscap sheets were prepared containing music staves barred off at intervals of about 10 mm. Each stave contained eleven bars, and in the first bar, following the treble clef sign, was printed a semibreve which indicated the tonic or the position of "doh" for that line. The teacher then dictated, without pitch and at a uniform rate, a number of sol-fa syllables, and while he did so the pupils wrote a semibreve in each bar to indicate the sol-fa note that was called out by the teacher. We give below a sample line filled in, with the dictated sol-fa notes printed above.



The pupils were told that if they wrote two or more notes in one bar, these would be marked wrong. Each note must be entered in its proper bar, so that the eye of the pupil must travel along the stave as in ordinary sight-singing. If a pupil were in doubt about a note, he knew from previous instruction and experience to leave a blank bar and pass on to the next note, but that the notes must all be entered in their proper bars.

Some of the lines dictated contained 8 notes, some 9 notes and some 10 notes. The reason for this arrangement is that in previous tests it was found that some

pupils would fill in perhaps the first two notes in leisurely fashion, and then lie in wait for the penultimate and final notes, taking time to refer back to the tonic and to count up the lines and spaces for the correct position - a procedure that would have defeated the purpose of this test, for, given time to count up, all tonic positions would be equally easy. As the pupils were told that the number of notes in each line varied, they could no longer do this with impunity, but were forced to move along the stave at the rate of dictation.

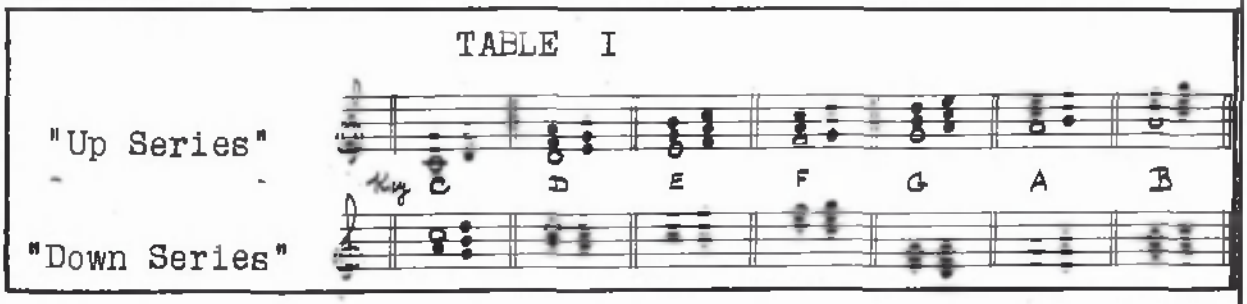
The music staves were printed on the foolscap sheets in groups of seven, and in the first bar of each stave was printed a semibreve to represent the "doh" in the various keys, C, D, E, F, G, A, B, so that each group of seven staves represented the complete cycle of tonic positions.

The fundamental idea underlying the test was that exactly the same series of notes should be written to dictation by the pupils in each of the seven keys and under identical conditions. Such a test must evidently be administered on the principle of rotating the sequence of note tests and of keys so that the practice effect and the fatigue effect may be distributed equally among all the seven keys. Hence, seven groups or lines of notes were chosen for dictation, and these were dictated seven times, each time with a different order of keys, so that no key should enjoy any advantage over another from its position in the series.

In order to test the effect of the different tonic positions for notes above and notes below the tonic, two different series of notes were used, the first or "Up Series" (Nos.1 to 7) containing notes ranging above "d" as far as "l", and the second or "Down Series" (Nos.I to VII) containing notes ranging from "r" or "r'" to the "s" below, these "Up" and "Down" groups being dictated alternately.

The range of notes used in the test thus runs as follows:-

TABLE I



Thus, a range of a 6th or six notes in the one series, and of a 5th or five notes in the other, were used. Notes beyond this range would have involved the writing of leger lines, and this, as will be seen, would have reacted disadvantageously against certain keys, e.g.C and D. For the same reason, the "d" in the "Up Series" was not repeated in the test, as this would have necessitated the writing of a leger line in Key C during the tests in this key.

The following are the fourteen groups of notes which were written to dictation in each of the seven keys, the first note being printed on the sheets in each case.

TABLE II

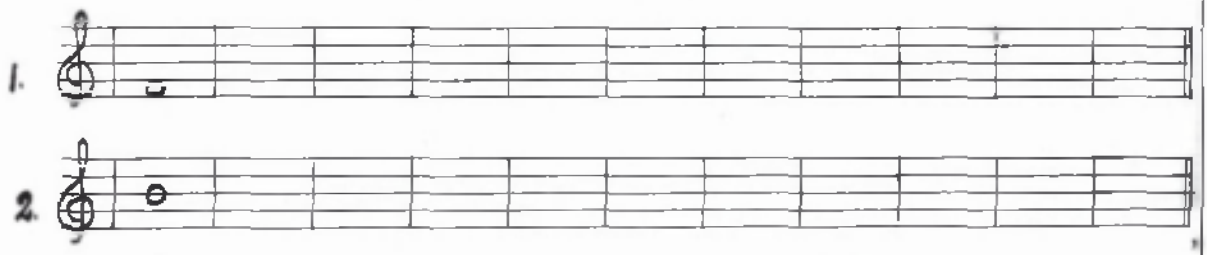
Up Series	Down Series
1. d s l m f r l s m f	r d t_1 s_1 l_1 d s_1 r l_1 s_1
2. d r s l r f m l s	m d s_1 d r t_1 d l_1 s_1 r t_1
3. d m f l s m r s f l m	m d l_1 t_1 s_1 d r t_1 d s_1 r l_1
4. d s r f l m s r l	m d r s_1 l_1 d s_1 r t_1 d
5. d s m f r m l r f s r	m d s_1 l_1 d t_1 r l_1 d s_1 r t_1
6. d f m s r l m r s f	m d t_1 r s_1 d l_1 r t_1 s_1 d
7. d m f s m l f r m l	m d r t_1 d s_1 l_1 s_1 d t_1 r

The key or tonic position was changed for each line of 8-10 notes, and, in order to separate the tonic positions as much as possible, the keynotes were printed on the sheets in this order: F B E A D G C.

Perhaps we should explain the reason for the printing of the tonic on each stave. In earlier visual tests of this type the writer did not print the tonics on the cyclostyled sheets, but announced them or wrote them on the blackboard before each line was dictated. But he found that while this was being done, some of the pupils would resort to jotting down various visual aids, staff modulators, etc. 

in order to help them to find their bearings in the various keys. So, to defeat this subterfuge, and to ensure that every pupil should have an equal chance and every key should have the same amount of time allotted to it, he

printed the keynote on every stave, thus:-



The pupils kept the sheets down, and did not turn them over till they got the word of command.

The whole of each series of 63 notes was dictated in exactly the same manner and in strict time at the metronomic rate of 40 notes per minute, a pocket metronome of the tape measure type (issued by Weekes & Co.) being used. There was no break in the series except at the end of each line, when the teacher counted: "One, Two, Ready! Go!" and started the dictating of the next line.

The first series, for example, would be given out thus:-

M=40 ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩

1. |One |Two |Ready! |Go! |d |s |l |m |f |r |l |s |m |f |
2. |One |Two |Ready! |Go! |d |r |s |l |r |f |m |l |s |
3. |One |Two |Ready! |Go! |d |m |f |l |s |m |r |s |f |l |m |

and so on, until the seven lines in the series were dictated, when the pupils were ordered to turn the sheets down again. Then the second series of 63 notes was dictated in like manner, and so on with the remaining ones.

It was pointed out above that the position of a line in the series of seven lines has a marked effect on the amount of work done, and so, in order to distribute this effect of position in the series among all the seven keys, it was necessary to dictate the whole series of 126 notes in Table II seven times, each time with a different order of keynotes,

F B E A D G C
B E A D G C F
E A D G C F B
etc.

Thus each pupil had to write in each of the seven keys the same 126 notes, i.e. 882 notes in all, and as far as possible the conditions under which the notes in each key were written were identical.

In Table III we show the order of the whole series of 14 tests, the letters F B E etc. representing the keys, and the numbers 1 2 3 and I II III etc. representing the groups of notes in Table II written in these keys.

Table III

1st series	F1	B2	E3	A4	D5	G6	C7
2nd series	BI	EII	AIII	DIV	GV	CVI	FVII
3rd series	E2	A3	D4	G5	C6	F7	B1
4th series	AII	DIII	GIV	CV	FVI	BVII	EI
5th series	D3	G4	C5	F6	B7	E1	A2
6th series	GIII	CIV	FV	BVI	EVII	AI	DII
7th series	C4	F5	B6	E7	A1	D2	G3
8th series	FIV	BV	EVI	AVII	DI	GII	CIII
9th series	B5	E6	A7	D1	G2	C3	F4
10th series	EV	AVI	DVII	GI	CII	FIII	BIV
11th series	A6	D7	G1	C2	F3	B4	E5
12th series	DVI	GVII	CI	FII	BIII	EIV	AV
13th series	G7	C1	F2	B3	E4	A5	D6
14th series	CVII	FI	BII	EIII	AIV	DV	GVI

Five cyclostyled foolscap sheets, complete with music staves, treble clefs, keynotes and bar lines, were required for each pupil, and the number of notes written by the pupils in the whole test amounted to nearly a quarter of a million, viz. 244,314.

Much preliminary practice had been given in all keys in previous tests, before the idea of this "Tonic Position" Test occurred to the writer, so that the pupils knew exactly what to do.

The whole test was completed fully by 277 First Year Secondary pupils (average age 12+) in two consecutive music periods. The scores were then tabulated under the respective keys, and the results subjected to the approved statistical analysis, without which nothing can be predicted from such tests.

We shall deal first, and chiefly, with the "Up Series" of tests, as these results are of more significance to us in our enquiry, since the usual approach to staff sight-singing is from the tonic upwards.

In the following tables we give the Average Mark or Mean for each Key, with the Probable Error of the Mean, and the Coefficient of Variation.

Table IV ... gives the results for the whole group of 277 pupils.

Table V ... gives the results for the upper quartile, or the 70 pupils who scored the highest marks.

Table VI ... gives the results for all except these top 70 pupils, i.e. the lower 75 per cent.

Table VII... gives the results for the lower quartile, or the 67 pupils who scored the lowest marks.

Key	F	B	E	A	D	G	C
			Table IV (whole group of 277 pupils)				
Mean	48·95	42·01	44·95	47·40	42·15	42·90	37·63
P.E. of Mean	·5053	·5899	·5899	·5418	·6345	·5780	·7241
Coeff^{t} of Var^{n}	25·76	35·04	32·75	28·52	37·58	33·63	48·05
			Table V (top 70 pupils)				
Mean	60·36	58·01	59·77	60·60	58·60	59·04	57·37
P.E. of Mean	·2313	·3131	·3083	·2135	·3705	·3063	·3970
Coeff^{t} of Var^{n}	4·81	6·78	6·47	4·42	7·94	6·51	8·69
			Table VI (all except top 70 pupils)				
Mean	45·10	36·59	39·96	42·92	36·58	37·43	30·97
P.E. of Mean	·5602	·6056	·6424	·6032	·6742	·5841	·7396
Coeff^{t} of Var^{n}	26·80	35·72	34·69	30·32	39·75	33·67	51·53
			Table VII (lowest 67 pupils)				
Mean	32·78	23·30	24·65	29·85	21·51	25·17	14·34
P.E. of Mean	·8867	·6863	·6998	·8632	·7033	·7553	·7807
Coeff^{t} of Var^{n}	33·23	36·16	34·86	35·51	40·15	36·84	66·86

We subjected the above figures to the usual test for significance of difference between means (viz. the difference between two means, in order to be significant, must be at least 3½ times the square root of the sum of the squares of the Probable Errors of the Means), and we now give the result of this further analysis.

Instead of employing technical terms we shall use ordinary terms in interpreting these results. For example, instead of saying, "There is a significant difference between the Means of X and Y," we shall say, "X is superior to Y" or "X is inferior to Y"; and instead of saying, "There is no significant difference between the Means of X and Y," we shall say, "X and Y are more or less equal" (in the sense that the figures have not been able to prove that any difference exists).

The order given in Tables VIII to XI is the order of superiority of Keys from the visual point of view, within the range measured by this test. (See Table I "Up Series".)

Key	is superior to Key	is more or less equal to Key	is inferior to Key
Table VIII (whole group of 277 pupils)			
1. F	B E D G C	A	nil
2. A	B D G C	F E	nil
3. E	B C	A D G	F
4. G	C	B E D	F A
4. D	C	B E G	F A
6. B	C	D G	F E A
7. C	nil	Nil	F B E A D G
Table IX (top 70 pupils)			
1. A	B D G C	F E	nil
2. F	B D C	E A G	nil
3. E	B C	F A D G	nil
4. G	nil	F B E D C	A
5. D	nil	B E G C	F A
7. B	nil	D G C	F E A
7. C	nil	B D G	F E A
Table X (all except top 70 pupils)			
1. F	B E D G C	A	nil
2. A	B D G C	F E	nil
3. E	C	B A D G	F
4. G	C	B E D	F A
4. B	C	E D G	F A
4. D	C	B E G	F A
7. C	nil	nil	F B E A D G
Table XI (lowest 67 pupils)			
1. F	B E D G C	A	nil
1. A	B E D G C	F	nil
3. G	D C	B E	F A
4. E	C	B D G	F A
4. B	C	E D G	F A
6. D	C	B E	F A G
7. C	nil	nil	F B E A D G

Assuming that this test measures the same visual ability which is employed in reading from staff notation by the movable doh method, we are entitled to come to the following conclusions.

From the visual point of view, and within the range of notes given in this test, the easiest keys for sight singing are F and A, and the hardest key of all is C. Of the remaining keys we cannot speak with the same certainty, but we may say that E and G are easier than B and D.

As the pivot notes in the scale, from both the aural and the visual point of view, are "d m s", reference to Table I, "Up Series", will perhaps enable us to account for this order of rank.

In the case of the two best keys, F and A, the pivot notes, "d m s", are on the three bottom spaces and the three top spaces respectively.



This superiority of space-tonics over line-tonics may be due to the fact that the spaces on the stave make a better appeal to the eye of the child than the lines; or it may be due to the fact that while there are 5 lines on the stave, there are only 4 spaces; or it may be due to both facts.

At the same time we should remember that the school child always writes and reads letters and figures resting on a line

abcd ABCD 1234

Nowhere does he write or read letters or figures passing through a line,

~~abcd ABCD 1234~~

Strictly speaking, of course, the notes  are not on lines, but through lines.

And the child, who has done so much on-line reading and writing and who has probably often been censured or punished for through-line writing (~~bad~~) may have developed a preference for on-line notes or, as we musicians call them, space notes.*

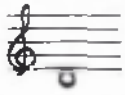
Whatever the reason for this superiority (as revealed in the Test) of space-tonics over line-tonics may be, it was, at any rate, not due to the comparative ease or difficulty of writing notes during the test on spaces or lines, as in the whole test the number of notes that had to be written on lines or spaces is practically the same for both space-tonics and line-tonics. So that the preference for space-tonics is a purely visual one.

The remaining space-tonic in the test, viz. D, did not score well, but we must bear in mind that D does not stand

* This suggestion was made by a colleague, Mr J.N.McConochie, M.A.

in a space, but hangs perilously from a line. This fact was brought out by the number of pupils who, in the Key C test, always wrote D thus:-

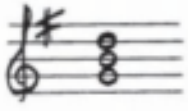


Although in the Key D test they were not required to write this note, they would still have to visualize it to get their bearings for the other notes in the key, and they may have had some difficulty in realising or remembering that the tonic was on a space which was not really there at all  . And, at any rate, the visualizing of the tonic on the space below the stave makes a five-space stave instead of a four-space stave.

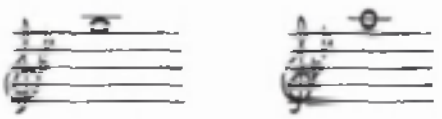
With regard to the line tonics, E scored higher marks than G, although the difference of the Means in relation to the Probable Errors of the Means was not sufficient to allow us to call this difference between the two significant. However, when compared with other keys, E has a higher rank than G in all except the lowest group of 67 pupils. With "d m s" on the three lowest lines.



E certainly seems to be better placed than G, with "d m s" on the three middle lines.



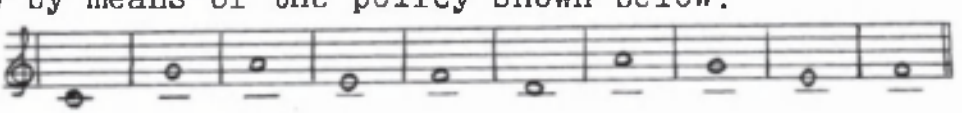
With regard to B, one might have expected better results from the position of "d m s" on the three top lines. But, as in the case of D, a number of pupils had trouble in visualizing "l" on the space above, where there is no space for it, and wrote it thus,



In keys B and D, such ambiguous notes on the "spaces" above and below the stave may cause a sense of confusion or irritation which would affect the performance in the key as a whole.

With regard to the remaining line-tonic, C, we have not far to seek for the reasons for its outstanding place at the bottom of the list. First of all, it is the only tonic which requires a leger line. When this leger line is in use it creates a six-line stave, and even when it does not appear on the stave, it still presupposes a six-line stave, the lowest line of which enjoys a shadowy existence in the imagination. If, in this key, children appeal to the tonic position to find their bearings, they appeal to a veritable shadow.* In addition to this, the disability, under which, as we saw, Key D suffers, with its tonic on a space that is not a space at all, applies at least equally to Key C, for here we have a supertonic, "r",

* Some pupils insured themselves against this appeal to a shadow by means of the policy shown below.



on a space that does not exist. So that Key C is doubly handicapped by these leger notes, D and C.

The greatest revelation in the whole of this test was the fact that, in innumerable instances, Key C was confused with Key D. Eight pupils out of 277 scored not a single mark in Key C out of the 63 notes dictated in this key. This score of zero occurred in no other key. Even if all the 63 notes had been guessed, the laws of chance would be against such a result. But these eight pupils were by no means among the poorest pupils. If Key C in their case had been corrected as Key D, they would have had good scores for this key; and their average marks for the other six keys were respectively, 46·7, 42·7, 38·5, 32·2, 31·7, 30·5, 29·7 and 26·5, out of a total of 54 marks.

The low scores in Key C were not the result of guessing, but rather the result of misdirected thought. Let any teacher write Middle C on the blackboard and ask a young class to write quickly the whole scale or even "d m s" from this tonic position, and he will be surprised at the number who drift into Key D.

It must not be thought, however, that the place of Key C in these tests was seriously affected by the scores of these eight pupils. This tendency to confuse Key C with Key D was found more or less throughout the whole group, and probably accounts for the abnormally high Coefficient of Variation in this Key.

And let it not be assumed too readily that one simple blackboard explanation will banish for ever the confusion due to this anomalous space-note below the stave.



The child is essentially a realist, and while we may explain an anomaly to him, we cannot explain it away for him. In looking over the answers in Key C, one could see over and over again how some of the pupils were constantly fighting against this tendency to drop into Key D from Key C.

The adult finds it difficult to see the child's point of view, and is impatient sometimes to force his point of view on the child. "It is so tiring," as Francis Thompson says, "to stoop to the child, so much easier to lift the child up to you." But only by stooping to the child, and trying to see things as he sees them, can we be of service to him in his difficulties. And the one thing that stands out above all in this test is the fact that, from the purely visual point of view, the natural key of C is the un-natural key for the child or beginner in staff sight singing.

No doubt, with frequent practice in Visual Staff Dictation, on the lines indicated in this chapter and the previous one, these differences, due to the position of the tonic in the various keys, would tend to disappear. To an experienced sight singer one key is as good as another from

the visual point of view. We find confirmation of this in the test results, when we compare the scores of the upper quartile or bright pupils with those of the lower quartile or poor pupils. In this case we may look upon the bright pupils as being more experienced sight singers than the poor pupils, in the sense that they have been able to make better use of their previous experience in sight singing. Thus, in the top group of pupils (Table IX), there are 9 cases of superiority or inferiority and 12 cases of equality as between the keys. While in the lowest group of pupils (Table XI) there are 15 cases of superiority or inferiority and only 6 cases of equality as between the keys. The coefficients of variation in Tables V and VII also point to a similar conclusion.

Perhaps we should here anticipate possible criticisms of this experiment by stating some further facts. An examination of Sight Readers, used by these pupils in elementary schools, before entering the First Year of the Secondary School, showed that they contained nearly an equal number of exercises in each key, so that it is not likely that the results were biased by previous practice or lack of practice in certain keys. With regard to key signatures, the results, in the writer's opinion, were not affected by the non-inclusion of these in the test sheets,

as all the pupils had been taught up to this point to sol-fa by the movable doh method, without reference to key signatures. And, at any rate, the only key with the proper key signature was the unfortunate Key C!

Again, as we have already mentioned, it is not likely that the results were affected seriously by the relative ease or difficulty of writing, as opposed to visualizing, notes on lines and notes on spaces. In the space-tonic keys, D, F and A, there were 27 space-notes and 36 line-notes, and in the line-tonic keys, C, E, G and B, there were 36 space-notes and 27 line-notes in the 63 notes of the test material. Likewise, the fact that the sol-fa syllables were spoken and not sung to pitch is one that would affect all keys equally. If the syllables had been sung to pitch, more guessing would have occurred, and, besides, the test material would have been more likely to become familiar through repetition. As it was, probably not a single pupil realized that the same test material was being repeated in the various keys.

The tests were given under very favourable conditions, in a room with a seating capacity equal to twice the number of pupils in the classes. Further, in this school, marks for Music were entered in the Report Cards of every pupil twice yearly, so that there was stronger motivation behind

the efforts of these First Year pupils, than would be found in other schools where "music doesn't count."

We shall now deal with the "Down Series" of tests, and give the results in tabular form as in the case of the "Up Series".

"Down Series"
Table XII (Total group of 277 pupils)

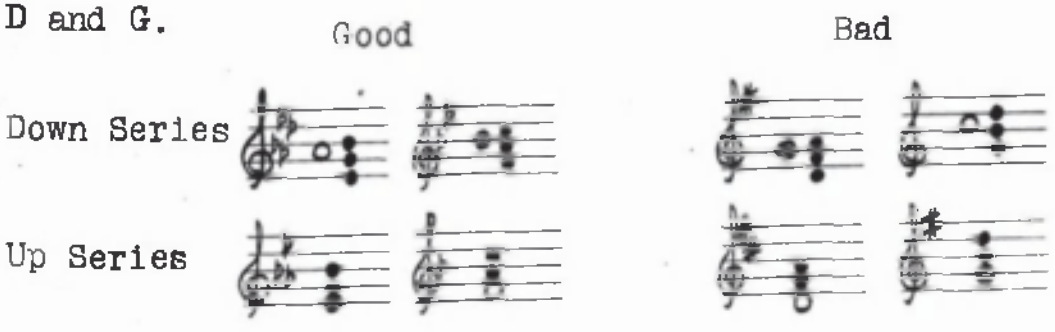
Key	F	B	E	A	D	G	C
Mean	43·81	46·03	44·62	46·23	43·87	42·94	42·24
P.E. of Mean	·5906	·5475	·5636	·5564	·5572	·5443	·5471
Coeff^{t}. of Var^{n}.	33·69	29·69	31·53	30·05	31·70	31·64	32·33

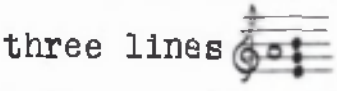
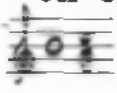
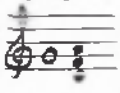
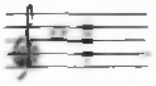
One would naturally expect a different order of keys in this test, as compared with the previous one, since the pivot notes and therefore the visual problems here are quite different.

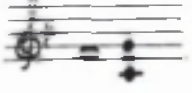
The closeness of all the Means, P.E.'s and Coefficients of Variation will be noted. This close result is probably due to several facts. First of all, a smaller range of notes was used here, viz. a 5th, as compared to a 6th in the "Up Series". Again, while, in the "Up Series", the tonic did not appear in the test except as the given starting note, in the "Down Series", besides being used as a starting note, the tonic was repeated twice in six of the groups of dictated notes and once in the remaining one. (See Table II.) That is to say, in the latter test

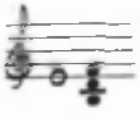
there was a good deal of crossing the tonic and returning to port, while in the first test there was none at all. And, finally, none of the tonics in the "Down Series" appears on a leger line or an ambiguous leger "space".

Possibly the test was too easy. At any rate, the only prediction we can make from the above results, on applying the formula for significance of difference between two means, is that A is superior to G and C, and B is superior to G and C. Assuming that the pivot notes in this "Down Series" of tests are, apart from the tonic, the notes of the dominant chord, "s_1 t_1 r", just as the pivot notes in the "Up Series" of tests were the notes of the tonic chord, "d m s", it is interesting and instructive to note that the two best keys in this test, A and B, correspond, from the point of view of the configuration afforded by the pivot notes, to two of the good keys in the "Up Series" Test, viz. E and F. While the two low keys in the "Down Series" test, G and C, correspond, from the point of view of the configuration of the pivotal notes, to two of the low keys in the "Up Series" test, viz. D and G.



We may conclude, therefore, that, from the visual point of view, the best positions for "low soh" are the first line and the first space (i.e. with the pivot notes "s, t, r" on the first three lines  and the first three spaces  ; and that the worst positions for "low soh" are the first space below the stave (i.e. with "s, t, r" based on an ambiguous leger "space"  which creates a five-space stave), and the second line (i.e. with "s, t, r" on the three "undistinguished" middle lines ).

Although we could not test Key F in the lower octave without necessitating the writing by the pupils of a leger line for "s,", thus  , and so introducing a handicap in this key, it is almost certain that this tonic position in the "Down Series" would have scored even lower marks than Key G, as it carries with it all the disadvantages of Key C in the "Up Series", 

Likewise, Key E in the lower octave,  would probably have scored lower marks still.

It is evident that these leger-line-and-space-notes must be taught to pupils at some time, but, judging from the results of this experiment, it seems that it would be wise to avoid them with beginners. When they <u>are</u> introduced later on, then they should be accorded special treatment

and exposition; and much practice in writing them on the lines indicated above should be given to the pupils.

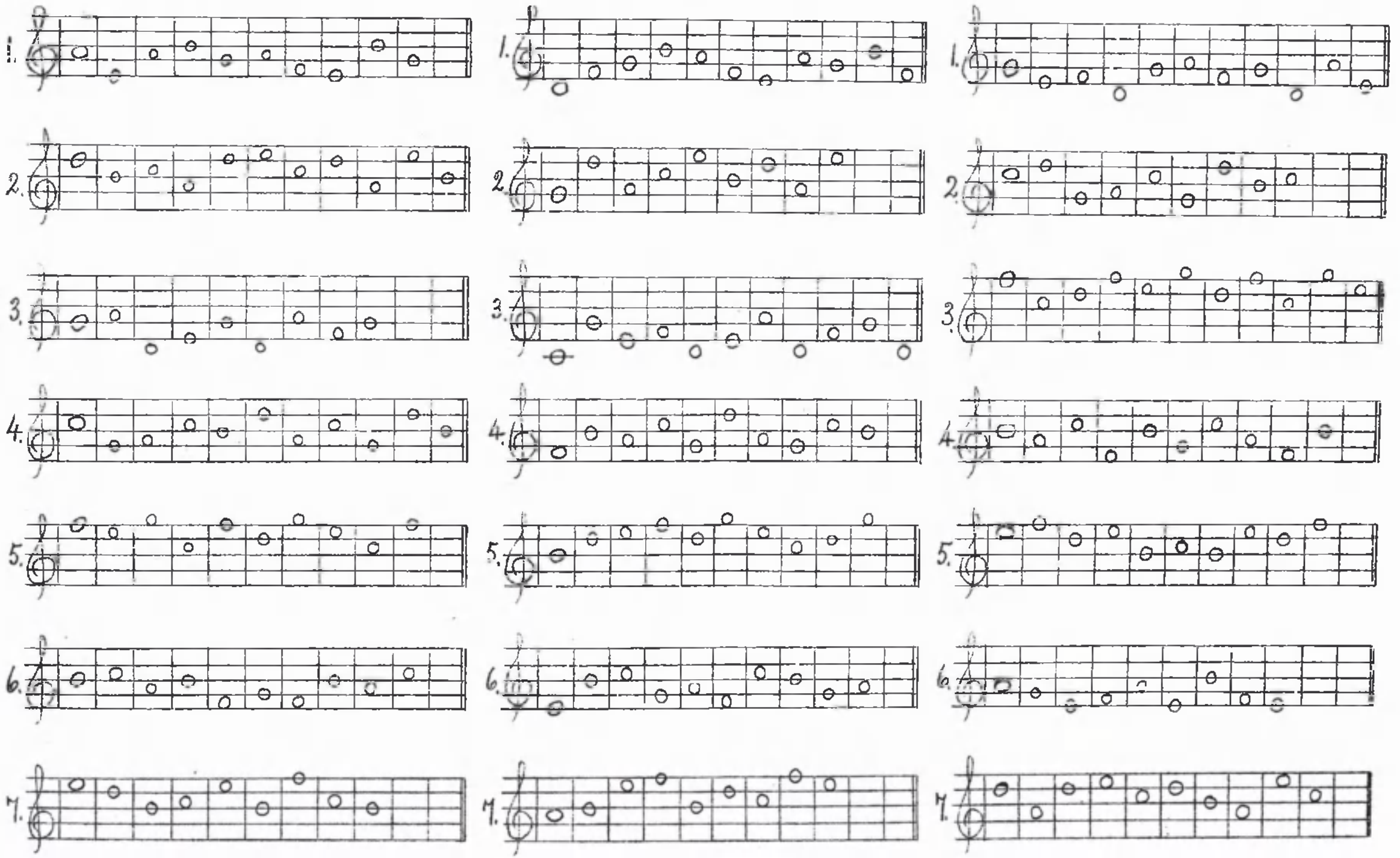
As we said at the beginning of this chapter, the question of the order of difficulty of keys for beginners in staff reading has been constantly raised and is still being constantly raised in Musical Journals. Out-and-out staffists and instrumentally-minded musicians naturally favour the order of the Keys - C G F D - while tonic sol-faists, as the result of observations in the classroom, have always favoured the order of the lines and spaces - E F G A.

The question is an important one, as it concerns the beginnings of a very important branch of musical education, and as the class teacher is not free to choose his own method but must follow the method adopted by the compiler of the Music Reader used in class. As we have said before, in a very real sense so far as this question is concerned, the Reader is the Method.

Unfortunately, many Readers have been compiled by professionally trained musicians, who have had little or no training in actual class teaching, but whose eminence in other branches of Music has earned for them official positions in the educational world.

In other subjects in the school curriculum such an important pedagogical question as the above would be settled by objective experiments in the psychological laboratory and not by argumentum ad hominem methods in Musical Journals. If Music is still the Cinderella of school subjects, perhaps musicians have only themselves to blame.

We append samples of the cyclostyled sheets actually used in the Test.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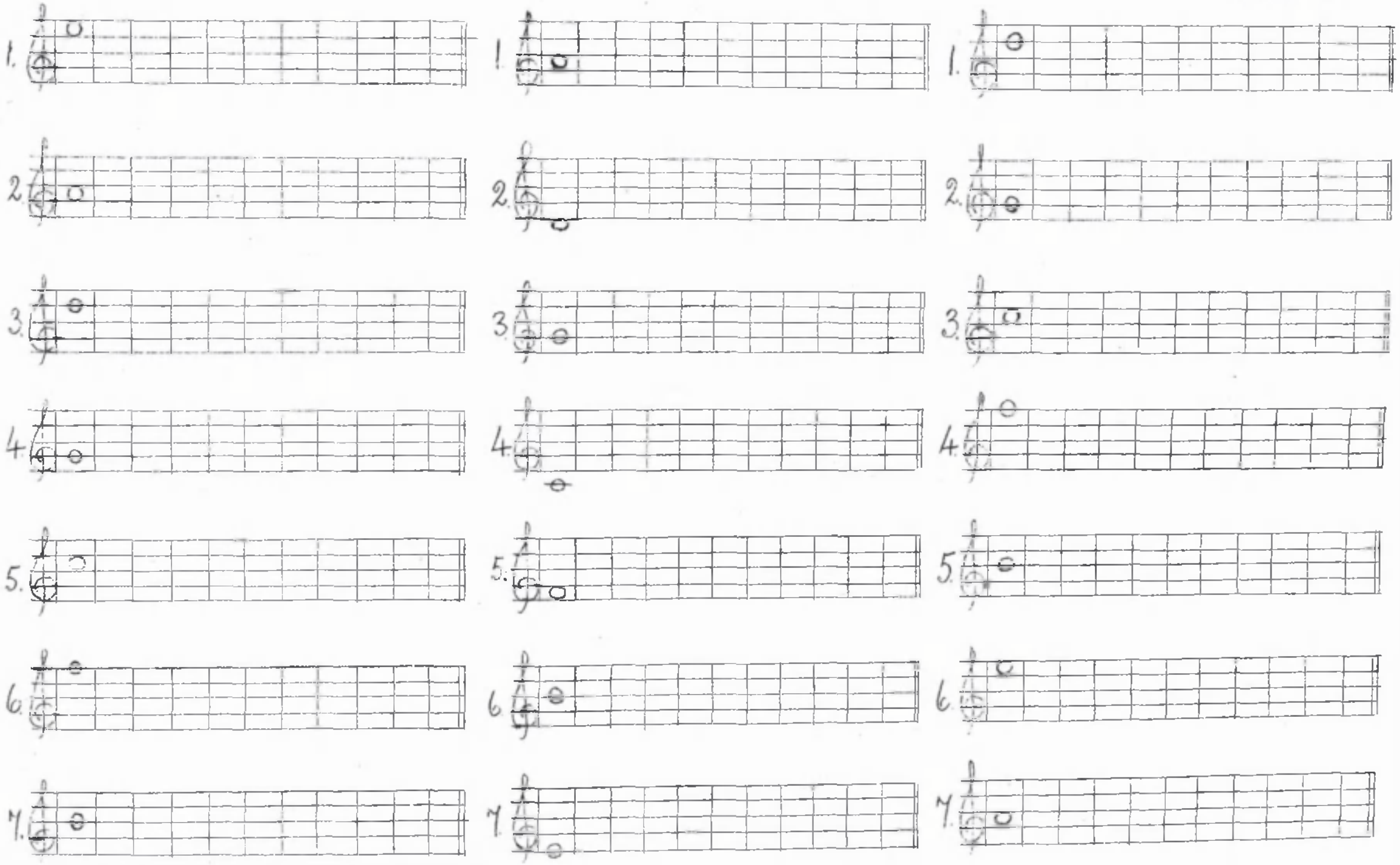
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CHAPTER VIII

THE FORMAL LAYOUT OF MUSIC TYPE*

It will be generally agreed that repetition in some shape or other (whether of melody, rhythm, harmony or key centre) is at the root of all form in music. By means of such repetition the sense of unity is imparted, while this sense of unity is prevented, by means of well-contrived contrasts, from developing into a sense of monotony. In early forms of art, as, for example, in the Greek drama, with its insistence on the three unities of time, place and action, the emphasis is laid on the element of unity, while in later forms, owing to the more highly developed technique of both artist and audience, the element of diversity becomes more and more prominent. And so in the beginnings of the contrapuntal and harmonic art we find forms such as canon, fugue, ground bass, variation, etc., whose very structure premises unity; and in the simplest type of the melodic art, the folksong and folk dance, we find this sense of unity emphasised by the most obvious of all means, the repetition of whole phrases.

Now, if we examine most School Music Readers, we find that phrase repetition is conspicuous by its absence. This means, then, that we are asking children to read, and to take an interest in, music of a complex type which is rarely met with in the music of childhood - nursery rhyme, lullaby, hymn tune and folksong.

*Incorporating part of an article published in the "Music Teacher", May 1933 (Evans Bros.Ltd.)

The Doctrine of "Interest"

No doubt there is a laudable aim behind this adult conception of what constitutes the best material for training in sight-reading. But by avoiding repetition of phrase and by presenting new and ever-varying material to the child for purposes of eye-training, we may be defeating the end which we have in view. For we shall not get children to master anything readily until we gain their interest and co-operation by means of a proper motivation of their activity. And what is not near to the heart will not be near to the eye.

Music-reading, then, should aim at touching the child to the quick, and to this end the reading matter should be in keeping with his interests and with his mental content. For whatever he finds not worth reading will be read only to be forgotten. We all know how we can shut our eyes and visualize those favourite passages of ours in Bach, Beethoven or Schumann. It may be only a phrase or a cadence - "a dying fall" - but we know the exact part of the page where it occurs, we can see every note, every dot. Other passages we have played or read quite as often, but somehow our spirit has not rushed out to embrace them - we have not identified ourselves with them.

Now this self-projection of the reader is of supreme importance, especially in the early stages of the teaching

of reading. We must give the children their "purple patches" too. For it is not what we put before a child that counts, but rather what the child takes in or assimilates, and, as the latter word implies, this will be something which finds in the child mind a certain kinship with other ideas there.

Form and Content

It must be admitted that the usual type of sight-reading exercise is not calculated to find a ready welcome in the adult mind, far less in the child mind. In his constant unravelling of new combinations of notes, the child is so preoccupied with the trees that he has no chance to see the wood. To get the idea of the wood, we must be able to stand back and see it as a whole. To get the idea or the meaning of a tune, we must be able to stand back, so to speak, and see it as a whole. We must have the echo of the first phrase in our minds while we are singing the last phrase; in short, we must "appreciate", in the literal sense, the artistic unity or form of the tune. This does not mean that we should be able to label and classify the parts from the formal point of view, but it does mean that we should feel or sense its form. And if it is a simple art product like a folksong, and not simply a textbook product written to exemplify some new point in sight-reading,

then we shall feel its form at once.

> For of the soul the body form doth take,
> For soul is form and doth the body make.
> (Spenser)

We shall feel a certain kinship between our inner selves and this art product. As Bergson, in his "Creative Evolution" says:

> "In a general way, reality is ordered exactly to the degree in which it satisfies our thought. Order is, therefore, a certain agreement between subject and object. It is the mind finding itself again in things."
> (Translation by Arthur Mitchell, Macmillan & Co.)

Now, as was said above, the simplest types of form are to be found in the songs of the child and the songs of the folk. An examination of any collection of folk or national songs will show that the great majority of them can be classified under some such forms as the following:

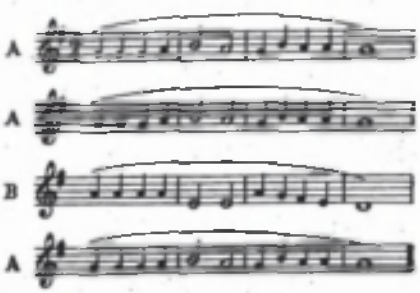
AABA, ABA, AA'BA', AA'AB, ABBA,
ABB'A, AA'BB', AA'BC, ABAC, etc.

(Here A' and B' stand for phrases which have been derived from A and B.)

It will be seen that in some cases one half, and in most cases nearly one half of the tune consists of material which has already been used.

The ABCD type of folksong is exceptional, and this is probably the reason why so many writers and lecturers have to fall back on "Barbara Allen" when seeking an example of Binary Form.

Thus, in folksong, the form, and therefore the content, of the tune is easily apprehended by children. They do not have to keep turning the tune over and over again in their minds in order to feel the connection between the parts and the whole, i.e. in order to understand it, as would be necessary in a more complex ABCD form, and thus they find immediate self-realisation and satisfaction in it. Compare the following simple French Nursery Rhyme, "Au clair de la lune", with the usual text-book exercise:



Formal Presentation

If the music be set out in this fashion, the form can be apprehended by the eye as well as by the ear. We shall understand the importance of this graphic presentation of form better if we borrow an illustration from literature. Suppose we read over the following extract:

> "You have beheld how they with wicker arks
> did come to kiss and bear away the richer
> cowslips home."

And suppose now we read it again as it is to be found in Herrick's poem "To Meadows."

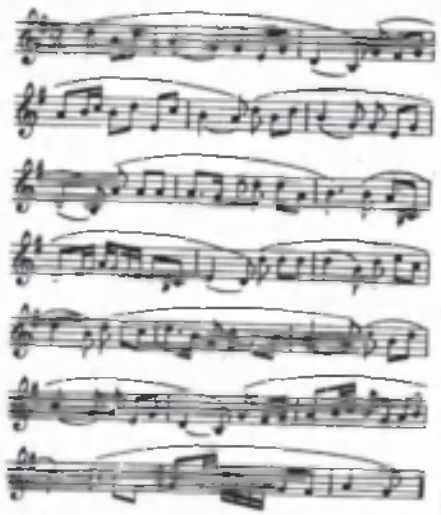
You have beheld how they
With wicker arks did come
To kiss and bear away
The richer cowslips home.

Our psychological approach to this extract is quite different when we meet it in the latter form. We now see its phrases and its cadences before we hear them. In reading it, our minds reach out beyond the present words to something which we know to expect. And the compensating satisfaction which follows this self-projection is the reward which all true art has to offer to its worshippers.

Now, music in its formal aspect bears a close resemblance to poetry. Why, then, in dealing with children should we not set out a piece of music as we would a poem? Of course, we ourselves can afford to dispense with such visual aids in music, but this is because our feeling for phrase and form, for the grammar and syntax of music, is so developed that we are constantly anticipating what is to come. That is to say, in music-reading as in ordinary reading, our mind contributes a great deal over and above what our eye contributes.

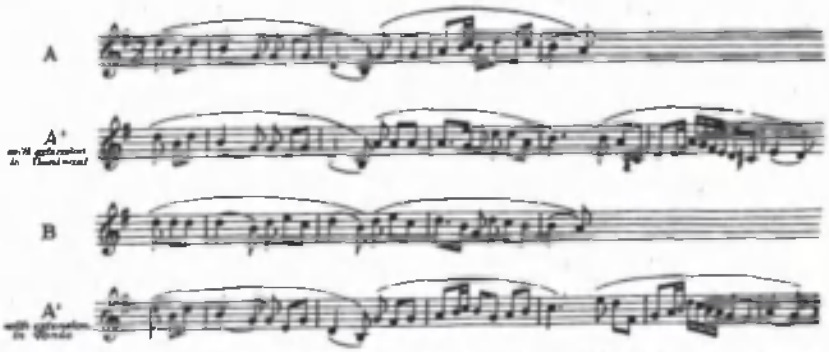
Yet, even in the earliest stages of the teaching of staff reading, where we are dealing with children whose minds have necessarily very little to contribute to the reading process, we take little care to lay out the music type to advantage to show the form or the balancing and "rhyming" of the phrases.

Consider the following lay-out, remembering that while phrase marks have an almost ritualistic significance for the musician, they are merely curved lines to the child.



The Cuckoo Madrigal from "The National Song Book" (Stanford).

Now see this lovely concise example of Bach-Handel Binary Form, set out to advantage to show its "lines":*



Does not the technical term, "extension," take on a new meaning when it is shown graphically as in the above? Does not the musical jargon, "leading up to a close in the dominant at the end of the first section, and leading back to a full close in the tonic at the end of the second section," begin to connote something more than mere musical jargon to the uninitiated?

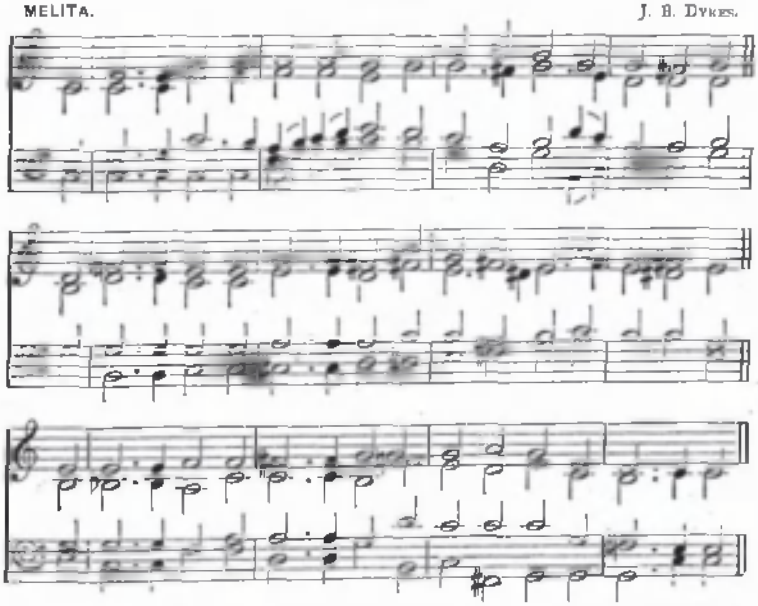
*Illustrations taken from the "Music Teacher" article, May, 1933.

Formal Layout in Hymnals and Psalters

It is noteworthy that the only editors who have paid any attention to the formal layout of the music type are the editors of Hymnals and Psalm Books, and the editors of tonic sol-fa song books. The reason for this is obvious. In both cases these editors are catering for singers who have to follow at the same time both the music and the verses printed below the music. Thus, it is evidently very important that the singer should be given the advantage of any visual aids in recognising the beginnings and the endings of lines.

509

MELITA. J. B. Dykes.



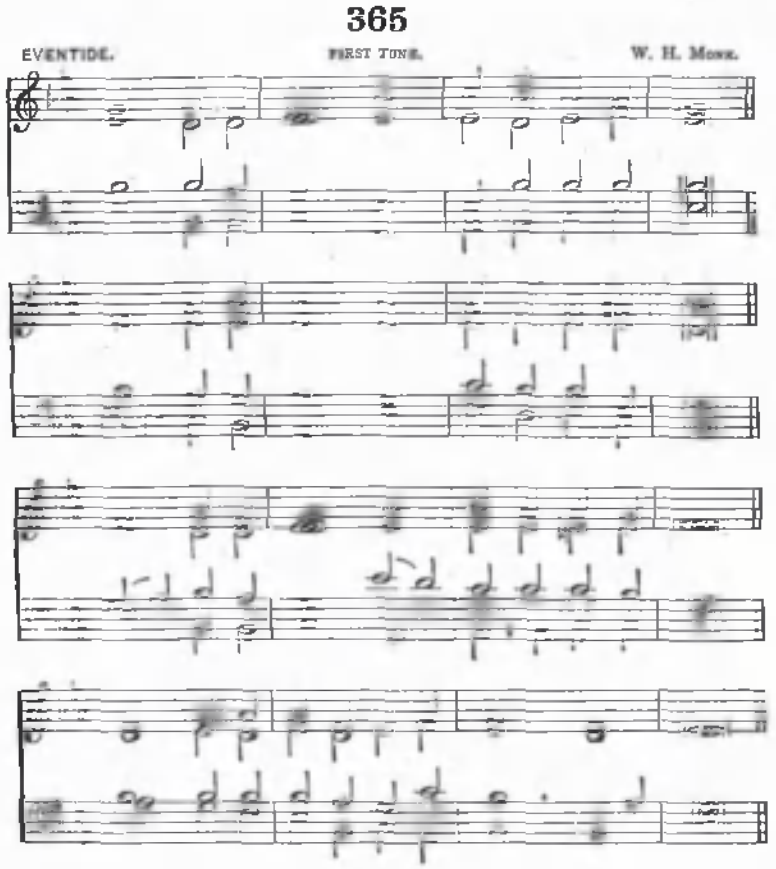
'They cry unto the Lord . . He maketh the storm a calm, so that the waves thereof are still.'

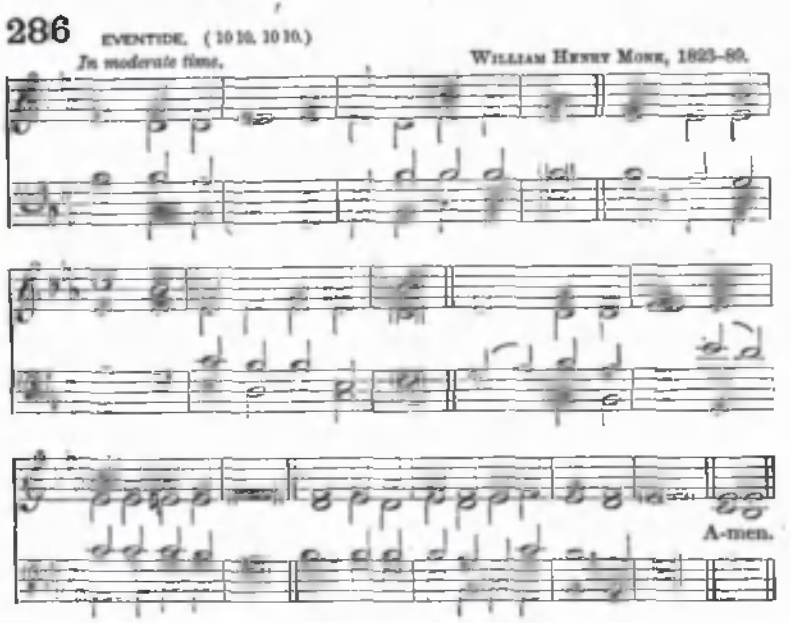
m ETERNAL Father, strong to save,
Whose arm hath bound the restless wave,
Who bidd'st the mighty ocean deep
Its own appointed limits keep,
mp O hear us when we cry to Thee
For those in peril on the sea.

m 2 O Christ, whose voice the waters heard, [word,
And hushed their raging at Thy
Who walkedst on the foaming deep,
And calm amid the storm didst sleep,
mp O hear us when we cry to Thee
For those in peril on the sea.

m 3 O Holy Spirit, who didst brood
Upon the waters dark and rude,
And bid their angry tumult cease,
And give, for wild confusion, peace,
mp O hear us when we cry to Thee
For those in peril on the sea.

From "The Church Hymnary" (1898)





ABIDE with me: fast falls the eventide;
The darkness deepens; Lord, with me abide:
When other helpers fail, and comforts flee,
Help of the helpless, O abide with me.

2 Swift to its close ebbs out life's little day;
Earth's joys grow dim, its glories pass away;
Change and decay in all around I see:
O Thou who changest not, abide with me.

3 I need Thy presence every passing hour;
What but Thy grace can foil the tempter's power?
Who like Thyself my guide and stay can be?
Through cloud and sunshine, O abide with me.

In recent years,however, even editors of Hymnaries have not been so careful of the layout of the music type, as can be seen by comparing the layout of tunes in the "Church Hymnary"(1898) with the layout of the same tunes in the "Church Hymnary - Revised Edition"(1927). The first example above is from the former, and the second example from the latter. In the Revised Edition example, a four-phrase tune is cramped into three lines of music type, with the consequent distortion of the visual structure or form, while the principle of equal spacing for bars of equal length is totally neglected. In this Hymnary the Amens are printed at the end of each tune, and for this reason alone the layout must suffer. On the whole, however, the aim of editors of Hymnaries has been to facilitate the

reading process for the singers by means of the formal layout of the music type.

But it is surely equally important that the beginner in music-reading should be allowed to enjoy this same advantage. If the child does not grasp the form of the tune which he is reading, that is, if he does not feel, as he sings, the beginnings and the endings of phrases and the relationships between these phrases, then the meaning or content of the music will have escaped him. He may read each separate note accurately with regard to both time and pitch, but as Landor says somewhere, "a note in music is nothing but as it appertains to what has gone before and what follows after." The child may have noted each separate tree, but he will have missed the wood.

On the other hand, if he receives visual aid in the apprehending of the form or structure of a melody, this should help him to apprehend the form or structure aurally. The importance and, in fact, the very existence of such things as phrase marks shows that visual aids do help the reader or performer in his task of interpreting the musical symbols as set out by the composer.

Why then should we withold from the child what we deem necessary in similar cases for the adult?

In the world of art, the nearest approach to melody from the point of view of form or structure is poetry. A poem and the music to which it is sung both co-exist in time. In early days they were both born of the same

spontaneous impulse, although nowadays the divorce between the two is more or less complete. But it is not generally recognised how important from the point of view of the poet or the reader is the formal layout of the poem on the printed page.

Formal Layout of Poetry

In the well-known periodical, "The London Mercury", edited by Sir J.C.Squire and devoted to literature and literary matters, one of the most interesting features was the monthly article entitled "Book Production Notes" by Bernard H. Newdigate. In these notes the writer criticised new books, as they appeared, of prose and poetry, especially poetry, from the point of view of the make-up of the book and the layout of the type. We give below a few extracts from these "Book Production Notes".

> "The printer who would make a comely page and at the same time make the poet's message as clear as possible to the eye, and through the eye to the mind, is beset with special problems. He may not run his lines on - else how should we know them for poetry? - and long lines and short play havoc with his margins....
>
> The page is best wide in proportion to its length, so that the vessel may have plenty of beam for carrying its mixed cargo. For a wide page will take the short lines and the long lines too, and 'turned' lines should be as few as possible. As for the type, let it be as big and as clear as the page will admit, lest eye-strain be added to mind-strain."
>
> (May, 1920)

"The press-work is admirable, and does justice to the beautiful face of the type; but the pages have been 'made up' by the printer's gauge rather than the printer's eye, and he has made sad havoc of the poetry. In a fine edition such as this each poem should begin on a fresh page. Instead, in this volume each begins just where its predecessor leaves off, even though that be near the very foot of the page; and the stanza is ruthlessly divided whenever it fails to accord with the printer's sense of the right division of his pages. Poetry, and especially Mr Hardy's poetry, deserves much more tender treatment."

(December, 1921)

"In the 'Blake', the compositor has made up his pages to fit the poems instead of packing the poetry by sheer force into the uniform measure of his pages. Each poem begins on a new page, and even the shortest has a page to itself. They are imposed, too, with a careful eye to the balance of the facing pages, and even the longest lines are never 'turned'."

(January, 1922)

"To break up poems and even stanzas in order to fill up a page is a wanton mutilation of poetic form in an attempt to get a typographical effect which, however good in prose, is neither possible nor desirable in printing a volume of varying verse forms....

"Each poem should be printed so that its structure may be clear at a glance. That cannot be if it is disjointed. Two poems on facing pages should be printed with as much thought for their form and margins as would be given to the mounting of a pair of valuable prints which are to hang side by side on a wall."

(March, 1922)

"Stanley Morison in his 'First Principles of Typography' (Cambridge Univ. Press 1936) reminds us that the right purpose of typography is the 'arranging the letters, distributing the space, and controlling the type so as to aid to the maximum the reader's comprehension of the text.' "

(August, 1936)

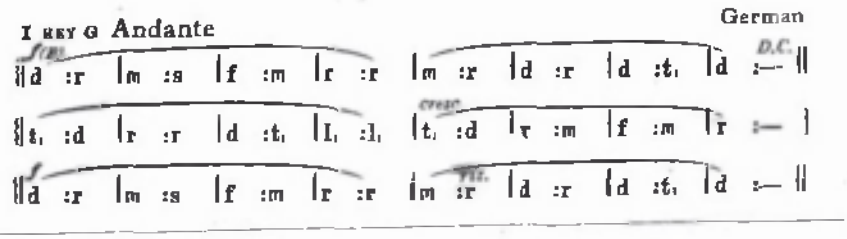
Formal Layout in Tonic Sol-fa Notation

Let us now examine some School Music Readers, and see how far these principles have been carried into effect with regard to the setting out of music type.

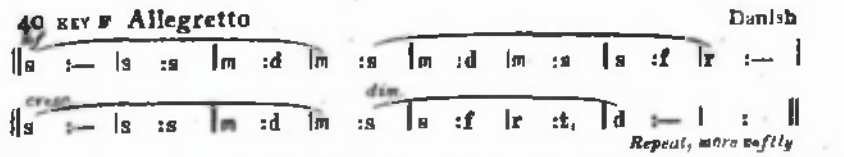
In Sol-fa Readers the layout is generally superior to that found in Staff Readers. This is due to the fact that, whereas staff time notation has a purely symbolic or pictorial basis, tonic sol-fa time notation has a spatial basis, and is set out according to the principle of equal spacing for notes and for bars of equal length.

We give below some examples of exercises from well-known Sight Readers, adding a few remarks on the layout of each.

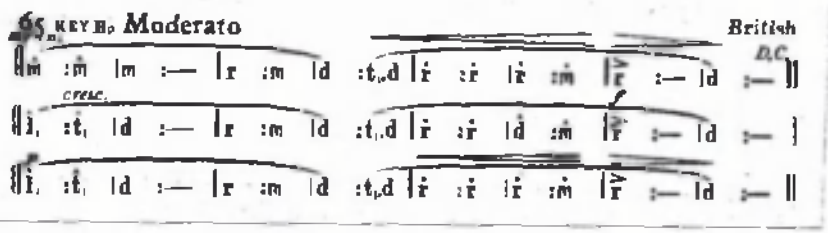
From "The Folk Song Sight Singing Series", Books XI and XII.



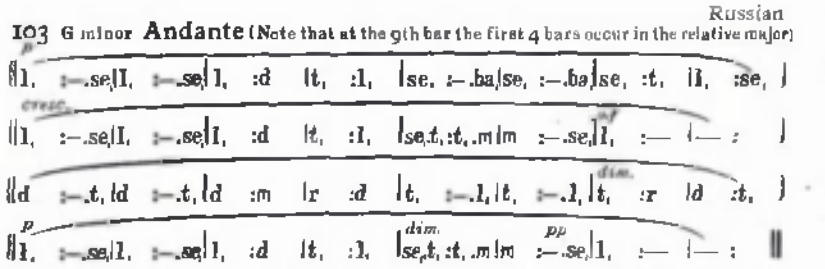
Form AABA stands out clearly, and the primary rhythm of the tune is apparent to the eye. The first phrase might have been repeated in print with advantage.



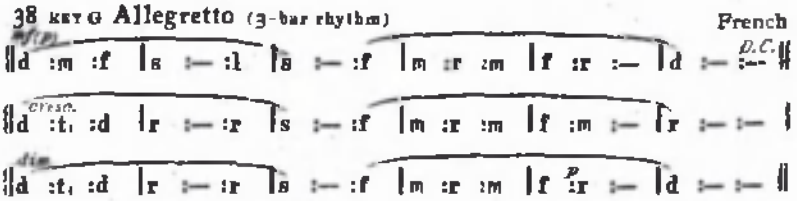
Form ABAC well set out. Primary and secondary rhythms of announcing and responsive phrases stand out clearly.



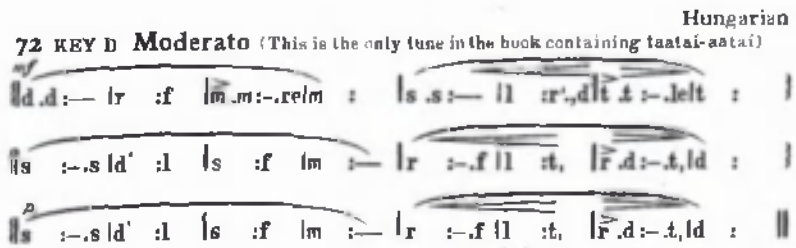
Form ab ab cb' cb or AABB'
Primary and secondary rhythms stand out well. Also the slight change of one note in the penultimate bar of the third phrase.



Form AABA' clear. First half of third phrase in relative major contrasts well visually with phrases above and below in relative minor.

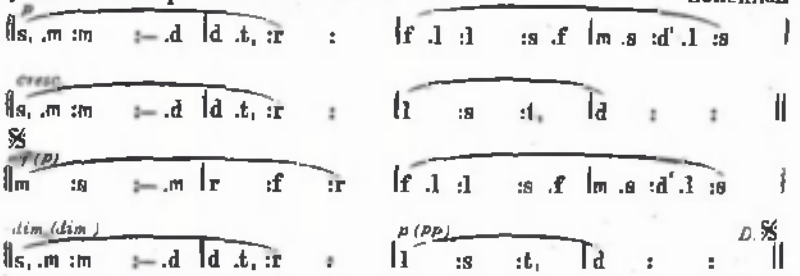


Form ab ab cb' cb or AABB' stands out clearly, also three-bar phrases and primary and secondary rhythms.



Primary rhythm and Form ab cd cd or ABB clear to the eye. Taatai-aatai cadences stand out well.

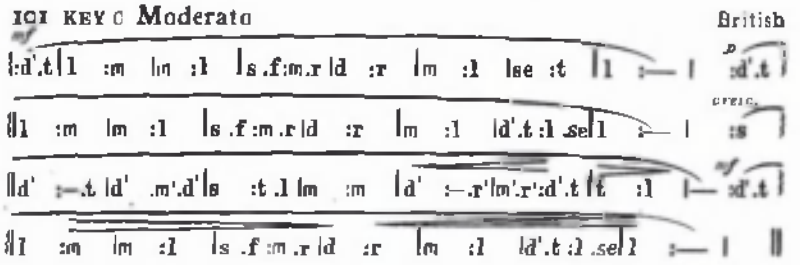
9 KEY E Tempo di Menuetto (d-l) Bohemian



Form ab ac db ac db ac
or A A' B A' B A'

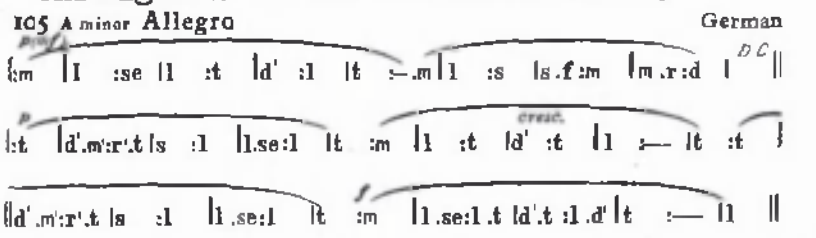
Well laid out. Feminine and masculine cadences clear to the eye.

101 KEY C Moderato British



Form AA' BA' (cf. the previous example) is concealed from the eye by the bad layout. By running on the lines in order to finish off with a complete bar the printer has broken up the 2nd, 3rd and 4th phrases, while in the last line the equal spacing of the bars has been abandoned in order to fill out the line, which contains one pulse less than the second and third lines, and two pulses less than the first line. The anacrusis should have been printed throughout as in the first line.

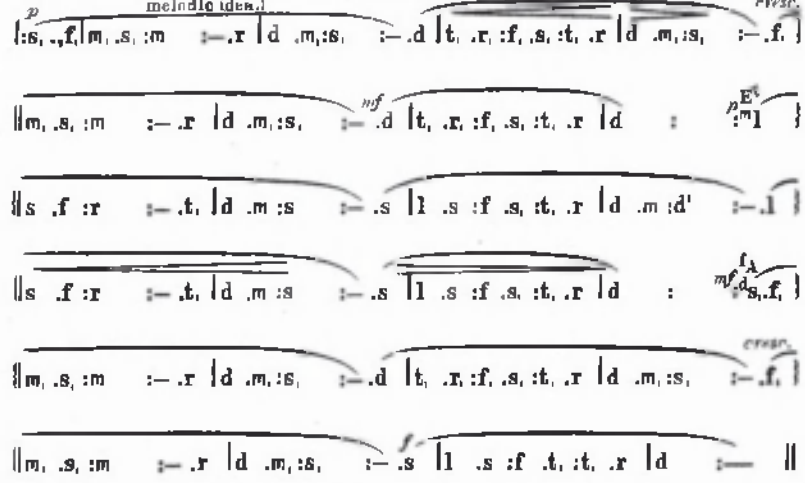
105 A minor Allegro German



Form ab ab cd cd' or AABB'
As in the previous example the bar spacing in the 2nd and 3rd lines has been upset through the placing of the anacrusis at the end of the 2nd line. Thus the 1st line contains 16 pulses, the 2nd line 17 pulses, and the 3rd line 15 pulses. The typographical presentation consequently does not aid the eye.

German

136 KEY A **Moderato** (In the 2nd set of 8 bars, note the 3 different presentations of the same 2 bar idea. Note the climax at the end of the tune produced by a new melodic idea.)

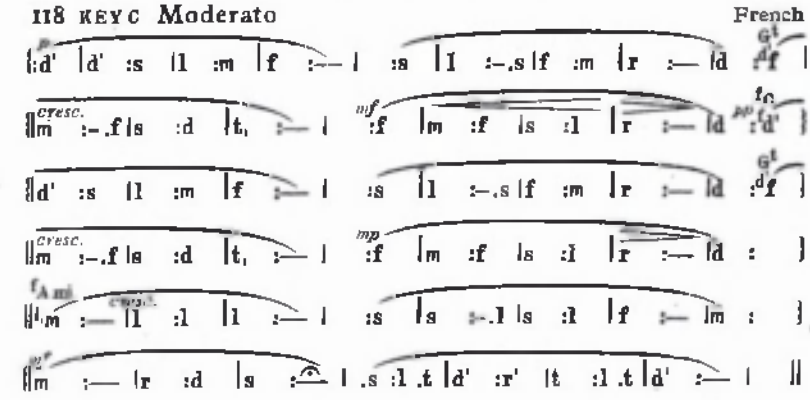


Form ab ab' cd cd' ab ae or AA'BB'AA²
The same criticism applies to this example.
The misplacing of the anacrusis upsets the bar spacing and the typographical presentation.

26

Nos. 118-132. Miscellaneous changes of key

118 KEY C **Moderato** French



Form ab cd ab cd ef gh or ABABCD.
Again the misplacing of the anacrusis spoils the formal layout, and the change from secondary rhythm to primary rhythm in the last two lines is lost to the eye.

From "The Philharmonic Sol-fa Sight Readers," Books III and VI

14

Keys F or G. Phrase thus :—

|d :m.d |s_1 :— $^{\surd}$|d :m.d |s_1 :— $^{\surd}$|

|d :d.r |m :s |f :m |r :— |m :s |f :m.r |

|d :m |s :— |s_1 :s_1 |l_1 :t_1.d |r :— |d :— ‖

15

Key D.

|m :— |r :— $^{\surd}$|s :— |f :— $^{\surd}$|

|m :s |d' :d'.t |l :— |s :— |d' :— |t :l |

|s :f |m : |d :— |t_1 :d.r |m :r |d :— ‖

B

In these examples the structure is shown graphically by the line diagrams. It would have been better to incorporate this idea in the layout of the lines of music type.

90

Tallis.

Key E^b. :d |m :f |s :s |l :l |s $^{\surd}$:s |

|d' :t |l :l |s :— |— $^{\surd}$:d |m :f |s :s |

|l :l |s $^{\surd}$:d |f :m |r :r |d :— |— ‖

Key A^b. **100** Innsbruck.

:m |d :r |m.f :s |f :— |m $^{\surd}$:m.f |s :s |r :m |

|d :— |t_1 $^{\surd}$:s_1 |d :r |m :f.m |r :— |— $^{\surd}$:m |

|d :r |m.f :s |f :— |m $^{\surd}$:m.f |s :s |r :m |

|d :— |t_1 $^{\surd}$:s_1 |d :r |m :f |m :r |d ‖

Form ABCABC'

No attempt made at a visual presentation of the form with its repetitions of phrases.

In No.90 the Form AB(in dominant)AB(in tonic) is quite concealed.

53

The 2nd and 4th phrases are alike and are three bars long.

German Chorale.

Key G.

m :r .d	r :s	m :d	r :—
d :d	d :d	r :m	r :—	d :—	— :—
s_1 :s_1	l_1 :t_1	d :r .d	t_1.l_1 :s_1	d :d	d :d
r :m	r :—	d :—	— :— ‖

Form ABCB. No attempt at formal layout. No phrase marks or breath marks. Instead of saying that "the 2nd and 4th phrases are alike and are 3 bars long," it would have been better to present this information to the eye in the layout.

96

J. Turle.

Key F.

|d :— |d :r |t_1 :— ‖d :— |
|d :d |r :m |r :— ‖s :— |s :l |
|f :— ‖s :— |m :f |r :r |d :— ‖

There is no attempt to make the structure of this double chant (3+4)+(3+4) clear. It should be printed in two lines, showing the sequence in the 1st and 3rd phrases.

Wm. Crotch.

Key G.

|s :— |f :m |r :— ‖d :— |
|t_1 :l_1 |s_1 :m |r :— ‖r :— |m :f |
|s :— ‖r :— |m :s_1 ‖l_1 :t_1 |d :— ‖

Form entirely concealed by the layout, so that the inversions of the 1st and 2nd phrases in the 3rd and 4th phrases in this well-known chant would escape notice. Compare the following formal layout:

{|s :- |f :m |r :- ‖d :- |t_1 :l_1 |s_1 :m |r :- ‖
{|r :- |m :f |s :- ‖r :- |m :s_1 |l_1 :t_1 |d :- ‖

Key E *Not too quickly* **110** HAYDN

:s,	|d	:m	|s	:m.,d	|d'	:l.,f	|s	✓:m.,d	|t,	:d	|f	:m			
||r	:-.m	|r	✓:s,	|d	:m	|s	:m.,d	|d'	:l.,f	|s	✓:m.,d			
||l	:-	|l,.t,	:d.r	|m	:-	|r.,d	:r.,m	|d	:-	|-	||			

Form ABAC (with extension). No attempt made to present the form (with its repeated phrase and its extended phrase) visually.

Key C *Rather quickly* **88** MOZART

:s.,s	|m	:s.,s	|m	:s.,s	|f	:r	|	:f.,f	|r	:f.,f	|r	:f.,f			
||m	:d	|	:d.,m	|s	:m.,s	|d'	:s.,d'	|m'	:d'	|		:s.,d'		
||s	:m.,s	|f	:r.,f	|m	:	|	:d.,m	|s	:m.,s	|d'		:s.,d'		
||m'	:d'	|	:s.,d'	|s	:m.,s	|f	:r.,s	|d	:-	|	||			

Form ABCDCD'.
No attempt to present the form and show the repetitions typographically.

Key G **13** BEETHOVEN

|s,	:d.m	|m.r	:d.r'	✓|m	:m.s	|s.f	:m.f'	✓|s	:l.s						
||f.m	:r.d	|t,.r	:d.m	|m	:r	✓|s,	:d.m	|m.r	:d.r'	✓|m	:m.s				
||s.f	:m.f'	✓|s	:l.s	|f.m	:r.d	|l,.d	:t,.r	|r	:d	||	*Sing again for speed*				

Form ABAB'.
No attempt at formal layout.

82

Key D. Speed test. Look through for repeated phrases.

|d'	:s	:l	|s	:f	:m	|d'	:s	:l	|s	:f	:m				
|d'	:s	:l	|s	:f	:m	|s	:f	:m	|r	:-	:-				
|s	:l	:s	|m	:r	:d	|s	:l	:s	|m	:r	:d				
|d'	:s	:l	|s	:f	:m	|s	:l	:t	|d'	:-	:-	||			

Here we have one of the few formal layouts in the Book. Evidently the compilers set it out thus, in order to give visual aid to the pupils in their attempt to sing it at speed.

(*d*) Manchester.

Key E♭.

:d |m :— :r |d :— :d' |l :s :f |m :— :

:d' |s :f :m |l :t :d' |m :r :— |— :— :

:r |f :— :m |l :— :s |s :f :m |m :r :

:t |d' :f :m |f :m :r |d :— :— |— :— ‖

(*e*) Crasselius.

Key C.

:s |d' :s |l :l |s :f |m :

:m |f :m |r :s |s :fe |s :

:s |d' :r' |m' :d' |f' :m' |r' :

:m' |d' :l |s :d' |d' :t |d' ‖

In the eight memory tunes at the end of Book III the compilers have set out the notation in a formal manner as in the above, in order no doubt to assist the pupils in their efforts to memorize the tunes to the sol-fa syllables.

It is difficult to understand why this principle of the formal layout of music should not have been applied throughout the book. Can it be because the compilers believe that in assisting the eye in the reading process, they are not using it to its fullest capacity? But the eye is the servant of the mind, and as the old Greek philosopher said, "the eye brings with it only what it sees." If it sees single notes it will bring back to the mind only single notes. If it sees orderly patterns of notes, it will bring back to the mind these orderly patterns. For, to quote again Bergson's words: "In a general way, reality is ordered exactly to the degree in which it satisfies our thought. Order is, therefore, a certain agreement between subject and object. It is the mind finding itself again in things."

It will be noted that the examples from Book III above are printed in a very heavy type. This was done on purpose for the sake of the younger pupils who would be using these books. But surely such a type is unnecessary even with young children, who are accustomed in their ordinary reading to much lighter types. The result of using ordinary letterpress type in sol-fa layout is that some of the letters, like "m" and "d", claim too much attention, while others, like "t" and "r", claim too little. This will be seen from the following first-proof of the Sequence Modulator, which was by error printed with ordinary letter-press type.

THE SEQUENCE MODULATOR

1	2	3	4	5	6	7	8
d'	t	l	s	f	m	r	d
t	l	s	f	m	r	d	t_1
l	s	f	m	r	d	t_1	l_1
s	f	m	r	d	t_1	l_1	s_1
f	m	r	d	t_1	l_1	s_1	f_1
m	r	d	t_1	l_1	s_1	f_1	m_1
r	d	t_1	l_1	s_1	f_1	m_1	r_1
d	t_1	l_1	s_1	f_1	m_1	r_1	d_1
1	2	3	4	5	6	7	8

1	2	3	4	5	6	7	8
d'	r'	m'	f'	s'	l'	t'	d^2
t	d'	r'	m'	f'	s'	l'	t'
l	t	d'	r'	m'	f'	s'	l'
s	l	t	d'	r'	m'	f'	s'
f	s	l	t	d'	r'	m'	f'
m	f	s	l	t	d'	r'	m'
r	m	f	s	l	t	d'	r'
d	r	m	f	s	l	t	d'
1	2	3	4	5	6	7	8

Copyright in U.S.A. and all countries, 1938. by Arthur J. Irvine

John Curwen invented a special type for sol-fa notation in which the weight is distributed as evenly as possible over all the letters. In his famous Memorandum*, one of the points he made against John Hullah, who had printed tests for Training College students in staff and sol-fa, was that he had not used the proper type.

Curwen always insisted on the use of this type in all tonic sol-fa publications, and freely granted the use of it to outside bodies who wished to use sol-fa notation.

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* See "The Present Crisis of Music in Schools. A Reply to Mr Hullah's Attack on the Movable Doh and Tonic Sol-fa Methods in The Education Blue Book, 1872-73. by John Curwen." (London, Tonic Sol-fa Agency)

John Hullah, in an attempt to prove the superiority of the Fixed Do Staff System over the Movable Doh Sol-fa System, had used with students in Training Colleges a test printed in staff and in sol-fa. In Hullah's layout of the sol-fa test Curwen points out "between 20 and30 errors" on the one page— using wrong type, taking away from the sol-fa time notation "its pictorial measurement of time" by the unequal spacing of pulses and bars, misplacing or omission of octave marks, use of transitions or modulations where these are quite unnecessary, etc.
As this sixpenny Memorandum is now scarce, we give for comparison and for instruction on the following page the facsimile of Hullah's sight-test with Curwen's layout of the same.

Fac simile of the Sight-test used by Mr. Hullah.

PART-SONG.

Un poco adagio. (♩= 72).

KEY B♭.

KEY F

KEY B♭.

KEY E♭.

KEY B♭.

Fine.

KEY F.

KEY E♭

KEY B♭.

Da Capo.

Corrected version of the Sight-Test in the Tonic Sol-fa Notation.

PART-SONG.

KEY B♭. *Un poco adagio* M 72.

FINE.

F.t.

d.f.E♭. *L is C.*

B♭.t.

D.C.

The Layout of Staff Notation

It is difficult to find good examples of the formal layout of music in staff notation, and this for several reasons. First, there is no recognised rule that bars of equal length in staff should be spaced equally. Where symbols have a pictorial basis, size (except as a matter of courtesy) does not count.*

Again, in the first bar of staff examples a time signature is always to be found, and this occupies some space and consequently upsets the spacing of the bars. While in Staff Readers the numbers of the exercises are often allowed to occupy space in the first line of music type in each exercise. In sol-fa notation there is no key signature and the numeration is not allowed to take up space in the printed music line (compare the foregoing examples in sol-fa).

In the following examples this indenting for numeration and inclusion of a time signature is usually responsible

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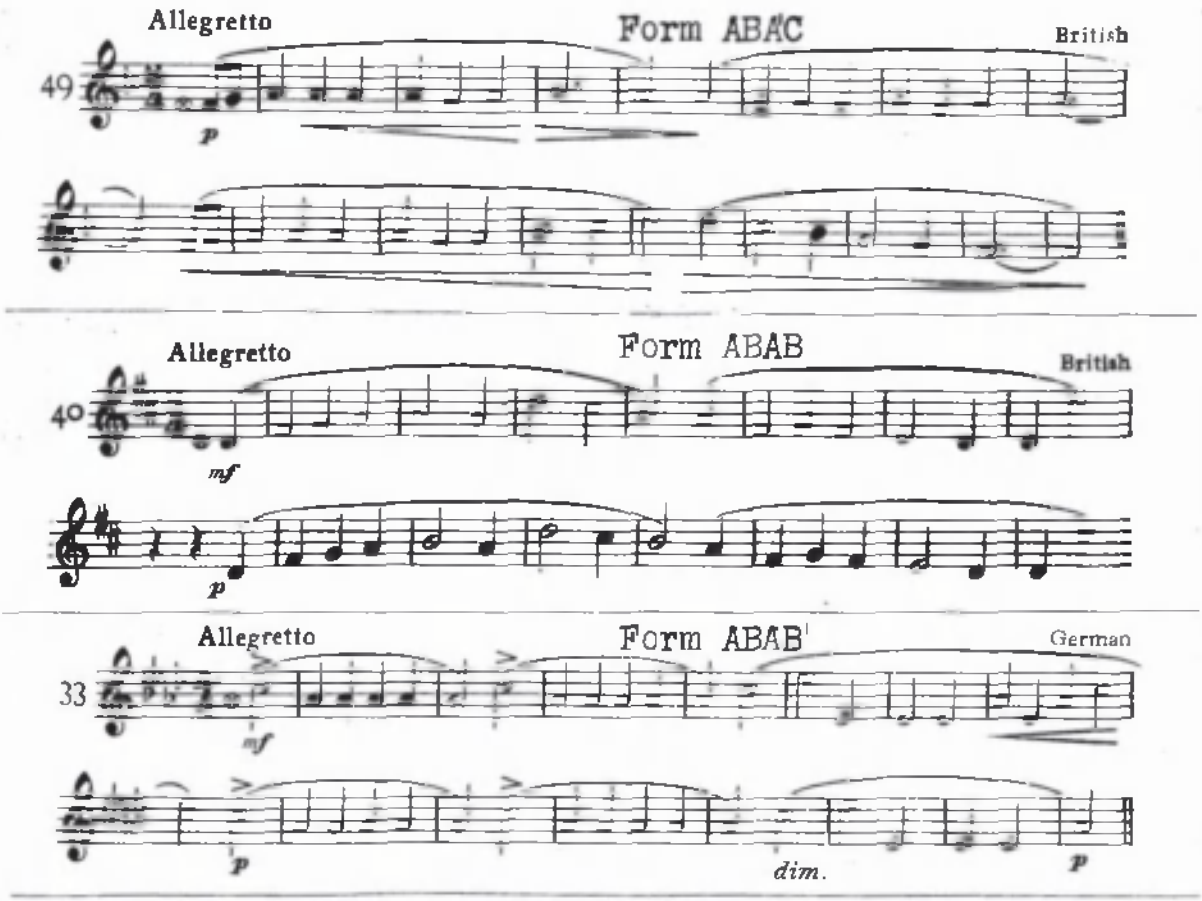
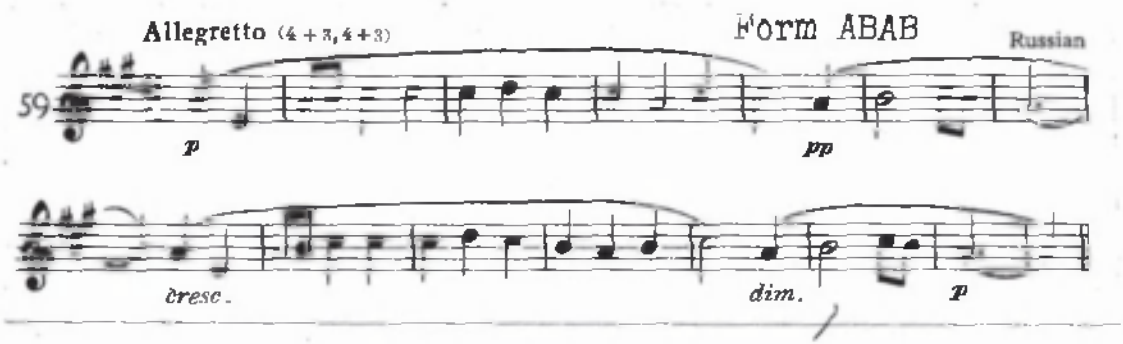
* "A reform that could be carried out by convention between publishers of different countries and immediately applied, with no inconvenience and nothing but advantage to all concerned, would be the adoption of one note-value (say the crotchet) as the beat in all new music. And experiments in the spacing of music according to the beats (approaching the system of the tonic sol-fa in that respect) might be fruitful."
("The Oxford Companion to Music" by Percy Scholes, p.621)
(Both of these advantages in the layout of music-type are incorporated in the tonic sol-fa notation.)

for the bad layout, although in many cases this is due also to the desire of the compositor to finish a line with a complete bar, irrespective of the fact that the last beat in that bar may be the first beat of a new phrase

After what has been said of the sol-fa layout, very little comment need be added to the following staff examples.

From "The Folk Song Sight Singing Series", Books I and II.





In the four examples above the repeated phrases in the bottom line appear more or less below the phrases in the top line. This makes for good form in the layout. But these results have been gained through carrying over the end of the second phrase to the beginning of the second line.

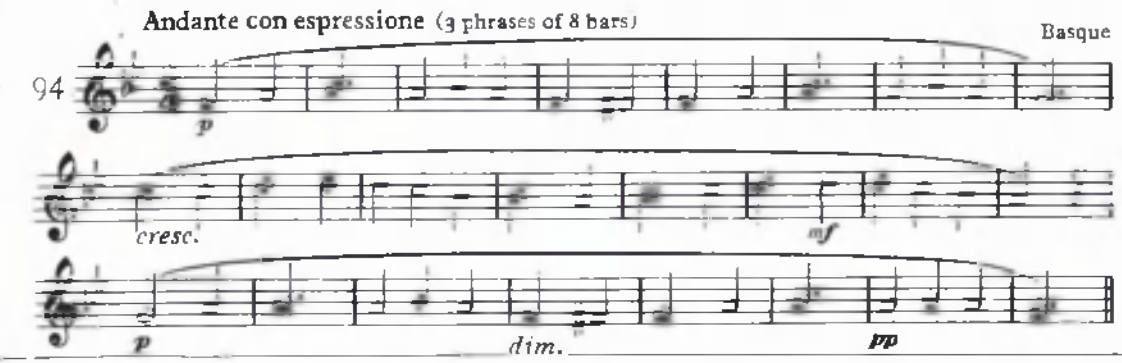
The best way to set out these tunes would be to make allowance for the number and the time signature, and indent slightly for the second line, so that the phrases in the second line would appear exactly under the phrases in the first line.

Actually the numbers would be better set out above the music as in the sol-fa examples. In this case only a slight indent would be necessary in the second line to allow for the time signature.

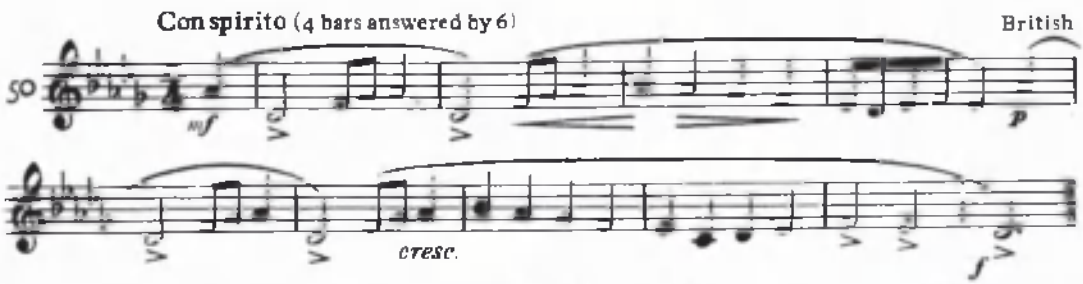
The examples on this page show the effect on the layout of the indenting of the first line.



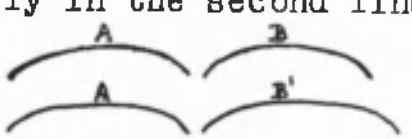
Form AABAAB.
The formal layout here is spoiled solely by the indenting of the first line.



Form ABA.
This layout would have been excellent but for the indenting of the first line.



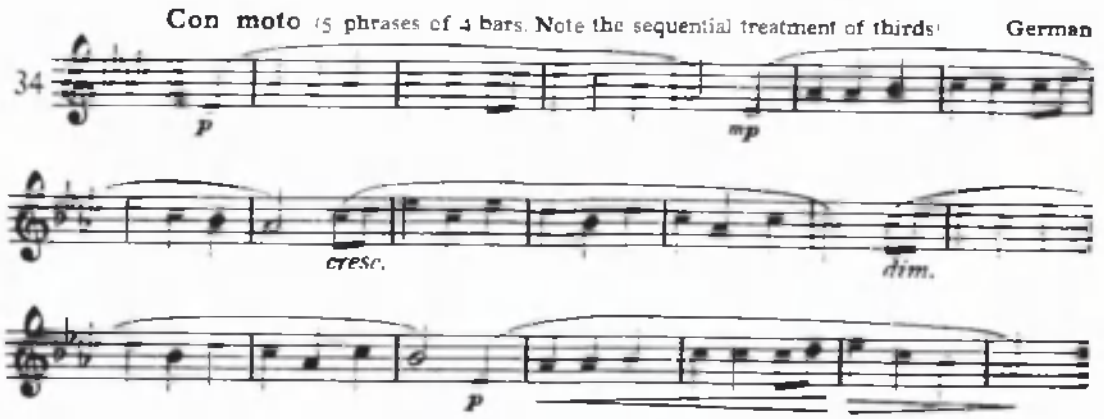
Form ABAB' (with extension).
Layout spoiled by indent. Phrase B' should be extended in space typographically in the second line.



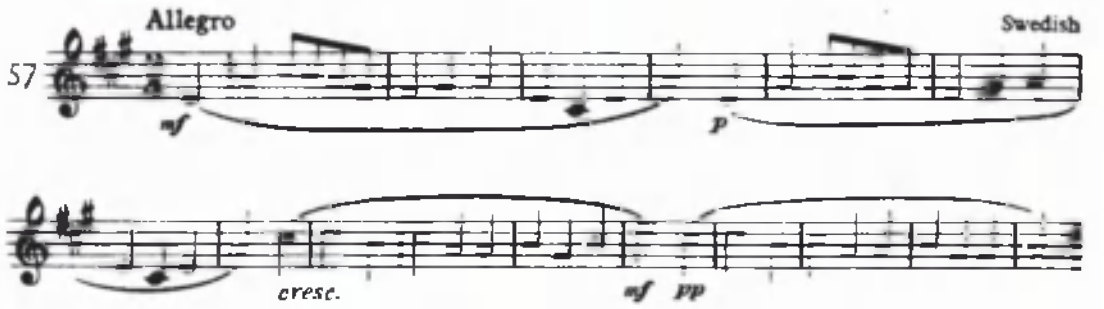
In the examples on this page a different number of lines in the layout would have aided the visual perception of the form.



Form ABABCB.
In order to show the repetitions visually this example should be set out in three lines: AB
AB
CB



Form AABBA.
A five-line layout without indent would make the repetitions stand out clearly to the eye.



Form AABB'.
A four-line layout would reveal the form visually.

From "The Progressive Reader" Books C and D

SCHUMANN.

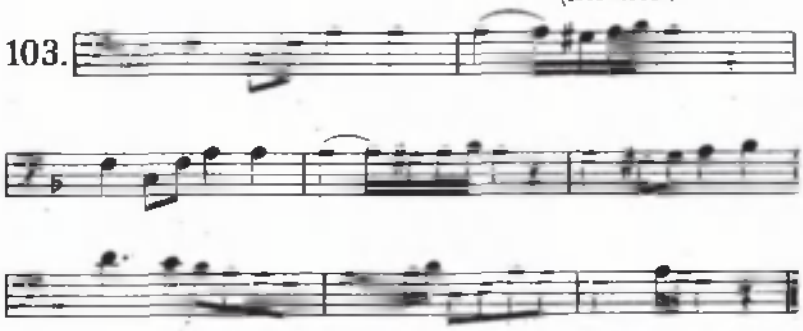
59.



Form ABAC.
Requires two lines without indent and with equal bar spacing.

VERDI (La Traviata) (Transposed).
(1813-1901.)

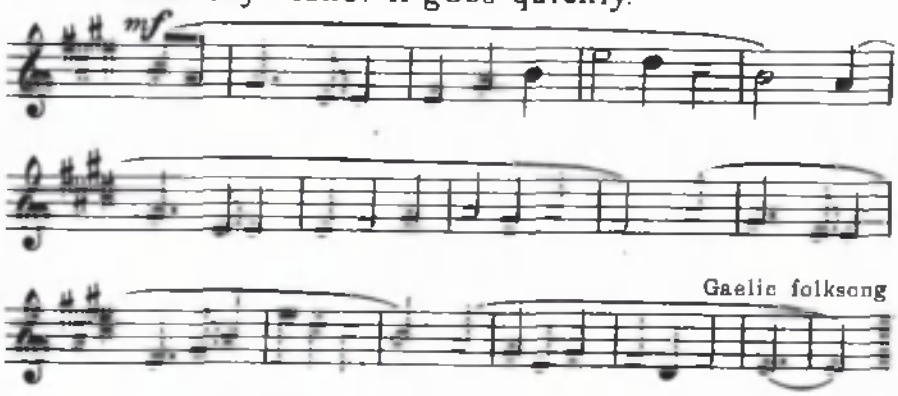
103.



Form AABC.
Requires a four-line layout without indent.

From "The Classical Sight Reader", Book 5.

93 A "Memory" tune. It goes quickly.



Form ABAC.
Requires a four-line layout. Note the 7 bars in third line, the 5 bars in second line, and the four bars in first line.

H.M.V. D 847.
Beethoven – Choral Symphony.

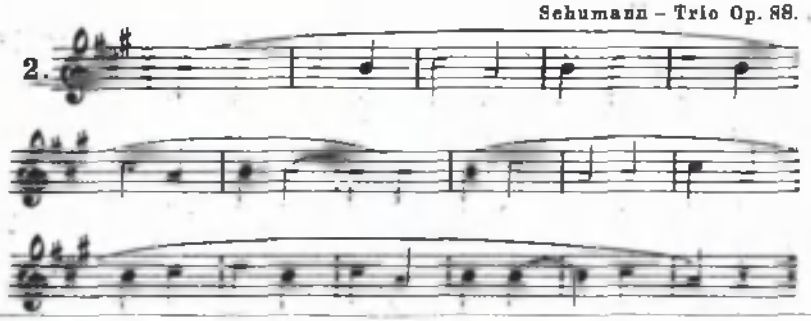
5.



Form ABAB'.
Layout spoiled solely by indent.

Schumann – Trio Op. 88.

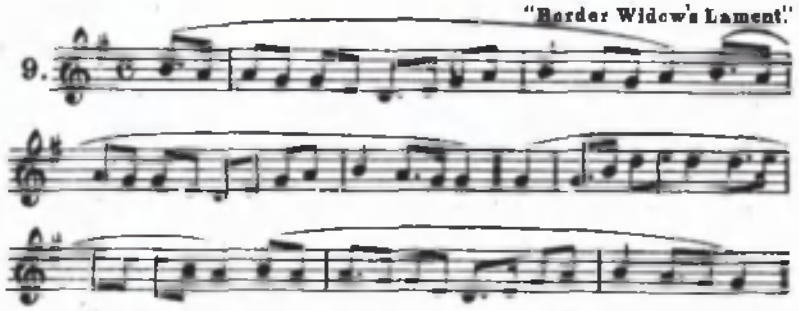
2.



Form AA (with extension).
Form quite concealed from eye by layout.
This tune requires two lines with extension in space in second line.

"Border Widow's Lament."

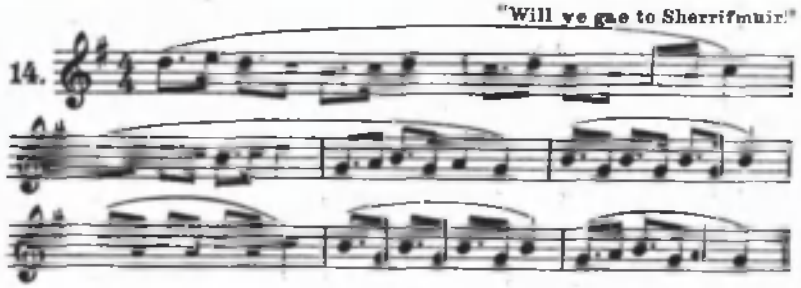
9.



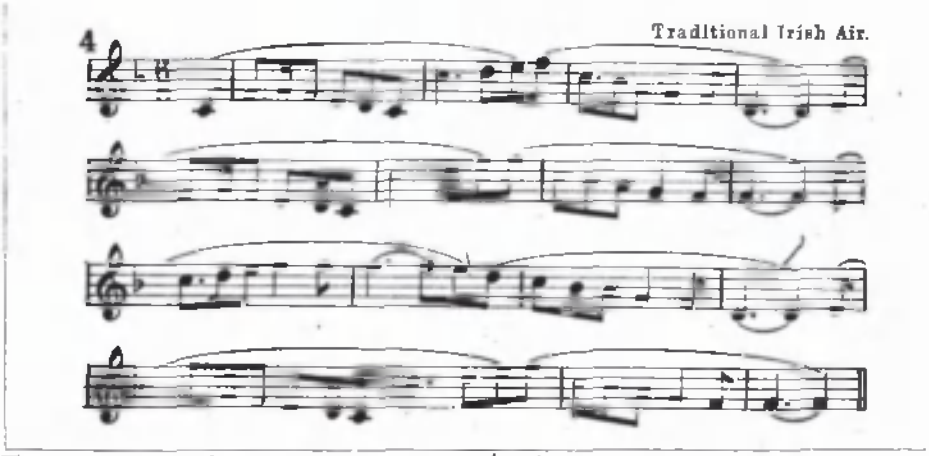
Form AA'BA'.
This four-phrase tune with its repetitions should be set out in four lines without indent.

"Will ye gae to Sherrifmuir."

14.



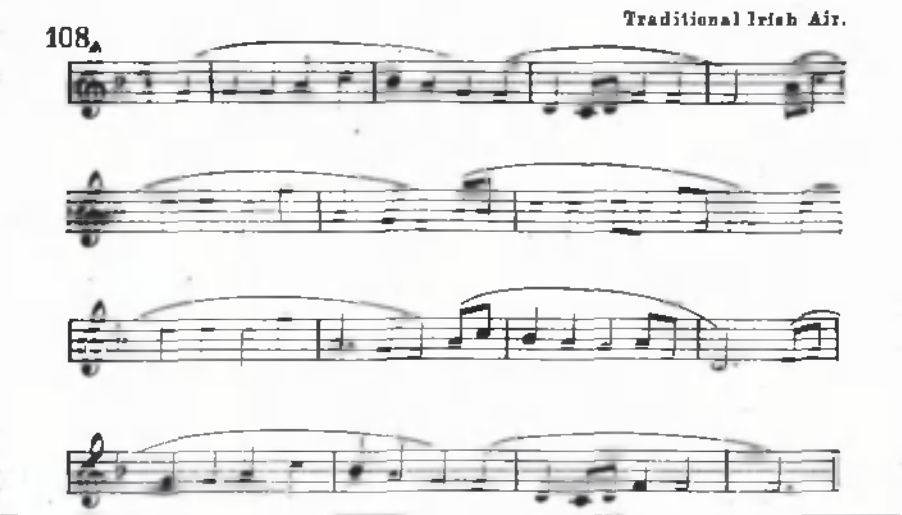
Form AA'BB'.
Bar spacing bad. This tune requires four lines for the layout.



Form ab ab' cb ab' or AA'BA'
Layout spoilt by indent, due solely to the time signature.



Form ABAC.
Layout spoilt by indent and unequal bar spacing. The phrase endings should coincide with the line endings, revealing the Gavotte form to the eye.



Form ABB'A.
No attempt made to show typographical structure of this typical Irish tune with its thrice reiterated tonic at the cadences in the first and last phrase, and its repeated second phrase B.

So far as the writer is aware, very little attempt has been made by compilers of School Music Readers to take advantage of the formal layout of music type in order "to aid to the maximum the reader's comprehension of the text."/ Indeed, until the publication a few years ago of "The Folk Song Sight Singing Series" (Oxford University Press), the question of the formal layout of music type in Sight Readers would scarcely have suggested itself to the music teacher. Up till then, practically all Sight Readers were made up of artificially constructed exercises devised to introduce as many examples as possible of pitch or rhythm problems in their order according to the scheme of the compiler of the book. In order to keep the eye of the pupil fully engaged from beginning to end of each exercise, the compiler of these Readers contrived to introduce little or no repetition of theme or phrase, little or no sequence, and few or no repeated notes. Each exercise was intended to be sung once and once only. Symbol interpretation or note-reading was the order of the day. And since there was no emphasis on reading for content - and the content after all was quite worthless from the aesthetic point of view - it was quite natural that there should be no attempt on the compiler's part to reveal the content or form typographically in the layout of the music. Indeed, such an attempt to aid the visual perception of the content of the sight-reading

exercise would be quite contrary to the principles on which the sight-reading method was based.

But the coming of "The Folk Song Sight Singing Series" has heralded a new approach to the problem of teaching children to read at sight. In this series of twelve Books, every exercise is an actual folk song. These folk songs have been collected from various countries in Europe chiefly, and, as would be expected, the A B C D type of structure is exceedingly rare. Every tune has been carefully phrased, and tempo and expression marks have been added to assist the reader in the sympathetic rendering of the music. Notes on any peculiarity in the form have been added in many cases, and indications of the structure of the tunes and the numbers of bars in each phrase have been given in brackets e.g. "(3 sets of 4 bars), (5 sets of 2 bars), (four-bar phrases concluded by one of 6 bars), (4+ 4 +4 + 2)" etc.

In an excellent Preface to each Book the following "Suggested Plans for Reading" are laid down for the guidance of the teacher.

SUGGESTED PLANS FOR READING

In the early stages of reading it is suggested that each tune may be sung in all of the following ways:

1) To solfa without time.
2) In monotone (*a*) to time names, (*b*) to doh.
3) Combined time and tune to solfa.
4) Combined time and tune to laa, twice if necessary, and then once at least with all expression marks observed (and to an accompaniment where the teacher is sufficiently skilled to improvise one).

The class should always beat time or tap each beat silently. It is desirable to use tapping in the early stages but to proceed to beating as soon as the class is ready.

When the class is sufficiently advanced each test should be sung at least three times, as follows:

1) To solfa.
2) To laa.
3) With all expression marks observed (and to an accompaniment where the teacher is sufficiently skilled to improvise one).

After the earliest stages of note-to-note reading, classes must learn

> to think in phrases. As an aid to this, phrasing is marked in all tunes, and cases of irregular rhythmic structure are noted. Observation of these points of construction not only helps towards more intelligent reading but also increases the interest of the lesson. All repeats should be observed: expression marks in brackets refer to the second time.
>
> Tempo and other indications may or may not be attended to on a first reading according to the capacity of the singers, but at a later stage all indications should be observed in order that sight-singing may be linked up with musical enjoyment. There is too often a tendency to divorce sight-singing from music, and one object of this collection is to provide material which is at once musical and useful, and which will help towards making this part of the singing lesson a delight to the class.

We have given in full this part of the Preface to Book I, because it indicates an altogether new departure in method with regard to the teaching of sight reading. As will be seen, the emphasis all along is on reading for content or meaning, and this is entirely in keeping with modern views on the teaching of ordinary language reading. Any pedagogical devices or visual aids that will help the learner to maintain continuity in the reading and to extract meaning from the text should be welcomed by the teacher.
In this connection it is interesting to note that up till the beginning of last century, when fluent readers were not so plentiful as now, it was customary to print at the foot of each page of letterpress a "catchword", which would help the reader to maintain continuity in his reading while he was turning over the page. These "catchwords" are still to be found in typescripts and in legal documents, where they serve also as warning signs if the pagination is wrong or if more than one page is turned at a time.
In music, too, until fairly recent times a similar device was used at the ends of lines to help the reader to maintain

the reading flow. This took the form of a sign (w) which was "set at the end of a stave to show the place of the first note in the next stave."

(Dictionary of Music," by John Hoyle, 1770)

This sign was known variously as a Direct, Custos, Mostra or Index. Under "Guidon," Rousseau in his "Dictionnare de Musique" (1775), defines it thus:

> "Guidon. Petit signe de Musique, lequel se met à l'extrémité de chaque Portée sur le Degré où sera placée la Note qui doit commencer la Portée suivante. Si cette première Note est accompagnée accidentellement d'un Dièse, d'un Bémol ou d'un Béquarre, il convient d'en accompagner aussi le Guidon."
>
> (Guidon. A small musical sign which is placed at the end of each stave on the line or space occupied by the first note of the next stave. If the latter note is accompanied by a sharp, flat or natural, this accidental must be placed also before the guidon or direct.)

It is interesting to note that the only places where directs are still to be found are in Exercises sent up by candidates for University honours. In these it is still, or it was until recent years, obligatory to insert directs at the end of each stave. The direct in this case is not just a relic of the distant past, but rather a most useful visual aid for the examiner who is looking out for "consecutive fifths."

But, we may ask, if such a visual aid is deemed by the University Professor to be a necessity for the preserving of continuity in his reading of a musical score, and if it

was deemed a necessity in the layout of music for adult readers up till the beginning of last century, why should we withold such a useful device for preserving continuity in reading from line to line from the young child in his early efforts at sight-reading?

The one constant in all music is the pulse or the beat. In ordinary language reading we may read a passage quickly or slowly, and we may pause over a word or a phrase, or even repeat it, until the meaning sinks in. But not so in music reading. The original pulse rate must be preserved until the end, except in cases where it is altered deliberately for aesthetic purposes. With young children it is even more essential to keep up a steady pulse, and a fairly quick pulse too, for they have more difficulty than experienced musicians have in holding a tune in solution in their minds, so to speak, until the last note is reached. And, as we have said, unless children are able to retain the echo of the first phrase in their minds while they are singing the last phrase, they will have failed to grasp the meaning of the whole. Hence we suggest that in the early reading exercises a "direct" should be placed at the end of each line of music except the last. The best place for such visual aids is undoubtedly at the seams of the melodic texture, the endings of phrases; for such

endings or cadences usually coincide with a long note, which allows time for breathing and recuperation without disturbing the pulse rate.

We advocate, then, that in Music Readers intended for young children:

(a) Each exercise should be treated on its own merits, and set out typographically so that it may reveal to the reader its form or structure to the best advantage.

(b) The numbers of the exercises should be placed above the line of music type and should not occupy space in that line.

(c) Allowance should be made in the second and following lines for the space occupied by the time signature at the beginning of the first line. This may be done by indenting for the lines below, or by beginning further in with the first note in these lines, so that it will appear exactly below the first note in the first line.

(d) All line endings should coincide with phrase endings, and directs should be used at the ends of the lines. This <u>streamlining</u> of the tune in its visual aspect will economize eye-power in the reader by preventing unnecessary waste in his efforts

to perceive the beginnings and endings of phrases, just as the stream-lining of a motor car or aeroplane economizes engine power by preventing unnecessary friction or resistance to the air.

(e) An extension in any musical phrase should be shown typographically by an extension in space in the layout.

(f) In all exercises tempo should be indicated, and phrase marks and expression marks should be inserted, so as to help the reader to bring out all the meaning of the music.

(g) It goes without saying that the tunes used for training in music reading should be real tunes with a content or meaning that will reward the reader in his efforts at interpreting the musical symbols, and not simply artificially constructed exercises with no organic unity whatever, such as we have been accustomed to in the past in School Music Readers.

Edward Elgar in his Preface to H. Elliott Button's "System in Musical Notation" (Novello) quotes the poet, Gray, who in reference to his own published poems writes to a friend:

"The press has in general a bad effect on the complection of one's works."

And Elgar goes on:

"Here Gray (1762) expresses an opinion which, however correct it may be as to literature, is certainly untrue as to the printing of music."

With regard to the topic under discussion - the layout of music is School Music Readers - we cannot endorse Elgar's opinion. And until the compilers of Music Readers come to recognise the bad "complection of their works," as the children in their sight-reading no doubt unconsciously do, there cannot be much hope for an improvement in "the complection."

CHAPTER IX

An Experiment to ascertain the effect of the formal layout of music type on Reading performance

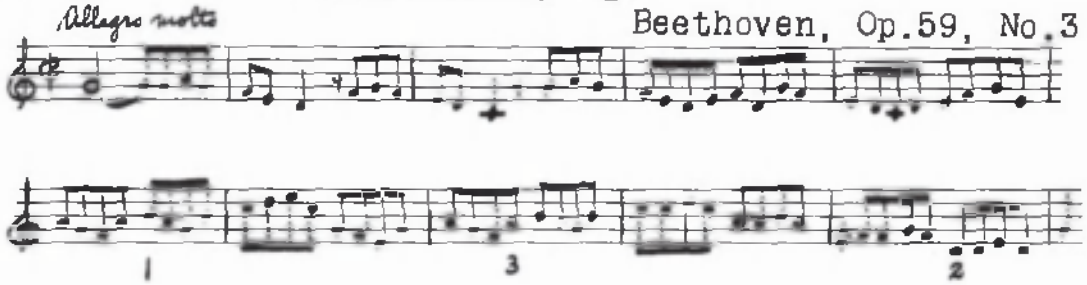
In an endeavour to ascertain the effect of the formal layout of music type on the ability to follow or read music type, the writer planned an experiment on objective lines and carried out a test on 302 First Year pupils in a large Secondary School.

Naturally, it would be quite impossible for an examiner to assess accurately merits or demerits of music type layout while pupils actually read from it either as a class or individually. The days when such a type of subjective judgement would be accepted in responsible quarters are gone, although this method of assessing still lingers on in practical examinations in music and in Musical Festivals.

So the writer planned a test in which the pupils would show by their own marking whether they were able or not to follow music which was played on the pianoforte.

The classes were all well acquainted with this type of test, as the writer used it regularly in class in order to cultivate fluency in following music type and, along with other tests, in order to assess sight-reading ability.

In this type of reading test, each pupil had before him a cyclostyled sheet of music, containing melodies from various classic sources. The writer then, with the aid of a pocket metronome, played these melodies at a certain Metronomic rate without accompaniment on the pianoforte, but stopped on certain notes under which the pupils were told to write a certain number, e.g.

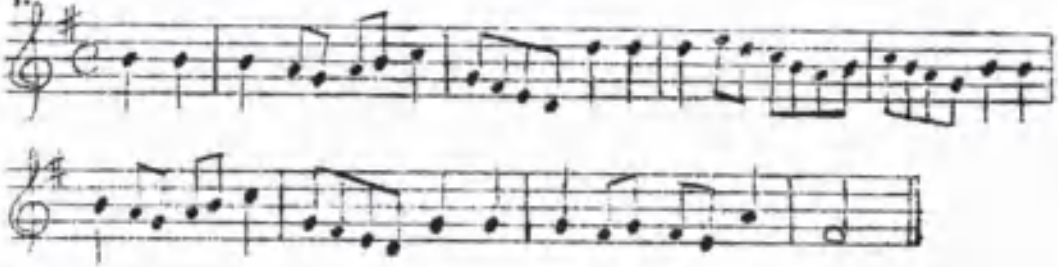


Thus, on a foolscap page the pupils would have to mark, say, 20 notes with the figures 1 to 20.

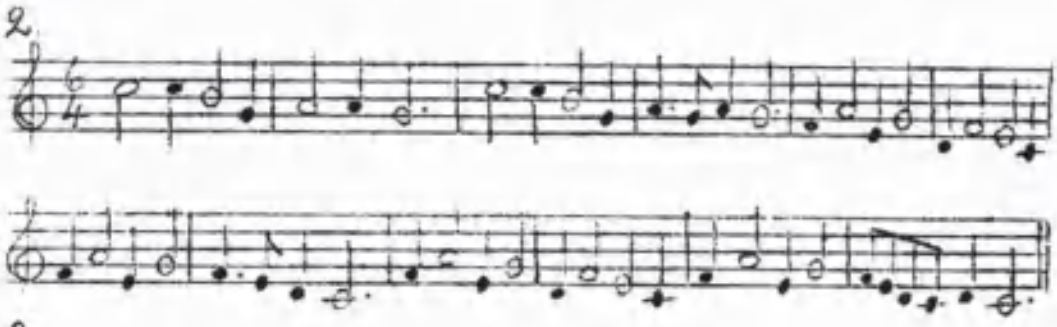
From the purely visual point of view it may be claimed that this test is quite valid, and in this experiment we were concerned only with the visual advantages or disadvantages of different forms of music-type layout.

We give on the following pages some examples of the type of material used in previous tests of this kind.

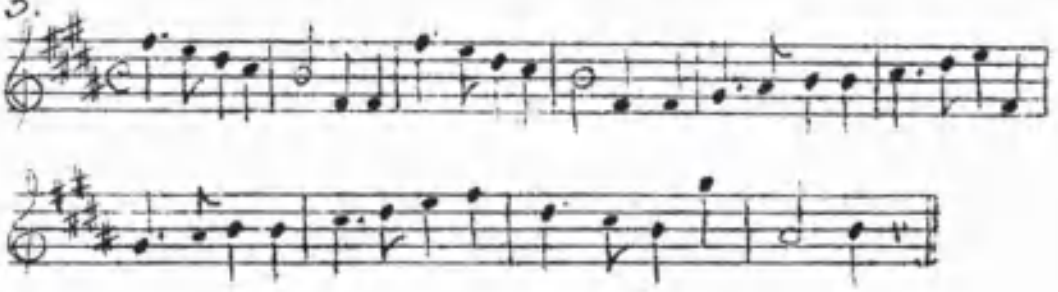
1.



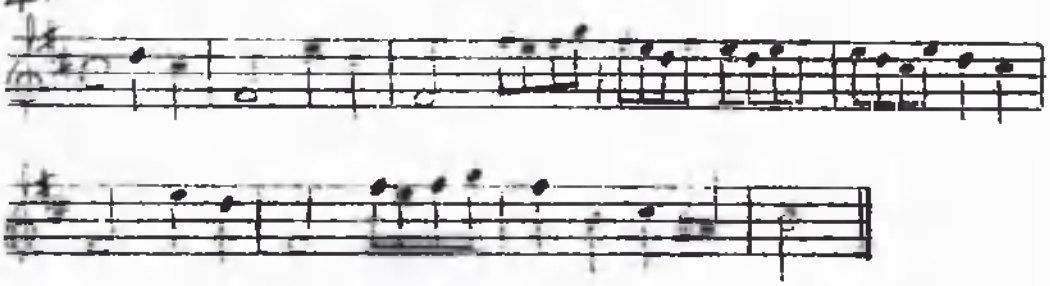
2.



3.

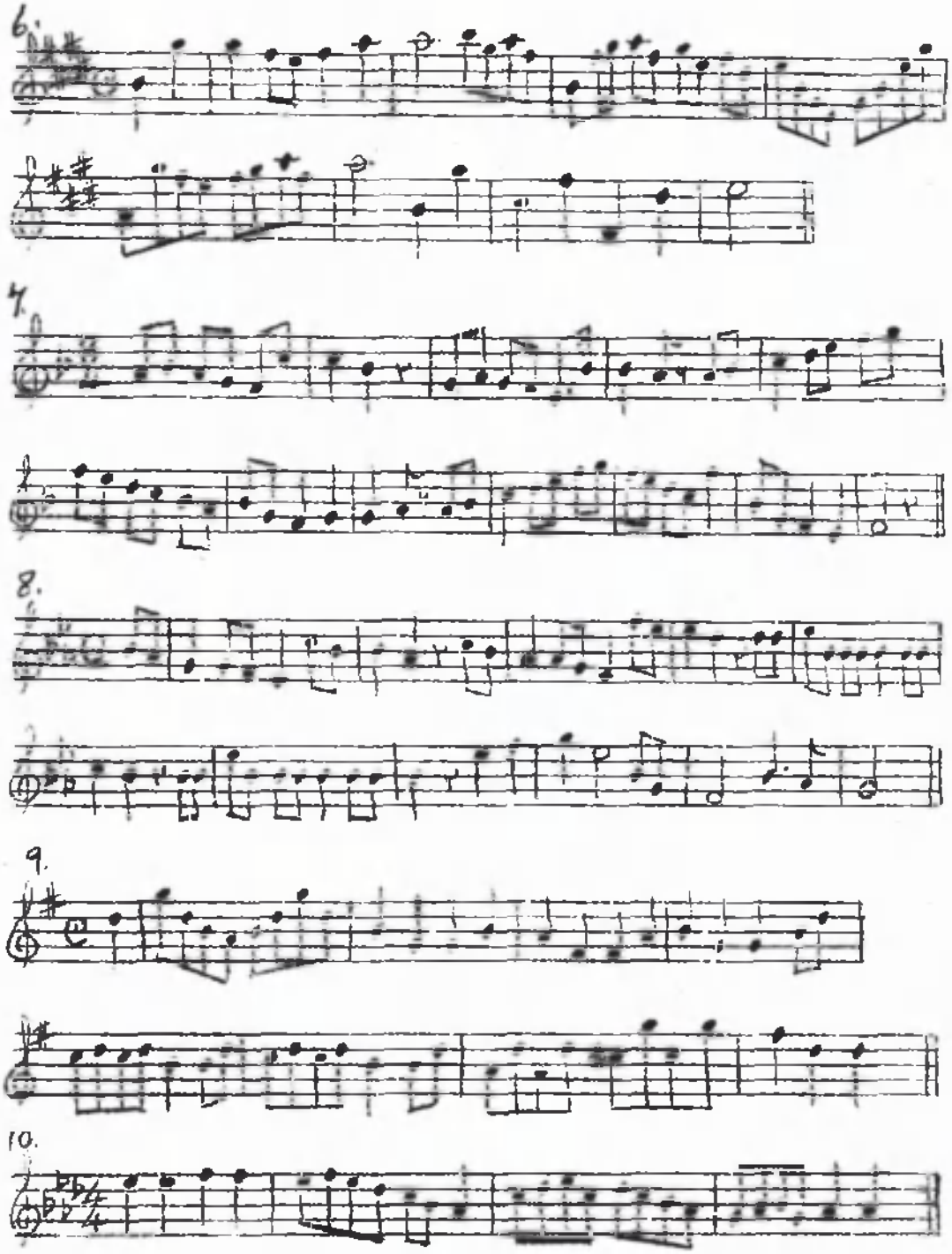


4.



5.




6.
7.
8.
9.
10.

In the Formal Layout Experiment we selected two melodies and printed these in the ordinary layout found in a School Music Reader and also in the formal layout whose advantages we desired to assess. A sample sheet will be found at the end.

The idea behind the experiment was to select the same five notes in both melody layouts, so that in each case - ordinary and formal layout - the pupils would have the same task to perform.

To prevent the pupils from noting these stopping places in the two layouts, one pair of melodies, 1a and 2a, was printed on the left-hand side of the sheet from top to bottom, and the other pair, 1b and 2b, on the right-hand side from bottom to top.

Again, to overcome the effect of position in a series on the amount of work done in a test of this kind, the pupils were numbered, and odd numbers started the series from 1a, while even numbers started the series from 1b. Thus, while one half of the pupils were marking the ordinary layout, the other half were marking the formal layout.

As the same notes were marked by each pupil in both the formal and the ordinary layout, care was taken to separate these notes by as wide an interval as possible.

Thus,

the 1st note marked 1 in one layout was again marked in the other layout as number 11

... 2nd 2 12

... 3rd 3 13

The order of marking will be seen from the accompanying sample sheet. It is very unlikely that the pupils knew that they were marking the same notes in each layout. (They usually tell the teacher in such cases!) But if any, probably only the bright pupils would have noticed it. And this, instead of militating against the validity of the results, would only make more certain any positive results attained through the statistical analysis of the scores. For such an escaping from the conditions of the test must have a tendency to equalise the scores in the case of these pupils, and it would require a greater discrepancy in the remaining scores to make the difference in the means significant.

Nine mixed classes of First Year Secondary Pupils, or 302 pupils in all, completed the test at one sitting during their ordinary lesson periods. The papers were collected, and the scores for the two layouts (one mark for each correct note), were subjected to the usual test for significance of difference between two Means. The statis-

tical analysis of the results is given below.

Statistical Measure	Formal Layout	Ordinary Layout
Mean	5·97	5·21
σ	3·566	3·285
P.E.	2·377	2·190
P.E.	·136	·126
V	60	63

r (Formal - Ordinary) = 0·86

P.E. = .01

Maximum possible score = 10 in each layout

Number of pupils tested = 302

$$V = \frac{\sigma \times 100}{M}$$

Probable error of difference = ·185

Difference in means = ·76

There is therefore a significant difference between the means, so that the formal layout leads to a superiority in scoring - a superiority that is not due to chance. That is, the formal layout definitely aids visual perception in the reading of music type.

It can also be noted that the subjects show a little more variation in the results for the ordinary layout as compared with the formal layout, but the difference is slight and probably not significant.

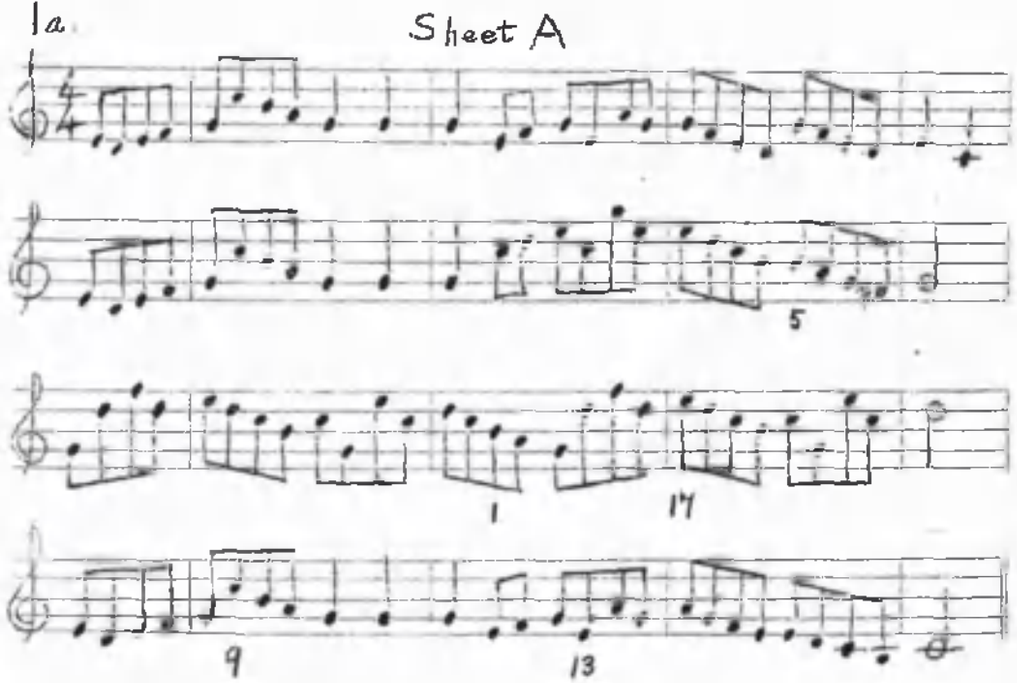
The correlation value is high and significant. There is consequently a large overlap in the mental functions concerned with perception in the formal layout and in the ordinary layout, and as has been shown already, the formal layout is easier to perceive (as demonstrated by relatively higher scores.) On both issues of similarity of perceptual process and ease of perception, the formal layout demonstrates its superiority.

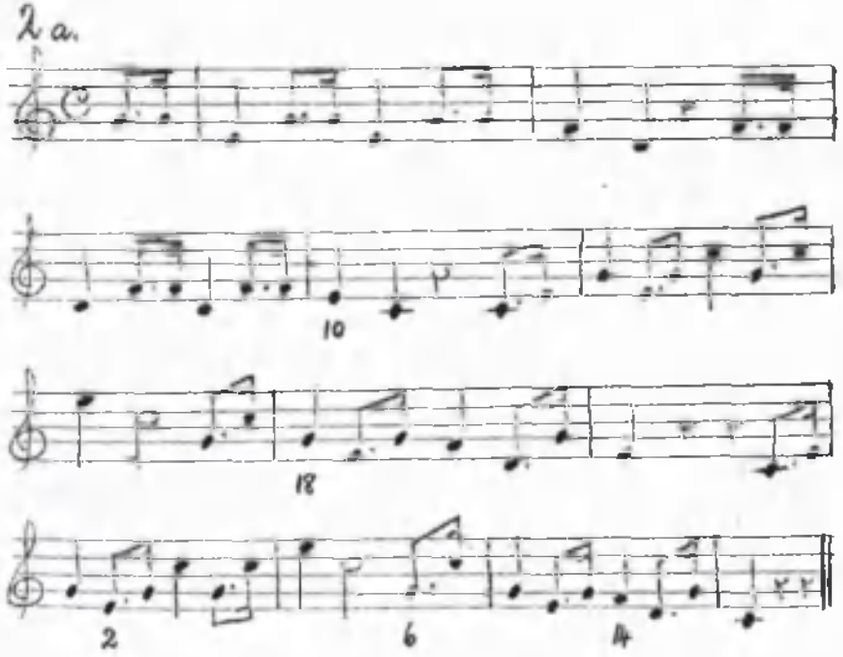
A sample test sheet, as used in this experiment, will be found on the next page.

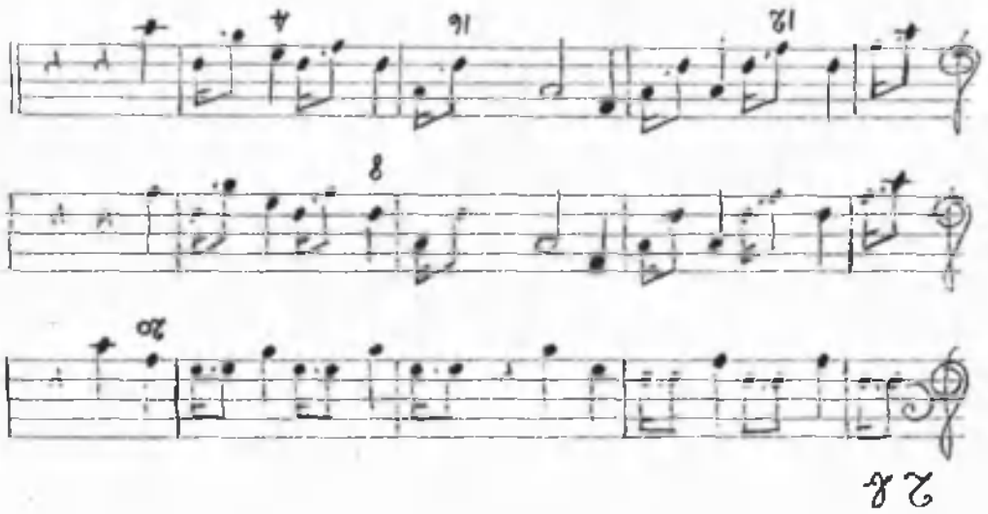
The figures 1-20 under the music show the notes which the pupils had to mark in each case when the playing stopped

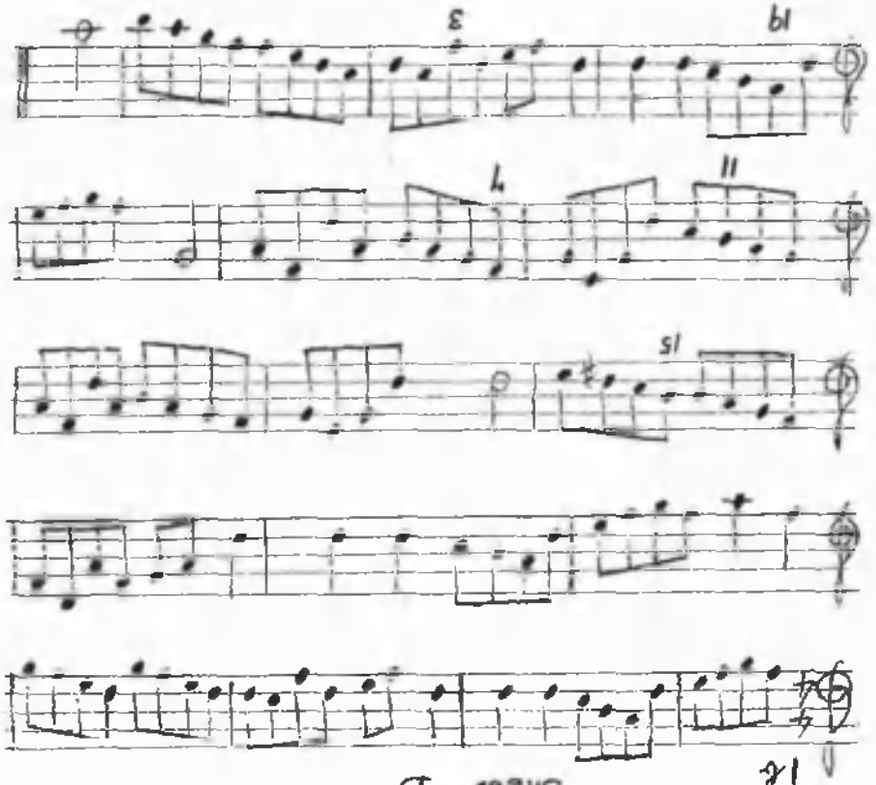
In all classes, one half of the pupils marked the sheets in the order 1a, 2a, 1b, 2b, then 1a, 2a, 1b, 2b again, etc., while the other half started from 1b, following the order 1b, 2b, 1a, 2a, and so on.

The same notes should have been marked on each layout, although a wide interval separated the notes marked on the ordinary layout from the same notes marked on the formal layout, 1 being marked again on the other side as 11, 2 as 12, 3 as 13, etc.


1a
Sheet A
5
1
17
9
13


2a
10
18
2
6
14


4
16
12
8
20
2a


3
19
7
11
15
1a
Sheet B

CHAPTER X

FREQUENCY OF INTERVALS IN MELODY.

Lord Kelvin once said that we begin really to know a thing when we are able to measure it. And Professor A. N. Whitehead in "The Aims of Education and Other Essays" (New York, The Macmillan Co. 1929) says - "Through and through, the world is infected with quantity. To talk sense is to talk in quantities".

When we come to analyse an impalpable thing such as melody, it seems very difficult at first to find a quantitative measure which may be used for comparing melody with melody.

Yet it is possible to find such a measure. We may, for example, take the number of repetitions or of sequences in melody, and thus be able to compare one melodic type with another, or even one composer or epoch with another. If the measure is a valid one it will measure some inherent quality of all melody. If it is a reliable one, we should be able to classify melodies of different types or of different epochs and even of different composers.

For melody has been evolved through the centuries just as truly as any living creatures have been evolved, and it should be possible to find in it internal evidence of its origin or of its state of evolution.

One can recognise aurally the Plainsong melody, the Palestrina melody, the Bach melody, the Mozart melody, the Grieg melody, just as one can recognise the peculiar form and melodic lines of folksongs of different countries, and just as one can recognise the typical sight-reading

exercise of the old-fashioned School Sight Reader. It is the latter - the product of the artificially constructed Sight Reader - that we are interested in at present. We wish to analyse this peculiar melodic type and to compare it with other melodic types in order to judge its fitness for the work it has to perform. This analysis may help us, too, to reconstruct the principles on which the compiler of Sight Readers works in preparing and presenting his subject-matter to the class. As we have pointed out, however, form or repetitions of phrase and sequences are practically non-existent in such Sight Readers.

However, we are still left with another measure which we may apply in our analysis of melody, namely, the frequency of intervals in melody.

In "The Foundations of Music" (Cambridge University Press, 1919, page 34) H. J. Watt quotes the following sentence from C. S. Myers's essay on "The Ethnological Study of Music".

> " In folk music generally the frequency with which the various intervals are used decreases proportionately with their size. "

Dr. Watt tested this conclusion in the case of Schubert's Songs, and found that it held there, and he adds - "The matter has not been fully treated statistically, as far as I am aware, but it would probably well repay the trouble necessary to gather the facts". Dr. Watt in his analysis of the Schubert songs takes account of the quality of the interval, e.g., minor second, major second, etc., and

gives the frequencies for these. Unfortunately, however, he takes no account of the unison or repeated note, and this is just as important an element in melody as any other interval.

In the following analysis of various types of melody we have counted all intervals, I II III IV V VI VII VIII, but we have not discriminated intervals from the point of view of quality - perfect, major, minor, diminished, augmented. By using too fine a measure we may obtain so much detail that we lose the broad outlines. Further, in the very rare instances among later composers where an augmented or diminished unison occurs, e.g., f fe or m ma, we have counted this as a second or II.

In our analysis we have included also what have been called "dead intervals", that is, intervals between phrases separated by a rest, provided that these intervals occurred within the space of a bar. The melodies analysed were selected from volumes which were at hand, but, as will be seen, the selection is fairly representative of various ages and countries.

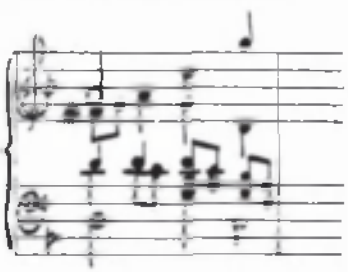
In the following Tables, we give the results of these analyses of melodies from the point of view of interval frequency under the following headings - (1) Sources of melodies analysed, (2) Total number of intervals in the melodies analysed and (3) Percentages of the various intervals in these melodies from unisons to tenths under the Roman numerals - I II III IV V VI VII VIII IX X.

Melodies Analysed (In each case the top part has been taken)	Total Number of Intervals	Percentages of Intervals									
		I	II	III	IV	V	VI	VII	VIII	IX	X
From "The Oxford History of Music"											
Vol. I Ch. VII "The First Development of Polyphony"	1454	8·6	77·1	11·1	1·9	1·1	0·14		0·14		
Vol. II Ch. V "Chansons de Gestes"	904	10·3	76·6	9·8	2·0	1·1	0·2				
Vol II Ch. I England (to Dunstable)	909	8·8	60·6	24·2	4·7	1·3	0·2		0·1		
Ch. I France and the Gallo-Belgic Provinces	1032	8·9	69·8	13·9	4·0	2·5	0·1	0·1	0·7		
Ch. II The Netherland School (excepting Secular Music)	900	10·9	70·0	12·8	3·0	2·8	0·2		0·3		
Ch. III The English School (Early Tudor to "Tye and Whyte")	532	13·7	61·3	15·8	5·6	3·2			0·4		
Ch. IV The Selection of the Method (Tallis, Byrd etc to Palestrina and Victoria)	796	16·5	63·7	11·4	5·0	2·3	0·5	0·1	0·5		
Plainsong from "Cantus Missae in Festis Solemnibus" ex Editione Vaticana Excepti" (Rome)	1308	21·1	61·2	14·9	1·8	0·5	0·2		0·15		
The Netherland School - Secular Music (from Oxford History of Music, Vol II, Ch II)	440	21·8	61·2	11·6	4·1	0·2	0·7		0·45		
"The French Mass" (John Shepherd (d 1563))	1147	13·7	58·8	14·5	7·1	4·8	0·7		0·4		
Palestrina: "Missa Papae Marcelli"	1058	18·1	64·5	11·1	3·9	1·4	0·5		0·5		
Palestrina: Two Anthems and Two Madrigals (from Taylor's "Great Schools of Italy")	555	16·9	64·2	12·2	3·6	2·2	0·4		0·5		
Byrd: "Mass for Five Voices"	1002	16·5	63·7	11·1	6·1	2·2	0·2		0·3		
Wilbye: "First Set of Madrigals" (every fourth page)	1070	18·5	60·7	10·3	5·5	3·8	0·7		0·6		
Orlando Gibbons: "First Set of Madrigals" (every sixth page)	724	14·2	66·2	9·7	4·3	3·0	0·7		1·9		
Ditto (more intervals taken)	1110	13·1	68·2	9·5	4·3	3·0	0·5		1·4		
Purcell: "Te Deum in D"	1140	15·4	65·3	11·2	5·6	2·2	0·1		0·14		
Bach: Recitatives and Arias for Alto Voice (Peter's Album No. 4797)	4047	7·6	64·4	14·3	4·8	3·2	3·3	1·4	0·9		
Mozart: Soprano Arias from "Le Nozze di Figaro" (Books I & II Novello)	1958	18·4	47·1	18·6	8·4	3·0	2·6	0·6	1·0	0·1	0·15
Schubert: Album Vol I (Augener) (every tenth page)	1283	23·5	41·8	17·9	7·8	4·1	2·7	0·8	1·3	0·08	0·08
Mendelssohn: "Twenty Songs" (Boosey)	2496	14·4	57·1	14·9	7·6	3·4	2·0	0·2	0·1		0·1
Schumann: Song Cycle "Myrthen" Op. 25	1323	38·7	35·5	11·5	9·4	3·0	1·6	0·3	0·15		
Schumann: Song Cycle "Frauenliebe und Leben" Op. 42	1285	36·8	36·4	11·3	7·7	4·4	2·5	0·7	0·16		
Brahms: Ausgewählte Lieder "Forty Songs (Simrock) and "Nine Songs" Book II (Novello)	1311	13·7	48·9	19·5	9·5	3·1	4·0	0·6	0·7		
Grieg: Lieder Album (Twelve Songs)	1590	20·9	44·0	21·5	6·9	2·3	2·6	0·8	0·9		
Richard Strauss: Lieder Album Vol. II (Universal Edition)	1492	24·6	42·4	15·6	8·5	4·8	2·4	1·1	0·8	0·13	0·06

A study of the figures on the previous page reveals some interesting facts. The most frequent interval in melody is, as would be expected, the second or the stepwise note. Until Mozart's time, with the exception of Shepherd's Mass, all the melodies analysed have shown a percentage of seconds varying from 60% to over 70%. The next interval in size, the third, shows a sharp decrease, and this decrease continues with each succeeding interval until the octave is reached, where there is sometimes a slight rise. The repeated note, or the first, is the most variable interval of all. The two entries (·01%) of sevenths in the early examples may be discounted as they represent two "dead intervals"*, that is, intervals occurring between phrases separated by a rest. The 24·2% of thirds under "England (to Dunstable)" are interesting as showing the pioneer spirit of England in Dunstable's day. Again, the 21·5% of thirds under "Grieg" are what we would expect, when we consider his love of falling thirds, especially at cadences. (See Groves Dictionary, Vol.II, page 459).



* The excuse for the "dead" seventh in the case of Weelkes can be seen from the example below showing the context in which it appears.



The Bach percentages, it will be noted, represent those for Alto Arias and Recitatives, and it is probable that they would have been quite different if Soprano Arias had been analysed, as the Alto soloist does not always have the melody part and as Recitative melody is different in character from ordinary melody.

The Schumann frequencies will come as a surprise - 38·7% and 36·8% of firsts, and 35·5% and 36·4% of seconds. That this is no accident of selection but rather the result of conscious mannerisms on the part of the composer is shown by the fact that in both Song Cycles the frequencies correspond very closely.

On the whole, Professor C.S.Myers's conclusion regarding folk music holds with music generally - "the frequency with which the various intervals are used decreases proportionately with their size." This is true, at any rate from thirds to sevenths, although a slight rise sometimes occurs at octaves.

In all cases the thirds are higher than the fourths, and usually very much higher. In all cases fourths are higher than fifths and in nearly all cases fifths are higher than sixths, while the sevenths are either absent as in the early examples or much lower than the sixths.

The most noteworthy feature of all, perhaps, is the close correspondence in the frequency scale among composers

of the great Vocal Era, c.1600. This homogeneity of the melodic line about this time, however, is to be expected, as in these days music was a purely vocal art and melodies were dictated by vocal considerations. The slow evolution of the vocal tradition in melody had not yet been interfered with by the entrance of the musical instrument into the domain of art or by the coming of the harmonic conception of music with its repercussions on the conception of melody itself.

The two examples from Palestrina show a remarkable correspondence, and one might safely predict that any sample of about 500 intervals upwards from Palestrina's music would reveal a similar scale of interval frequencies.

The high octave percentage in the two Gibbons examples is also interesting. This was probably due to the development of instrumental music, and to the beginnings of the Major-Minor Key System as opposed to the Modal System about this time.

In more recent times the general tendency has been to reduce the amount of stepwise motion and to exploit the intervals between the third and the octave.

But our purpose at present is to study the typical melodic line of the artificially constructed melodies of the School Music Reader.

So, we shall now give a table of interval frequencies of folk melodies (Hindostan music, and nursery rhymes) and of melodies from School Sight Readers.

Source of Melodies analysed	Total No. of Intervals	Percentages of Intervals I	II	III	IV	V	VI	VII	VIII	IX	X
The Music of Hindostan (Oxford Press) (Fox Strangways) Every tenth page taken	1444	28·4	50·3	15·3	3·7	1·6	0·6		0·07		
Nursery Rhymes to Old-fashioned Tunes Book 3. (Banks, Leeds)	1938	24·8	48·0	17·5	6·6	1·8	0·8	0·1	0·6		
British Nursery Rhymes Moffatt and Kitson (Augener)	1224	25·3	45·6	17·0	5·5	2·8	1·5	0·7	1·6		
Traditional Nursery Rhymes (John Graham) Curwen & Co.	2063	26·4	46·6	15·7	6·7	3·1	0·9	0·05	0·6		0·05
Folk Song Sight Singing Series, Book I (Cowe, Lawton & Whittaker) Oxford Univ. Press	3853	20·8	53·8	17·5	4·6	1·2	1·1		1·0		
The Progressive Staff Reader, Book B (Hunter & Walker) Bayley & Ferguson	2688	4·2	64·1	16·9	7·0	3·2	3·6	0·1	0·9		0·04
The Compleat Teacher (A. Somervell) Boosey & Co.	2178	6·7	72·5	11·7	6·2	2·0	0·4		0·6		
The Rapid Sight Reader (A. Somervell) Boosey & Co.	5642	5·3	64·4	15·2	9·0	3·4	1·3	0·2	1·2		

As will be seen from these figures, the most remarkable feature of folk music and nursery rhymes is the high percentage of repeated notes or firsts, and the most remarkable feature of the artificially constructed melodies from the three Sight Readers analysed (Progressive Reader, Compleat Teacher and Rapid Reader) is the remarkably low percentage of firsts. The Folk Song Sight Singing Series Book I is made up entirely of folksongs of all countries, and it corresponds closely with the samples of folk music above in this respect.

This low percentage of repeated notes is probably due to the fact that the compilers of these Synthetic Sight Reader exercises consider that repeated notes or firsts have no eye-training value. They look upon them as the water in the milk, and by reducing the proportion of firsts they hope to get a more concentrated mental food for the child. But a glance at the interval frequencies of more highly organised melodies (e.g. Schubert, Schumann, Grieg or Strauss) shows that if the water is anywhere, it is to be found in the seconds. If the higher intervals from III upwards are to be exploited, it is the seconds that should suffer in consequence, not the firsts. This fact is borne out by the predominant feeling of aimlessness and spinelessness that the reading of such artificially constructed melodies produces in one. The most inspiriting music of all (Bugle and Trumpet calls) can get on without a single second, but not without firsts.

In considering tunes for purposes of training children in sight-reading, then, we must consider the tune as a whole, and the tune as a whole must not suffer as the result of over-emphasis on particular elements, whether they be firsts, seconds, thirds, fourths, etc.

That the compilers of these artificially constructed Readers can write good melodies, when they care to, cannot be denied, but these melodies reveal a different scale of

interval frequency. Thus, Sir Arthur Somervell's Songs from "Fifty Modern English Songs" (Boosey) give the following percentage of intervals.

Number of Intervals	I	II	III	IV	V	VI	VII	VIII
1262	12·7	56·0	14·7	9·5	4·0	1·7	0·4	0·9

Again, in the case of these Sight Readers, large samples have been taken. But in considering the suitability of material for training children in sight-reading, we must consider smaller samples, for, if children are to be interested, they must be interested at once or not at all.

One may get a fairly normal distribution of intervals by analysing large stretches of melody. But the child's weekly portion is probably, at the most, one page of exercises. Hence, it is important, for the sake of the melodies themselves and for the interest they will generate in the child, that the homogeneity of the melodic line is preserved even in small samples.

When we analyse these artificially constructed Sight Readers more closely, we find, as we would expect, that, if for example the compiler is introducing fourths into the exercises, the fourths often outnumber the thirds on the same page of exercises.

We give below a few pages from "The Rapid Reader" showing the total numbers of intervals in the page.

	I	II	III	IV	V	VI	VII	VIII
Page 6	16	121	12	15	6			
" 7	8	119	11	19	13	4		3
" 11	13	135	11	16	4	1		
" 23	5	116	16	17	2			
" 29	0	101	21	17	8		1	4
" 30	3	92	26	31	1	1		2
" 31	3	91	55	26	5	1		2
" 32	5	111	30	27	8	2		1

The last four pages, 29-32, contain 675 intervals, quite a fair sample. We give below the percentage of intervals in this sample.

I	II	III	IV	V	VI	VII	VIII
1·63	58·52	19·55	14·96	3·26	0·6	0·15	1·33

Nowhere else in the world of music will such an interval frequency be found!

Fourths, of course, must be taught, but they will be taught better through satisfying melodies in which they observe their true proportion in the melodic scheme; just as vitamins must be absorbed by the growing child, but, except in pathological cases, they will be absorbed to better advantage in the orange than in the medicinal drop.

Yet we find that where the native melodic instinct of the compilers of artificially constructed Readers might lead them to write firsts, seconds, or thirds, the formal, logical and mistakenly pedagogical instinct of the writers impels them to write fourths, fifths or sixths.

In the case of the School Music Reader the only way to assure that natural melody will be provided for the growing child with his real love of melody is for the compiler to select natural tunes, e.g. folksongs, and music associated with childhood, or else to rid his mind of preconceived notions of what the child should receive in the way of eye fodder and give free rein to his melodic fancy.

We may not be able to prescribe the exact order of learning in the child, but we may be sure that it will follow closely on the order of loving.

The classic example of the result of abnormal interval frequency on melody is to be found in Beckmesser's Serenade from "Die Meistersinger". In the opera, Beckmesser, who is Walther's rival for the affections of Eva, overhears Walther practising his song for the contest, and endeavours to appropriate the musical ideas to his own use. But, like most imitators, he fastens on the accessories of the style rather than on the style itself - Walther's song contains a high proportion of fourths - and produces a ludicrous abortion containing 22·8% of fourths!

This example from the domain of art, composed with a special purpose in view, is the nearest approach to some of the artificially constructed melodies, which, as we have seen, were also composed with a special purpose in view.

The following are the percentages for Walther and Beckmesser:

	No. of Intervals	I	II	III	IV	V	VI
Walther	326	2·5	62·0	19·0	9·2	5·2	1·8
Beckmesser	263	3·8	50·9	18·2	22·8	1·6	2·7

We mentioned in the first volume the influence of the technique of the instrument on the type of melody which is written for it. The following percentages of intervals in the subjects of Bach's keyboard and pedalboard fugues speak for themselves.

	Number of Intervals	I	II	III	IV	V	VI	VII	VIII	IX
48 Fugue Subjects from "Das Wohltemperirte Clavier"	783	3·5	64·2	14·2	8·0	4·6	3·1	1·6	0·8	0·1
Organ Fugue Subjects from Vols. 2, 3, 4 (Peters Edn.) (Containing in Vol. 2)	691	9·1	44·0	19·1	10·1	9·3	4·6	1·3	2·2	

Orlando Gibbons in his Dedication of "The First Set of Madrigals" to his patron, Sir Christopher Hatton, writes,

> "It is proportion that beautifies everything; this whole Universe consists of it, and Musicke is measured by it, which I have endeavoured to observe in the composition of these few Ayres."

In the world of Art, much has been written about the "Golden Section"
(see "The Meaning of Art" by Herbert Read:Faber)

If such a Golden Section is to be found in melody considered from the point of view of interval frequency, it will probably be found in the melody of the Vocal Era, especially in the melody of Palestrina. There we have real homogeneity of melody adapted to the peculiar technique of the human voice.

We append a few examples of interval frequency in melody represented by frequency curves. But we would warn the reader that there is no mathematical significance in the curves themselves. This graphical mode of representation, however, allows of the superimposition of a number of examples, and aids in the comparison of these.

N.B. In analysing polyphonic music, the top part only has been taken throughout.

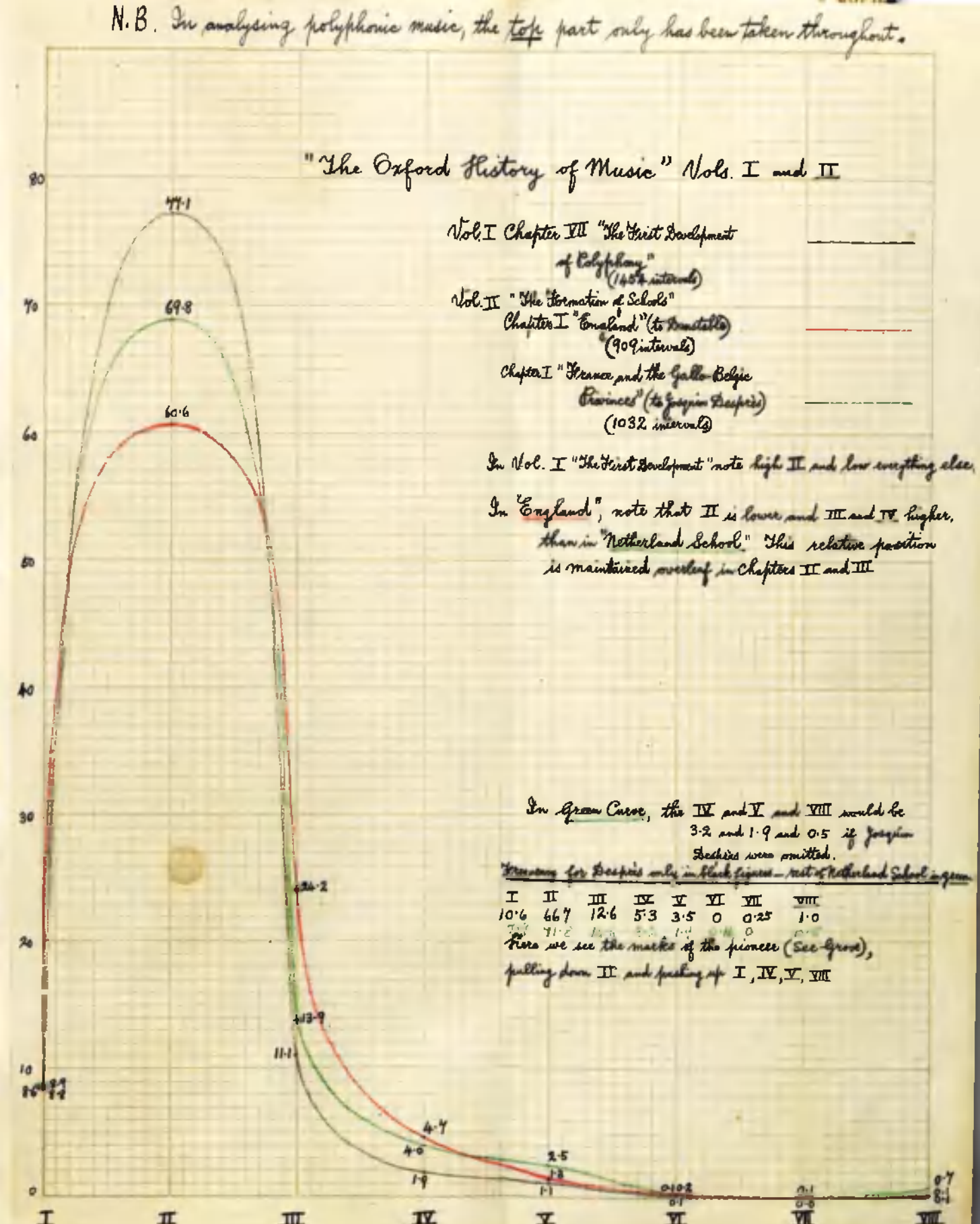
"The Oxford History of Music" Vols. I and II

Vol. I Chapter VII "The First Development of Polyphony" (1404 intervals) ——————

Vol. II "The Formation of Schools"
Chapter I "England" (to Dunstable) (909 intervals) ——————
Chapter I "France and the Gallo-Belgic Provinces" (to Josquin Desprès) (1032 intervals) — — — —

In Vol. I "The First Development" note high II and low everything else.

In "England", note that II is lower and III and IV higher, than in "Netherland School". This relative position is maintained overleaf in Chapters II and III.

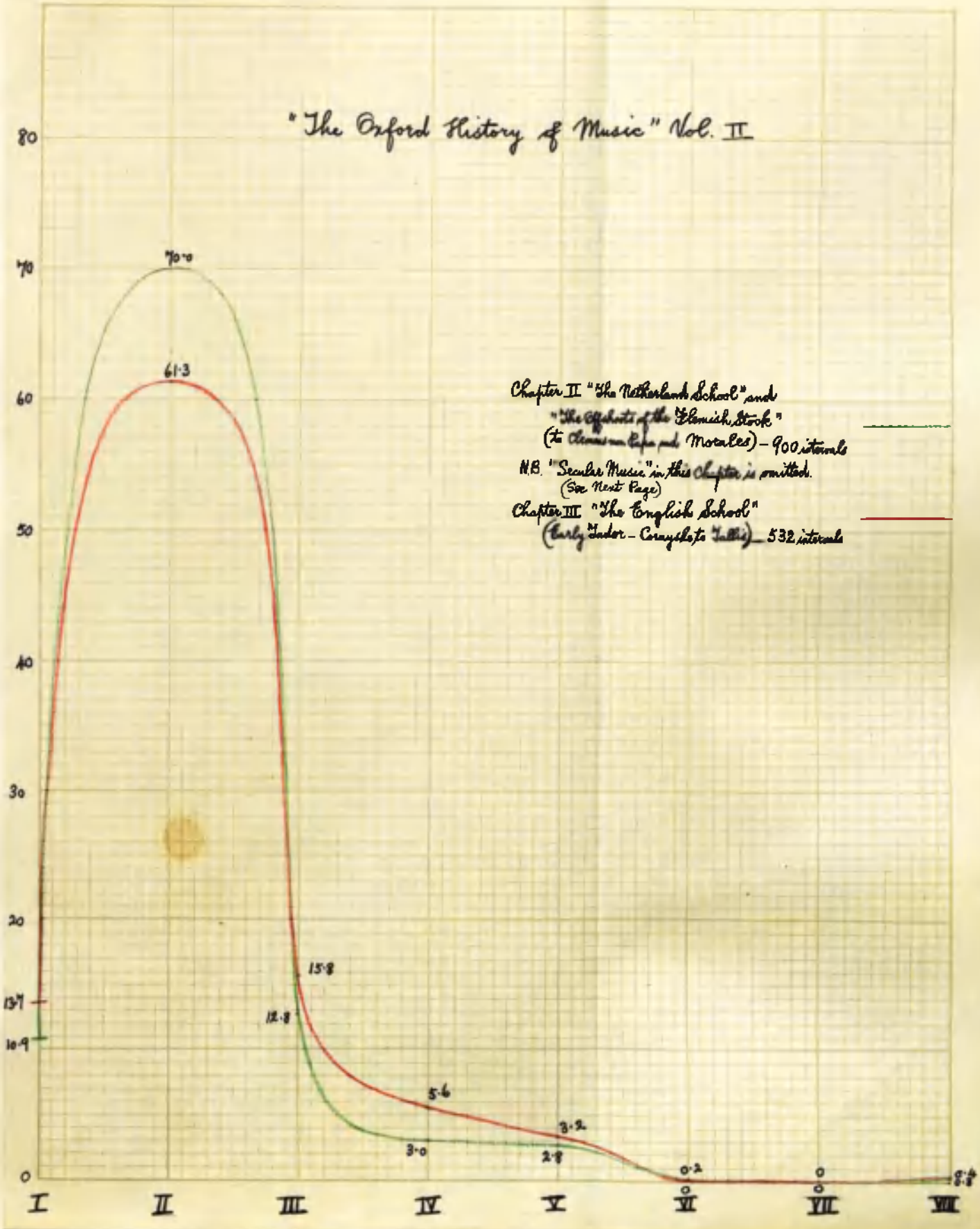


In Green Curve, the IV and V and VIII would be 3·2 and 1·9 and 0·5 if Josquin Dechins were omitted.

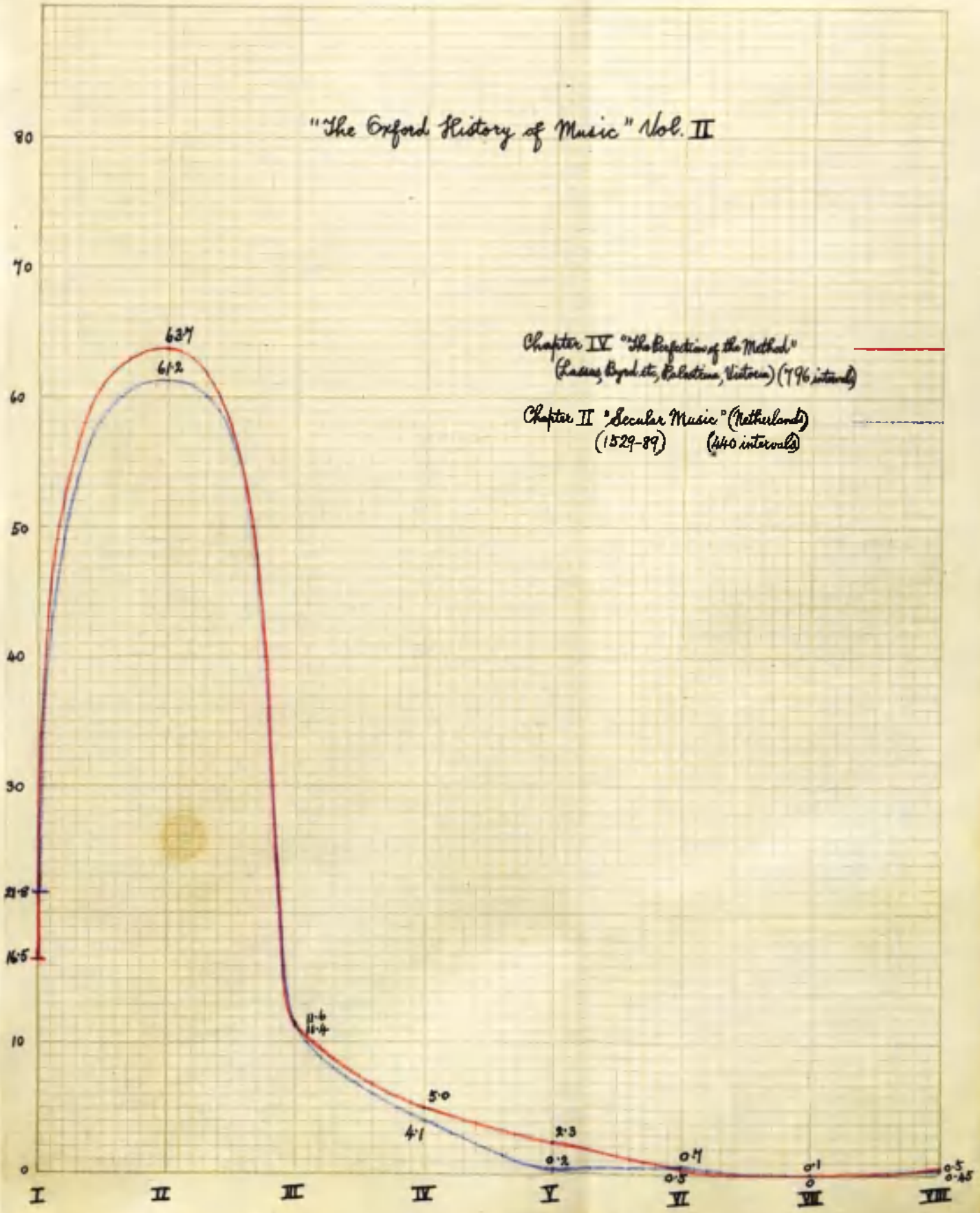
Numbers for Desprès only in black figures – rest of Netherland School in green

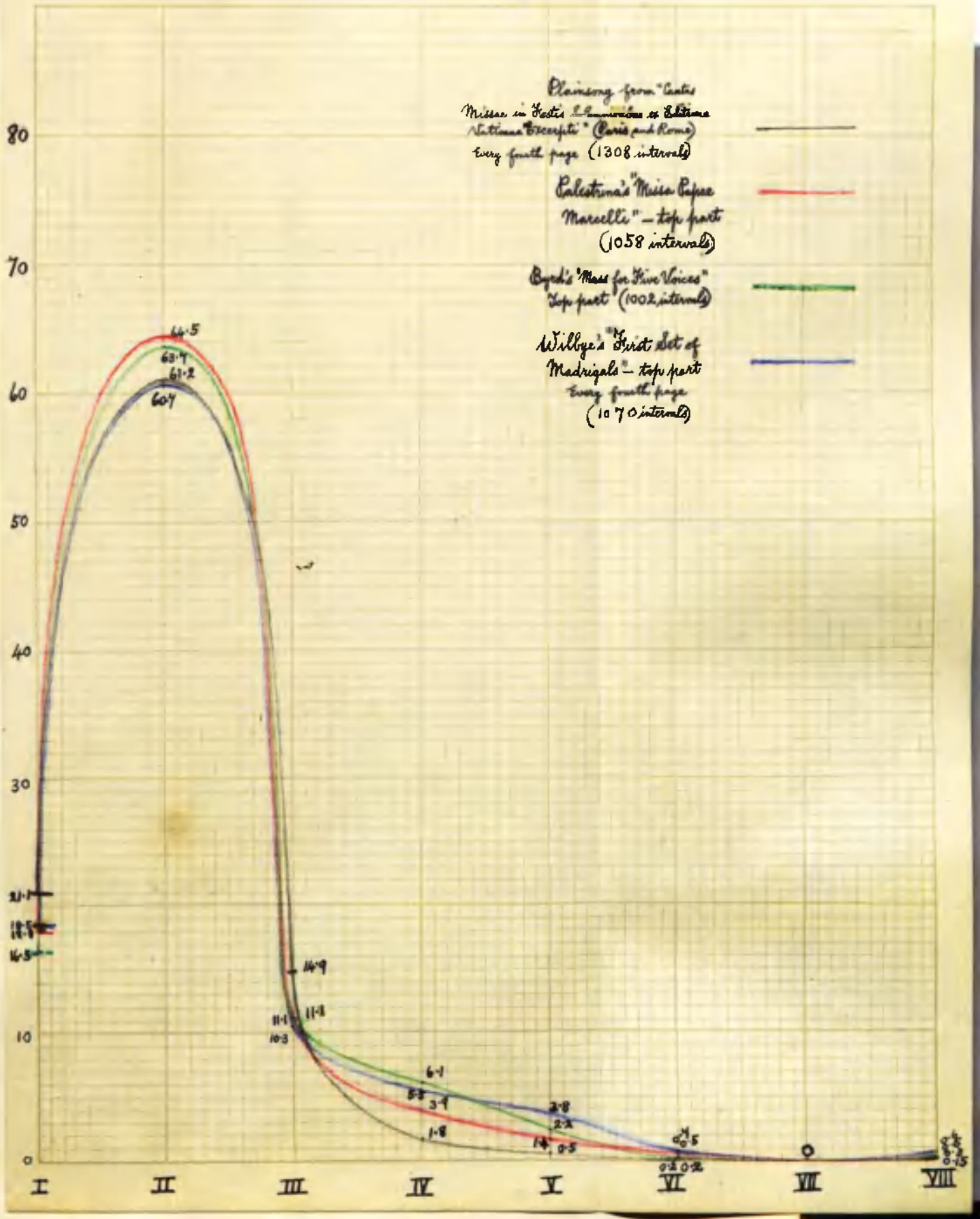
I	II	III	IV	V	VI	VII	VIII
10·6	66·7	12·6	5·3	3·5	0	0·25	1·0
7·7	71·2	14·3	5·3	1·1	0	0	0·5

Here we see the marks of the pioneer (See Grove), pulling down II and pushing up I, IV, V, VIII

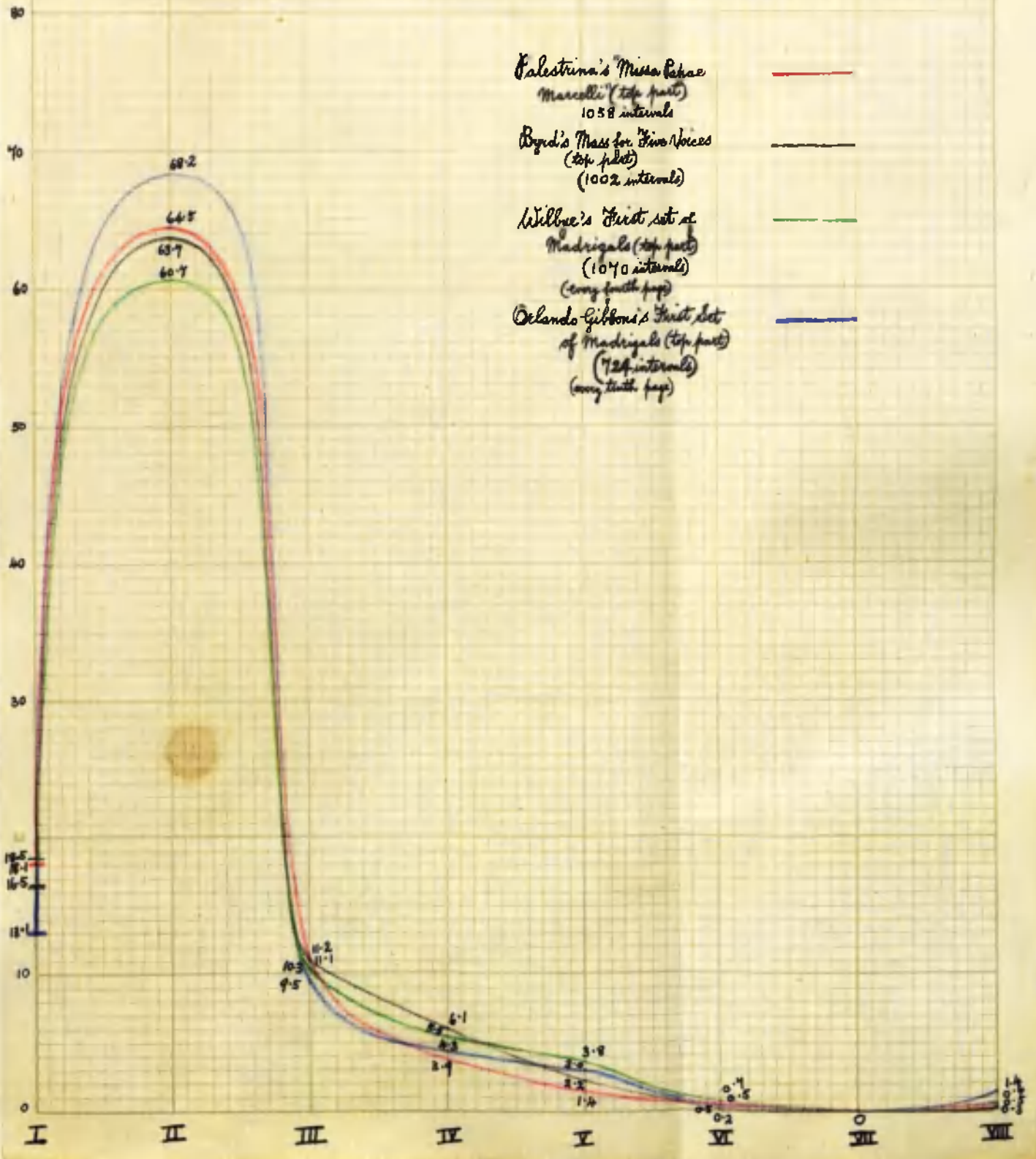

"The Oxford History of Music" Vol. II
80
70
60
50
40
30
20
10
0
70·0
61·3
13·7
10·9
15·8
12·8
5·6
3·0
3·2
2·8
0·2
0
0·4
0·8
I
II
III
IV
V
VI
VII
VIII
Chapter II "The Netherland School" and
"The Offshoots of the Flemish Stock"
(to Clemens non Papa and Morales) – 900 intervals
N.B. "Secular Music" in this Chapter is omitted.
(See Next Page)
Chapter III "The English School"
(Early Tudor – Corneyle to Tallis) – 532 intervals

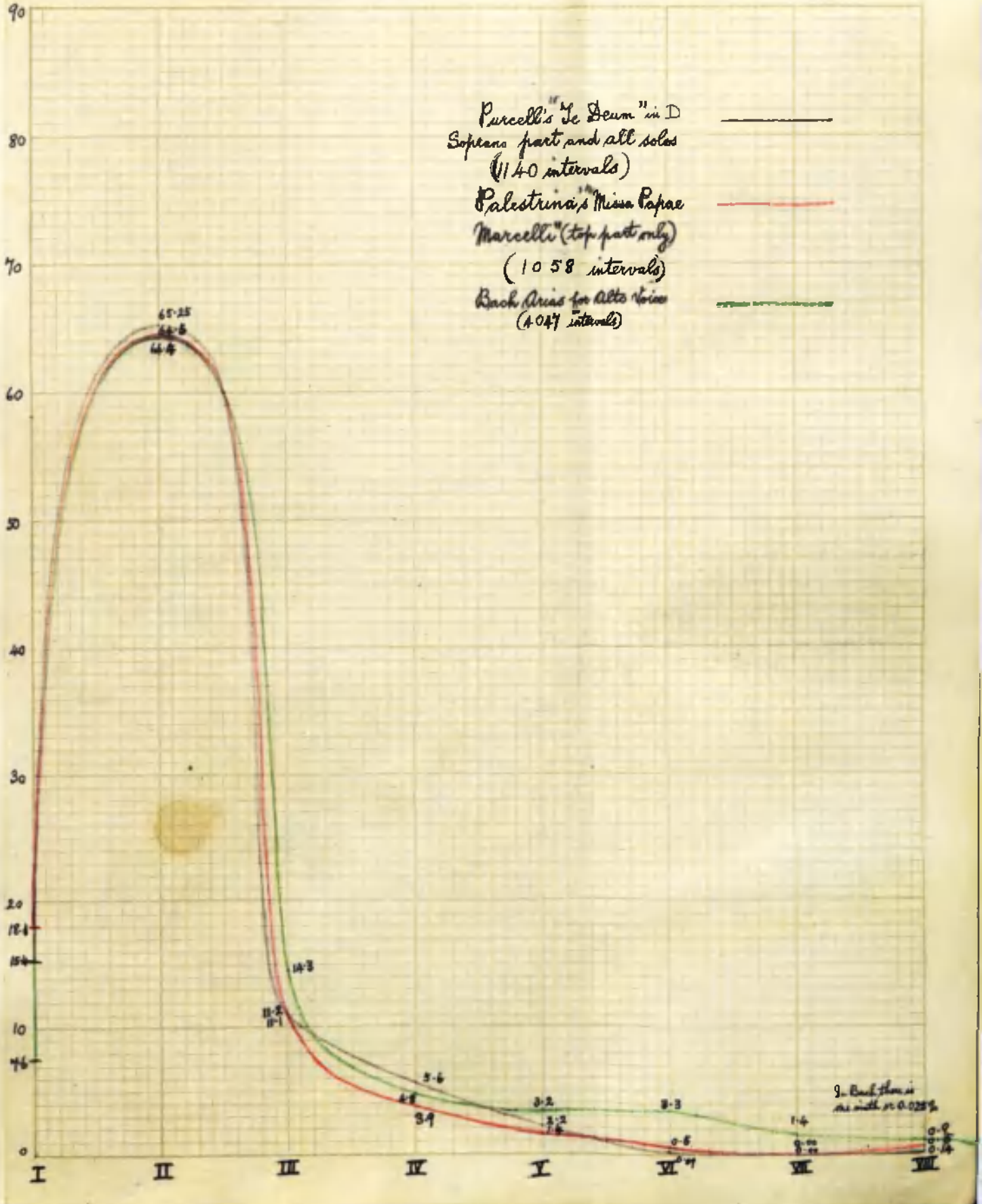
"The Oxford History of Music" Vol. II



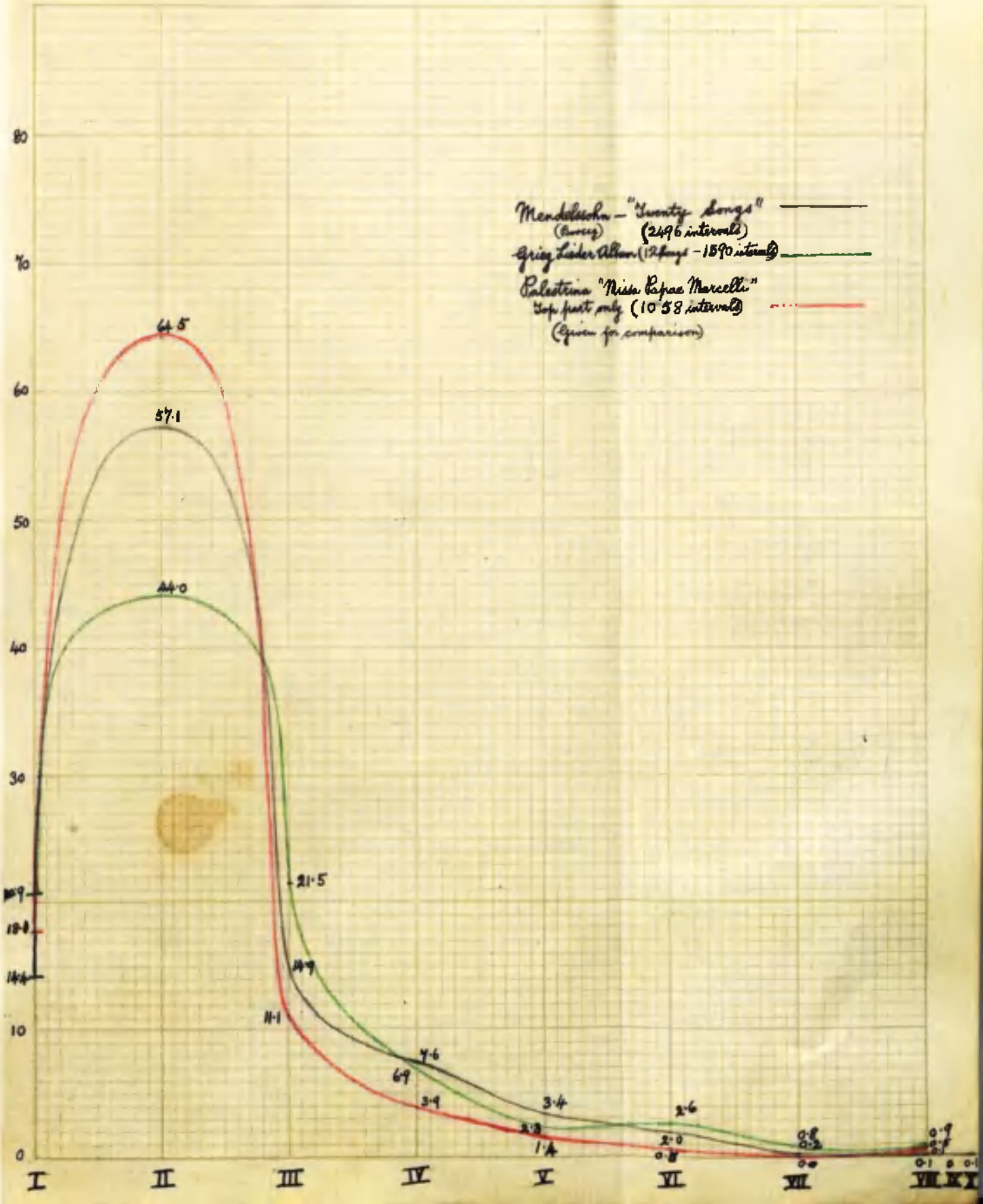


Plainsong from "Cantus Missae in Festis Lemniscibus ex Editione Vaticana Excerpti" (Paris and Rome) Every fourth page (1308 intervals)
Palestrina's "Missa Papae Marcelli" – top part (1058 intervals)
Byrd's "Mass for Five Voices" Top part (1002 intervals)
Wilbye's "First Set of Madrigals" – top part Every fourth page (1070 intervals)
80
70
60
50
40
30
10
0
64·5
63·7
61·2
60·7
14·9
11·1
11·1
10·3
6·1
5·5
3·9
1·8
3·8
2·2
1·4
0·5
0·2
0·2
0
I
II
III
IV
V
VI
VII
VIII

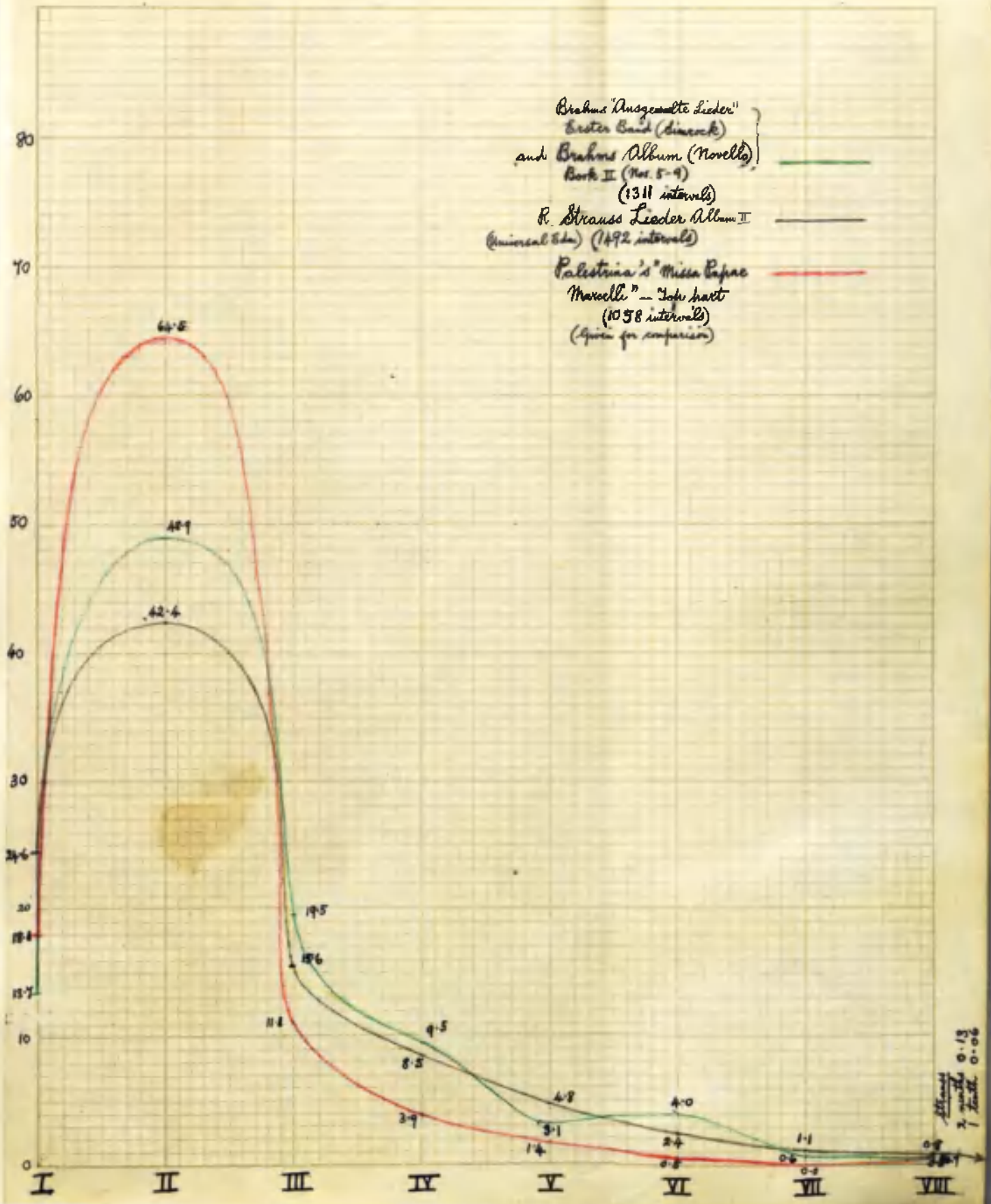

Palestrina's "Missa Papae Marcelli" (top part)
1058 intervals
Byrd's Mass for Five Voices (top part)
(1002 intervals)
Wilbye's First set of Madrigals (top part)
(1070 intervals)
(every fourth page)
Orlando Gibbons's First Set of Madrigals (top part)
(724 intervals)
(every tenth page)
80
70
60
50
40
30
20
10
0
68·2
64·5
63·7
60·7
18·5
18·1
16·5
12·1
11·2
11·1
10·3
9·5
6·1
3·8
2·4
1·4
0·7
0·5
0·2
I
II
III
IV
V
VI
VII
VIII



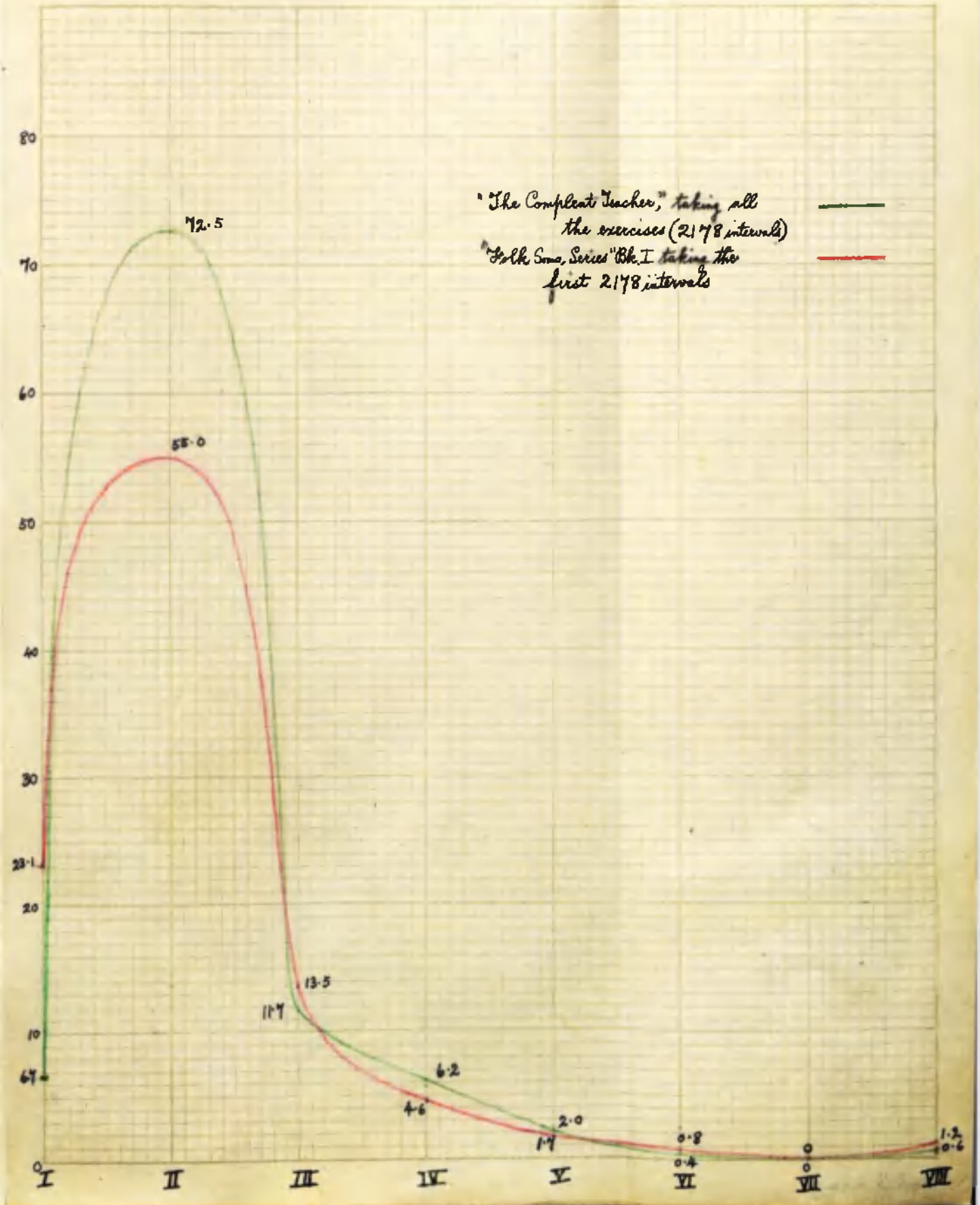
Purcell's "Te Deum" in D
Soprano part and all solos
(1140 intervals)
Palestrina's "Missa Papae Marcelli" (top part only)
(1058 intervals)
Bach Arias for Alto Voice
(4047 intervals)
90
80
70
60
50
40
30
20
10
0
I
II
III
IV
V
VI
VII
VIII
65·25
14·3
5·6
3·2
3·3
1·4

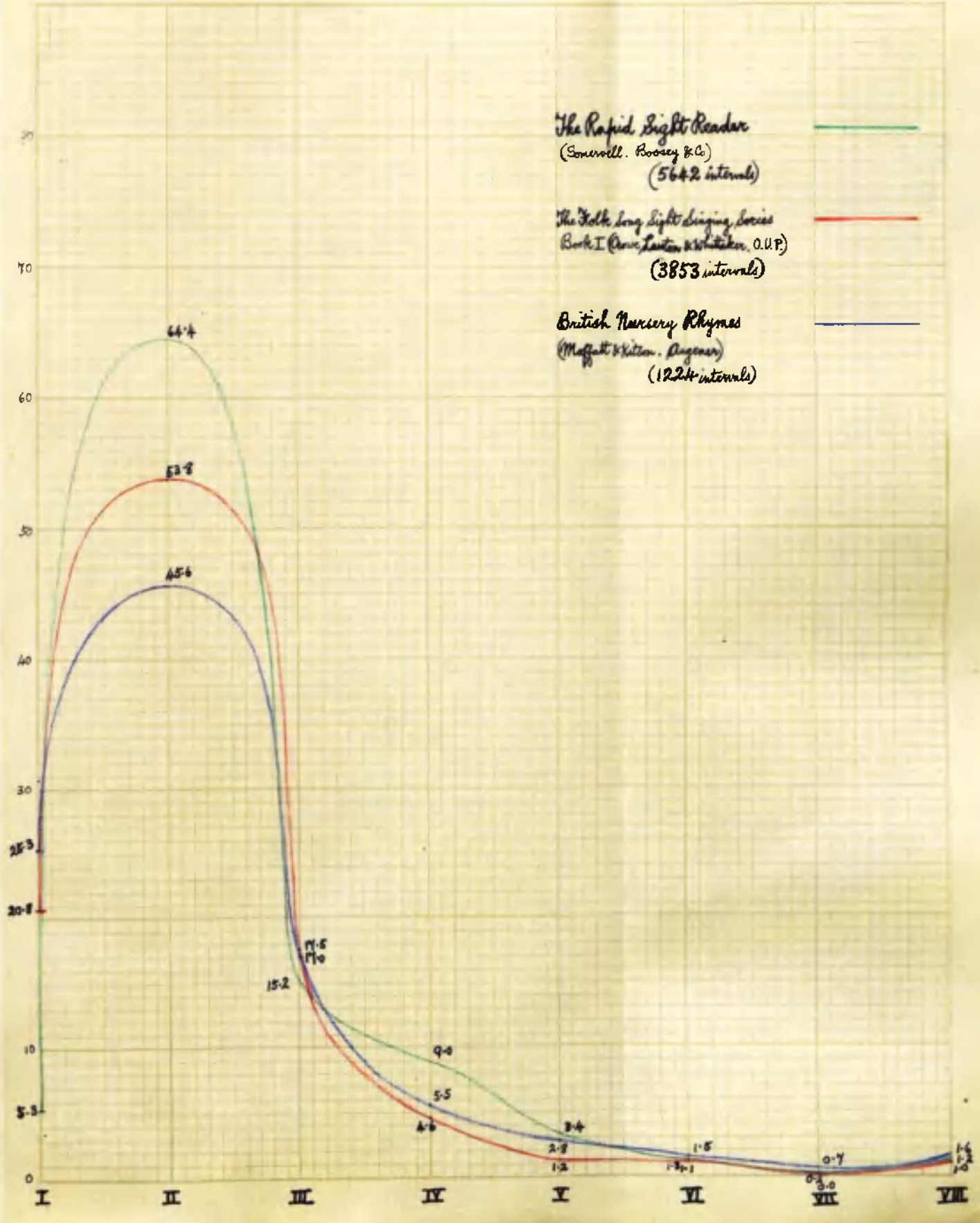


Mendelssohn – "Twenty Songs"
(Boosey) (2496 intervals)
Grieg Lieder Album (12 Songs – 1590 intervals)
Palestrina "Missa Papae Marcelli"
Top part only (1058 intervals)
(Given for comparison)
80
70
60
50
40
30
10
0
64.5
57.1
44.0
21.5
14.9
11.1
7.6
6.9
3.9
3.4
2.3
1.4
2.6
2.0
0.8
0.8
0.2
0.0
0.9
0.5
0.1
0.1
0.1
I
II
III
IV
V
VI
VII
VIII
IX
X


Brahms "Ausgewählte Lieder"
Erster Band (Simrock)
and Brahms Album (Novello)
Book II (Nos. 5-9)
(1311 intervals)
R. Strauss Lieder Album II
(Universal Edn.) (1492 intervals)
Palestrina's "Missa Papae
Marcelli" — Tobi Hart
(1038 intervals)
(Given for comparison)
80
70
60
50
40
30
20
10
0
64·8
48·9
42·4
24·6
19·5
18·6
11·8
9·5
8·5
4·8
4·0
3·9
3·1
2·4
1·4
1·1
0·6
0·8
I
II
III
IV
V
VI
VII
VIII

Frequency of Interval in "The Compleat Teacher, Vol. I – (page 1–8) (exercises) compared with Frequency of Interval in "Folk Song Sight Singing Series" Book I, exercises 1–66, the same number of intervals (2178) being taken in each case.




The Rapid Sight Reader
(Somervell. Boosey & Co.)
(5642 intervals)
The Folk Song Sight Singing Series
Book I (Curwen, Lawton & Whittaker. O.U.P.)
(3853 intervals)
British Nursery Rhymes
(Moffatt & Kitton. Augener)
(1224 intervals)
70
60
50
40
30
20
10
0
64·4
53·8
45·6
25·3
20·8
17·5
17·0
15·2
9·0
5·5
4·6
3·4
2·8
1·2
1·5
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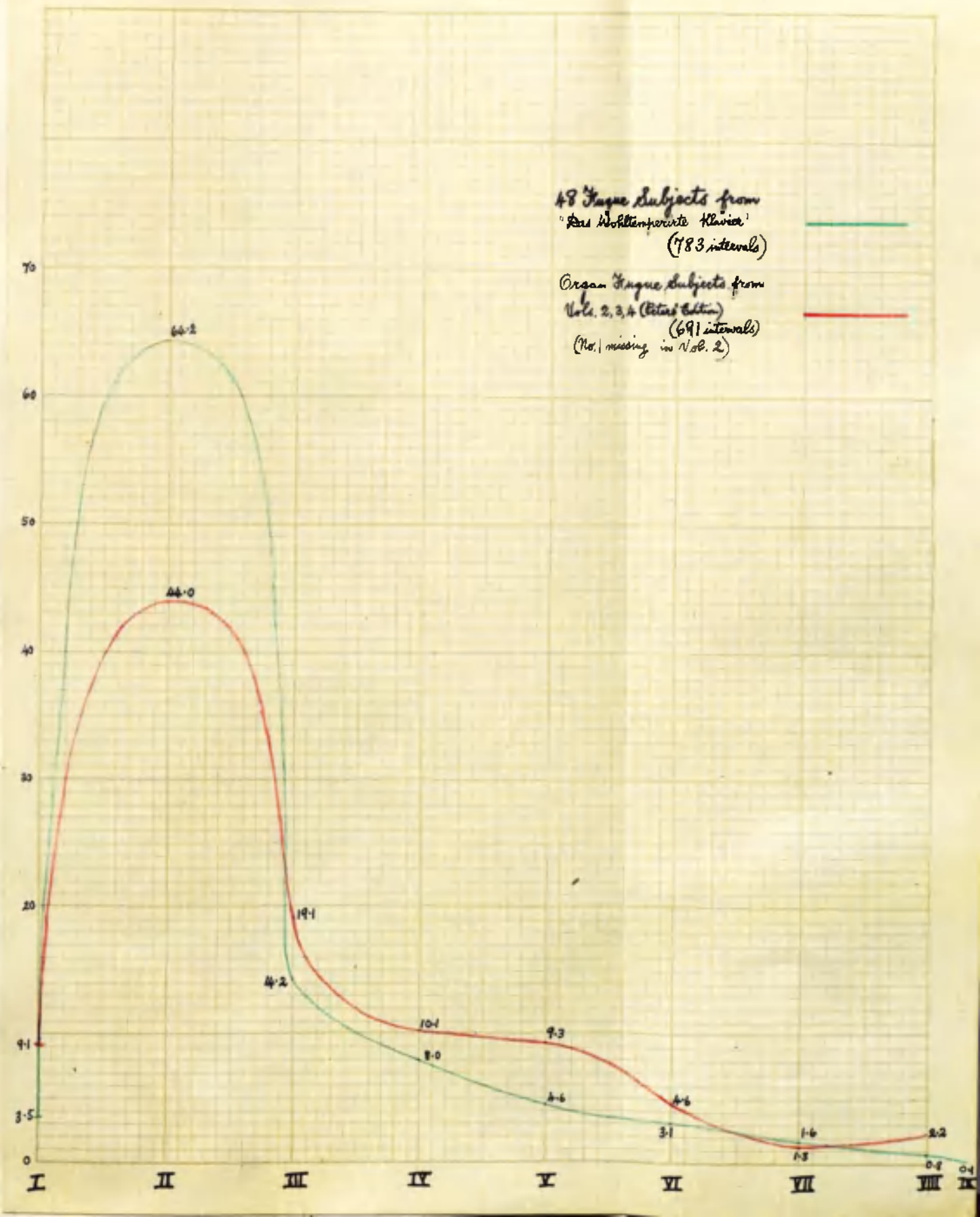
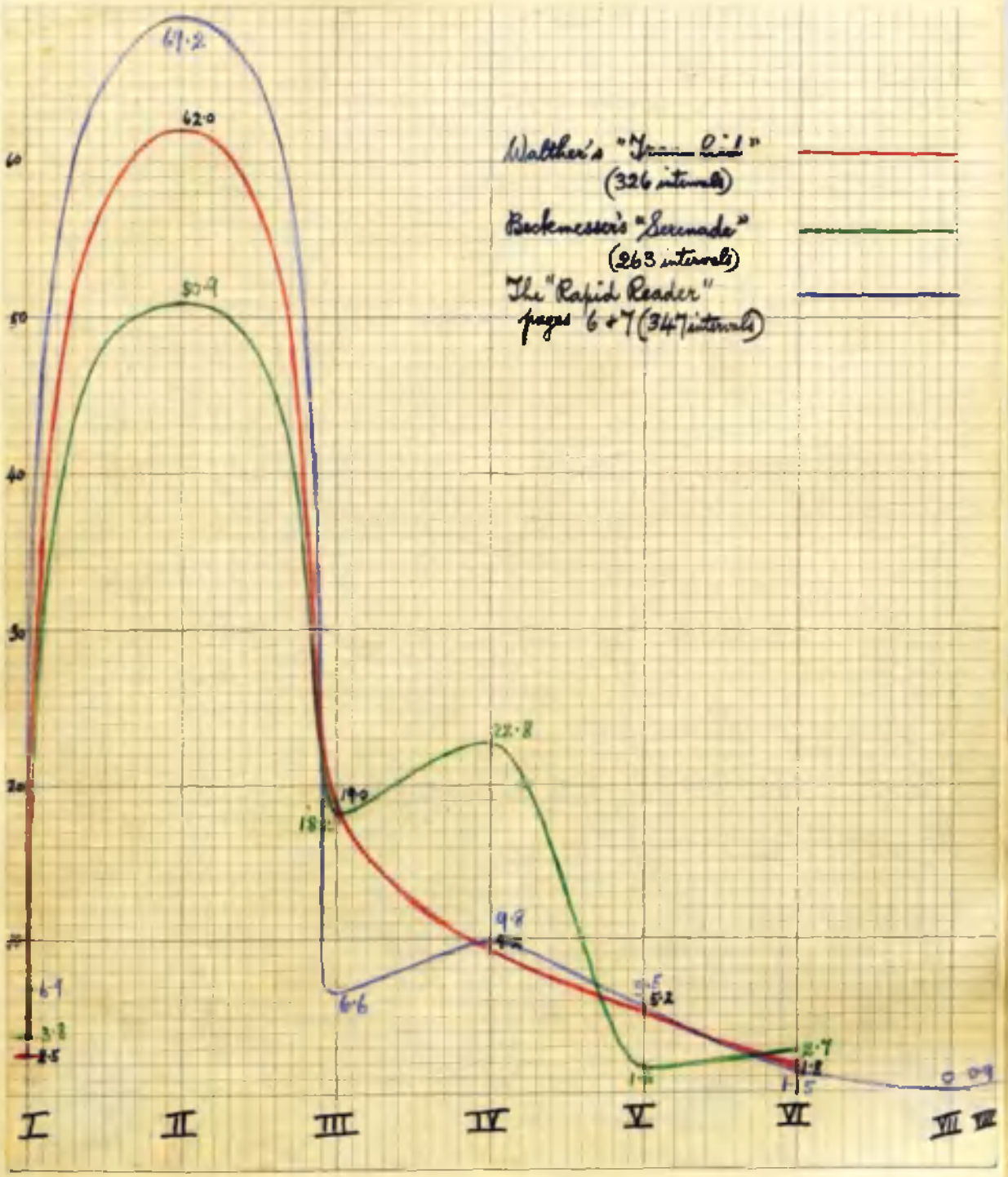
0·0
1·6
1·2
1·0
I
II
III
IV
V
VI
VII
VIII


48 Fugue Subjects from
"Das Wohltemperirte Klavier"
(783 intervals)
Organ Fugue Subjects from
Vols. 2, 3, 4 (Peters' Edition)
(691 intervals)
(No. 1 missing in Vol. 2)
70
60
50
40
30
20
10
0
64·2
44·0
19·1
4·2
10·1
9·3
9·1
8·0
4·6
4·6
3·5
3·1
1·6
2·2
1·3
0·9
0·4
I
II
III
IV
V
VI
VII
VIII
IX


Walther's "Iron Lid"
(326 intervals)
Beckmesser's "Serenade"
(263 intervals)
The "Rapid Reader"
pages 6 + 7 (347 intervals)
69·2
62·0
50·9
22·8
19·0
18·2
9·8
6·6
6·9
3·8
2·5
5·2
2·7
1·8
1·5
0·9
60
50
40
30
20
10
I
II
III
IV
V
VI
VII
VIII

CHAPTER XI

METHOD IN RELATION TO CONTENT IN THE SCHOOL MUSIC READER

If one would strike a blow at an adversary, one must endeavour to gain entrance into his citadel, whether it be a citadel of steel or a citadel of ideas. And, as it is our purpose here to expose the fallacies on which the artificially constructed School Music Reader and the Reading Methods associated with it are based, we shall first of all endeavour to give a brief exposition of the system of ideas which has given birth to both the Reader and the Method.

At the outset we must be careful not to assume that those who have compiled dull Music Readers are themselves dull fellows. For the most part they are quite the reverse. Some of them, indeed, have been charming people, who in other directions have shown that they possessed a native gift of melody far above the average.

The fact is, they have entered on the task of writing these grim sight-reading exercises in the same sorrowful but determined spirit in which the fond mother prepares the castor oil for her favourite child.

The Synthetic System of Teaching Sight Reading

An examination of the Sight Readers themselves and of the prefaces or directions given therein reveals the fact that the compilers have adopted a logical or synthetic approach to the teaching of music-reading. They have set about their task by first of all analysing the subject-matter in hand, namely melody, and by breaking this up into its elements - elements of pitch or intervals, and elements of time and rhythm or crotchets, minims, simple duple time, etc.

Next, they take what they consider to be the simplest elements of pitch, whether it be the tonic chord or scale progressions, and the simplest elements of time, whether it be the crotchet or the semibreve, and set about constructing reading exercises on these simple elements. Then they go a step further, and add to these a new element of pitch or time. And so they continue throughout the book or series of books, following more or less the lines of all textbooks on the Rudiments of Music.

Their aim is to teach children to read music "at sight and this aim of teaching children to read "at sight" determines both the nature and content of the reading material and the methods employed in its use. For example, they say, children should read each exercise only once, even though they may make mistakes in this first-sight attempt, the

reason for this being that if they attempted to read an exercise twice, this second attempt would not constitute sight-reading.

> "The exercises must not be sung more than once, even if incorrect in places. A mistake in time is worse than one in pitch. The singing ought not to be stopped unless the class should come hopelessly to grief. The class must get to realise that, once an exercise is started, the rhythm cannot be broken for the rectification of slight mistakes. The exercise should proceed, and the class sing as much as it has presence of mind enough to read as the music goes on its way."
> ("The Rapid Sight Reader" by Arthur Somervell. Boosey & Co.Ltd., London, 1930.)

> "The Wrong Method
> The practice usually found in schools is to take one or, at the most, two exercises, and to study them intensively.... That is not sight-reading: it is intensive study with a view to performance.... (Page 14)

> "An exercise must not be sung more than once at any one lesson, in order that it shall not be learned by heart, thus making it useless as a future sight-reading exercise." (Page 16)
>
> ("The Compleat Teacher" by Arthur Somervell. Boosey & Co.Ltd., London, 1932.)

> "The whole object of sight-singing exercises is that they should be carried through at first sight; not at second or third.... Once the singing is started, it must continue. Should it get wrong it may get right again: but every effort should be made not to stop."
> ("At First Sight - Sight Tests for Singers" by E.Markham Lee, Banks & Son, York, 1934.)

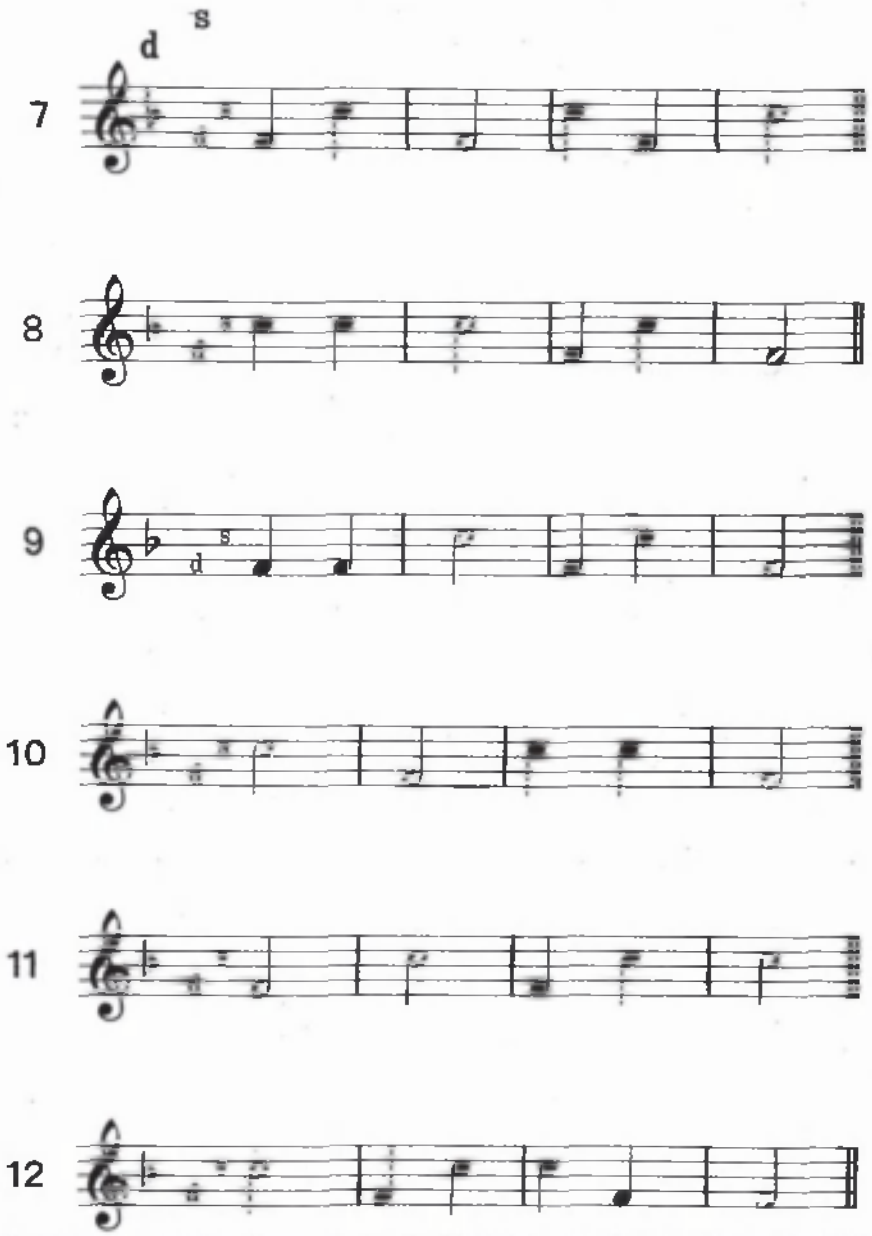
Again, the compilers of these Sight Readers try to see to it that no phrase or melodic figure is repeated in an exercise, since such a repetition of material previously read would defeat the aim of teaching "sight-reading." For the same reason all sequences or imitations and repeated notes are avoided as far as possible in the compiling of these exercises.

The purpose of the reading lesson, in short, is to train the eye, to keep it engaged to its fullest capacity in order to ensure a maximum of eye-training in a minimum of space and time. And, since it is almost impossible to find in the literature of music examples of melodies which fulfil all the above conditions, it is absolutely necessary to construct melodies ad hoc.

This analysis (or breaking up of the subject-matter into its elements) and synthesis (or piecing together again of the elements or products of this analysis so as to produce a carefully graded corpus of music-reading exercises), is undertaken by the compiler on the assumption that the part is easier than the whole, and therefore in teaching we should always proceed from the part to the whole, from the simple to the complex. Hence the artificially constructe

Music Readers which are so familiar to all.

2



In the above we have attempted a fair exposition of what we consider to be the underlying principles and methods of this synthetic system of teaching sight-reading. These principles and methods are well known to all students of pedagogy. In most subjects of the curriculum they have had their day and ceased to be. However, let us see how these principles have worked out in practice in two cognate subjects, the teaching of language reading and the teaching of art.

The Synthetic Method in teaching Language Reading

In the bad old days of the Alphabetic Method of teaching reading, the compiler of Reading Books, like the compiler of Sight Readers, began by analysing the subject-matter, namely language, and by breaking this up into its parts — sentences, words, syllables, letters. Starting from what he conceived to be the simplest elements of language, namely the letters of the alphabet, he set about providing material for the teaching of reading by adding together letters to form syllables, syllables to form words, and words to form sentences - with an eye all the time on the elements of the reading matter and not on the content.

Here again he had to fall back on artificial construction, since in evolving the language our forebears did not proceed by such logical steps, adding letter-sound to letter-

sound, syllable to syllable, and word to word, until at length they arrived at sentences capable of bearing meaning. Yet the compiler of the Reader insisted that the psychological approach to language reading must be made by way of this logical analysis of language.

Let us quote a few examples of this synthetic approach to the teaching of reading from an old School Reader, which had a wide circulation in late Victorian days.

(a) Initial consonant and vowel.

A	E	I	O	U
Ba	be	bi	bo	bu
Da	de	di	do	du
Fa	fe	fi	fo	fu
Ga	ge	gi	go	gu

and so on through all the consonants down to

Wa	we	wi	wo	wu
Ya	ye	yi	yo	yu
Za	ze	zi	zo	zu

(b) Vowel between two consonants.

ab	eb	ib	ob	ub
dab	deb	dib	dob	dub
fab	feb	fib	fob	fub
gab	geb	gib	gob	gub
...	...	...	...	...
...	...	...	...	...
yab	yeb	yib	yob	yub
zab	zeb	zib	zob	zub

and so on with other final consonants.

(c) Two syllables.

abby	ebby	ibby	obby	ubby
addy	eddy	iddy	oddy	uddy
affy	effy	iffy	offy	uffy
aggy	eggy	iggy	oggy	uggy

etc.etc.

("Reading without Tears", 81st Thousand, London, Longmans Green & Co., 1890)

(d) Sentences of one syllable based on elements thus learned.

Rap a fat nag
Tap a fat lad
John had sop on his hob
Joe has no doe

In keeping with the principles of this synthetic approach to language reading, we find that all words beginning with compound consonants are printed with the consonants separated by the space of a letter from the vowels, thus:-

Br a	br e	br i	br o	br u
cr a	cr e	cr i	cr o	cr u
dr a	dr e	dr i	dr o	dr u
fr a	fr e	fr i	fr o	fr u
gr a	gr e	gr i	gr o	gr u
pr a	pr e	pr i	pr o	pr u
tr a	tr e	tr i	tr o	tr u
st a	st e	st i	st o	st u
sl a	sl e	sl i	sl o	sl u
sm a	sm e	sm i	sm o	sm u
sn a	sn e	sn i	sn o	sn u
sp a	sp e	sp i	sp o	sp u
sk a	sk e	sk i	sk o	sk u
sw a	sw e	sw i	sw o	sw u

"fr og, tr y, tr ue, sw eet, st eam,
st iff, sn ug, sp ot, st u-pid" etc.

The fr og in the cr ock will not cr oak.

While two-syllable words (which, by the way, are first introduced on page 164!) are always hyphenated or broken up into elements, thus:

A fr og is ug-ly: so is a sl ug: so is a cr ow: so is a gr ub: so is a sp i-der.

"pep-per, but-ter, rab-bit, pen-ny, pan-tr y.
-tr a-vel, se-cr et, sn ap-ped, gr u-el, bl is-ter.
A sl ug is sl ow. It is sl i-my. It is st i-cky."

Is it to be wondered at that this method of teaching reading, hindering, as it does, the functional organisation of meaningful wholes, was blamed for causing slow inexpressive reading, and even stuttering and stammering?

But enough has been quoted to show the old synthetic approach to language reading in the Infant Room, with the type of synthetic food, passing by way of nonsense syllables to nonsense sentences, which was served up to healthy, growing children.

The close parallelism between this method and the sight-reading method in question will be noted.

In modern methods, children begin with short but interesting sentences or even stories, which they learn to read by imitation. From this they are led by a process of analysis to recognize the elements and parts involved in the sentences. That is to say, they start with what is actually the smallest unit of thought, the complete

sentence, and proceed to break this organic whole into parts, and then to build up the parts again into new wholes - the complementary processes of analysis and synthesis being done by the children themselves, and the primary emphasis being placed on the content or the whole.

The Synthetic Approach in the Teaching of Art etc.

But now let us turn for a moment to Art.

Under the old dispensation in art teaching, children of tender years were drilled in the elements of freehand drawing, and spent what to them must have seemed an eternity, drawing straight lines, parallel lines, rectangles, curves, ellipses, etc., when all the time they were yearning to express their notions of the subject (and often did so in odd corners of an exercise book) in an imaginative drawing of their very own.

But, according to the pedagogue of the day, they must learn to attack the parts before the whole. And, alas! when they did graduate to the complete model stage, the model was sure to represent a bare synthesis of a few of these parts or elements - of the Flower Pot order!

Even in the old system of physical training, more truly known as "physical jerks," we find the same tendency to

analyse the bodily movements into elements, the same synthetic approach to these bodily movements by means of mechanical exercises designed exclusively for this muscle or that joint, and the same absence of that co-ordinated movement in which the whole mind and body act as one, and in which the muscular responses "unroll" in organised pattern. Compare this with the modern conception of physical education, which finds its culmination in Dalcroze Eurhythmics.

The Direct Method in modern language teaching is just another aspect of the present day tendency in pedagogy to stress content or wholes rather than syntax or elements. Its philosophic basis is to be found in the following dictum of Walter Pater:

> "All progress of mind consists for the most part in differentiation, in the resolution of an obscure and complex object into its component aspects."

In direct contrast with this, the thesis of the exponents of the Synthetic Method would seem to be that all progress of mind consists for the most part in <u>accretion</u>, in the <u>synthesis</u> or gradual piecing together of component parts of an obscure and complex object. As if a living organic whole like a melody were a mere summation of component parts! Or, as if the mind could reach the

stage of apperception of a complex melody by way of the summation of component elements of pitch and rhythm! Such a mechanical conception of melody as the summation of component parts is true only of melody in its visual or notational aspect, the aspect with which, as we have seen, the compiler of the Synthetic Music Reader is chiefly concerned.

Synthesis and Analysis

This old synthetic conception of the learning process, which assumed that the child should master the parts before being allowed to attempt the whole, and which we have seen at work in the teaching of language reading, music reading, art and physical training, was due to ignorance of the child mind, and to a false psychology of the mental processes.

The child was regarded as a sort of immature being, who should be "seen not heard," and who should be made to feel thoroughly conscious, if not actually ashamed, of this immaturity on every possible occasion. He was not supposed to have a complete personality of his own, or to be capable of projecting himself wholeheartedly into experiences, like the adult. On no account must he be allowed to show his preferences or to take his own way. He must be taught by fair means or foul, that is, by

rewards or punishments, to realise that he is just a child, and must therefore be content to keep grubbing away for a long time to come among the roots, in the hope that he may, in the distant future, be in a position to partake of the fruits.

To an adult this seems a most noble ambition to implant in the young mind. But unfortunately, ambition (which just means all this "going round and about" a thing for some distant end) is an adult quality which is quite foreign to the child. Surely an ambitious child is a monstrosity! The normal child does not live for distant ends, he is too much engrossed in the important business of growing up. He lives in and for the moment, and is moved only by direct contact with real things, not by symbols or abstractions. No child, for instance, is interested in syllables as such, or in grammar and the parts of speech, any more than he is interested in scale degrees as such, or in intervals and the "parts of music" - {|d :s|s :-|s :s|d :-| - which we present to him in some of our Music Readers. He is interested in whole experiences - in stories, in tunes.

Of course, it can't be "roses, roses all the way." He must at some time get down to the roots. He must learn to analyse the whole into its component elements, so that the whole may be apperceived in all its relationships, and

so that he may himself be able to build up new wholes from the parts or elements. In language reading, for instance, he must come down to words, syllables and letters; and in music reading he must come down to intervals and scale degrees, and to the elements of time and rhythm. But the essential thing to remember is, that we must guard lest the teacher himself should undertake this analysis of the subject-matter in the seclusion of his own study, and then present the products of this analysis to the child as the lifeless fragments or anatomical specimens that such products of analysis must necessarily be. This is what the compiler of the "ba be bi bo bu" method contrived to do. And we submit that this is exactly what the compilers of these artificially constructed Sight Readers have contrived to do. They have taken away the flesh in order to build up from the skeleton.

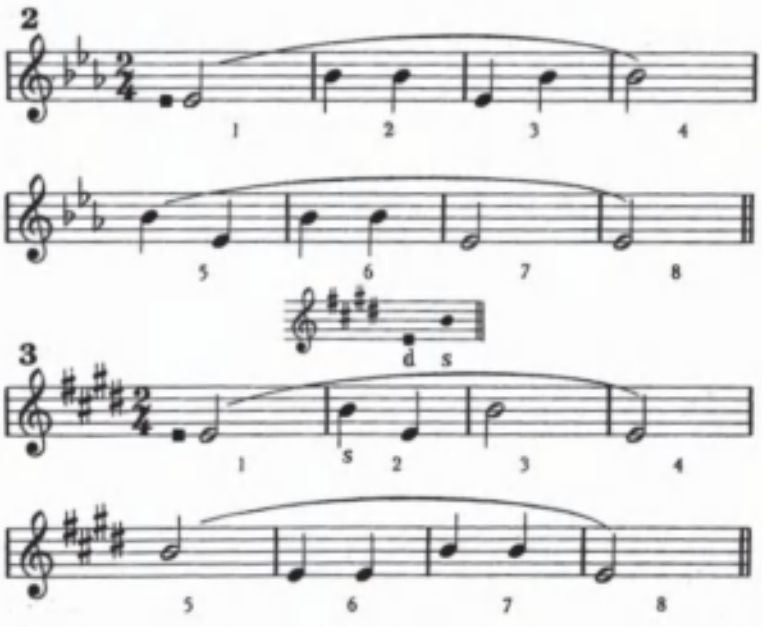
Rather, the process of analysis of the living organic whole, whether it be music or language, must be carried out by the child himself under the sympathetic guidance of the teacher, as is done in up-to-date Language Reading Methods.

Wordsworth, in one of his sonnets, reminds us that "we murder to dissect." But we must distinguish carefully between dissecting or analysing, which is an active process, and the products of this dissection or analysis, which, unless seen in the light of this process of analysis, must remain lifeless and meaningless matter. When the analysing

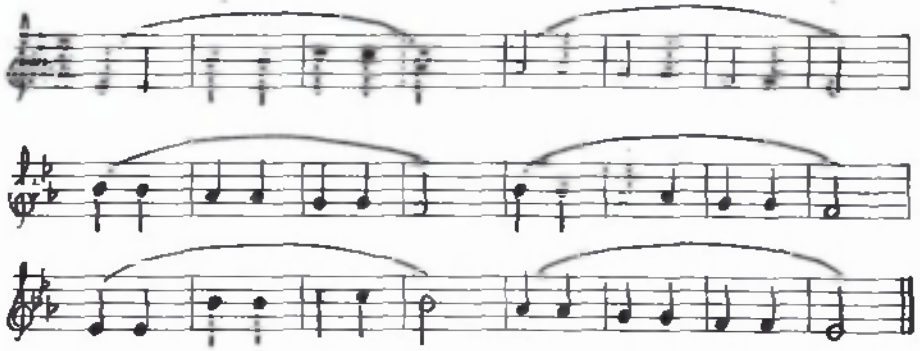
is done in the child's own mind, no such murder or mutilation takes place. For it is not the products of analysis, as seen from the inside by the one who does the analysis, that are deadening, but rather the products of analysis as seen from the outside by the learner who has taken no part in the analysis.

From the Complex to the Simple

A practical example will make this clear. The compiler of the Music Reader, who, remember, has ranged over the whole gamut of music and has drunk deep of the "Pierian spring", may decide that the simplest element to start from is the interval "d s". And he accordingly prescribes a number of exercises based on this interval, of the type:-



We grant that, for the adult musician, such tunes represent probably the simplest elements of pitch, time and form. But can it be said that such a type of tune, based on this interval, is for the child the simple thing that it appears to be on paper, or in its notational aspect? It is simple in the sense that "dab deb dib dob dub" and "Rap a fat nag" (or is it "Rag a fat nap," or does it matter which?) is simple. But we must distinguish here between the simple from the point of view of elements or parts, and the simple from the point of view of content or meaning. And in this sense, are the above tunes as simple as, for example, the nursery rhyme, "Twinkle, twinkle, little star"?



Is it not true to say of the former tune that in thus simplifying we have been rarefying, in thus abstracting the elements of melody we have killed melody or musical meaning, for the child at any rate? And if so, the child's eye may be on the notes, but his heart will be elsewhere, and, to invert the old saying, what the heart does not see the eye will not grieve for.

On the other hand, if we attack the subject of music reading by starting from vital tunes like the above nursery rhyme, the child himself will, with guidance, arrive at the concept of interval by the process of analysis or differentiation, postulated by Pater as essential for all progress of mind. For, as Lascelles Abercrombie says in his Leslie Stephen Lecture on "Progress in Literature", "our consciousness of the world comes to us in masses; it is only by analytical attention that we split it up into component parts." (Cambridge University Press, 1929.)

In the above case, the interval "d s" will have a vital meaning for the child, since it will form part of an organic whole; and accordingly its notational accompaniments will take on meaning too. To put it in other words, this element of musical thought and of musical notation, "d s", can mean, and comes to mean something, only in relation to other elements of musical thought and of musical notation.

In the light of the illustrations and arguments set out above, let us now come to grips with the problem of the artificially constructed Music Reader, and try to indicate an alternative method of teaching music reading, more in keeping with the tenets of modern psychology and the practice of modern pedagogy.

The "Quality of Memorableness" in Art

The most striking feature of these artificially constructed sight-reading exercises is, as we have seen, that they are entirely lacking in that "quality of memorableness," which, as Robert Lynd* reminds us, is the mark of all great poetry, and which, all will agree, is the mark of all great music. And, if our exposition of the principles and teaching methods underlying this sight-reading system is correct, we can understand that the lack of this "quality of memorableness" is regarded as a desideratum in such reading exercises, and is, indeed, the outcome of conscious effort on the part of the compiler.

(Compare Markham Lee..."Several exercises should be done at each lesson. After an interval of a few weeks, unless memories are superlative, they may be tried a second time, possibly even a third.")
"At First Sight - Sight Tests for Singers"
York, Banks & Son, 1934.

In this system all the emphasis is laid on the mechanics of reading, on the training of the eye to follow the staff symbols note by note. Hence, as we have seen, each exercise should be sung only once, while in the exercises themselves there must be no repetition of phrases, and little or no sequence, and there should likewise be a minimum of repeated notes. The assumption on which this method is based is that better pedagogical results, i.e. more learning on the part of pupil with respect to a certain

* Introduction to "An Anthology of Modern Verse"(Methuen)

interval, will accrue from the reading once through of a page of artificially constructed exercises containing, say, twenty examples of that interval, than from the reading once through of a page of real tunes from folksong or classical literature containing only ten examples of the interval in question, or from the conning or reading over and over again of one vital tune containing only two examples of the interval.

This is an assumption that is based on logic of the "twenty is twice as great as ten and ten times as great as two" order, but it is an assumption that would be heartily condemned by all students of modern psychology. It does not reckon with the element of interest or aesthetic thrill, which is essential in all learning situations, and which is absent in a process in which all the emphasis is put on the going and none on the arriving.

Synthetic Foods and Synthetic Tunes

We grant that at a certain stage it may be necessary to concentrate on the teaching of "d f", for example; but to crowd as many as possible of these intervals into a page of reading exercises at the expense of other intervals and therefore of melody itself, is equivalent to prescribing for a healthy, growing child a diet of synthetic foods containing a maximum amount of certain vitamins. Synthetic

foods, whether for the body or for the mind, may be necessary in certain pathological cases, especially in the case of adults. In music, for example, synthetic staff-reading exercises in fourths, fifths and other intervals may form excellent pabulum for the adult, who can appreciate the value of them and who will, therefore, discipline himself voluntarily for the sake of distant ends. But, like synthetic foods, synthetic music-reading exercises of the type described are not fit nourishment for the normal, growing child, who in the nature of things is not interested in distant ends, and who cannot, therefore, summon that voluntary attention based on an appreciation of distant values, which is necessary for the apperceptive process in a subject-matter which holds no intrinsic interest for him. (This is not to say that drill in interval recognition, both visual and aural, should not be given in the music lesson, but rather to say that such drill in visual and aural technique should be kept apart from the actual reading lesson, whose main function it is to <u>justify this drill</u> by putting the acquired technique to use for immediate or aesthetic ends.)

The principal objection to synthetic foods is that they do not provide the body with that roughage which is necessary for healthy assimilation. And, just as the body requires roughage for the digestive process, so, too, the

mind requires roughage for the apperceptive process. This roughage nature provides in the form of natural foods and natural tunes. And in music, the roughage is to be found in those very elements of melody, that are found in ordinary or natural tunes and that have been deliberately left out in the synthetic reading exercises, namely, repetition of phrases, repetition of single notes, and sequence or imitation.

Form and Repetition

All children delight in form or repetition for its own sake. Try to "cut a long story short" by singing only the last verse of a cumulative song, or by reciting only the last verse of "This is the house that Jack built" (both of which verses contain all the previous verses), and the child will insist, like the King in "Alice in Wonderland," on "beginning at the beginning, and going on till you come to the end." Try to tell the story of "The Three Bears," leaving out all the repetitions of "The father bear....., and the mother bear....., and the little bear.....", and the child will protest at once. For the child these simple repetitions have all the thrill of anticipation and recollection that the return of the first subject in a symphony or the appearance of the subject in a fugue has for the adult.

In music, which is a temporal art moving forward all the time, repetition is of the very essence of form, and is to be found in all art forms from the folk dance or the folk song to the Brahms Symphony or the Wagnerian Music Drama. Yet in these Music Readers it is in vain that we look for any of the various folksong forms - AABA, ABAC, ABCB, ABBA, etc.

In the disinclination on the part of the compilers of these Readers to repeat a phrase, we are reminded of the Editor (mentioned by George Saintsbury in "The Bookman's Journal, November 1921), who insisted on paying for a Triolet* at the rate of five lines instead of eight lines, because one line occurs three times and another twice — the argument of these compilers being, evidently, that a sixteen bar tune of the AABA type, like "Drink to me only," is worth only eight bars from the pedagogical point of view, and is consequently to be avoided as wasteful in reading exercises.

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* a short poem of eight lines of the form, ab ca de ab, or AA'BA:

"Rose kissed me to-day;
Will she kiss me to-morrow?
Let that be as it may,
Rose kissed me to-day.
But the pleasure gives way
To a savour of sorrow.
Rose kissed me to-day;
Will she kiss me to-morrow?"

Austin Dobson.

But let us consider for a moment the nature of art and of art experience. Briefly, the problem of all art in all ages has been to awaken in the spectator or hearer that aesthetic thrill which comes from the perception of a unifying principle amid the conflict of diverse elements. The respective proportion, which these two elements of unity and diversity assume in art works, has varied from age to age, according to the technical equipment of artist and public alike.

If today some of us find that a piece of modern music by a composer of repute leaves us with a sense of bewilderment or even disgust, we must assume, in fairness to the composer, that in his efforts to avoid the commonplace or the obvious and in his search for a higher synthesis or principle of unity, he has not given us sufficient clues to his train of thought. But if that composer has, in fact, spent months or perhaps years shaping his melodies, weaving his harmonic and contrapuntal texture, and endeavouring to bring the whole under one great unifying principle, we have no right to expect to understand it fully at a first hearing. Indeed, we usually discover that after repeated hearings of the same work we begin to see a guiding principle at work binding together all the heterogeneous elements. Our interest is aroused. The music begins to shape itself or to take "form" in our minds, and to impress

us with that "quality of memorableness" which will mark it off in our imagination from all other music.

Finally the whole piece stands out like a statue before our eyes, which we can examine at leisure from different angles.

(See "Musical Form and Matter" by D.F.Tovey, Oxford University Press, p.31, where he quotes Professor Andrew Bradley's "A poem exists in innumerable degrees.")

In the early stages of art, then,— in Greek drama, early ballads and tales, folk song and folk dance — the emphasis for obvious reasons has been laid on the element of unity.

This is especially true of the art that appeals to the child. For the child revels in the obvious, whether it be a tune, a game, a story or a joke. And this is just to say that his outlook is simple and direct, and therefore the type of art-work which will appeal to him and which should be used for reading material especially in the early stages, is that in which the element of unity is stressed, as it is in simple folk song forms by means of the repetition of phrases and by sequence or imitation.

Reading for Technique

To sum up, then, we submit that the emphasis in this sight-reading method is wrongly placed on the mechanics of reading and on the acquisition of technique for its own sake. The reading lesson thus resolves itself into an eye-training or note-reading lesson of the "vab veb vib vob vub" order. Synthesis, with its emphasis on elements and its neglect of aesthetic content, is the guiding principle underlying the construction of the reading matter; and synthesis, with its emphasis on eye-training or note-getting and its neglect of mind-training or thought-getting, is the guiding principle underlying the method of training.

A common practice with some teachers, especially in the early stages of reading, is to ask the class to read the exercises backwards, beginning at the end of each exercise!

And in some cases, "note-blocking," i.e. the covering or blocking out by the finger of the note which is being sung, is recommended by the compiler of the reading book!

> "Note Blocking.
> An almost universal fault in sight reading is that children are apt to look at the note they are singing instead of looking ahead. This stops the flow of the music more than anything else. The children should learn to cover with their first finger the note they are singing; later two notes, and later still a whole bar." (Page 16)
>
> "It is very important that the children should not point to the note they are singing, but block it out." (Page 39)
> ("The Compleat Teacher" by Arthur Somervell, Vol.2, London, Boosey & Co.Ltd. 1932.)

The purpose of this practice is to ensure that the child's eye will continue to move along the line of notes from left to right, always looking ahead and never glancing back over the matter just read.

Movement of the Eye in Reading

This practice, which is in keeping with the principles underlying the Synthetic Method, cannot be too strongly condemned. It is a commonplace in modern educational psychology that the eye does not behave in this way in reading a line of print. Experiments have proved that (in reading) the eye does not travel along the line of print at a uniform rate in the same direction from left to right, but rather, to quote from Dr Paul Klapper, "moves across each line in a series of approximately rhythmic sweeps and pauses. It is also important to note that reading takes place during the pauses, not during the sweeps."

In these movements the eye, according to the nature of the reading matter and the stage of technique attained, makes a sweep over two, three or four words, and then turns back and fixates a word or syllable usually about the centre of this sweep; then it sweeps forward again and turns back to pause over another word or syllable, the number of sweeps and pauses varying perhaps from six to two according to the reading ability of the subject.

To quote Dr Klapper again, "The character of eye movement in reading gives added weight to the conviction that we do not read by joining letters in phonic succession, but rather by recognising units as large, at least, as whole words. The more mature we are, naturally, the larger is the unit of visual perception. In the earliest exercises children must be taught to read words and short phrases as wholes. Our knowledge of eye movement has helped to lay the axe to the old synthetic reading methods."
(Paul Klapper Ph.D. "Teaching Children to Read". Appleton & Co., New York and London, 1926).

It will be noted that the above references are to the reading of language, but it is highly probable that the same is true of music reading, and a little introspection on the part of the musician will support this view.

Again, the practice of not allowing children to read the same exercise twice is in keeping with the thesis of the exponents of this synthetic music-reading system. Actually, the re-reading of an exercise would strengthen the technique of the eye by encouraging it to take in larger and larger patterns of notes. And the same strengthening of technique, or increase in the eye span leading to efficiency of visual perception, would come from the inclusion in the reading exercises of those features of actual melody, which are more or less absent from the Music

Readers under discussion, namely, repetitions of phrase of the AABA type, sequences or imitations, and repeated notes. Likewise, the adoption of reading books containing actual tunes of the folksong and nursery rhyme variety would encourage the learning process in pupils, by awakening their interest in the content of the reading book, and, therefore, in the notation.

In an attempt to find out the frequency of intervals in various types of melody, the writer made an exhaustive analysis of thousands of melodies of different kinds. He found that in the case of unisons or repeated notes the percentage was highest in Nursery Rhymes, and lowest (being, indeed, abnormally low) in well-known Music Readers.

Books surveyed	Total number of intervals analysed	Percentage of Repeated Notes
Nursery Rhymes, Book 3 Gem Series, Banks, Leeds.	1,938	24·8
Traditional Nursery Rhymes John Graham, Curwen.	2,063	26·4
Nursery Rhymes, pp.1-22, Moffat, Augener.	1,224	25·3
Progressive Staff Reader, Book B. Hunter and Walker, Bayley & Ferguson	2,688	4·2
The Rapid Sight Reader, Vol.I. Arthur Somervell, Boosey & Co.	5,642	5·3
The Compleat Teacher, Vol.I (age 7-8) Arthur Somervell, Boosey	2,178	6·7
The Folk Song Sight Singing Series, Book I Oxford University Press (consisting entirely of Folk Songs)	3,853	20·8

When we consider that repeated notes are nearly always a striking feature of strongly rhythmic music, being more or

less the musical equivalent of the hop or stamp in dancing and of the "réculer pour mieux sauter" of the French proverb, we are not surprised at this high percentage in nursery rhymes, and we have an added reason to deplore their absence in sight-reading exercises.

Perception and Apperception

With regard to the importance of melodic form in relation to sight-reading, it will be readily seen that the child, in reading at sight a tune of the AABA type will recognize in the second phrase, A, an acquaintance he has made in the first phrase; and this recognition will be all the more spontaneous and its impression all the more vivid, if his heart has warmed to the melodic phrase on the first occasion.

Then, when the child comes to the fourth phrase, A, after a careful scrutiny of, and a passing nod to, the third phrase, B, this acquaintanceship will have ripened into friendship, all the more so as he does not now require to examine credentials and stand on his guard all the time, as he had to do on his first introduction to A at the beginning of the tune.

On account of the aesthetic or hedonistic element involved in such recognition, the aural impression will become co-ordinated with the visual impression, so that the child should ultimately arrive at the stage when he will be able to shut his eyes and "see" the notes, or shut his ears and "hear" the notes.

This "hearing with the eyes" and "seeing with the ears" has become a sort of slogan with Music Teachers today. But it is very necessary to stress the prime condition on which such "hearing" and "seeing" takes place. Shakespeare has done this for us. Let him speak.

"O learn to read what silent love have writ;
To hear with eyes belongs to love's fine wit."
(Sonnet XXIII)

By accumulating a store of such co-ordinated aural and visual images, analysed in the mind and unconsciously grouped according to degree of kinship, the child will gradually arrive at the stage when he will be in a position to take in at a glance new combinations of pitch and rhythm elements, varying in this or that particular from those stored-up mental images.

It is by such unconscious processes, motivated by the aesthetic content of the reading matter, that the experienced reader has learned to "read a page as a flash of lightning reads it" (Oliver Wendell Holmes).

On the other hand, in journeying through the pages of the artificially constructed Music Reader there is no such pleasant recognition or intercourse with old friends, no lighthearted venturing along familiar paths, but instead a nerve-wracking "Safety First" progress through a seemingly interminable series of crotchet and quaver signals!

Psychologically, the perception of material, in which each element is unfamiliar, is not only exhausting, but hinders the organisation of "meaningful wholes".

> Compare the "fundamental postulate" of Gestaltpsychologie "that there is more in any psychological whole than the mere sum of its parts...
>
> "The old view that learning comes about by slow associative processes of trial and error, during which pleasurable or successful reactions are stamped in so as to become habits, while unsuccessful or painful ones become eliminated, is supplanted in Formalism by a doctrine of insightful learning. New wholes are suddenly apprehended; a new structuration occurs, or a new element is incorporated into the situation, with consequent changes in reaction...
>
> "The greatest contribution of 'Gestalt' to contemporary psychology is undoubtedly its vigorous protest, supported by a wealth of comparative and experimental evidence, against the insufficiency of associationism. Not only are mental objects originally perceived as meaningful wholes which grow by structuration, but they are wholes perceived in relation to goals to be attained, and so explain behaviour. Thus purpose is implied from the outset of mental life."
>
> ("Psychology" by F. Aveling in "An Outline of Modern Knowledge", Victor Gollancz Ltd. London, 1932. Pages 330-333)

<u>The Aesthetic Content</u>

The question of the aesthetic content of School Readers is no new one. Seventy-five years ago, Matthew Arnold, in his capacity of H.M. Inspector of Schools, was carrying on a crusade against the content of contemporary School Reading Books, which contained for the most part

"dry scientific disquisitions and literary compositions of an inferior order," and in which "far more than half of the poetical extracts were the composition either of the anonymous compilers themselves, or of American writers of the second and third order." He quotes typical sentences such as, "the crocodile is viviparous," "quicksilver, antimony, zinc, etc., are metals," and so on. And he pleads, in these Official Reports to the Education Department, for School Readers calculated to inspire "quick scholars with a real love for reading and literature in the only way in which such a love is ever really inspired, by animating and moving them."

Again in 1879, he writes:

> "The reading lessons should be used not only to secure the bare power of reading....The power of reading is not in itself formative... But good poetry is formative; it has, too, the precious power of acting by itself and in a way managed by nature, not through the instrumentality of that somewhat terrible character, the scientific educator... The reading lesson should be treated as in connection with the good and sterling poetry learned for repetition, and should be made to contribute to the opening of the soul and imagination, for which the central purchase should be found in that poetry."
>
> (Matthew Arnold, "Reports on Elementary Schools", Macmillan & Co., 1889).

The music teacher would do well to study this last quotation, and to apply it to the music reading lesson, which he may easily do by changing the underlined words

above as in the following:

> "The music-reading lessons should be used not only to secure the bare power of reading....The power of reading is not in itself formative... But good music is formative; it has, too, the precious power of acting by itself and in a way managed by nature, not through the instrumentality of that somewhat terrible character, the teacher of musical appreciation... The music-reading lesson should be treated as in connection with the good and sterling music learned in song singing, and should be made to contribute to the opening of the soul and imagination, for which the central purchase should be found in that music."

As an appendix to the above we may add the following from Bishop Mandel Creighton's "Thoughts on Education" (Longmans Green & Co. 1902):

> "The Education Department has made an important change in the code, which is to come into effect next year (i.e.1881). The children are henceforth to be examined not only in the mechanical exercise of reading, but also in the contents of their Reading Books."

The content of the Music Readers, then, should be our first concern, for if children do not read to enjoy, they will read to very little purpose. The exercises should be well graded, and should be taken from standard musical literature - classical themes and folksongs, preferably the latter.

Folksongs are vocal in origin, and are therefore eminently singable; they are also for the most part simple

in time and in structure, and demand no great speed of execution.*

To those who object that it would be impossible to get simple enough material for very young children, we say that very young children should not be asked to read from staff notation, because they will assuredly not have mastered the tonic sol-fa syllables. To attempt staff when sol-fa is weak is to waste precious time and to produce disgruntled teachers and listless pupils. But suitable material in tonic sol-fa notation (see "The Folk Song Sight Singing Series, Books XI and XII) can easily be found for the early stages, for in this notation no eye training in pitch symbols is necessary (no child ever mistakes the syllable "d" for the syllable "r"). While the tonic sol-fa time system with its spatial basis for time elements (and time and space are closely allied psychologically) offers little difficulty even for very young children.

half-beat	𝅘𝅥𝅯	|d.
whole beat	𝅗𝅥	|d :
1½ + ½	𝅗𝅥. 𝅘𝅥𝅯	|d :-.d|
2 beat	𝅗𝅥	|d :— |
3 beat	𝅗𝅥.	|d :— :— |
4 beat	𝅝	|d :— :— :— |

*The first and still, in spite of many imitations, the best collection of such sight-reading material, is undoubtedly "The Folk Song Sight Singing Series" Books I to XII (Oxford University Press), Edited by Edgar Crowe, Annie Lawton, and W. Gillies Whittaker.

This folksong material is exempt from all the criticism that may be levelled against the synthetic sight-reading exercises, and, if it is well chosen, the reading lesson will not be divorced from actual music as the child understands it.

Sight Reading and Reading Practice

But, in the early stages especially, and indeed throughout the whole course, care should be taken to distinguish clearly between reading practice and reading testing or sight-reading. The term "Sight Reading" has been responsible more than anything else for leading the teacher of music reading along the false paths we have indicated.* This is a term that is scarcely known in the teaching of ordinary language reading. There the children learn to read by intensive practice over the reading matter, by reading the same page individually, and by listening and following the words while others read it. Even the Inspector on his annual visit does not ask for "sight-reading!"

As we have seen, in modern methods of reading, like the Sentence Method and the Story Method, the first stages are confined to imitation and to the analysis by the pupils themselves of the sentences thus learned. This, too, should be done in the early stages of staff reading. Such learning

* Probably advocates of these synthetic First-Sight Methods have been led astray by assuming that sight-singing and sight-playing involve the same mental processes. The great majority of sight-players are a standing proof that this is not the case.

to read by pattern is even more essential in music reading than in language reading, since a strict tempo and a certain minimum metronomic rate are essential factors in all musical interpretation. This learning by pattern would thus overcome the problem of retaining the interest of the children in the reading matter and the symbols at the stage when reading technique is necessarily weak.

Thus, the Music Primer would be conned in the same way as the Language Primer, and, provided the reading matter was such as would furnish motivation through the aesthetic content, real learning would take place. For we should remember that learning is the child's contribution to the lesson, and emanates from within - the teacher can't "learn" him.

> "You will educate me, not as you will,
> but as I will."
> (Emerson)

The learning process, however, may be stimulated from without by the type of subject-matter selected and by the method of presentation.* Everything should be done, then, to encourage this learning process, for we learn to succeed by success, and, as an Eton headmaster has put it, "We learn to learn by learning."

It is a common experience of music teachers in secondary schools to find that, when it comes to staff reading, a large number of the incoming pupils never seem

* See the chapter on "The Formal Layout of Music Type", p.538.

to have "got going" at all, although they have had regular lessons in staff over a number of years. This is no doubt due to the fact that their interest in staff symbols has been confined within the narrow limits of sight-reading, and they have never learned to dwell on the notation, and to love the symbols for the sake of the melodies enshrined therein.

> (Compare Quiller-Couch: "Few of my contemporaries can erase - or would wish to erase - the dye their minds took from the late Mr Palgrave's 'Golden Treasury': and he who has returned to it again and again with an affection born of companionship on many journeys must remember not only what the 'Golden Treasury' includes, but the moment when this or that poem appealed to him, and even how it lies on the page."
> "The Oxford Book of English Verse 1250-1900"
> Oxford, Clarendon Press, 1912.)

In the early stages of music-reading practice, especially, it is necessary to generate a momentum of interest in these staff symbols, so that this interest may later be carried over into the narrow and somewhat arid subject of sight-reading. And the only way to do this is to give young children both intensive and extensive practice in the reading by imitation, from staff and to the sol-fa syllables, of melodies after their own heart. For, as Stanley Hall, the great American educationist, says in his "Life and Confessions of a Psychologist"

> "Interest, like steam in an engine, must be developed over a large surface, although when put to work it has to be applied to a small one."

This means, then, that the Music Reader would no longer be regarded as a Sight Reader or Sight Tester, but rather as a Class Reader or Anthology of Melody, where the "purple patch" would find its place. Sight Reading, or Sight Testing as it should be called, would be resorted to from time to time, but it would not be the order of the day. The questioning on the contents of the reading matter would take the form of comparing and contrasting phrases (which would be indicated by phrase marks on the printed copy), and of singing these antiphonally, analysing them from the point of view of the elements of notation, drawing attention to sequences or imitations, to repetitions and to certain difficult intervals or melodic and rhythmic progressions, singing to vowels and beating time, with a pianoforte accompaniment or a descant where possible—in a word, of leading to the interpretation and appreciation of the music read and sung.

Should any reader doubt the necessity for all this questioning, analysing and re-reading of the music-reading exercises, let him perform this simple little experiment, which the writer has tried many times with different grades of children, and always with the same result. Immediately after the class has sung through an exercise, let the teacher play the same exercise on the piano in strict time, with or without an accompaniment, and then ask the class

how many have heard that tune before. If, like the writer, he receives a shock on getting a 10% correct response, let him ask himself, "What are we music-reading teachers teaching in this music-reading lesson?"

By such methods, then, interest would be aroused and maintained throughout the whole reading course, and a momentum generated which would help to carry the children over the new difficulties that would arise from time to time. Class teachers, whose musical ability was not very marked, would be able to give of their teaching ability to a subject, which would not now be testing their own reading powers at each stage, and they would benefit as much as the class from the new methods of attack employed.

Needless to say, too, there would be close correlation between reading and writing, which would begin with simple copying of sequences or tunes from the Reader, and would lead up to the writing of favourite tunes from memory.

Provided that good tunes, suitable for the different stages, are chosen from the literature of music to illustrate the various new elements of pitch, time and rhythm as they arise, there will be no sacrifice of melody to pedagogical requirements as we find to be the case in the artificially constructed Reader, and thus there will be no

sacrifice of interest for the sake of instruction.

"Omne tulit punctum, qui miscuit utile dulci."

The teaching of music reading would thus be brought into line with the teaching of language reading, and would benefit from the vast amount of research and experiment that has been carried on in this subject. Many dark corners in the pedagogy of music-reading would be lit up, "sweetness and light" would be brought into the music-reading lesson, and reading practice in staff would in time develop the power of sight-reading in staff - a power which every musician in the land would like to see the children cultivate, if only that they might be saved from that purgatory of eternal listening and parroting, to which the illiterate are doomed.

We would then have a real musical democracy instead of a musically illiterate community, which cannot read, write or make its own music, and so is dependent largely on commercialised and, therefore, demoralised and demoralising music makers.

CHAPTER XII

CONCLUSION.

In this concluding chapter we shall endeavour to show the philosophic basis or the unifying principle behind all the various criticisms and suggestions made in connection with the different branches of the Music Lesson.

We have had occasion to criticise the method of the doctrinaire, who, viewing his subject 'sub specie aeternitatis', analyses the subject-matter into what he conceives to be the simplest elements, and arranges these 'products of analysis' in a logical order which must not be departed from. He himself has done the analysis: it remains for the pupils to do the synthesis— to add part to part, until the goal from which the doctrinaire started is reached. This method is based on the principle that the parts are easier than the whole, that everything must be taught in the exact order in which it is laid down in the scheme, and that the subject-matter of any stage must by no means be anticipated in an earlier stage. Likewise, this method assumes that all pupils will progress at a steady uniform rate, and that exact limits of three minutes, four minutes or five minutes can be drawn up for the various aspects of the subject-matter in the lesson.

The whole method reminds one forcibly of bricklaying. One must not start from the idea of "house", but from solid bricks of uniform size; and one need not worry about the house itself until the last brick is placed in position. Naturally, one cannot put on bricks belonging to the fifth or sixth row if one is still working at the first or second row, although, when one has reached the fifth or sixth row, one can go back to the earlier rows to see that each brick is well and truly laid.

Again, since the bricks are of uniform size one must expect a uniform rate of progress, which may, in fact, be timed to within a few minutes. The bricklayer, finally, must not concern himself about the house - the architect has done that for him. His sole duty is to attend to each brick as he comes to it. Of course, it is necessary to have an overseer with plenary powers to see that each bricklayer in the squad is attending to his brick. This picture does not much exaggerate the Synthetic Method with its mechanistic conception of the learning process.

In "The Rhythm of Education", a Lecture included in the volume, "The Aims of Education" (New York. The Macmillan Company.1929), Professor A.N. Whitehead has many wise things to say about this learning process.

He "challenges the adequacy of some principles by which the subjects for study are often classified in order." For example, the "criterion of difficulty" (the easier before the harder), the "criterion of necessary antecedence" (on no account anticipate what is set down for a later stage), and the conception that the pupil's progress is "a uniform steady advance undifferentiated by change of type or alteration of pace."

Professor Whitehead analyses the learning process and describes its three main stages.

(1) The Stage of Romance.

> "In this stage knowledge is not dominated by systematic procedure. Such system as there must be is created piecemeal ad hoc. We are in the presence of immediate cognisance of fact, only intermittently subjecting fact to systematic dissection..... Education must essentially be a setting in order of a ferment already stirring in the mind: you cannot educate mind in vacuo."

This is the oral stage, the stage of sense impressions, when the child is in direct touch with things. It is the stage of childish wonder. Teachers as a rule would hate to leave the child's mind in a state of ferment as a result of their teaching. They prefer to tidy it up, to label and classify everything as they go along. How would it look to have to write in a Record of Work: "Created a ferment in the minds of the class." Yet, as Professor Whitehead says, this is

the first and necessary condition of intellectual progress.

(2) The stage of Precision.

> "In this stage, width of relationship is subordinated to exactness of formulation. It is the stage of grammar."

Here the "buzzing booming confusion" left over from the previous stage is set in order. It is the stage of analysis on the part of the pupils, of differentiation, of "the resolution of obscure and complex objects into their component aspects." (Pater).

This analysing and classifying prepares the way for the next stage.

(3) The stage of Generalisation.

> "This stage is a return to Romanticism with added advantage of classified ideas and relevant technique. It is the fruition which has been the goal of the precise training."

Thus, we have the ferment, the acquirement of precision and the subsequent fruition.

Of course, these three stages must not be regarded as three stages in the life of a pupil or of an individual. As Professor Whitehead says:

> "Education should consist in a continual repetition of such cycles. Each lesson in its minor way should form an eddy cycle issuing in its own subordinate process. Longer periods should issue in definite attainments, which then form the starting-grounds for fresh cycles. We should banish the idea of a mythical, far-off end of

> education. The pupils must be continually enjoying some fruition and starting afresh - if the teacher is stimulating in exact proportion to his success in satisfying the rhythmic cravings of his pupils."

The above sums up the philosophic basis on which the present system of musical training is founded. Whitehead's three stages in the learning process - (1) romance (2) precision (3) generalisation - corresponding to Hegel's three stages of progress - (1) thesis (2) antithesis (3) synthesis - will be found represented in that order in practically all the various branches of the music lesson with which we have dealt.

Of the three stages, the most neglected by teachers as a rule is the first - romance. The other two - precision and generalisation - are more amenable to formal procedure on the part of the teacher. The very names "precision" and "generalisation" smack of the old-fashioned dominie and the old-fashioned textbooks and grammars.

But the first stage - "romance" - would still be regarded by most teachers as strangely out of place in the classroom, where one must "get things done." It seems to offer so little in return in the way of positive progress or results which could be entered in the Record of Work.

Actually, the difference between the old synthetic

method and the modern analytic method is just a difference in the method of approach to the subject. In the Synthetic Method we begin with the acquirement of precision and of technique in the manipulation of elements or parts - i.e. stage two above - and we use this acquired technique to reach the third stage of synthesis or generalisation - the formulation of general principles and the building of new wholes. It will be noted that the first stage is not represented in this Method at all. The emphasis here is on far-off ends. "Learn all these rules, acquire technique in the manipulation of the elements or parts, and some day you will be able to enjoy the fruits of your labour." Unfortunately, it is just in this acquisition of technique and precision that this Synthetic Method fails. It lacks motivation for the pupils because it does not build on real experiences, on the ferment of romance, but begins from the products of analysis of the doctrinaire, the anatomical fragments and exhibits of the theorist.

On the other hand, the Analytic Method begins with wholes, with real experiences (i.e. Romance). These wholes or experiences it subjects to analysis on the part of the pupils themselves (i.e. Precision). But the products of analysis arrived at by the pupils themselves are no longer the lifeless products of the

textbook, because they have been analysed in the living state in the child's own mind. And it is these living products of analysis, the acquisition of the child's intellect, not the mental lumber of the child's memory, that will be put to use to create new experiences, to build up new wholes (i.e. Generalisation).

Let us see this Analytic Method at work on practical issues. The musical training of the child will begin, not with lines and spaces, minims and crotchets, dohs and sohs, but with music itself, with rhythmic response to music, with the singing of nursery rhymes and songs. This is the real stage of romance. and it should be an extensive one.

The children must, of course, learn to deal later on with the elements or parts - dohs and sohs, minims and crotchets, lines and spaces - but this learning must come as the result of analysis by the children themselves of the musical experiences gained in this oral stage of romance. Dohs and sohs, minims and crotchets, must come to be labelled and named by the children through the analysis of living organic wholes. This is where tune spelling will come in. Nursery rhymes and songs will be sung to the sol-fa syllables. These may be taught by pattern first or, as soon as the children are able to recognise the sol-fa letters, d r m, they may be sol-faed

from the blackboard or from cyclostyled sheets. In this connection it may be stated that the publication of a Book of Spelling Tunes, made up of familiar nursery rhymes, songs, hymns and classical melodies, formally set out in sol-fa, is one of the chief desiderata of the Singing Class to-day.

This tune spelling may still be regarded as coming under the first stage - Romance - for children find almost as much pleasure in singing tunes to the sol-fa syllables as to the words. But a further stage is marked by the memorising of these tunes to the syllables. This memorising process is slow at first but its effect is cumulative and it soon gathers momentum. With the spelling from memory of familiar tunes we reach the second stage - Precision. Such memory tunes may be analysed by the class into phrases, idioms and intervals. The major scale and the stair-modulator and vertical modulator may be arrived at by way of such analysis. Tunes may be sol-faed and pointed on the modulator, and used as a basis for ear-tests. The third stage - Generalisation - would come with the building up of new tunes or the reading of new tunes from the modulator or from Sol-fa notation by means of the spelling technique acquired in the previous stages.

Even in this one aspect of the music lesson, of course, there will be cycles within cycles. At all times the three stages will co-exist, albeit at different levels. Some simple tunes will have been memorized as wholes and then approached analytically, others will be too intricate for this purpose at this stage but will be used for sol-faing practice or rote-spelling, while others will be in various stages of acquisition as they are sol-faed from the Spelling Book.

We are well aware that this means the abandonment of the Curwen "steps". But we believe that John Curwen would have been the last to protest against this, if the new procedure were justified in practice. In a "Lecture delivered in various towns in England and Scotland, in the Autumn of 1875," Curwen said:

> "There are two things which we seek to promote in our Tonic Sol-fa movement; there is our method - that is, our plan and order of teaching - and there is our notation. The notation is chiefly Miss Glover's; the method is chiefly mine. Now which of these two can best be dispensed with? I am glad to acknowledge, it is the method, and not Miss Glover's notation... This is my testimony, that of these two things which help to make music easy, the method and the notation - Miss Glover's notation is the more essential."
>
> ("Music for the People, and the Tonic Sol-fa College". A Lecture Published at the Offices of the College, Plaistow, London, E.)

The first edition of "The Standard Course of Lessons and Exercises on the Tonic Sol-fa Method" was published in 1861. This was the age of Herbert Spencer, whose writings Curwen quotes copiously in all his educational works. But owing to recent developments in the biological sciences and the new conception of the evolutionary process that has resulted from these, Spencer's psychology is now considered to be quite out of date. The following quotation from Miller's "Psychology of Thinking" explains the psychology on which Curwen based his method, and contrasts this with the modern point of view.

> "Associationism and the biological point of view in psychology cannot keep house together. Spencer's psychology, vitiated by the doctrine of associationism, could not be truly biological. Associationism represents an atomic view of mind. Elements in the form of separate units of sensation are the starting point, and all higher forms of consciousness are but differing combinations, aggregations, or complexes of these elements. The biological conception is one of growth and of development marked by gradual differentiations of structure. When the structure has become complex, all parts are still functionally and organically related to one another and to the whole. There never were simple units with which to begin. The simple sensations of the associationists are not primary elements of mind at all. They are rather, themselves differentiations of structure which have come about in the growth and development of the mind, and they have specific functions to perform in this more complex and more fully developed mind."
>
> (New York, The MacMillan Company, 1909.)

We must remember, too, that Curwen's Method was intended for pupils, who from the musical point of view differed almost in kind from the pupils of to-day. In the "Introductions to Music" of the 17th and 18th Century beginners were advised to "listen to the bells" - the poor man's only music,* as Coleridge calls them - if they wished to learn how to sing the scale! This advice to "Listen to the bells" was still being given in textbooks in Curwen's day - for example, by Thomas Helmore (1811-1890). Besides, Curwen's Method was intended for adults as much as for children, and as applied to adults it has more justification, since the adult can submit to the discipline of the "steps" and forego present pleasure for the sake of far-off ends.

Even with children who had not a note of music in their heads there might be some justification for Curwen's "steps". But the school child of the present age - the age of the domestic piano, the gramophone, the "talkies" and the radio - is a totally different child from the mute child of the drab days before the Education Act of 1870. The modern child comes to school with scores, perhaps hundreds, of tunes in his head, and if we would seek his co-operation in the learning process, it is from such tunes that we must start.

With regard to sequence singing the same three stages

* Quoted by Hazlitt in "Sketches and Essays."

can be observed. It will be found that the singing of sequences evokes a real team spirit in the class, and the children really enjoy the drill element which it involves. The memorising of the sequence, the acquisition of technique with regard to speed and fluency, the conducting and the observing of expression, the use of rhythmic variety and of anacrusis in the sequence singing, the inversion and the modal treatment of the sequence, the introduction of rests and of antiphonal sequence singing with or without contrary motion, the mental singing of the sequence, the non-scalic, tetrachordal, chromatic or modulatory treatment of the sequence - all aid the child in the acquisition of spelling technique, and prepare him for ear-tests on the sequence, for staff reading and writing, and finally for part-singing through canonic sequence singing.

With regard to Part-Singing, the plain sequence (e.g. |d':t|l:-|) may one fine day be transformed into a two-part, three-part or four-part canon without much effort on the part of the class. This, for children who have never before sung in parts, is Romance indeed. New technique in part-singing may then be acquired gradually by the progressive ornamentation of the plain sequence and the resultant progressive harmonic complexity which comes from its canonic treatment. This acquired technique

may then be applied to new canonic sequences or to rounds, descants or part-songs.

When we come to the Teaching of Counterpoint and Harmony we find the Romance stage in the contrapuntal singing obtained through canonic sequences. Concords, discords, consecutive thirds and sixths and "six-threes", similar, oblique and contrary motion, unessential discords, auxiliary notes, passing notes, anticipations and suspensions, have all been registered in the mind through the singing voice. They may now be arrived at by self-analysis on the part of the pupils, labelled and classified according to the textbook procedure. The textbook indeed will merely endorse something which the pupil has already proved on his voice.

Through time the contrapuntal and harmonic idioms of the various types of canonic sequences - descending by step, by third, by fourth or by fifth - will become part of the contrapuntal and harmonic vocabulary of the pupil, who can then use these, out of their context in the canonic sequence, in his counterpoint and harmony exercises. The rules for harmonic progression or part-writing will no longer be the products of analysis of the writer of the textbook, but the products of analysis of the pupil

himself, subscribed to by his intellect through his voice. The same applies to Harmonic Sequences.

With regard to the teaching of Time or Rhythm we find the same order - Romance, Precision, Generalisation. We begin first with the oral stage - the singing of familiar sequences to various rhythmic patterns. Then, on this reserved fund of rhythm experience we may draw in order to introduce rhythm spelling or taatai-ing. Rhythmic patterns may be compared and contrasted with each other in the singing of the same sequence, e.g.  and  ,  and  etc. Rhythm spelling or taatai-ing may also be applied to familiar songs, and the rhythm spelling or taatai-ing technique thus acquired may be used in attacking new material in sequences, sight-reading and dictation.

Similarly the raised chromatic element may be introduced into a familiar sequence, e.g. {d' : t : d' | t : l : t} by means of the semitonal mordent principle. No explanation is required and all the raised chromatic notes may be introduced at once in the one sequence. The chromatic syllables themselves are self-explanatory and self-justificatory. Analysis will reveal where a raised chromatic note may be sung and why. The technique acquired in these semitonal mordent sequences may then be applied to sequences involving a leap to the

chromatic note, and, as we have shown, to the ornamenting of modulator or sight-reading exercises. While chromatic harmonies and modulations may be introduced into the part-singing by these now familiar chromatic sequences treated canonically.

In the chapter on "Method in relation to content in the School Music Reader", we have dealt at length with the synthetic and the analytic approach to the teaching of music reading, and have shown how the Synthetic Method of approach to the subject has determined the very content of the School Sight Readers based on this method. In condemning this synthetic method of teaching music reading we have had to condemn likewise the synthetic, artificially constructed type of sight-reading exercise and, in fact, the term "sight-reading" itself.

On the other hand, in our advocacy of the Analytic Method in teaching music reading we have stressed the importance of beginning with the whole rather than with the parts — of aiming at thought - getting or meaningful reading rather than at note-getting or mere symbol translation (c.f. Somervell's "note-blocking"). From this arises the question of the content of the Music Reader. If we are to teach children to read for meaning, we must see to it that the reading matter we

present to them is really worth reading. And it follows that if a tune is worth reading once, it will be worth reading more than once. (C.f. Dr. Markham Lee: "Nothing should be done more than once. To go over a test twice in the same lesson is not sight-reading but learning.")

Hence, instead of synthetic, artificially constructed sight-reading exercises with no repetition of phrase, no sequences and few or no repeated notes, we must have real tunes, preferably vocal in origin, with their due proportion of these three elements of melody. From this question of real melody with its organic unity and form we have then arrived at the question of the formal layout of music type in School Readers - a question which did not even arise under the Synthetic Method of teaching music reading, which emphasised note-reading and discouraged anything that aided the visual perception of patterns or wholes.

The dominating principle behind all this destructive and constructive criticism of the Music Reader is that in teaching children to read melodies we must begin from the conception of melodies as wholes, and train children to read for meaning. Further, that the ability to read at sight will not be developed by sight-reading itself with its emphasis on elements and parts, but will come

naturally as the result of practice in reading for meaning with its emphasis on patterns and wholes. This is in keeping with modern methods of teaching ordinary reading (e.g. the Sentence Method), as opposed to the old synthetic Alphabetic Method of teaching reading.

It follows that in the very early stages of music reading the children must be taught to read a tune over and over again by pattern, as in language reading, and then to analyse the whole into its separate parts, in order to acquire visual technique or to attain to the visual perception of patterns, and to put this technique to use in further reading efforts. To begin with wholes is to begin with Romance. To analyse these wholes into their component parts is to introduce Precision. And to use the technique, thus acquired in the process of analysis, in the apperception of new wholes is to arrive at the stage of Generalisation.

Throughout the whole school course this visual perception of patterns must be encouraged by presenting to the pupils reading material in which sequences and repetitions of note-patterns play a prominent part, and by the re-reading of each exercise several times. Indeed, the real test of the efficacy of the subject-matter of the School Music Reader for the purpose on

hand is to be found in the desire of the pupils to read this subject-matter over and over again.

In the chapter on "A Comparison of the Principles underlying the Tonic Sol-fa and the Staff Notation" we have shown that staff reading is an analytic process since it involves the apperception of relationships in space. Hence "note-blocking", emphasis on separate symbols rather than on patterns of notes, reading each exercise once through only, and absence of repeated phrases, sequences and repeated notes in sight-reading exercises all come under the same condemnation, since they discourage the visual perception of patterns or the analytic approach to music reading in the reader.

In all our investigations into the reading process we have noted one exception to the rule, "analysis before synthesis." This exception is to be found in the reading of tonic sol-fa notation. In the tonic sol-fa notation, as we have seen, the analysis of the whole into relative pitch elements (d r m) and relative time elements (Key E♭ {d :-:m : f | s :-:-:lt | d' :-:-} has been done for the pupil by the tonic sol-fa transcriber or editor. Actually, reading from the tonic sol-fa notation is not reading proper. It should be regarded rather as the second stage, the stage of precision, in aural spelling or sol-faing, in which the pupil puts to use the powers of association of

sound and syllable which he has acquired by analysis in the first stage of tune-spelling and sequence-spelling.

In reading from this notation the pupil is brought, by the assistance of the sol-fa transcriber or editor, so near to the wood that he can see each tree (d d r r m m f f s s l l t t d) individually. But this very precision of the near-view prevents him from seeing the wood itself, the contours or the patterns formed by the trees.

Hence, reading from tonic sol-fa notation is simply an extension in space of reading from the ordinary modulator, and involves synthesis or the taking in of note-shape (r) after note-shape (d), while the analytic element must be confined to the taking in of just a few notes in the immediate surroundings on the straight line of note-shapes. For the reading of a single line of vocal music, this synthetic approach suffices; but for the reading of intricate melodic and rhythmic patterns or for the reading of several lines in open or close score it breaks down completely. One cannot take in at one and the same time individual note-shapes and collective note-patterns distributed in space. The one involves a synthetic process, the other an analytic process.

Nevertheless, as we have seen, reading practice in

tonic sol-fa notation has its contribution to make to music reading from staff notation. One may regard it as a sort of oral stage leading up to the more abstract symbol stage of the staff notation - a very necessary oral stage, too, for in this stage we can anticipate all problems of pitch and rhythm which will occur later on in the real symbol stage. Hence, sol-fa reading should come before staff reading and should continue in school alongside staff reading, but at a much higher level of performance.

As we have seen, staff reading is music reading proper with its greater and greater demands on the analytic powers of the mind through the eye. But, so far as pitch is concerned, the only process that stands between sol-fa reading and staff reading is what we have called the Visual Spelling process, the process by which one recognises as scale degrees, with sol-fa names, notes related in space to a tonic position on the stave. We have made provision for this visual spelling in what we have called Visual Staff Dictation, and have shown the necessity for drill in this visual spelling, both for developing speed of response as between sol-fa name and staff symbol and vice versa, and for checking up on the pupils' responses in actual practice.

By means of this visual staff dictation we have shown how the perseveration over a number of years of wrong

responses on the part of individual pupils may be checked, and how these wrong responses might have been prevented in the early stages by better teaching methods and by the earlier use of this visual spelling check. Further we have discovered that, besides such subjective errors of response due to peculiarities in the mental make-up of individual pupils and to unsatisfactory presentation of the subject-matter on the part of the teacher, there were to be found also what we have called objective errors due, not to the nature of the pupil or to the nature of the teaching, but rather to the nature of the position of certain scale degrees on the stave.

Thus, we found that in dealing with notes below the stave special precautions must be taken, to show to the pupils, for example, that between Middle C on the leger line below the stave and E the first line on the stave a note-position D existed  and that this position of D must be regarded as a "space" even when it is not actually enclosed by the leger line of middle C.

As a corollary to this we have found that it is advisable to avoid Key C and Key D with beginners in staff reading, or else give very special attention to the presentation in dealing with these keys, remembering that one or two explanations are not sufficient. For to explain an anomaly to a child is not to explain away

the anomaly for the child.

Likewise, in the course of our investigations into the effect of the tonic position on the stave on the visual perception of other scale degree positions, we found that for tunes ranging from d to l, Keys F and A with the tonic chord d m s on the three bottom spaces and the three top spaces were the most favourably placed:



and that Key C with its tonic position on the imaginary leger line and its six-line stave, and Key D with its tonic position on the ambiguous "space" below the stave and its five-space stave were the most unfavourably placed.



As we have pointed out, the teacher must follow the Reader, for the Reader is the Method. Hence the importance of the recognition of these facts by compilers of School Music Readers in their selection of keys for beginners in staff reading.

The only safe way to ensure mastery of all the keys in staff reading is to develop visual spelling technique in the pupils. But adequate visual spelling technique cannot be acquired through music reading, and until this

visual spelling technique is adequate, it can only hold up music reading and defeat the very aim of the music reading lesson, namely, to enjoy the fruits of the various techniques involved in the co-operative effort of the reading process. If reading does not issue in understanding and enjoyment it will have failed in its chief purpose.

But all three techniques involved in the reading process - visual, aural, rhythmic - must be well in advance of anything required in music reading, and all three must be acquired apart from music reading, for technique implies drill. Hence our insistence throughout on separate drills in visual technique or visual staff spelling, aural technique or sol-faing, and rhythmic technique or taatai-ing.

APPENDIX

In the following pages we give examples of sheets which were used in the Music Class for drill in the three spelling techniques involved in the music reading process - pitch spelling, visual staff spelling and rhythm spelling.

Sheets for Pitch Spelling or Sol-fa-ing Practice

These sheets were made up into small books which each pupil received.

Efforts were made to memorise as many tunes as possible.

The Blue Danube Waltz (Strauss)

Key D

(1) d |d m s |s - s |s - m |m -
.....f |f -
t, |t, r l |l - l |l - f |f -
.....m |m -
d |d m s |d' - d' |d' - s |s -
.....l |l -
r |r f l |l - - |- fe s |m' - - |-
d' m |m - r |l - s |d - - |-

Key A (d'=f)

f m |m r r |- r de |de r r |-
s, s, |l, - s, |- s, s, |r - d |-
f m |m r r |- r m |s f f |-
t, r |r - d |t, .l,fr |ll,l, s, |d, (Repeat last four lines)

Key D (d =s)

(2) s |f - s |f - s |m' - - |-
r's |m - s |m - s |r' - - |-
d's |f - s |f - s |m' - - |-
r' s |d' r' m' |s' - f' |m'm'm' r's |d'-(Repeat)

Key B flat (d' =m) Time

m |m - - |- f m |r d t, |l, - - |
|r - r |.s,l, .s, |s, - - |- -
s, |m - - |- f m |r d t, |l, - - |
|se, - se, |- l, .d |t, - - |- -(Repeat from (2) t, = s)

Key G (d=s,)

(3) s, |m - m |- s .f |m s, s, |s, -
s, |m - m |- l .s |f t, t, |t, - - |
|f - f |- t .l |d' m m |m -
m |r - r |re- re |m - - |- -(Repeat)

mfm |mr der mr |rd td s |.ff f |f m m |
|mr der mr |rd td d' |.tt t |l s s |
|mr der mr |rd td s |.ff f |f m m |
|mr der mr |rd m .d' |t .l fr |d - (Repeat)

(4)

|d r m |f l, .d |f l, .d |f - - |-
m r |m s, .d |m s, .d |m - - |-
r d |t, r t |- l f |m - - |-
r d |t, r l |- s t, |d - - |
|d r m |f l, .d |f l, .d |f - - |-
m r |m s, .d |m s, .d |m - - |-
r d |t, r t |- l f |m - - |-
r d |t, d r |re m fe |s ss s |s s s |

|m - - |m - - |m - - |-
st, dr |m - - |m - - |f - - |-
lde rm |f - - |f - - |l - - |-
s m |l - - |- s f |m - - |- - - |
|m - - |m - - |m - - |-
st, dr |m - - |m - - |f - - |-
lde rm |f - - |l - - |d' - - |-
t l |l s fe |f m r |d - - |Repeat from No. (4)

1. Slumber Song (Schumann)

Key E flat

s--	m'--	r'--	d'--	lse l	d'tl	s--	f--
m--	s--	f--	m--	rde r	l-l,	d--	t,--
s--	m'--	r'--	d'--	lse l	d'tl	s--	f--
m--	s--	f--	m--	rde r	f-t,	d--	---

Key B flat (r'=s)

s--	d--	d--	t,l,	s, t,	rf	f--	m--
s--	de-	l-r	l-re	mre m	sft,	d--	---

Repeat first four lines(d =s)

2. The Harmonious Blacksmith (Handel)

Key E

d	m	r	s	m	r d	r	s
m	l d	t,	s t,	l,	fe	s	-
d	m	r	s	m	r d	r	s
m	l d	t,	s t,	l,	fe	s	-
s	d' s	l	s	m s	d' s	l	s
m s	d' t	t l	l s	s f	mf s	r	-
s	d	r	d	s m	r d	r t,	d
s	d r	t, f	m r	m	r d	d	-

3. Melody in F (Rubenstein)

s,	fe s,	s,	fe s,	d	t, d	s	-
f	m r	m	r	d	t, l,	t,	l,
s,	fe s,	s,	fe s,	d	t, d	l	s
f	de r	m	r	d	-	-	-

Key C(t, = m)

m	t l	s	r m	f s	l t	d'	d
m s	t l	s	r m	f s	l t	d'	:

Key A flat (d' = m)

m	m	s f	m	. m	m	s f	m	:
m,	m,	s, f,	m,	s, f,	m,	s, f,	m,	-

Repeat first four lines (m, = s,)

4. Minuet in G (Beethoven)

m .f	s .fe	s .fe	s .fe	s	-		
l .m	f --		s .r	m	-		
d .r	m .re	m .re	m .re	m	-		
r d	d t,	t, r	d l,	s,	-	(Repeat)	
s d'	d' t		d'	r'	-		
dtls	f m		l .f	m	r		
d .r	m .re	m .re	m .re	m	-		
f .del	f -		m .t,	d	-	(Repeat)	

5. Cradle Song (Brahms) Key F

m m	s . m	m	s	-	
m s	d' t	. l	l	s	
r m	f r	r m	f	-	
r f	t l s	t	d'	-	
d d	d' -	l f	s	-	
m d	f s	l	m s	-	
d d	d' -	l f	s	-	
m d	f sf m	r	d	-	

6. Marche Militaire (Schubert)

Key G

s	f m	r	m r	d	r m	s .ls,	
s	f m	l	s m	f sf	m fm	r sltd	
r rrd r		m f	s	r m	f	m r	d
r rrd r		m f	s	fe s	l .t	s	-
s	f m	r	m r	d	r m	s, .ls,	
s	f m	l	s m	f sf	m fm	r sltd	
r rrd r		m f	s	r m	f	m r	d
r rrd r		m f	s	t, d	r .m	d	-

1. "The Merry Peasant" (Schumann)

Key F

{.s_1 | d :- m | s :- d | f . l : d' . l | s :- . m | f . r : s_1 . f | m . d : s_1 . m | t_1 : l_1 | s_1 :- ‖ (Repeat)

{.s_1 | f :- . m | r :- s_1 | f . m : r . d | r :- }

{.s_1 | d :- m | s :- d | f . l : d' . l | s :- . m | f . r : s_1 . f | m . d : s_1 . m | r : t_1 | d :- ‖ (Repeat)

2. "See the conquering hero comes" (Handel)

Key G

‖ s :- | m :- f | s :- | d :- | r . m : f . s | f : m | r :- | - :- | m . f : s . l | s : s | d' :- | s :- | f : m . r | r :- d | d :- ‖

{ | m . r : m . f | m : m | r :- | d :- | f : m | r : d | t_1 :- | - : t_1 | d . t_1 : d . r | d : d | l :- | fe :- | s : l . s : fe :- s | s :- | - :- ‖

Repeat first line

3. Entr'acte from "Rosamunde" (Schubert)

Key B^b

{ | m : m . m | d : d | d . t_1 : d . r | s_1 :- | m : m . m | l_1 : l_1 | l_1 . r :- de | r : m . f }

{ | m : m . m | d : d | d . t_1 : d . r | s_1 :- | m : t_1 . t_1 | d . s : m . d | d . t_1 : t_1 . l_1 | s_1 :- } (Repeat)

{ | f : f . f | m : r | m : m . m | r : d | t_1 : r . d | t_1 : l_1 | m :- | - :- }

{ | ma : ma . ma | d :- | r : r . r | t_1 :- | m : t_1 . t_1 | d . s : m . d | l_1 : t_1 | d :- ‖ (Repeat)

4. March from Handel's Opera "Scipio"

Key D

{ : d , r | m :- | s :- | d' :- | - : r | m , f : s_1 , l | s : f . m | r :- | - : s | l_1 , t_1 : d' | t_1 : l | s :- | f :- | m , r : d_1 , f | m : r | d :- | - ‖ Repeat

{ : m' | r' : d' | t_1 . d : r' | s :- | f :- | m : f m | r : d | s :- | - : r' | l , s : l_1 , t_1 | l : l | l :- | - : t | d' : t_1 | l_1 , t_1 : l | s :- | - }

{ : f | m . r : m . f | m : r | f :- | m :- | l : s | f : m | r :- | - : s | l_1 , t : d' | t_1 : l | s :- | f :- | m , r : d_1 , f | m : r , d | d :- | - ‖ Repeat

5. Theme from Weber's Opera "Oberon"

Key A

{ . s_1 | s_1 :- | d :- m , | s_1 :- | - :- fe | f : - | r :- r , | f_1 :- | - :- f | m_1 :- f_1 | s_1 :- se_1 | l_1 :- | m :- r | d :- | - : t_1 : r . d | t_1 :- | - }

{ . s_1 | s_1 :- | d :- m , | s_1 :- | - :- fe_2 | f_1 :- | r :- r , | f_1 :- | - :- f | m_1 :- f_1 | s_1 :- se_1 | l_1 :- | - : t_1 | d : l_1 , f_1 , r | t_1 :- l_1 , s_1 | d :- | - ‖

6. March from "William Tell" (Rossini)

Key E

{ . s_1 , s_1 ‖ s_1 . s_1 , s_1 : s_1 . s_1 , s_1 | d . r : m . s_1 . s_1 ‖ s_1 . s_1 , s_1 : d . m , m | r . t_1 : s_1 }

{ . s_1 , s_1 ‖ s_1 . s_1 , s_1 : s_1 . s_1 , s_1 | d : r | m . d_1 , m | s : f . m , r | d . m : d . ‖ Repeat

{ . m , m | m . m , m : m . m , m | m . l : m . l | m . l : m . r | d . t_1 : l_1 }

{ . m , m | m . m , m : m . m , m | m . l : m . l | m . l : s . fe | s . fe : s . }

{ . m , m | m . m , m : m . m , m | m . l : m . l | m . l : m . r | d . t_1 : l_1 }

{ . m , m | m . m , m : m . m , m | m . l : m . l | m . l : s . fe | s :- }

{ . r , r | r . r , r : r . m | f . r :- . f | m . d :- . m | r . s_1 , s_1 : s_1 }

{ . r , r | r . r , r : r . m | f . r :- . f | m . d :- . m | r . s_1 , s_1 : s_1 }

{ . s_1 , s_1 | s_1 . s_1 , s_1 : s_1 . s_1 , s_1 | d . r : m . s_1 , s_1 | s_1 . s_1 , s_1 : d . m , m | r . t_1 : s_1 }

{ . s_1 , s_1 | s_1 . s_1 , s_1 : s_1 . s_1 , s_1 | d . r : m . d_1 , m | s : f . m , r | d . m : d . ‖

1. Waltz in A♭ (Brahms)

|m ·d dm|m ·d dm|f sf m r|m ·
dds|l ·m ms|l ·m ms|t l s fe|s ·
t,t,m|m ·d dm|m ·d dm|f sf m r|m ·
dds|l ·m ms|l ·m ms|t l s fe|s ·
m ms|s ·r rs|s ·m ms|d' ·s s d'|d' ·
l ld'|r' ·l ld'|d't l s|
|m ·d dm|m ·d dm|f sf m r|m ·
dds|l ·m ms|l ·m ms|d's f r|d - -||

2. Largo in G (Handel)

d - -	- t, l·s,	s, - -	l, t, drm	r - -
l - l·s	s - -	f - f·m	m - -
d' d' t	t l·s s	sfe fe ·fe	s ·l s
fm r·d	d s -	s m r·d	d - -	d t l·s,	s, - -
l, t, drm	r ·d r	l l t	d' ·s s	·l f ·m	m -
d	d t, l·s,	s, - -	f f m	r ·d d
t t l	se·fm se l l	·r t, ·l	l, f -
f m r m	r·d r l	- s f·m	m s t
d' d' t	t l·s s	sfe fe ·fe	s ·l s
fm r t	d' - d	rm f m r·d	d s t
d' d' t	t l·s s	sfe fe ·fe	s ·l s
fm r ·d	d - -	

3. Song without words in E (Mendelssohn)

m r·d sf ·m	r d t, d m r
r r·m f ·r	l, t, m·r d -
m r·d d' ·t	l s fm l r
r r·m f ·r	l, t, m·r d -	

4. Minnet (Boccherini)

d't d'r'|d'd ·m ·s|sf f
fm fs|fs, ·r ·f|fm m
d' ·l|sfe fe fe d'r'|d't t t
f' ·r'|m'd' l f' r'·d'|d' -
d't d'r'|d'd ·m ·s|sf f
fm fs|fs, ·r ·f|fm m
f ·r|dt, t, t, f·r|dt, t, t,
f ·r|md l f r·d|d -

5. The Wild Horseman (Schumann)

m|l m l d' l d'|m d' f' m' d' l|
|t se d' t se m|l m d' t
m|l m l d' l d'|m d' f' m' d' l|
|t se d' t se m|l m se l·
s,|d s d m d m|s m l s m d|
|r t, m r t, s,|d s, m r·
s,|d s d m d m|s m l s m d|
|r t, m r t, s,|d s, t, d·

6. Rosamunde Overture (Schubert)

s,|s, ds, s, rs,|s, l sfe s m
s,|s, ds, s, sf|md ssss d·
de|r fr de t de|rm fl s·
f|m sm r st,|d l, rrrr s,·
Repeat first two lines

7. Funeral March (Chopin)

m - fm rd	t, l s -
f - sf mr	d d' s -
m - fm rde	rde rm fl, mr
d - rdtd l s fs,	r - d -	

Music Spelling Sheet No.1.

1. Twinkle, twinkle, little star

d	d	s	s	l	l	s	:-
f	f	m	m	r	:-	s	s
f	f	m	m	r	:-	d	d
s	s	l	l	s	:-	f	f
m	m	r	r	d	:-		

2. I hear thunder

d	:r	m	:d	d	:r	m	:d	m	:f	s	:-	m	:f	s	:-
s,l	:s,f	m	:d	s,l	:s,f	m	:d	d	:s,	d	:-	d	:s,	d	:-

3. Water, water, wallflower

m	:m	m	:m	r	:-	d	:r	m	:m	m	:m	r	:-	-	:-
s	:s	s	:-	m	:-	d	:d	r	:d	r	:m	d	:-	-	:-

4. Hot Cross Buns

s	:s,	d	:-	s	:s,	d	:-	s	:s,	d	:-				
s.f	:m,r	d.r	:m.f	s	:s,	d	:-	m.m	:r	d.r	:m.f	r	:-		
s.f	:m,r	d.r	:m.f	s	:s,	d	:-								

5. Little Tom Tucker

s	:s,	s,	d	d	:-	r	:r	r	m	:m	:-				
s	:s	s	s	f	:m	r	:d	:t,	d	:d	:-				

Music Spelling Sheet - No.2.

6. Little Bo Peep

	d	:d	:d	d	:-	:d	r	:-	:r	r	:-	}			
r	m	:-	:s	s	:f	:m	m	:-	:-	r	:-	:-			
	s	:m	:m	m	:-	:s	f	:-	:r	r	:-	}			
f	m	:-	:m	r	:d	:r	d	:-	:-	d	:-	:-			

7. Jack and Jill

	s	:-	:s	s	:-	:s	d'	:-	:d'	d'	:-	}			
d'	r'	:-	:r'	r'	:-	:r'	m'	:-	:-	d'	:-	:-			
	s	:-	:s	s	:-	:s	l	:-	:l	l	:-	}			
l	s	:-	:f	m	:-	:r	d	:-	:-	d	:-	:-			

8. This is the way we wash

	d	:d	:d	d	:-	:m	s	:-	:m	d	:-	}			
d	r	:-	:r	r	:-	:d	t,	:-	:l	s,	:-	:-			
	d	:d	:d	d	:-	:m	s	:-	:m	d	:-	}			
d	r	:-	:r	s,	l,	:t,	d	:-	:-	d	:-	:-			

9. Mary, Mary, quite contrary

	s	:s	m	:m	f	:mf	r	:r							
	m	:mm	s	:m	r	:-	-	}							
s,	l,	:t,	d	:s,	l,	:t,	d	}							
f	mm	:m	r	:rr	d	:-	-	:-	:-						

10. London Bridge is broken down

	d	:-	:d	r	:-	:m	f	:-	:m	r	:-	:-			
	m	:-	:-	d	:r	:d	t,	:-	:l	s,	:-	:-			
	d	:-	:d	r	:-	:m	f	:-	:m	r	:-	}			
mf	s	:-	:-	r	:-	:-	d	:-	:-	-	:-	:-			

Music Spelling Sheet No. 4.

16. This old man

```
1s  :m   1s  :-   1s  :m   1s  :-   1
1l  :s   1f  :m   1r  :m   1f  :-   1
1s  :d   1d.d:d   1d.r:m.f 1s  :-   1
1s  :r   1r  :f   1m  :r   1d  :-   1
```

17 Sing a song of sixpence

```
1d'.t:l.s 1d' :m.m 1s.l:s.m 1s  :-   1
1d'.t:l.s 1d' :m   1r.l:l.s 1l  :-   1
1s.d'.d'.d'1d' :d'.d'1t.r'.r'.r'1r' :-   1
1m'.r'.d'.t 1d'.t:l.s 1l.d'.t.r'1d' :-   1
```

18. Old woman, old woman

```
1s :-.m:d 1s :-.m:d 1r:m|f:s 1m :-.d :- 1
Repeat .....
1s:d.d:d 1d:d.d:d 1r:m|f:s 1m :-.d :- 1
Repeat .....
```

19. Polly, put the kettle on

```
1s.l:s.f 1m.d:d   1r.m:r.d 1t.,s:s,  1
1s.l:s.f 1m.d:d.m 1l, :t, 1d  :-   1
1m.d:f.r 1m.d:d   1f.l:r.d 1t.,s:s,  1
1m.d:f.r 1m.d:d.m 1l, :t, t,1d :-   1
```

20. Bobby Shaftoe

```
1d.d:d.f 1m.s:m.d 1s.,s:s.,d 1t.,r:t.,s,1
1d.d:d.f 1m.s:m.d 1r.f:r.t,1d  :d    1
1m.s:m.d 1m.s:m   1r.f:r.t,1r.f:r    1
1m.s:m.d 1 m.s:m  1r.f:r.t,1d  :d    1
```

Music Spelling Sheet No. 3.

11. Little Jack Horner

```
   1f:m:f|r:-:r 1m:r:m|d:-:d 1
   1f:m:f|r:-:r 1s:-:-|-:-}
{m 1f:m:f|r:-:r 1m:r:m|d:-}
{d 1r:f:m|r:d:t,1d:-:-|-:-:- 1
```

12. When I was a lady

```
{:s 1d':t:f|1:s:m 1s:f:r|f:m}
{s  1d':t:f|1:s:s 1s:1:t|d!-}
    Repeat
```

13. Humpty Dumpty

```
   1m:-:s|f:-:1 1s:1:t|d'-:-  1
   1m:-:s|f:-:1 1s:m:d|r,-:-  1
   1m:m:s|f:f:1 1s:1:t|d'-}
{r'1m'-:d'|f'-:m'1r'|d':t|d'-:-  1
```

14. Up in the mornin'

```
   1d:r:m|s,-:s,1f:-:m|r:-:-  1
   1d:r:m|s,-:s,1l,-:-|d:-:-  1
   Repeat
```

15. Little Miss Muffet

```
   1d:m:s|s:m:s 1l:d'|1 |s:m:d 1
   1d:m:s|s:m:s 1l:-:-|d'-}
d  1d:m:s|s:m:s 1l:d'|1 |s:m:d 1
   1d:m:s|s:m:s 1l:-:-|d'-:-  1
```

Music Spelling Sheet No.5.

21. Golden Slumbers.

```
|s,:m,:f,|s,:-:m |r :-:d |l, :- :- |
.....|r :- :- |
|r :m :f |s :f :m |f :m :r |d :t, |
{s, |d :m - |l, :- :r |s, :t, :- |d :- :- |
```

22. All through the night.

```
|d :-.d|l,:d |r :-.d|t, :s, |l, :- |t, :-.t,|d :- |-:-|
Repeat.....
|f :m |f :s |l :s |f :m |f :m |r :d |m :r |d :t, |
Repeat first line.....
```

23. Spanish Boat Song.

```
|s :m |m :- |f :r |r :- |d :r |m :f |s :s |s :- |
..... |d :m |s :s |m :- |-:- |
|r :r |r :r |r :m |f :- |m :m |m :m |m :f |s :- |
Repeat second line.....
```

24. Kelvin Grove.

```
{d r |m ,s :r ,m |d ,t, :l ,s, |l, :r |r }
..... |l, :d |d }
{r ,m |f ,m :f ,s |l :m ,f |s ,m :r ,d |r }
Repeat second line.....
```

25. I left my dearie lying here.

```
{s, |d ,-d ,m ,-m |s ,-s ,m ,-m |s ,-s ,m ,-m |s ,-m ,r ,-}
..... .. ,s |d ,-d ,r ,-m |r ,-r ,d -|
```

Spelling Sheet No.5a.

Broken Bridges.

```
|s :-,|s :f |m :f |s :- |
|r :m |f :- |r :m |f :- |
|s :-,|s :f |m :f |s :- |
|d :- |m :- |r :- |d :- |
```

Aikin Drum.

```
{d ,r |m ,-,m ,m ,-d |f ,-,f ,f ,-}
{r |m ,-,m ,m ,-d |r ,-,r ,r }
{d ,r |m ,-,m ,m ,-d |f ,-,f ,f }
{s ,f |m ,-d ,r ,-,t, |d :-|
```

Can you bake an apple pie ?

```
{d ,-,m |s ,-,d :s ,-,m |d }
{t, ,-d |r ,-,r ,d ,-,r |m ,-,m }
{d ,-,m |s ,-,d :s ,-,m |d }
{t, ,-d |r ,-,f ,m ,-,r |d |
```

I saw three ships.

```
{d |d :-:d |d :- :l |s :-:f |m :-:-}
|r :m :f |m :- :-|r :m :f |m :- }
{d |d :-:d |d :- :l |s :-:f |m -}
{s |l :s :f |m :r :d |r :-: - |d -|
```

Where are you going to, my pretty maid ?

```
|d :-,d |m :- :m |r :-,d |d :-:-|
|m :-,f |m :s :- :s |l :f :-,m |f :m :- }
{r |d :-,d |m :- :d |t, :-:d |r :-:-:-}
|d :-:r |m :- :-|r :-:m |f :- }
{f |s :d :r |m :s :f |m :-:r |d - -|
```

Spelling Sheet No. 6.

26. Early one morning.

{|d :d,d |d,m:s,s |l,f:r,d |t,r:s,}
{s|.....:r,t |d' :- 1
{|r :mf |s,m:d |r :mf |s,m:d 1
{|d,m:s,d' |t,l:s,f |m,r:d,t |d :- 1

27. Robin Adair.

1s,:l,:t, 1d :-,m 1s,:l,:t, 1d - - 1
.....
1m:m:m 1f :-,l,l, 1m:m:r 1d :-,l,s, 1
1s:f,m,m:d 1d :-,m 1s,:l,:t, 1d :-:- 1

28. Barbara Allen.

{,d 1m,f:s :-,f 1m,r:d :-,}
{,r 1m,s:d' :d' 1t,s:- :-,}
{,t 1d',l:f :s,l 1s,m:d :-,}
{,r 1m,s:l :-,s 1m,d:- :-,}

29. Ye banks and braes.

{s,|d,-,d:r,d,r |m,s,m:r,d,r |m,r,d:d,l,s |s,l,d:r ,-}
{,mr|.....d:d ,-}
{,m|s,-,l:s,m,d |s,-,l:s,m,d |s,m,d:s,m,d |l,s,f,m,r ,-}
s,|Repeat second line.....

30. Oh Dear Me!

|m :d |f :- |m :d |r :- |
|m.f:s.m |f :m.f |s :s, |d :- |

Spelling Sheet No.6a.

Hymn Tune "French".

d|mfsd|rmfm|rddt,|d--
s|d'tls|sfe sm|rddt,|d--

Hymn Tune "Tallis".

d|mfss|llss|d'tll|s--
.....d|fmrr|d--

Wee Willie Winkie.

d :d,m	s, :s,l,	d,t,:d,r	m :-
f :f,l	s,m:r,d	r,m:r,d	l, :-
d,d:d,m	s, :s,l,	d,t,:d,r	m :-
f,s:l,d'	s,m:d,r'	m,f :m,r	d :-

Dance to your Daddie.

|d :d,r |m,d :- |d' :d' |d',s :-|
|f :f,f |m,s :m,d |r,r :s |s :-,}
{s|d :d,r |m,d :- |d',d':d' |d',s :-|
|f,f :f,f |m,s :m,d |r :d |d :-|

Hush-a-ba birdie, croon.

|m,r,d :l,d,r |m :s 1
|m,r,d :l,d,r |m :-,-,}
{m|s,-,s :l,-,l |d,-,r :m,-}
{m|s,m,r :d,l,s |l, :d 1

1 All through the night

1d .t,l, d 1r .d t, s, 1l, - t, .t,1d - - -1
Repeat.....
1f m f s 1l s f m 1f m r d 1m r d t,1
1d .t,l, d 1r .d t, s, 1l, - t, .t,1d - - -1

2 Kelvin Grove

d r 1m s r m 1d t, l, s, 1l, r 1r
..... 1l, d 1d
r m 1f m f s 1l m f 1s m r d 1r
d r 1m s r m 1d t, l, s, 1l, d 1d

3 Early one morning

1d d d d m s s 1l f r d t, r s,
s, 1d .d d d d m s s 1l f r t, d - 1
1r m f s m d 1r m f s m d 1
1d m s d' t, l s f 1m r d t, d - 1

4 Golden Slumbers

1s, m, f, 1s, - m 1r - d 1l, - - 1
..... 1r - - 1
1r m f 1s f m 1f m r 1d t,
s, 1d m - 1l, - r 1s, t, - 1d - - 1

5 Spanish Boat Song

1s m m 1f r r 1d r m f 1s s s 1
.....1d m s s 1m - 1
1r r r r 1r m f 1m m m m 1m f s 1
1s m m 1f r r 1d m s s 1m - 1

6 Robin Adair

1s, l, t, 1d .r m 1s, l, t, 1d - - 1
.....
1m m m 1f .l, l, 1m m r 1d .l, s, 1
1s fm rd 1d .r m 1s, l, t, 1d - - 1

7 Ye Banks and Braes

s,1d-d rdr1msm rdr1mrd dls1sld r-
mr1.....1sld d-
m1s-l smd1s-l smd1smd smd1lsfm r-
s,1d-d rdr1msm rdr1mrd dls1sld d-

8 Barbara Allen

d1mfs .f 1mrd .r 1msd' d' 1ts- .
t1d'lf sl1smd .r 1msl .s 1md- .

9 Cradle Song (Schubert)

1m s 1r .mf 1m m rdtd1r s, 1
..... rmfr1d - 1
1r .r 1m .rd 1s lsf m 1r s, 1
1m s 1r .mf 1m m rmfr1d - 1.

10 I left my dearie lying here

s,1d-d m-m1s-s m-m1s-s m-m1s-m r-
.....s,1d-d r-m1r-r d'

11 The Bailiff's Daughter

s f 1m . r d s f 1m .f r .m d
m f 1s s s d' d' 1s - -
f m 1l . t d' t l 1s . f m
d d 1m r d r d t, 1d - -

12 The harp that once

d 1s .l s m 1l .t d' l 1sm- r .m 1d - -
s 1d' .t d' r' 1d' t l s 1l s d' m 1s - -
..... f m 1l - -
t 1d' .t l s 1l .t d' l 1sm- r .m 1d - -

13 Sweet babe a golden cradle

d 1m-s s-s 1lsfe s-f 1m-s s-s 1lsfe s-f 1
1m-m m-m 1mrd rdr 1m-m mrd 1r d 1
1m mrd 1r d 1m mrd 1r d

14 Bonnie Charlie's noo awa'

1d .r m d 1l, d s, - 1s .l s m 1m r r -1
..... 1r .d d -1
1m s s s 1m s s - 1d' .tl s 1ls fm r -1
1mm- r d 1l,d- s, - 1l .s s m 1r .d d -1

15a French (I to the hills)

d 1m f s d 1r m f m 1r d d t, 1d - -
s 1d' t l s 1s fe s m 1r d d t, 1d - -

15b Tallis

d 1m f s s 1l l s s 1d' t l l 1s - -
d 1m f s s 1l l s d 1f m r r 1d - -

16 Good King Wenceslas

1dddr 1dds, - 1l,s,l,t, 1d-d-1
.....
1sfmr 1mrd-1.....
1s,s,l,t, 1ddr-1sfmr 1d-f-1d---1

17 Auld Lang Syne

s, 1d .d d m 1r .dr m 1dd- m s 1l - -
l 1s .mm d 1r .d r mr 1d .l,l, s, 1d - -
l 1s - m d 1r .d r m 1s - m s 1l - -
l 1s .mm d 1r .d r mr 1d .l,l, s, 1d - -

18 Nae luck aboot the hoose

s 1d' .l s .m f .s l .t 1d' .l s .m r -
..... d' 1s .f m .r d -
Repeat
d.r 1m m .df .f f .r 1m m .d r -
d 1m m m .d f .s l .d' 1s .f m .r d -

19 Cradle Song (Brahms)

mm 1s .mm 1s - ms 1d' t .l 1l s
rm 1f r rm 1f - rf 1tl s t 1d' -
dd 1d' - lf 1s - md 1f s l 1ms-
..... 1fsfm r 1d -

20 God save the King

1d d r 1t, .dr 1m m f 1m .rd !
1r d t, 1d - - 1
1s s s 1s .fm 1f f f 1f .mr 1
1m fm rd 1m .fs 1lfm r 1d - - 1

685

1 Jackson (Key D)

s |s d't|l s |f sfm m |s d' t l |s - -
s |m m f s |l rd't d' |s lfm r |d - -

2 Crimond (Key F)

s, |m - fr|s - fr|d - t, |d -
m |m r r |fe- fe|s -
m |m f m |r - m |f s f |m -
m |r f l |d - t, |d -

3 Orlington (Key C)

s |m s d' |m' r' d' |l - t |d' -
s |m s d' |l f' r' |d' t
s |sls f |f m d' |d' t l |l s
s |d' - r' |m' - d' |f' - m' |r' -
s |l t d' |r' d' t |d' -

4 Old Hundredth (Key A)

d |d t, l, s, |d r m m |m m r d |f m r
d |r m r d |l, t, d s |m d r f |m r d

5 French (Key F)

d |m f s d |r m f m |r d d t, |d - -
s |d' t l s |s fe s m |r d d t, |d - -

6 Duke Street (Key F)

|d mfs lt|d' tls - |s ssl s |f m r -|
|m mrdmsd'|lsfmr - |s ltd' .f|m r d -|

7 Salzburg (Key F)

d |m - s |s f m |m - r |d -
d |d t, d |s f m |m r
d |d - l |s m d |d - l |s -
d' |d' l f |m f r |d -

8 St. Ethelreda (Key F)

d |d r m r |d t, d r |m s f m |r - -
m |f l s t, |d f m s |l f m r |d - -

9 Stroudwater (Key A)

d |s, - d |s - m |f m r |d -
d |r - m |f - m |r -
m |r - d |s, - t, |d - r |s -
sf|m r d |f m r |d -

10 St. Olave (Key C)

m |f l s f |m - - m' |r' d' d' t |d' - -
s |l fe s t |r' .r'd' l |s m r mf|m - -

11 Harington (Key E)

s |d' t l |s f m |f s l |l s
s |s fe s |ml s fe|s -
rs|s f m |m r d |rmf m |l -
sd'|d' t d' |rmf m r|d -

12 Dunfermline (Key F)

d |d r m f |s s m m |l s s fe|s - -
s |m s l s |f m r m |r d d t, |d - -

13 St. Magnus (Key G)

s, 1d r t, s, 1d r m r 1m d m fe 1s - -
r 1m r d t, 11, r t, s, 1s sf m r 1d - -

14 Coleshill (Key C)

1 11 s d' s 11 1 m d' 1m' r' d' s 1d' - -
d' 1m' r' d' s 11 1 m d' 1s 1 rd' t 11 - -

15 St. Paul (Key A)

d 1r m s, d 1r t, d m 1r s f m 1r - -
d 1r m f m 1r d t, s, 11, f m r 1d - -

16 Old 124th (Key G)

1d - r m 1f - m - 1r d d t, 1d - - -1
1m - f s 11 - s - 1f m r d 1t, - - -1
1s, - d d 1t, - d - 1r f m r 1m - - -1
1s - s f 1m - r - 1m s s fe 1s - - -1
1m - r d 1t, d r f 1m - r - 1d - - -1

17 Eastgate (Key C)

s 1d' tl ls s 11 t d' d' 1d' rm' m' rd' 1d' t -
s 11 tt d' r' 1m' - - dt 11s fm f ls 1s - - -
1d' dt d' t 1d' - -

18 Ballerma (Key A)

d 1m - r 1d - 1, 1s, - 1, 1d -
d 1m - r 1m s m 1r -
d 1m - r 1d - 1, 1s, - m, 1s, -
d 1m s m 1r m r 1d -

19 Crediton (Key C)

s 1d' t d' s 11 sf m s 11t d' f m 1r - -
s 1s lt d' m' 1r' d' t s 11t d' mr' dt 1d' - -

20 Newington (Key A)

d 1s m d rd 1t, d r mf 1s dr m r 1d - -
m 1f r m f 1s rd t, 1, 1s, dr m r 1d - -

21 Grafenberg (Key G)

d 11, s, d r 1m m r m 1s f m r 1d - -
sf 1m s 1 s 1f m r s 1r mf m r 1d - -

22 St.George's, Edinburgh (Key F)

d - 1d r m f 1s - s - 1s - -
s 1f m r d 1m - r
r 1m f s dt 11 ·ss dr 1m s f r 1d - -
m 1s - - s 1s s s fe 1s - -
s 1d' s m d 1s - -
s 11 t d' s 1fm rd mr r 1m 1 s fe 1s - -
s 11 t d' s 1fm rd mr s 1dr mf m rd 1d - - -1
1d ·rm s 11 ·td' t 1d' ·tl s 1s ·drmf 1
1m ·sd' s 11 -s - 1f - m - 1r - - - 1d -‖

23 St. John (Key E)

d 1m m s s 1d' - - d' 1t 1 s fe 1s - -
s 11 t d' 1 1s - - s 1f m r r 1d - -
d 1d r m d 1m f s s 11 t d'
d' 1r' - t - 1d' - -

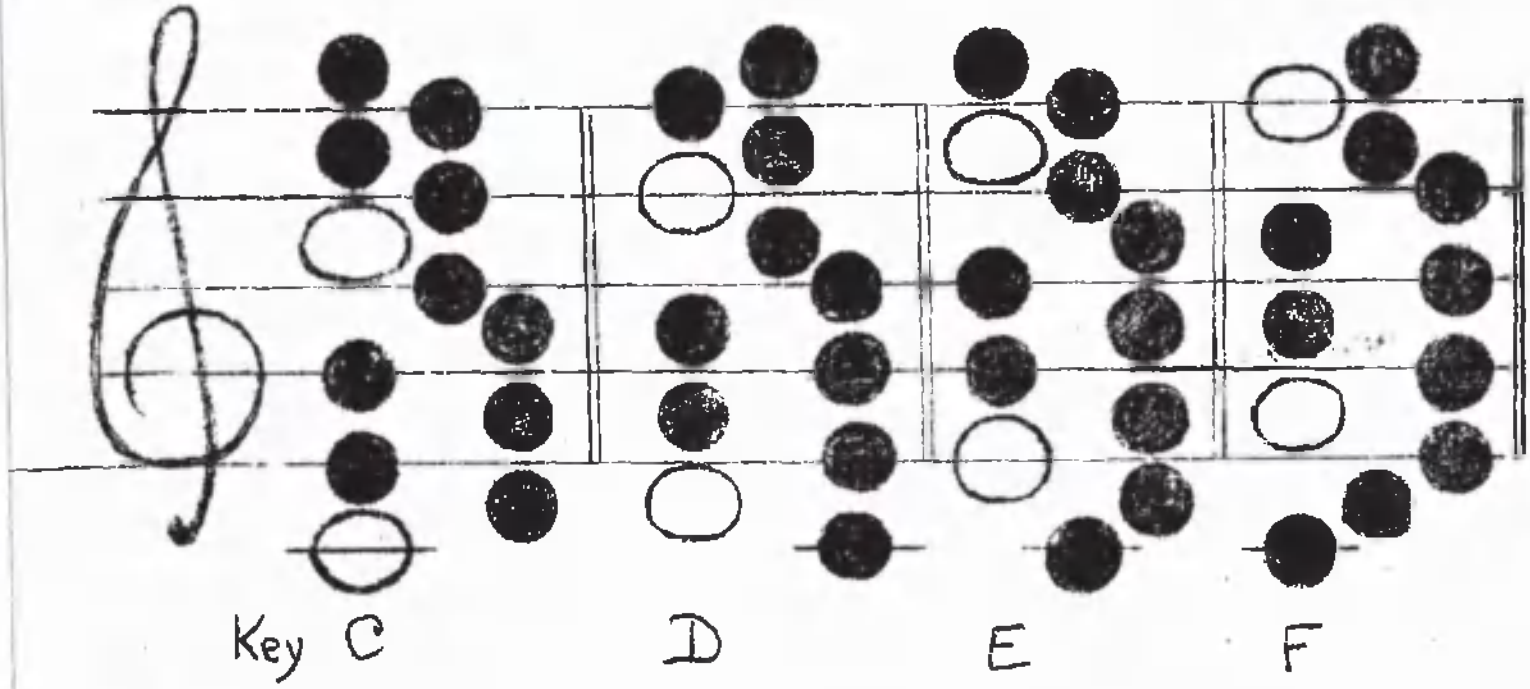
24 Winchester (Key G)

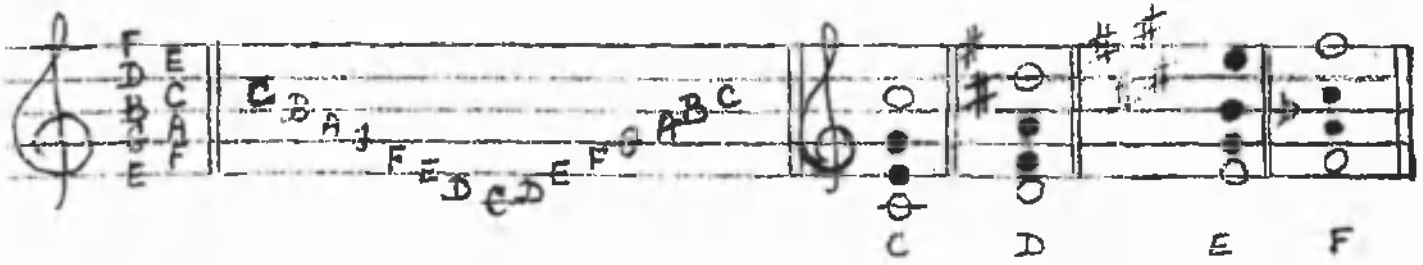
d 1m ·mr d 1f f m r 1m s s fe 1s - -
m 11 ·sf m 1r d t, m 1r d d t, 1d - -

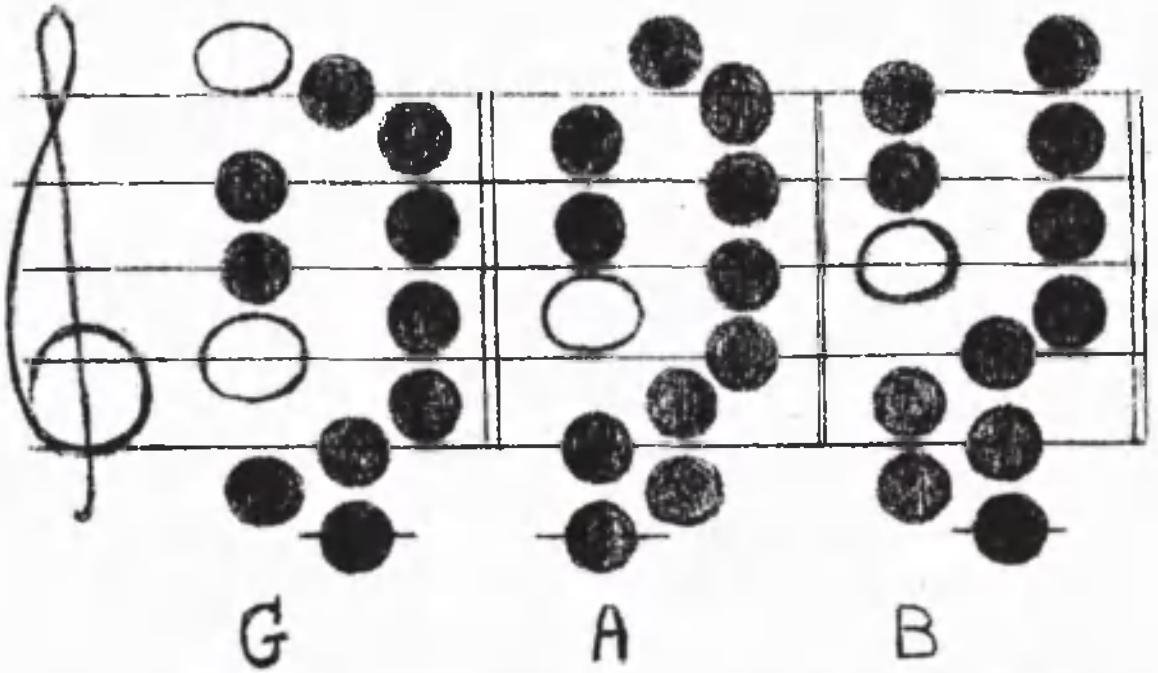
25 St. David (Key F)

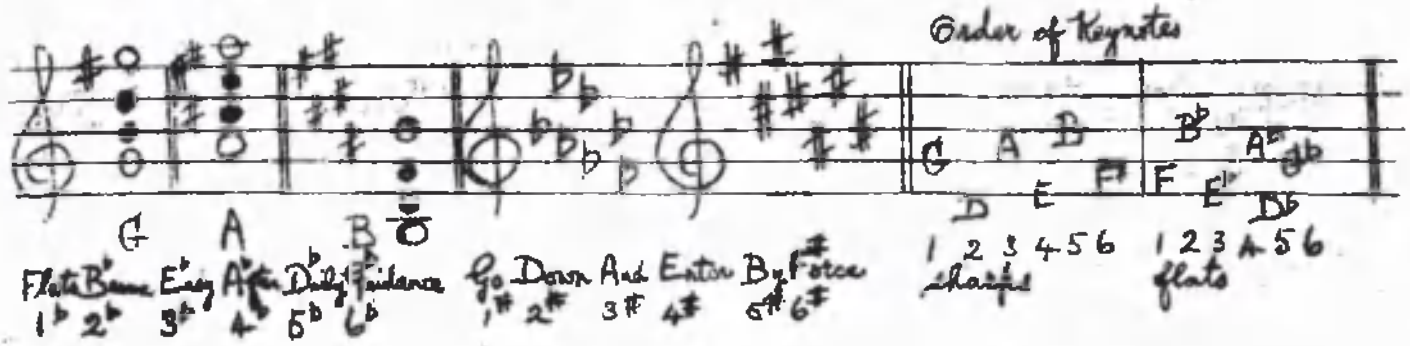
d 1s d' m s 1f m r d 1s d f 1 1s - -
s 11 m s d 1f m r s 1d m f r 1d - -

Each pupil received a set of these Staff Modulators. Once spelling tunes had been memorised, the pupils sol-fa'ed them while pointing the notes on these Modulators in various keys.

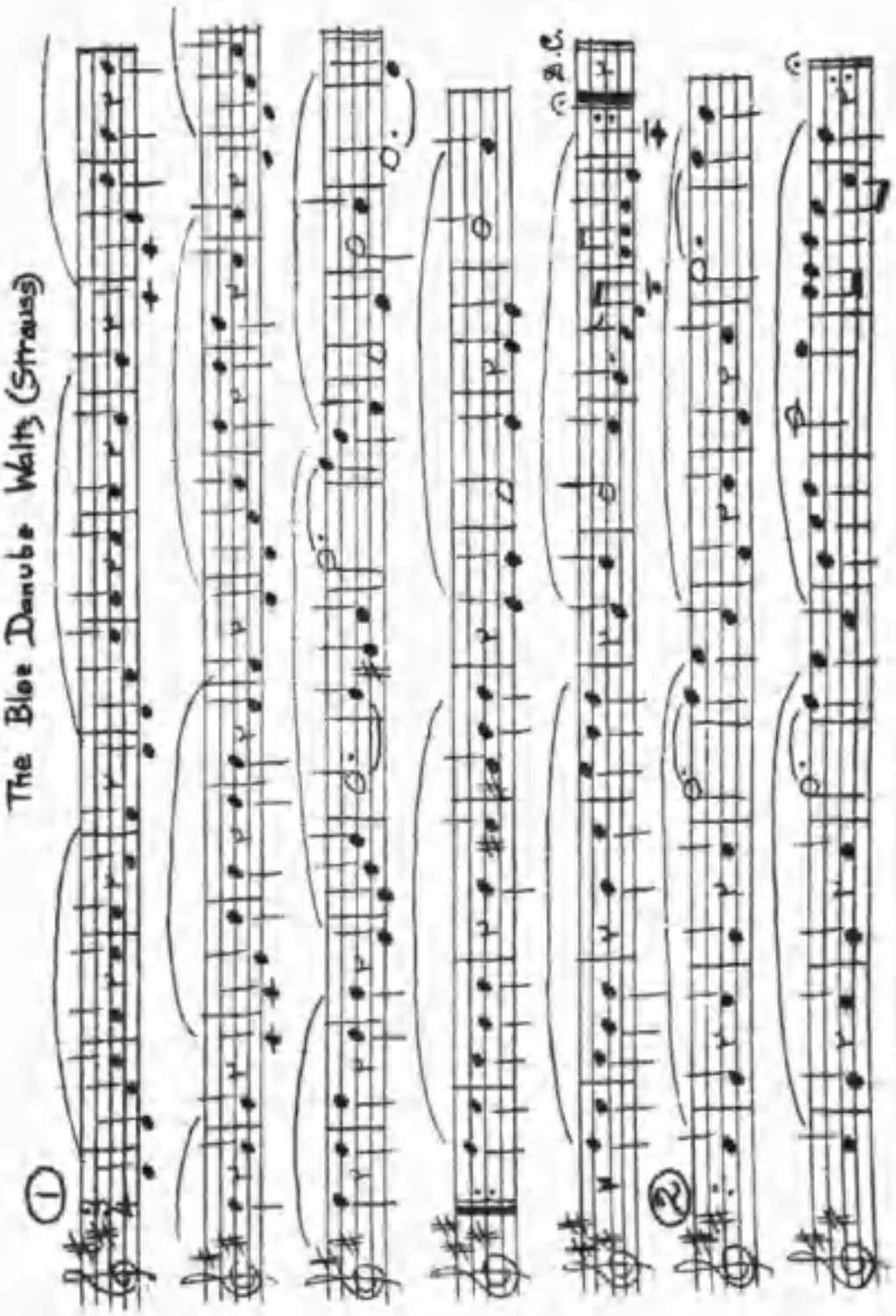


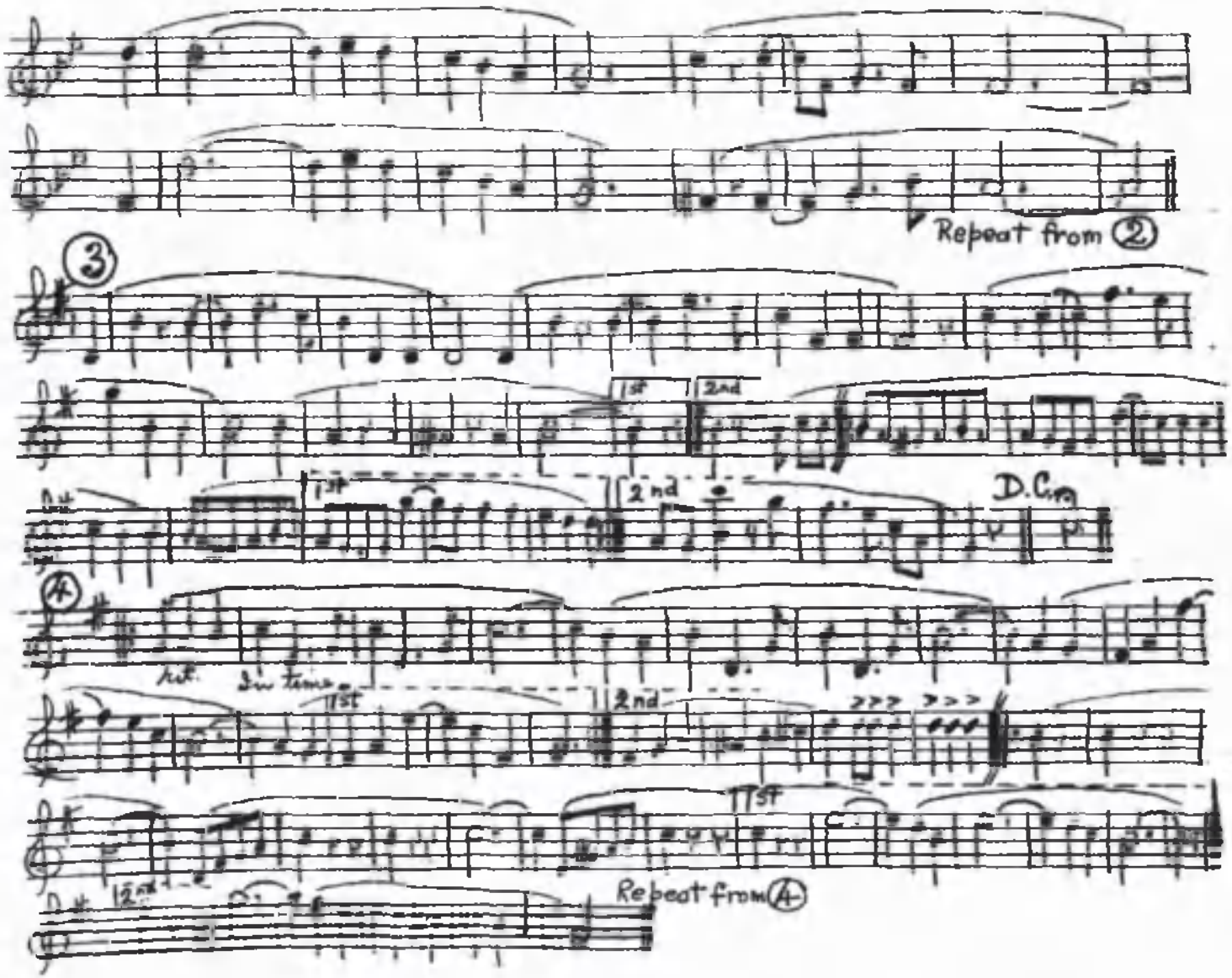


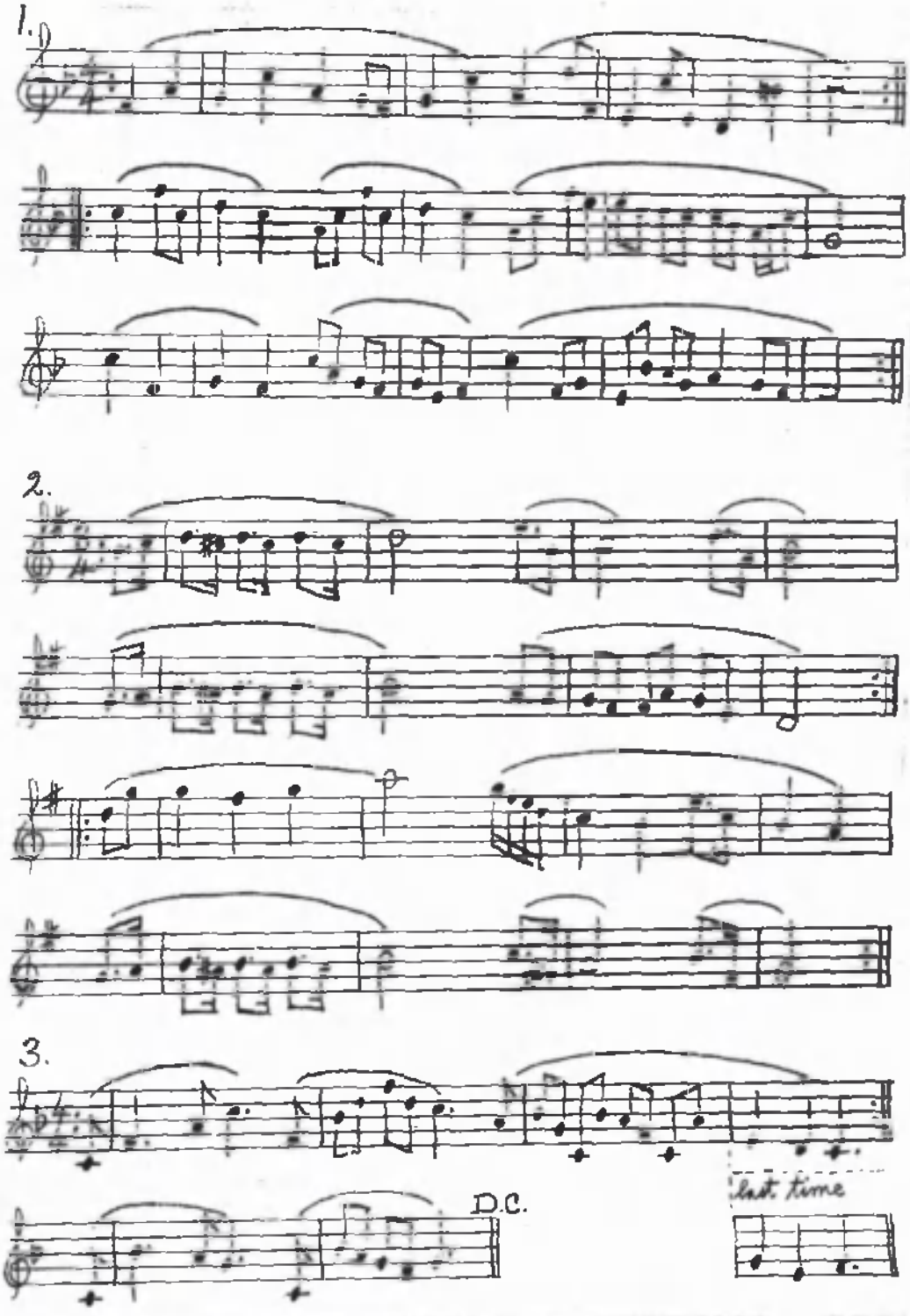

G
A
B

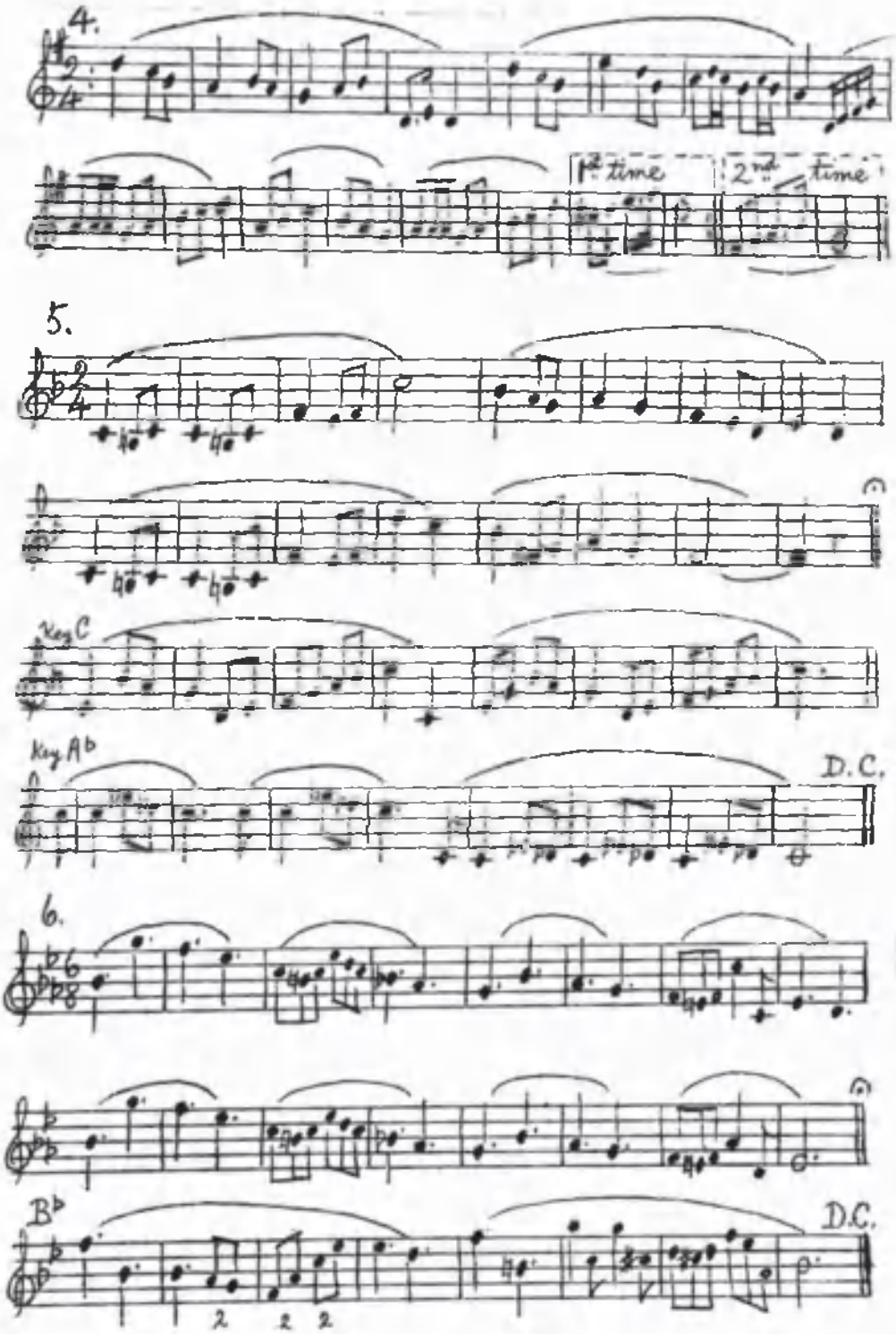

Order of Keynotes
G A B
Flats B♭ Beam E♭ Easy A♭ Fan D♭ Daily G♭ Guidance
1♭ 2♭ 3♭ 4♭ 5♭ 6♭
Go Down And Enter By Force
1# 2# 3# 4# 5# 6#
G A B F♯ D E
1 2 3 4 5 6
sharps
B♭ A♭ G♭ F E♭ D♭
1 2 3 4 5 6
flats

Favourite melodies were cyclostyled in staff notation, and given to the pupils after they could sol-fa them from memory. The pupils then followed the staff while they sol-faed the tunes.

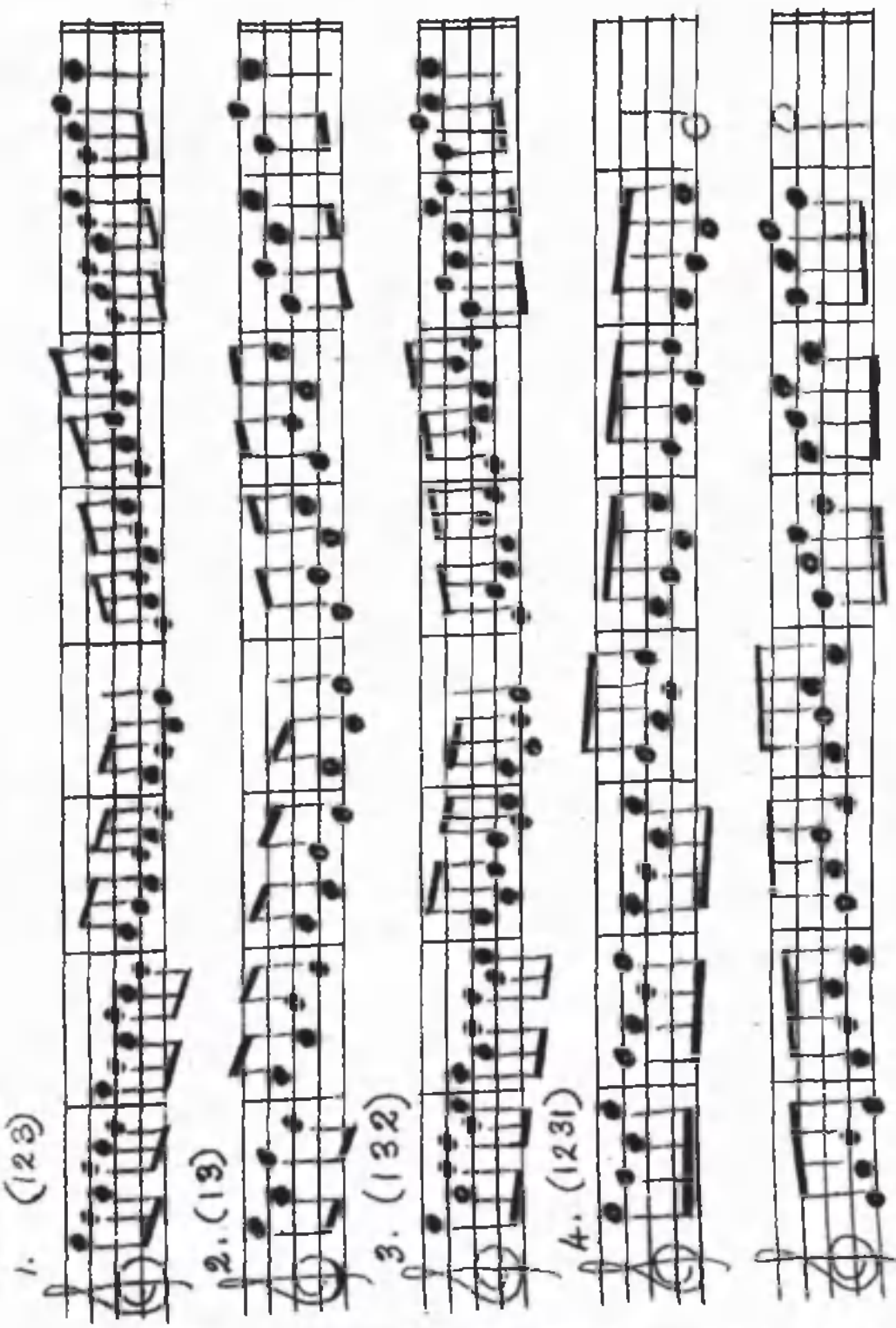


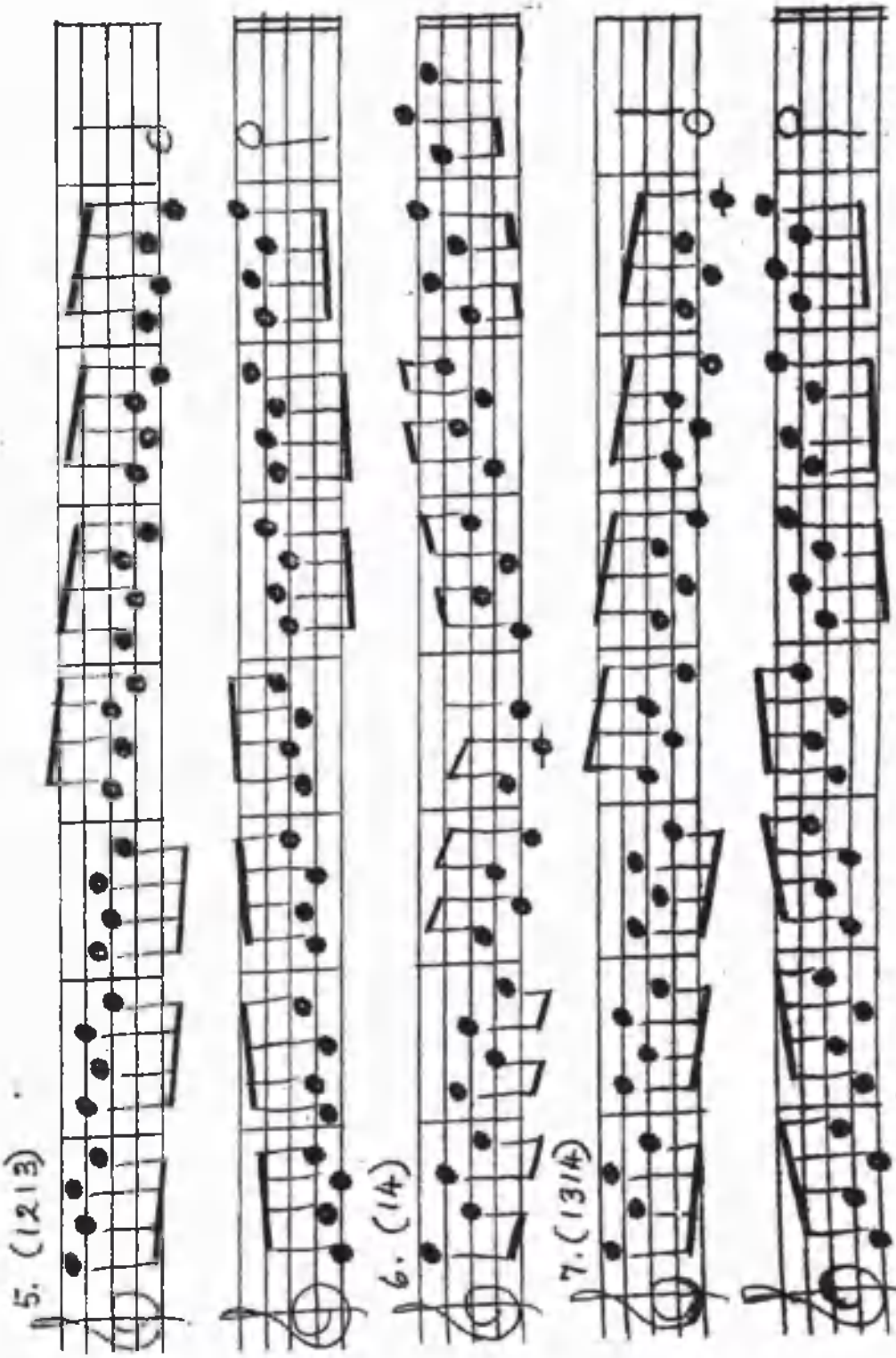

Repeat from ②
③
1st
2nd
D.C.
④
1st time
1st
2nd
Repeat from ④


1.
2.
3.
D.C.
last time


4.
1st time
2nd time
5.
key C
key Ab
D.C.
6.
B♭
D.C.

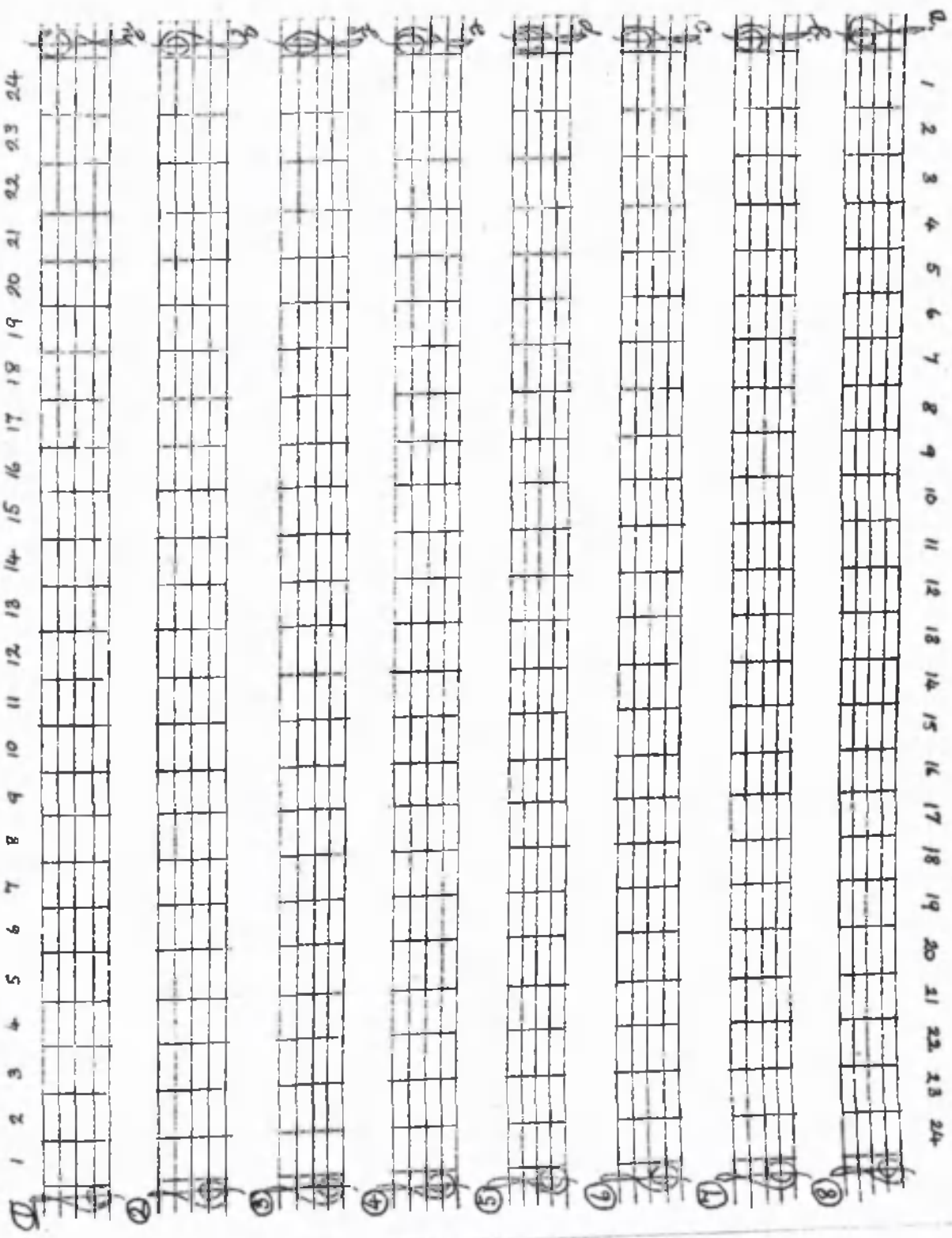
These sequences in staff notation were sol-faed in various keys, i.e. calling the first note s, f, m, r etc.




5. (1213)
6. (14)
7. (1314)

For Practice in Visual Staff Dictation

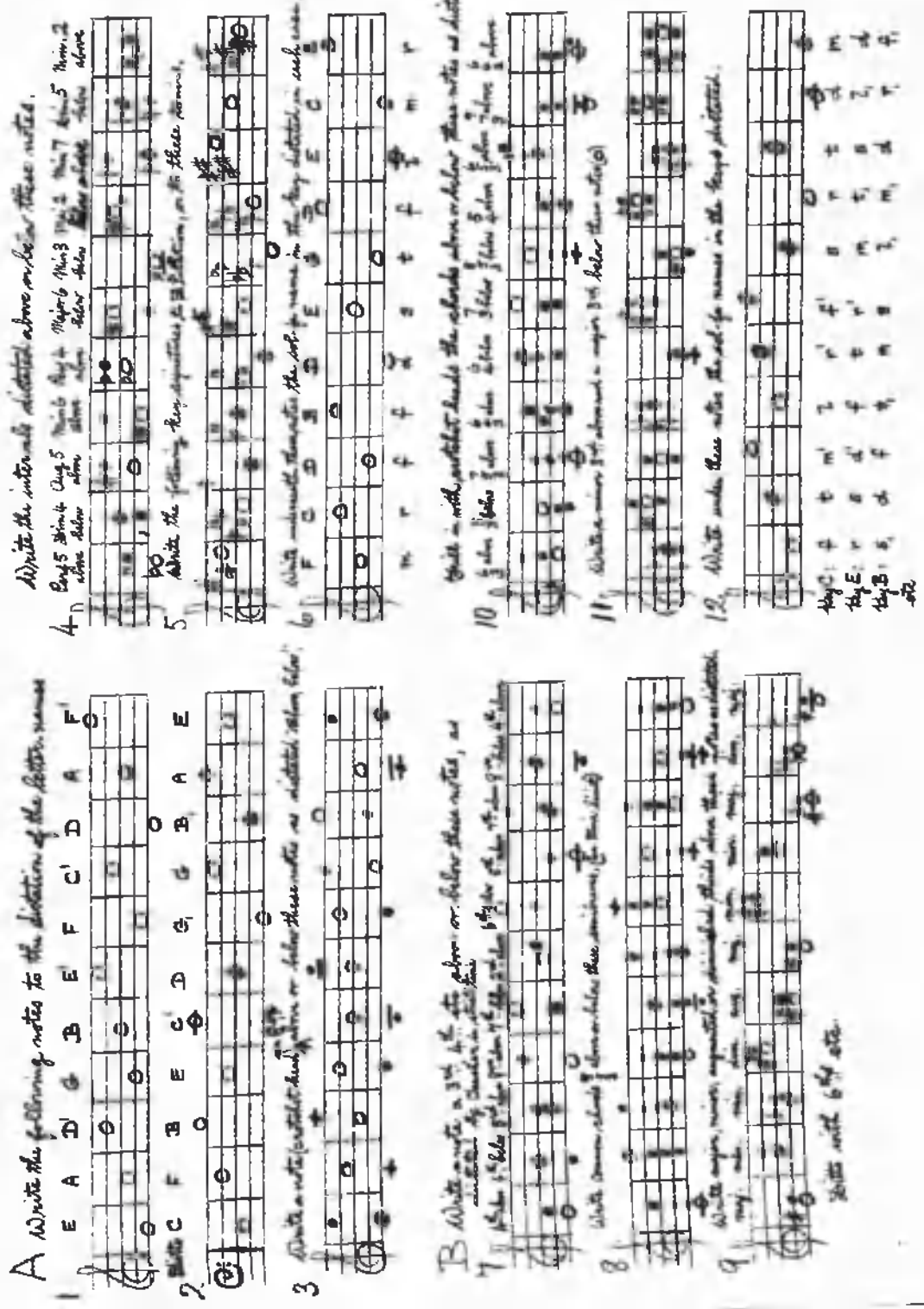
The sheet is so arranged that the whole 24 bars may be used at a stretch, or the sheet may be halved and only 12 bars used. With young pupils 12 bars are sufficient.



Various Uses to which Visual Staff Dictation may be put:

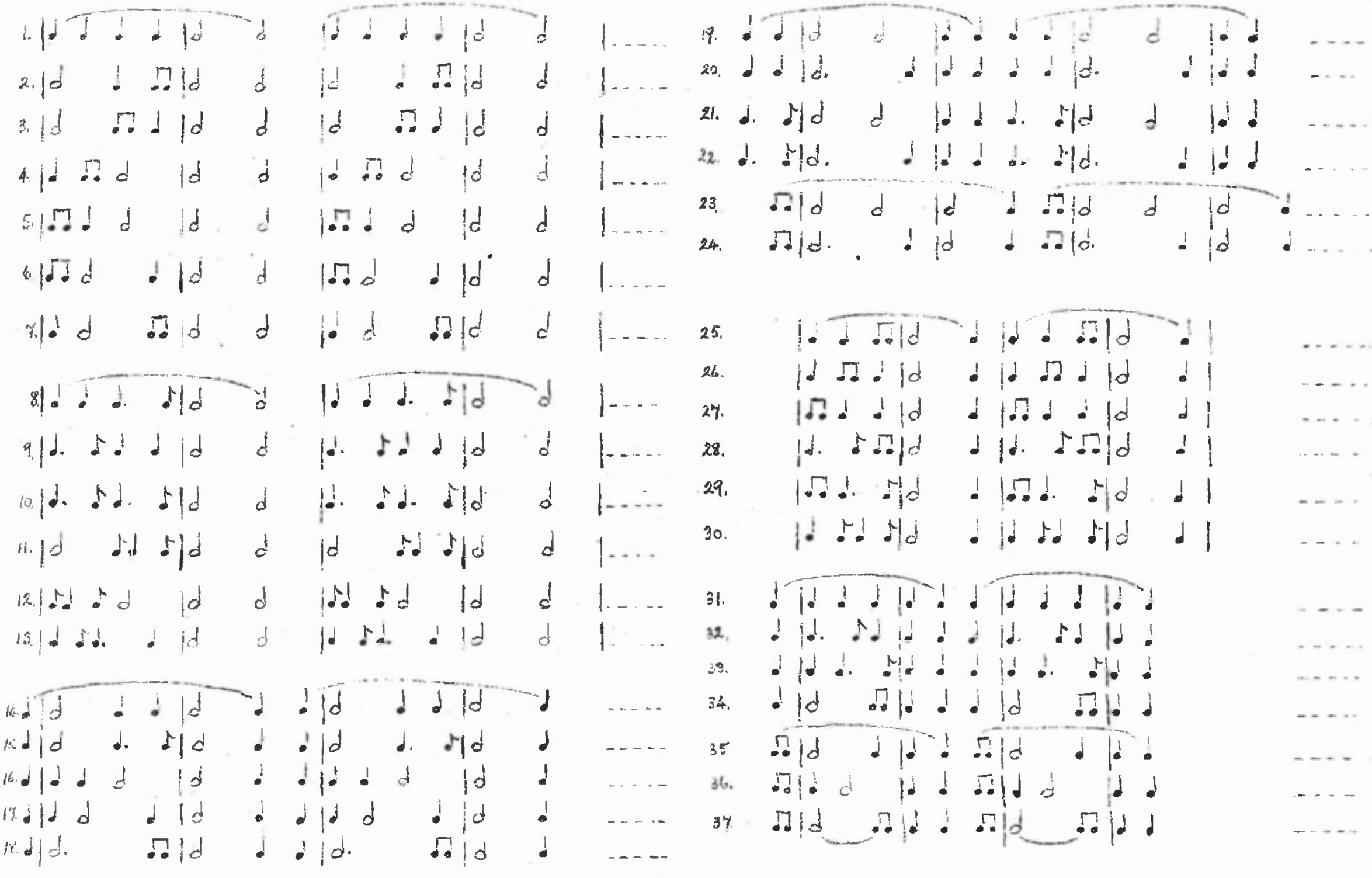
(a) for letter-name spelling in various clefs
(b) for key signature writing
(c) for translation from staff symbol into solfa name
(d) for octave recognition
(e) for interval recognition
(f) for chord recognition

the whole being done to dictation or within a set limit of time, so as to speed up the visual response.



Speech Rhythm as an aid in the training of children in rhythm reading.

All the rhythmic groups on this sheet were practised by the pupils to the words, "What do you remember?" The teacher and class would read down the page, reciting these words to the various speech rhythms indicated by the notation. The sheets were then used for recognition tests, the teacher selecting various speech rhythms, and the pupils marking 1, 2, 3 etc. opposite the rhythms used by the teacher. The words were always spoken twice to each rhythmic group. No pitch was used, but, of course, the voice was inflected as in ordinary speech. Bright pupils soon learned to spot any rhythm selected from the whole 37 examples. Tests could also be given with smaller groups, e.g. 1-7, 8-13 etc.



Speech Rhythm Practice Sheet and Test Sheet.

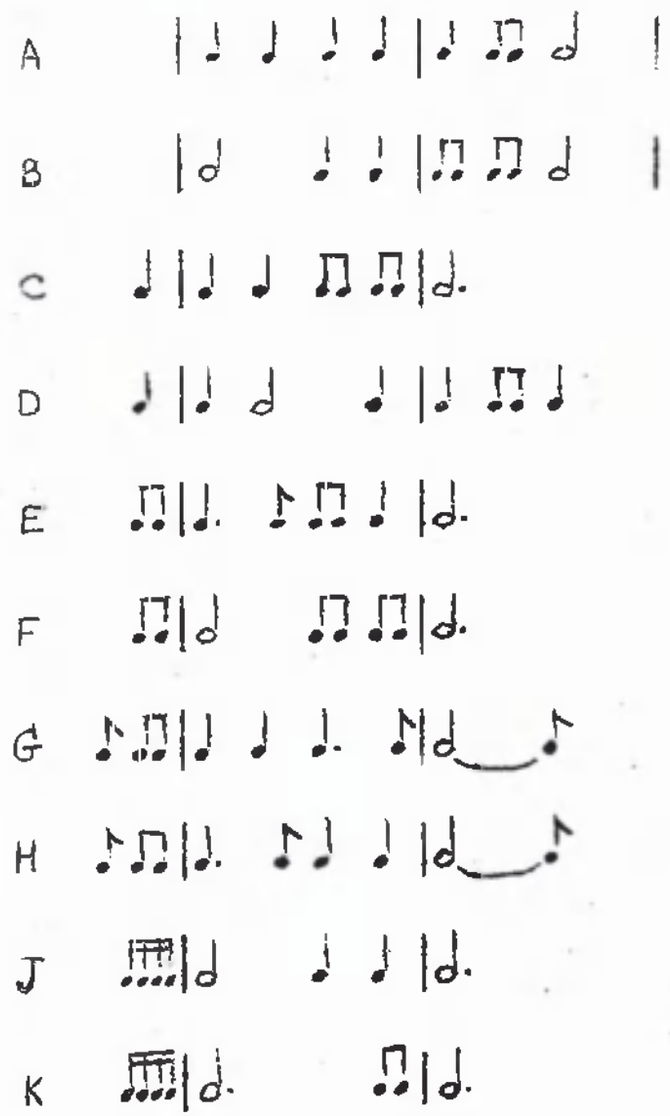
This sheet was used in the same manner as the previous one.

The words used here were: "Will you come with me to the school?"

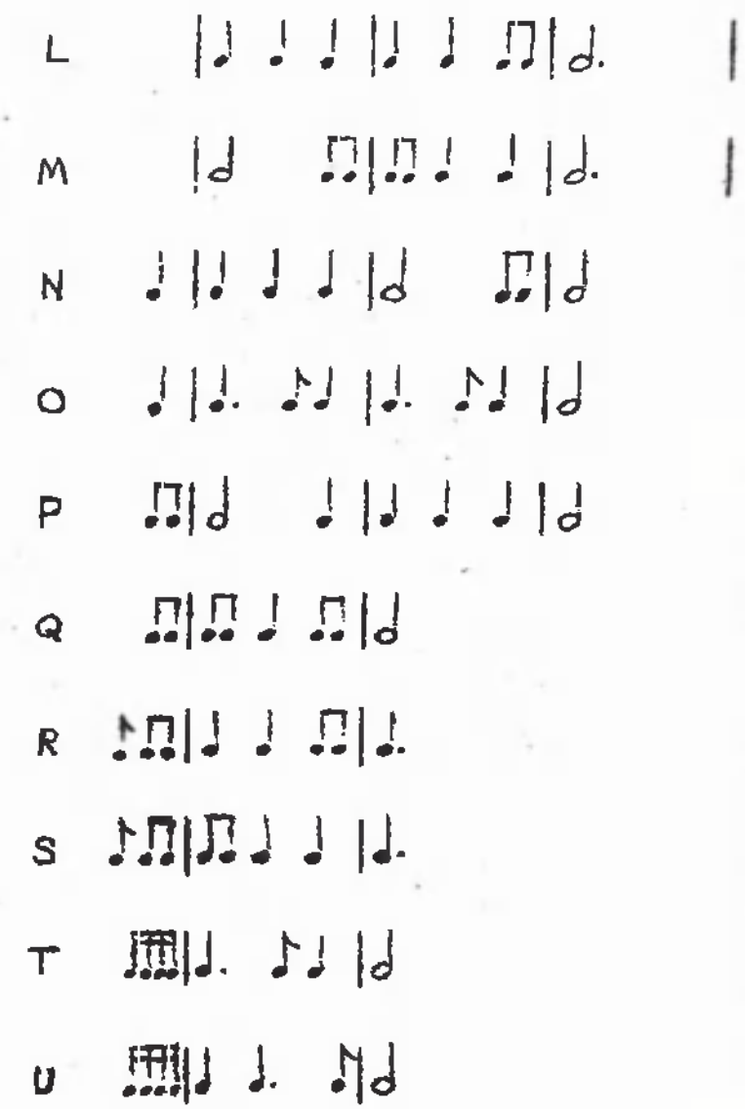
This training in Speech Rhythm Reading and Recognition encourages the analysis of rhythm on the part of the pupils, as the speech rhythm (without pitch) brings the problem home to their very door, as it were to speak. The blank columns I–VI are for use of answers when the sheet is used as a Recognition Test. But in such Recognition Tests, the children may also write down on a separate sheet the letters A,B,C etc. opposite the selected rhythms. Thus, in a selection of eight rhythms for "spotting", the correct answer might be: "SOUTHERN" — nine rhythms "RECOGNISE" etc. This makes for ease of correction.

Each rhythm is spoken twice to the words:

"Will you come with me to the school?"



I	II	III	IV	V	VI

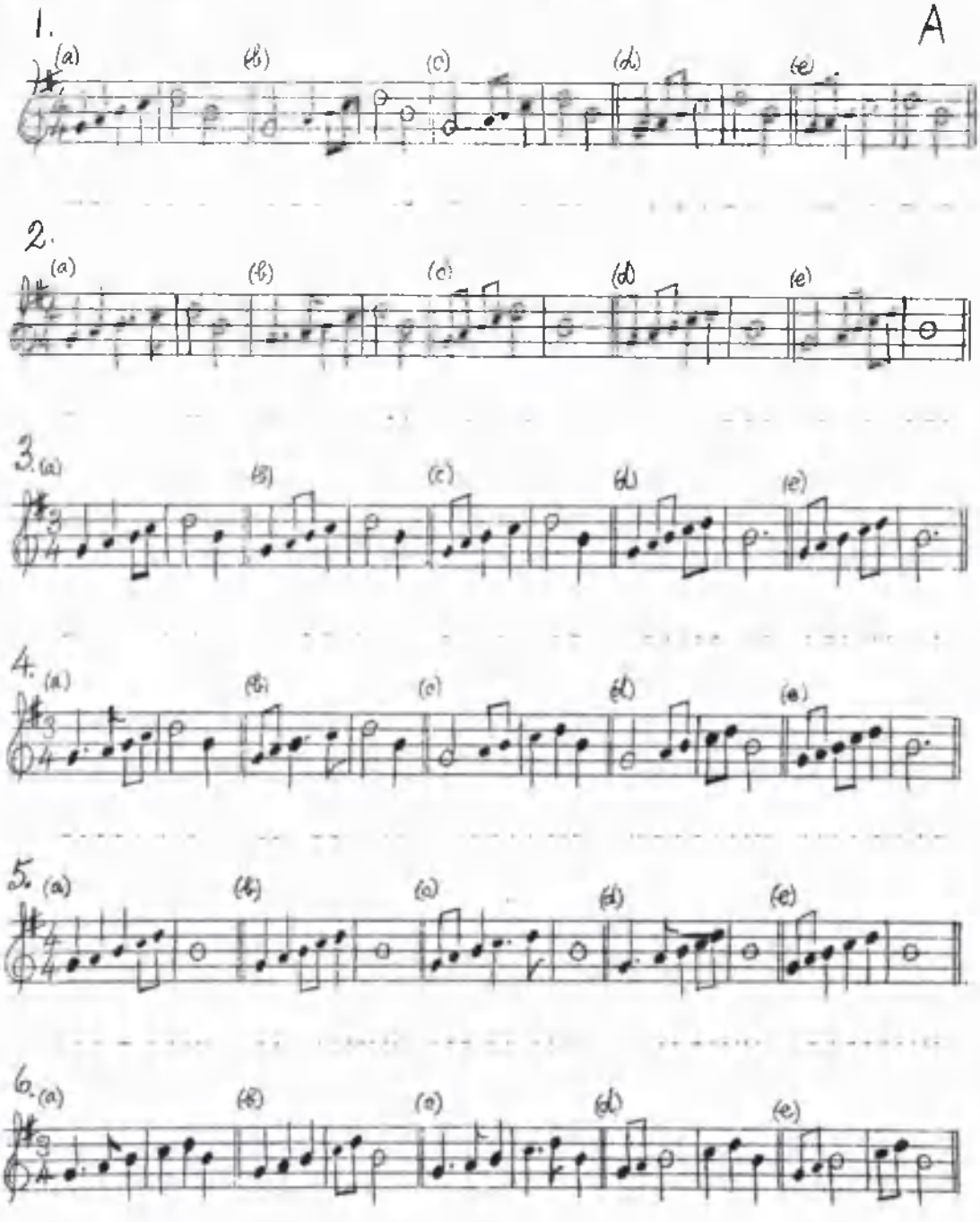


I	II	III	IV	V	VI

Rhythm Sheets for use in Rhythm Reading and Rhythm Recognition Tests.

The same six notes – d r m f s m – are used throughout on this page with different rhythms. These should be sung to pitch by the class. In Recognition Tests, selected examples from any line or from the whole page should be sung or played on the piano twice, the pupils entering the answers below, or indicating the answers on a separate sheet, thus: 1c, 2b, 3e, 4a etc.

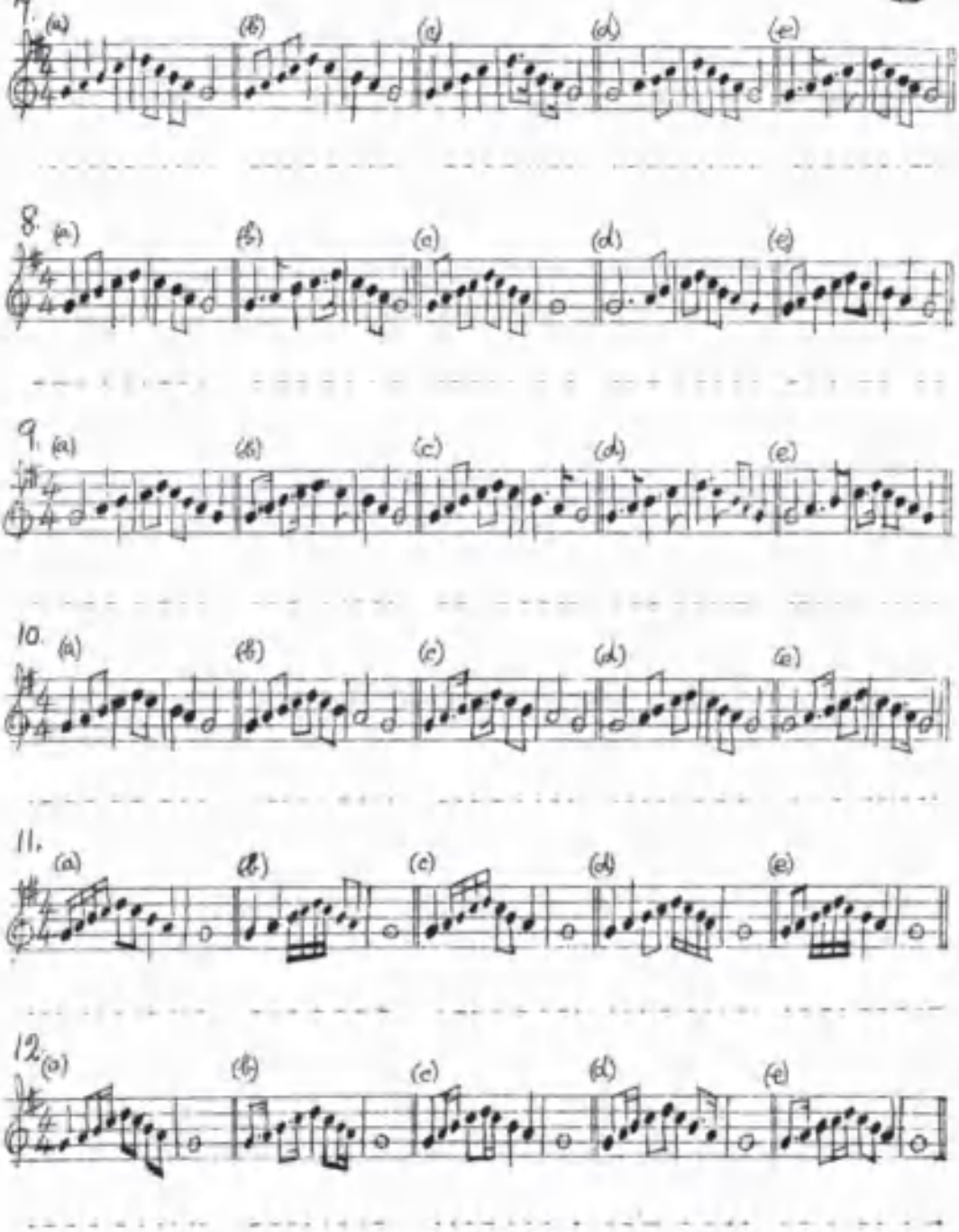
A



For Rhythm Reading Practice and Rhythm Recognition Tests

The sheet below forms the other half of that on the previous page. Here, however, the thirty rhythmic examples all contain the same notes, viz: d r m f s f m r d.

B



The first test below represents something which is probably novel in the testing of rhythm. Here correctness of response does not depend on knowledge of rhythm symbols at all, but depends solely on the power to analyse rhythm as represented in the speech rhythms of these names and sentences.

Rhythm Test

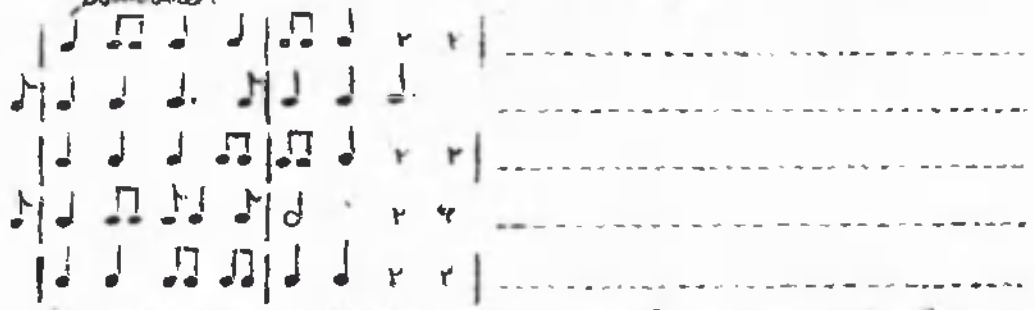
1. Read over these five names: (i) Sir Ebenezer Brown
   (ii) Timothy Anderson
   (iii) Dick Whittington, London
   (iv) Isabella Johnson
   (v) St. George's Place, Glasgow

   Now read the following, and after each one (a) (b) (c) etc., write the name from the above list which has the same rhythmic pattern.

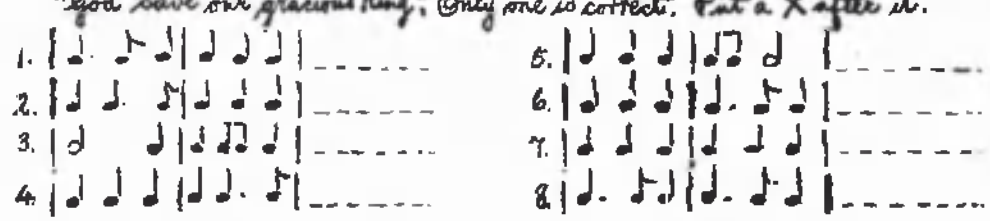
   (a) Whither are you going? .....
   (b) I won't be long, Willie. .....
   (c) You silly little fool. .....
   (d) What are you pondering? .....
   (e) March, April and August. .....

2. Read over these five names: Mac Tavish, the piper free Skye.
   Ramsay Macdonald, Lossiemouth.
   Doctor Williamson of Glasgow.
   Bobby Jones of America.
   Macdonald Smith, the Golfing Star.

   Now read over the following rhythmic figures and write opposite each the name from the above list which fits into the rhythmic structure.



3. The following are attempts to write the rhythm of the first two bars of "God save our gracious King". Only one is correct. Put a X after it.



Tests of Reading Ability

This battery of tests will reveal weaknesses in the three spelling techniques involved in music reading — visual, aural and rhythmic.

Name: (For Visual Staff Dictation Tests) Class: Age: Date:

sol. fa syllable into staff symbol.

1. 2. 3. 4. 5. 6.

(For sol. fa Eartests e.g. d m l f r s t.)

7. Sound into sf syllable 9. 11. 13.

8. 10. 12. 14.

Rhythm and Reading Test

(Pairing Rhythms Test) (This test measures capacity for rhythm apart from [illegible] of symbols)

1. Read over the following sentences:—
   ① Never you mind, you will soon be home.
   ② Hurry or we'll miss the last car home.
   ③ Apples, oranges wont you buy sir?
   ④ St. Andrew's Church of Scotland, Glasgow.
   ⑤ Come now child, you have got all you want.

   Now read over the following, and after each one (a) (b) (c) etc. write the number of the above sentences ① ② ③ etc. which has the same rhythmic pattern of accented and unaccented syllables.

   (a) Beecham's Pills, worth a guinea a box. ------
   (b) London, Midland and Scottish Railway. ------
   (c) Hullo, old chap, you're getting fatter. ------
   (d) Cooper and Company's famous teas. ------
   (e) Edinburgh University. ------

2. ("Speech Rhythm Symbol Test"; spoken twice to words; — "Wont you come with me?") (Pupils enter 1, 2, 3 etc. opposite the rhythm spoken)

   (a) (b) (c) (d) (e) (f) (g) (h)

3. (Same as previous test — to words spoken twice — "Come on with me or you'll be late") (Pupils enter 1, 2, 3 etc. opposite selected rhythms spoken by teacher.)

   (a) (b) (c) (d) (e) (f) (g)

4. Here are five names with (Pairing written Speech Rhythms Rhythm Symbols) numbers ① ② ③ etc.
   ① David Alexander ② Winifred and McIntosh ③ John William Paterson
   ④ James Archibald McNab
   ⑤ Archibald James McNab

   Now read the following rhythmic figures, and write after each the number ① ② ③ etc. of the name which fits the rhythmic structure.

   (a) (b) (c) (d) (e)

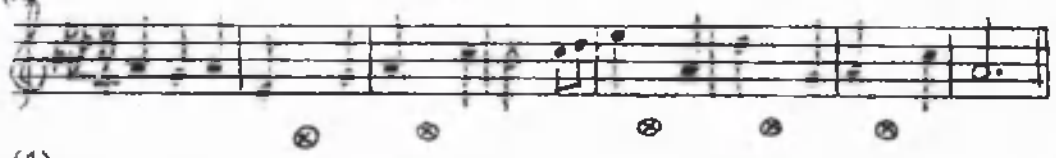
5. A (Beethoven) (Staff Reading Test: Teacher plays melody on piano, and stops on a note which pupils mark 1, 2, 3 etc.)

   B (Brahms)

Tests in Pitch and Rhythm

1. In the following melodies, at the points marked with ⊗, a note (♩) is missing. Listen while the teacher plays each melody, and put in the missing notes in their proper places.

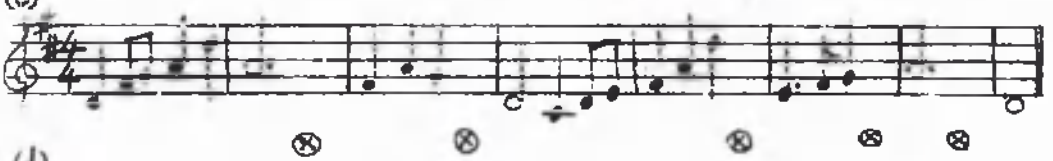
(a)



(b)



(c)

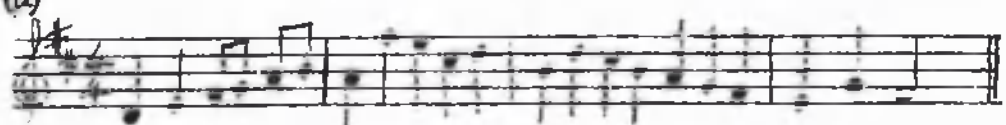


(d)



2. In the following melodies the time values of the notes in some of the bars are wrong. Listen to the melodies and correct these errors by adding the necessary dots and tails to the notes.

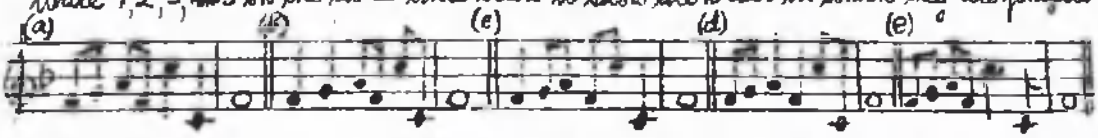
(a)



(b)



3. The following phrases (a)(b)(c)(d)(e) will be played in a different order. Write 1, 2, 3, 4 and 5 on the dotted lines below to show the order in which they are played.



_____ _____ _____ _____ _____

Rhythm Spelling Sheet

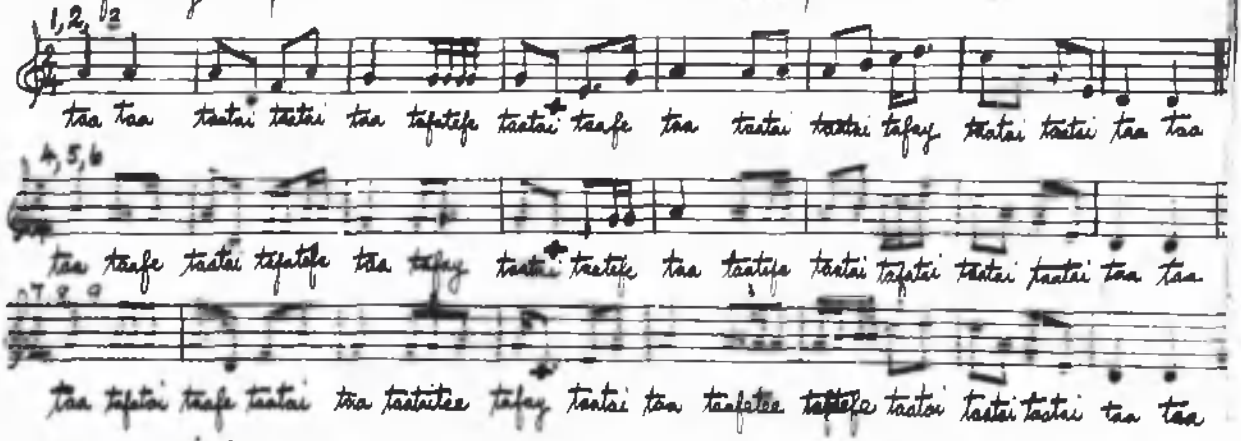
The Rhythm Spelling Sheet on the following page has some novel features. The whole series of 131 rhythmic patterns is marked off in groups of three. These three-group sections are intended to be taatai-ed and sung to the first three lines of "What shall we do with the drunken sailor?" — the fourth line of the tune |♫♫|♩ ♩| being taatai-ed to its own rhythm throughout, and thus affording a breathing space for the reader. (See example below)

The sheet may also be used along with this tune in various other ways. With beginners the three-group sections may be ignored, and any single line e.g. 1, 2, 3 or 4 etc, may be sung three times by teacher and pupils antiphonally if desired, all ending as usual with |♫♫|♩ ♩| on the fourth line.

Again, the three-group sections may be used with the tune, but the second bar may be ignored and |♫♫𝄽| substituted for it throughout, the pupils reading the first bar only.

At a Summer Music Course of the Tonic Sol-fa College of Music, where the writer has lectured for some years past, advanced students used every day to begin at No. 1 and continue to No. 131 without a break, to the metronomic rate of ♩ = 120.

The following example shows how this works out in practice.



And so on with 10 11 12,
13 14 15,
16 17 18, etc.

Rhythm Spelling Sheet

("What shall we do with the drunken sailor?")





Rhythm Names used above

THE SEQUENCE MODULATOR

1	2	3	4	5	6	7	8
d'	t	l	s	f	m	r	d
t	l	s	f	m	r	d	t_1
l	s	f	m	r	d	t_1	l_1
s	f	m	r	d	t_1	l_1	s_1
f	m	r	d	t_1	l_1	s_1	f_1
m	r	d	t_1	l_1	s_1	f_1	m_1
r	d	t_1	l_1	s_1	f_1	m_1	r_1
d	t_1	l_1	s_1	f_1	m_1	r_1	d_1
1	2	3	4	5	6	7	8

1	2	3	4	5	6	7	8
d'	r'	m'	f'	s'	l'	t'	d^2
t	d'	r'	m'	f'	s'	l'	t'
l	t	d'	r'	m'	f'	s'	l'
s	l	t	d'	r'	m'	f'	s'
f	s	l	t	d'	r'	m'	f'
m	f	s	l	t	d'	r'	m'
r	m	f	s	l	t	d'	r'
d	r	m	f	s	l	t	d'
1	2	3	4	5	6	7	8

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