

Reading Psalmodia

An introduction to modern Byzantine Notation.

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This Book
is dedicated, with great respect and
affection,
to
Protopsaltes Andreas Stylianou,
whose fine psalmody has,
for well over quarter of a century,
enriched the worship of the historic
Greek Orthodox Church
of the Annunciation,
Manchester.

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INTRODUCTION

This book offers a basic introduction to the notation in which the traditional chant of the Byzantine churches is written.

Many people automatically associate Orthodox worship with the rich choral traditions of music that developed in Russia and the Ukraine. Georgian, Serbian, Romanian and Bulgarian choirs also possess an extensive repertoire of choral liturgical music. Greek and Arabic Byzantine churches, however, have retained a very different style of monophonic chant, a tradition which also lives on, side by side with the Slav choral tradition in many churches in Romania and Bulgaria, and a closely related form of chant in Serbia. This music is known as *Psalmodia*: it has common roots with Latin plainchant and with the chant of the Syrian and Armenian churches. It originates in the ancient musical traditions, both Jewish and Pagan, of the Eastern Mediterranean.

When Christianity was established as the official religion of the Roman Empire the Church acquired new and splendid buildings for worship. The rites and ceremonies of Imperial Christianity took on the solemnity and the grandeur of court ritual. A rich tradition of hymnography developed, poets, composers and singers bringing their skills to the service of the Church.

Side by side with relatively simple styles of music used for scriptural readings and the chanting of the psalms, more elaborate melodies were composed for the church's new poetry and for the liturgical texts. In the main cathedrals and churches, the **Psaltēs**, the ordained singer who played an important role in the services was expected to attain a high level of musical expertise. As the sacred chant developed through the Medieval period, new forms of notation were created to record it. The notation developed over the centuries until it became a complex system of signs capable of expressing fine nuances of melodic movement, intonation and expression.

The fall of Constantinople to the Ottoman armies in 1453 paradoxically brought new opportunities for the Church's musicians; their musical skills and artistry were greatly appreciated by the Ottoman Sultans and their nobility, and several of the famous Psaltai found lucrative part-time employment as court musicians. Many became experts in the "Arabo-Persian" music of the Ottoman court, some learning the Arabo-Persian music before studying Psalmodia. In the eighteenth century Peter Lampadarios, whose compositions shaped the entire psaltic repertoire in the modern period, was an expert in Islamic music and taught the musicians of the dervish tekkes of Constantinople. Konstantinos Protopsaltēs in the nineteenth century was the source for a small but useful and informative manual on the modes of classical Ottoman music, or, as the book calls it "exoterike mousike".

Not surprisingly, during the centuries of Ottoman rule, the style and tonality of Psalmodia, always a living, developing musical tradition, took on a degree of Oriental colouring.

Similarly, in the eighteenth and nineteenth centuries the more elaborate settings of some psaltic composers were influenced by the melodies of the Italian opera.

The notation system in which Byzantine chant is recorded derives ultimately from the accents added to classical Greek texts by Alexandrian grammarians and rhetors, and then adapted for use to aid the musical declamation of scriptural texts. Eventually, the notation became complicated in the extreme, signs indicating the principal intervals of the melody being accompanied by a wealth of Great Hypostases, usually written in red ink, determining in minute detail the precise execution of the melody. In the modern period scholars have work hard to decipher the mediaeval musical manuscripts. The meaning of the signs for intervals seem reasonably solidly established. There remains, however, considerable disagreement as to the interpretation of other signs.

Facing the complex and difficult notation they inherited from their mediaeval predecessors, and an emerging gap between the musical texts used by expert psaltai and the traditional liturgical melodies handed down by ear, several musicians attempted to reform the notation to produce something simpler and more intuitive. Indeed, there is evidence that there had already emerged ways of writing a rapid "short-hand" version of the signs which could even be used to note down a melody as it was being sung. A particularly successful simplification was designed by Peter Lampadarios [+1777], but this was eclipsed by the great **Reform of the Three Teachers**, Houmouzios, Grigorios and Chrysanthos, who designed a simpler yet more analytic notation, and transcribed into it a colossal number of texts from the psaltic repertoire. The new notation indicates the precise duration of notes, something lacking in the old notation. The Three Teachers began their Reform about 1814 and the new notation was soon in wide use. Interestingly, the Protopsaltes (Archcantor) of the Patriarchal church, Konstantinos, disliked their new system, and continued to use the old with the right-hand choir, while his colleague, the Lampadarios, and the left-hand choir were using the new. This brief text is an introduction to the nature of the Reformed Notation and the chant written in it.

1. NOTES AND SCALES

Byzantine chant (*Psalmodia*) makes use of a variety of different modes, and in order to sing the chant it is necessary to know the different scales proper to each mode, and the other characteristic features of the modes.

The modes of Byzantine chant are organised into **Eight Tones** or **Echoi**. Each echos encompasses a cluster of related modes. (*Other modes also exist which are produced by combining the typical modes of different tones. Some of these are of considerable musical interest and importance, but none of them is used more than occasionally in Psalmodia.*)

A psaltic mode is not simply a scale. Indeed, different modes sometimes use the same scale. Each mode uses both a specific scale and a set of typical melodic formulae, or melodic loci; as the formulae typical of a particular mode become familiar, the musical "logic" of the mode becomes intelligible.

In order to be able to identify and discuss the notes of the chant, we need a way of identifying them. Syllables are used to name each note, just as the syllables "doh" "re" "mi" are often used to name the successive notes of the scale in European music. The syllables used in Byzantine chant are as follows:

Ni Pa Vu Ga Di Ke Zo Ni

If we are singing the diatonic scale, they correspond to

Do Re Mi Fa So La Si Do

[Ni Pa Vu Ga Di Ke Zo Ni']

Church music is normally written within a compass of two octaves from low di (So) to the high Di' (So) fifteen notes above. The Middle of this, from Ni to Ni' is the most commonly used part of the range. In transcribing the chant, we shall read the lower Ni as corresponding to the note C - the Middle C of the piano for women's voices, the C an octave lower for men's. *(This is slightly sharper than the tuning laid down by the Patriarchal authorities in 1881 [Ni = 512], but is convenient for purposes of transcription. In any case, the precise pitch laid down by the Patriarchal authorities had little justification beyond the general late nineteenth century obsession with the exact mathematical analysis of musical pitches and intervals.)*

If, then, we sing an ascending diatonic scale starting from C, the psaltic syllables will correspond to the notes of the scale as follows:

Ni Pa Vu Ga Di Ke Zo Ni
C D E F G A B C.

2. THE TYPES of SCALE:

Psalmody uses four main types of scale, **Diatonic, Hard Chromatic, Soft Chromatic** and **Enharmonic**.

The way we hear the scales used in modern European music has been greatly affected by the "Even Temperament" system of instrumental tuning, so that we hear the white note scale C to C on the piano as a diatonic major scale. A well-trained psalter hears that scale as something subtly different, as approximating to the Enharmonic scale on Ni. The Enharmonic scales of Psalmody are sung to approximately the same tuning as the corresponding piano scale: i.e. the steps of the scale makes use of only two kinds of interval, Enharmonic Tones and Enharmonic semitones, the tones being exactly double the size of Enharmonic Semitones.

The octave is divided by psaltic theorists into 72 micro-steps - for simplicity let us call them "steplets." The steps of the Enharmonic scale can be defined very easily in terms of the number of steplets to each step. Let us take the **Enharmonic scale** on F (Ga) as an example:

F	G	A	B ^b	C	D	E	F
12	12	6	12	12	12	6	
Ga	Di	Ke	Zo	Ni	Pa	Vu	Ga'

Here each of the steps of the scale contains precisely the same number of steplets that the corresponding interval between the notes of the scale as it is played on the piano would contain. The sequence Di Ke Zo Ni', that is to say, is produced by singing a sequence of notes starting from Di such that the successive notes are respectively 12, 6 and 12 steplets above the note preceding. Playing the successive notes G A B^b C on the piano produces an identical sequence of notes starting on G and rising by 12, 6 and 12 steplets successively.

The natural **Diatonic scale** is different. It contains three different sizes of interval, not two. Here is the interpretation of the diatonic scale on F (Ga) generally accepted by modern psaltic theorists.

F		G		A	B ^b		C		D		E	F		
	12		10		8		12		12		10		8	
Ga		Di		Ke	Zo		Ni		Pa		Vu	Ga'		

Here we have **large tones** of 12 steplets, identical in size with the Enharmonic tones, but accompanied by **lesser tones** of 10 steplets and **large semitones** of 8 steplets. It is important, however, to remember this is a *theoretical* analysis of the difference between the Diatonic and the Enharmonic types of scale: in practise the intervals singers actually sing may not correspond exactly to either pattern: some singers make less distinction amongst the diatonic intervals than the analysis would suggest, some actually make no distinction between the sung versions of the Diatonic and the Enharmonic type.

The **Hard Chromatic Scale** is most familiar in Psalmodia as the scale of a mode used in both the Second Tone and the Second Plagal Tone which has Pa (D) as its basic note.

D	E ^b		F#	G	A	B ^b		C#	D					
	6		20		4		12		6		20		4	
Pa	Vu		Ga	Di	Ke	Zo		Ni'	Pa'					

The **Soft Chromatic Scale** is used mainly in the principal mode of the Second Tone, but also provides the scale of an important mode in Tone Four and the second principal mode of Tone Plagal Two.

C	D ^b		E	F	G	A ^b		B	C					
	8		14		8		12		8		14		8	
Ni	Pa		Vu	Ga	Di	Ke		Zo	Ni'					

This scale is much easier to sing than might at first sight appear. One thing, however, should be noted: the flat A/Ke of the Soft Chromatic scale is a large (diatonic) semitone above G/Di, it is definitely not an enharmonic semitone above. It is acceptable to sing the Di less than 14 steplets flatter than B; it is not acceptable to sing it more than 14 steplets flatter than B. Attempting to play melodies in this mode on the piano produces

something quite wrong-sounding: the flattened Pa and the flattened Di sound completely out of tune.

3.THE THREE SYSTEMS:

In addition to the octave-based scales described above, modern Byzantine music also uses two other kinds of scale. **Tetrachordal** and **Pentachordal**.

The Octave System.

In the most used system, the eighth note of the ascending scale is also the fundamental note of the next octave of the scale. The note an octave above C is also a C, the octave above a D is also a D, so that this system has firm roots in the natural structure of musical scales.

The Pentachordal & Tetrachordal Systems.

It requires very little modification to make a repeated Pentachordal or Tetrachordal pattern of notes on a scale. Consider the Pentachord

[C D E F G]

if we read this as

[Ni Pa Vu Ga Di]

then, if we transform the note Di into the Ni of a new ascending scale of five notes we produce the following sequence:

Ni Pa Vu Ga {Di =Ni} Pa Vu Ga Di

and the same process can be repeated indefinitely many times:

Ni Pa Vu Ga {Di=Ni'} Pa' Vu' Ga' {Di'=Ni''} Pa'' Vu'' Ga''
 [C D E F G A B C D E F# G]

It is easy to see from the example just constructed, that the first eleven notes of a scale based on Ni using the Octave System are the same as the first eleven notes of a scale based on Ni using the Pentachordal System. The twelfth note of the Pentachordal System scale, however, differs from the equivalent note of the Octave System scale. And from this point on, the scales progressively diverge. The next eight notes of the two scales, for example, are as follows:

8ve Scale:	A	B	C	D	E	F	G	A	B	C
	Ke	Zo	Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni
5al Scale:	A	B	C#	D	E	F#	G#	A	B	C#
	Ni	Pa	Vu	Ga	Di/Ni	Pa	Vu	Ga	Di/Ni	Pa

The **Tetrachordal System** provides a further series of scales. In this system the fourth note of a scale becomes the foundation note of a new Tetrachordal scale, the fourth note

of which in turn becomes the foundation note of the next level. Here are the first twelve notes of a Tetrachord System scale based on C compared with the parallel notes of the Octave System and Pentachordal System scales:

8ve Scale: C D E F G A B C D E F G
 5al Scale: C D E F G A B C D E F# G
 4al Scale: C D E F G A B^b C D E^B F G

The construction pattern of a Tetrachord-System scale is

Ni Pa Vu {Ga=Ni'} Pa' Vu' {Ga'=Ni'} Pa'' Vu'' ...

The pattern of a scale based on the Tetrachordal System diverges more rapidly from the scale of the Octave System than does one based on the Pentachordal System.

Confusingly, the Byzantine musical texts also refer to the Pentachordal System as "Tetrachordia," the Tetrachordal System as "Triphonia" and the Octave System as "Diapason." Even more confusingly, the musical texts normally use the syllables Ni Pa Vu Ga Di Ke Zo Ni' Pa' Vu' &c. to name the successive notes of the Tetrachordal and Pentachordal scales, although this is both inappropriate and thoroughly misleading.

4. THE INTERVAL SIGNS

European music uses signs which tell the musician which note to sing or play. Byzantine notation is quite different. Melodies are written not as a sequence of notes, but as a **sequence of intervals**, and the fundamental set of signs it uses are interval signs. They are known as the "**signs of quantity**" since they tell us how far to move from one note to the next. The exact interval the sign indicates will depend on the note before the sign and on the specific mode in which we are singing. So, for example, a downward step of a second from Di in the first echos will take us a tone lower to Ga, but a descent of one note from Di in the main mode of the plagal second echos will take us only a fraction of a tone to the very sharp Ga used in the hard chromatic scale.

Ten basic signs are used:

a) For upward movement:

Oligon	—	Step
Petasti	∪	Flutter
Kentimata	“	Doublestitch
Kentima	∖	Stitch
Psili	∫	Leap

b) For downward movement:

Apostrophos	↘	Apostrophe
Elaphron	↪	Light
Yporrhoi	,	Cascade
Hamili	↵	Low

c) For no movement:

Ison	—	Level
------	---	-------

d) Combined signs for larger intervals:

Seventh	up	↗	down	↘
Octave	up	↖	down	↙
Ninth	up	↕	down	↔

Combinations are created in the same way for still larger intervals, though in Psalmodia these are very rare.

The Execution of Interval Signs

Besides indicating the interval the voice is to move, the Interval Signs also indicate the manner in which the note is to be sung:

Unless otherwise indicated (eg by a time-sign) each note is one rhythmic beat in length. [The Cascade is a notable exception: the Yporrhoi instructs us to sing **two** successive notes, each a second lower than the preceding note. Each note of the Cascade is a single rhythmic beat in length.]

The Step [—], the Flutter [↪] and the Double Stitch [↕] all indicate a rise of a second.

The Stitch [↖] indicates a rise of a third when written below or after a Step [↖ —], but if written above the Step or the Flutter [↖ ↪] combines with that note to indicate a rise of a fourth.

The Leap [↗] of itself indicates a rise of a fourth, but is only found in combination.

Written above the middle or end of a Step or a Flutter, it combines to indicate a rise of a fifth, written above the beginning of a Step or Flutter, a rise of a sixth.

The Apostrophe [↘] indicates a fall of a second.

The Light [↪] indicates a fall of a third.

The Cascade [,] is the equivalent of two apostrophes and indicates two successive notes, each a second below the preceding note.

Larger intervals are indicated by combinations of signs.

The Step, the Apostrophe and the Light are sung without any particular emphasis. They are sung naturally, moderately.

The Flutter is sung in a more lively manner. It begins on the note it indicates, rises a little, and returns with a sort of fluttering effect. If the Flutter is lengthened to two beats, the decoration occurs during the latter part of the first beat.

The Double Stitch is sung softly and linked with the preceding and succeeding notes with no break. It is always sung to the same syllable as the note which precedes it.

The Cascade is sung softly, smoothly and linked with the preceding and succeeding notes with no break.

The Stitch and the Leap take on the characteristic of the sign which supports them.

The combination Level/Step [≡] (*which also indicates no movement*) is more accentuated than would be the Level by itself. This combination is always followed by a level.

In the paradoxical combined sign Apostrophe-Light, [˘] the Apostrophe is sung softly, the Light normally. The execution of this combination requires considerable care; apart from the effect the elements of the combined sign have on each other, they also affect the preceding sign in such a way that the apostrophe takes half a beat from the preceding sign and itself is sung to a half beat. In this combination, the Light indicates a downward movement of a second not a third.

The execution of most other combined signs is fairly obvious.

5. TIME SIGNS

In addition to the interval signs which determine the pitch of the note to be sung, Byzantine notation makes use of a number of signs which affect the duration of notes and combinations of notes.

Klasma or Roll: the sign ˘ is used above or below an interval sign [˘ ˘ ˘ ˘] to indicate a doubling in the length of the note sung. When the Roll sits below a Flutter [˘], the lengthened note is sung with a slight tremolo or trill at the end of the first beat, the voice touching the note a second above.

Apli, (dot) a dot placed beneath a note, adds another beat to its length without any other ornamentation.

More than one dot can be used; each adds another beat, so that the total duration of the note is always one more than the number of added dots.

Gorgon, r sits above or below a sign and indicates that the note preceding the one on which gorgon sits is to be reduced by $1/2$ of a beat and the note over which gorgon sits also reduced by $1/2$ of a beat.

If the gorgon sits on the first note of a piece or on a sign following a pause, then only the note on which it sits is reduced by $1/2$ of a beat. Other Time Signs described below are treated analogously.

Above the Cascade, Gorgon is read as written over the first of its two notes.

Dotted Gorgon exists in two forms:

Left-dotted Gorgon r reduces the note before the one on which it sits by $1/4$ of a beat and the note on which it sits by $3/4$ of a beat.

Right-dotted Gorgon r reduces the note before it by $3/4$ of a beat, and the note on which it sits by $1/4$ of a beat.

Double Gorgon r^{r} sits above the second of a group of three notes: it reduces the note before the one on which it sits by $2/3$ of a beat, the note on which it sits by $2/3$ of a beat and the note after it by $2/3$ of a beat. It produces the rhythmical figure known in European music as a triplet.

Dotted Double Gorgon exists in three forms:

Left-Dotted Double Gorgon r^{r} sits on the second of a group of three notes; it reduces the first by $1/2$ of a beat, and the second and the third by $3/4$ of a beat.

Middle-Dotted Double Gorgon r^{r} sits on the second of a group of three notes; it reduces the first by $3/4$ of a beat, the second by $1/2$ of a beat and the third by $3/4$ of a beat.

Right-Dotted Double Gorgon r^{r} sits on the second of a group of three notes; it reduces the first and the second of the group by $3/4$ of a beat and the third by $1/2$ of a beat.

Triple Gorgon $\text{r}^{\text{r}^{\text{r}}}$ sits on the second of a group of four notes: it reduces every note in the group by $3/4$ of a beat.

[Four varieties of Dotted triple Gorgon exist, as do Quadruple, Quintuple &c. Gorgons. These exotic creatures are very rare in church music, and when they do occur their interpretation is usually as obvious as their execution is regularly inaccurate.]

Argon r appears only in combination with Double-stitch+Step; it acts on the Double-Stitch as a gorgon and on the Step as an apli.

Double Argon r^{r} is also found only on Double-Stitch+Step; it affects the Kentimata as a gorgon would and trebles the length of the Step.

Triple Argon is also written only above Double-Stitch+Step, and affects the Double-Stitch as a gorgon would and quadruples the Step's length.

The Pause √ indicates a silence of one beat's duration. Additional dots can be added to a Pause, each dot adding a single beat to the duration of the pause.

N.B. the Pause lasts the same number of beats as the number of dots its sign carries: a Pause sign with two dots lasts two beats, not three.

The pause can be affected by an argon or gorgon on the note following it or preceding it. In such a case, the argon or gorgon affects the Pause in the same way it would affect a sung note.

A gorgon can also sit on a Pause - in order for this to happen, the Pause is written with a dot, and the gorgon is written above the dot: in this case the Pause becomes a Pause of 1/2 of a beat.

6. QUALIFYING SIGNS:

An important group of signs indicates specific modifications to the notes which are to be sung. There are five such signs normally used in church music.

a] **The Bareia or Heavy Accent;** √ This is, of course, the same sign that is used for a pause. It gives a strong emphasis to the note which follows it, and makes it stand out from those preceding and following it. Unless the music is moving at a rapid tempo, the note following the Heavy Accent is sung with a slight grace-note sung a step higher than the pitch indicated by the written note, to emphasize the drop into the accented note. Sometimes the final half-beat of the note before the Heavy Accent is raised a step, to the same effect.

b] **The Psiphiston or Accented Diminuendo;** ∩ This is written under an interval sign that is followed by at least two more signs in a descending passage. It accentuates the note it sits under and operates on the whole group as a diminuendo does. If, however, the note following it is accentuated because, for example, of its meaning, the Psiphiston merely accentuates the note it sits under.

c] **The Omalon or Ripple;** → This sits beneath a sign and indicates the note is to be sung with a gentle ripple of the voice; the actual figure sung varies from a slight tremor to a clear brief trill on the note above, to a kind of turn rising above and falling below the note beneath which the Omalon is written.

d] **The Antikenoma or Shake;** ↪ This accentuates the note under which it is written and adds a more or less complex shake to it.

e] **The Eteron or Link;** ∩ This unites two notes so that they are sung on one breath without a break, but if they are on the same pitch with the flutter typical of a Petasti at the end of the first.

7. THE TYPES OF HYMNS AND MELODIES

The hymns and melodies of Psalmodia are classified in several different ways. One important classification is into:

- **Idiomelon**, a hymn sung to its own unique melody. The verses sung at a Lity are normally idiomela. (*Paradoxically, there have been rare occasions when a second hymn has been set to an existing idiomelon. In such cases the original hymn is still known as an idiomelon, although it now shares its tune with another.*)
- **Prosomia** are hymns or verses sung to a standard melody which is the tune of an existing hymn. The text of a prosomion should follow the exact metrical structure of its prototype, but in practise minor degrees of variation do occur. Unfortunately, many musical texts call automela prosomia!
- **Automela** are the hymns to whose melodies the prosomia are sung. The hymn is an automelon because it is sung to its own tune. Despite the role of automela as standard melodies, their melodies exist in very many different versions in both written and oral traditions.
- **Prologoi** are so called, according to the theorists, since they are the automela whose first words are set before the text of the prosomia in the liturgical books to indicate to which tune the prosomion is to be sung.
- **Irmos**: each ode of a Kanon consists of a sequence of prosomia known as troparia which are sung to the tune of an automelon which stands at the head of them in the liturgical books and is known as the "irmos" of the ode. Most irmoi are also used as automela by many other prosomia. The "*Irmologion*" is a book containing the irmoi of all the most used kanons and usually the most common prologoi. It is an important reference work for a psalter.

Melodies are also classified into:

- **Irmic** - melodies sung in the style of the troparia of the kanons,
- **Sticheric** - melodies sung in the style of opening verses of the Kekragenaria or the Ainoi. Idiomela are always sung in the sticheric style.
- **Pappadic** - melodies sung in the elaborate, slow, melismatic style used in the most solemn settings of the Cherubikon or Koinonikon.

A different pattern of classification divides melodies into:

- **short** or **simple**, (*syntomon*,) where generally each syllable is sung to one note,
- **slow** or **solemn**, (*argon*,) where each syllable is normally sung to two or three notes of melody (often then called **argosyntomon**), or to longer melismatic phrases,
- **elaborate** or **ornate** irmic style, (*kalophonikon*,) where the singing of a single syllable of text may use very many notes. The elaborate style also uses **kratimata**, passages of pure melody sung to meaningless syllables, "tererem" or "nananu" or suchlike.

Pappadic melodies are written in either the slow sticheric style or the elaborate irmic style and are the longest and most ornate of all.

Psaltic theorists also classify melodies according to their **emotional quality**:

- the **expansive** or **exultant**, (*diastaltikon*,)
- the **poignant, sorrowful** or **sad**, (*systaltikon*,)
- and the **serene** or **tranquil**, (*isychastikon*,)

The distinctions amongst the different kinds of melodies is important, since the Tones use different modes for different kinds of melody; sometimes the differences are subtle, sometimes they extend to using different scales.

8. ISOKRATIMA

Isokratima is an important element in the performance of Byzantine chant. In addition to the Psaltai who sing the melody of the hymn or verse, there should normally be two or more singers who hold the *ison* in order to underpin the modal structure of the chant and to give it stability of pitch. In short or slow melodies it is possible for the isokratima to sing the words of the hymn with the psaltes, in more elaborate pieces the isokratima is normally wordless, being sung with closed lips.

There are five main types of isokratima

- **Stable Ison:** where the isokratima holds the basic note of the melody without moving from it, unless, perhaps, to join the psaltes to sing the melodic cadences of the hymn. *In all forms of isokratima the ison may be replicated an octave higher. It is usual to avoid an ison which would sit in the middle of the Psalmodia, and when such would happen, a note an octave lower is usually sung.*
- **Isokratima on the Basic Note of the Tetrachord:** a more common form of isokratima which moves as the melody moves from one tetrachord to another of the mode in use and supports the psaltes by singing the basic note of that tetrachord.
- **Mobile Isokratima using the Dominant Notes:** a more flexible isokratima that makes use of any of the dominant notes of the mode in order to support the successive phrases of the melody. Normally each phrase is supported on the note on which its melodic cadence will come to rest.
- **Semi-Harmonic Isokratima:** some choirmasters are tempted to give the Psalmodia a harmonic enrichment by using a freely moving ison that makes use of whatever notes give what is felt to be an appropriate effect. Such pseudo-harmonic effects have no place in true Psalmodia and should be avoided.
- **Compound Isokratima:** besides the isokratima which supports the Psalmodia with a single line of sound, there exists a second ancient tradition of isokratima which uses the Basic note and one or more of the Dominant notes of the mode at the same time.

Reading Psalmodia

Part II

Sections 9 through 12 of the text.

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Part IV

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9. TONES, MODES & SCALES.

The **Eight Tones** (*Ēchoi*,) are defined Calendrically and liturgically as well as musically, in that the offices of each day are organised on the basis of a cycle of eight weeks, each of which has its own Tone. The offices contained in the *Anastasimatarion* and the *Parakletikē* are organised in a sequence of eight successive weeks each of which uses one of the Eight Tones.

Each Tone makes use of a cluster of Modes, some are in common use, some are rarely used. Different modes are used for the Irmic melodies of a given Tone from those used for the Sticheric melodies of the same tone.

Each mode has its own characteristic scales; sometimes the ascending scale used in a specific mode is different in some way from the descending scale of the same mode. Each mode is defined by its scales, its Basic Note or Tonic, its Dominant Notes, its Melodic Loci, (*theseis*,) its Melodic Cadences (*katalēxeis*) and its Emotional Character. Just as different modes can use the same scale, a particular melodic locus may occur in more than one mode. Traditional theorists also distinguish the modes according to their Intonation Formulae (*apēchēmata*), but this is archaic, the classic intonation formulae are really redundant in modern practice.

Basic Note or Tonic: each mode has a basic note. The melody almost always [but not always] ends on the basic note, and the basic note is heard as the foundation note and home note of the mode's scale. It is not always the lowest note of the scale: in the Soft Chromatic scale in Echos II for example, the basic note is G/Di, but the scale regularly descends five notes lower.

Dominant Notes: in addition to the basic note of the mode, each mode has one or more other notes that play a dominant role in its melodies and provide the arrival point for its cadential formulae.

Intonation Formulae (*apechemata*) in the ancient chant, standard melodic phrases were used by the precentor to define the mode in which the following piece would be sung. Later versions of these phrases and the odd "words" to which they were sung (neanes, anes, agia &c.) are still sometimes used, most commonly, however, the apichimata are reduced to a single note or pair of notes. The chant can be sung perfectly well without the intonation formulae, but they can be useful in ensuring singers know exactly what they are to do.

Melodic Loci. (*Theseis*) Western scholars of Mediaeval Byzantine music discovered, on decyphering and analysing the melodies written in the ancient notation, that the same or similar musical phrases kept recurring in different melodies of the same echos. This has led to a consensus amongst them that the art of the Byzantine Melode consisted of constructing melodies by combining together standard stereotyped phrases typical of a particular mode. This is certainly an inadequate account of melurgy whether mediaeval or modern; the psaltic composer has at his or her disposal all the loci of the various modes, but the art of melurgy cannot be reduced simply to the technique of nailing together a sequence of melodic loci. Analysis of long and ornate melodies in particular

would make this evident. A cherubikon by Peter Lampadarios or Grigorios Protopsaltes is no more a simple sequence of loci than is a passage of Homer simply a catena of poetic cliches.

Nonetheless, each mode does have its own typical melodic loci, and the use of these as significant elements in the melodies in a given mode help give it its typical musical flavour.

Melodic Cadences. (*Katalēxeis*.) A typical and extremely important feature of Byzantine Psalmodia is the use of melodic cadences. Each mode has its own typical cadential formulae. They serve as musical punctuation of the text as well as establishing clearly the mode in which the text is being sung. The cadences are of four kinds:

- **Partial Cadences** (*ateleis katalixeis*) function rather like the commas of the poetic text. They mark the end of a musical and textual passage, and at the same time indicate there is more to follow. Partial cadences can end on any of the dominant notes of the mode being sung.
- **Complete Cadences** (*enteleis katalixeis*) are more definite, marking the end of a complete section of the hymn. They correspond to the colons or full-stops of the written text. Complete cadences often end on the basic note of the mode.
- **Final Cadences** (*telikai katalixeis*) are a special kind of complete cadence used to mark the end of the hymn being sung. They normally end on the basic note of the mode.
- **Emphatic Cadences** or **Cue Cadences** (*oristikos katalixeis*) are more emphatic versions of Final Cadences used both to mark the completion of the whole passage of chant the psalter has sung, and to provide a cue for the next *ekphonēsis*. Typical of cue cadences is a sustained slow trill on the final note of a piece. Since such cadences cue the clergy, sometimes the piece is concluded on a note other than the basic note to indicate where the ekphonesis will be chanted. *The function of the emphatic cadences as musical cues is of considerable importance; the psalter needs to take care not only to use the cue cadences at the right moment, but also to avoid misusing them, (for example, to end one in a sequence of hymns or verses,) to avoid miscuing the celebrant or the deacon.*

The Eight Tones are divided into two groups, four Principal Tones and four Plagal Tones. *The Eight Tones of Byzantine Psalmodia correspond to the Eight Tones of Latin Plainchant, but are not identical with them. It should be noted that the numbering of the two sets of tones is not the same, the odd numbered Latin tones are the four Authentic Tones, the even numbered Tones, the four Plagal. So, for example, Latin Tone Two is also Latin Plagal One and Latin Tone Four is also Latin Plagal Three. In the Byzantine Tone System, Tone Five is Plagal One, Tone Six is Plagal Two, Tone Seven (The Grave Tone) is Plagal Three, though it is never so called, and Tone Eight is Plagal Four. The Eight Tones of Modern Psalmodia derive from, but are not identical to those in use in the Mediaeval period, though there is nonetheless a close relation between the two systems.*

STONE ONE:

Scale Type: DIATONIC

Basic Note: Pa

Dominant Notes:	Irmic Melodies:	Pa & Di
	Sticheric Melodies:	Pa & Ga

MODES: The Mode in which Irmic melodies are sung is the Diatonic scale on D/Pa:

Pa [10] Vu [8] Ga [12] Di [12] Ke [10] Zo [8] Ni [12] Pa

Usually, however, the note Zo is flattened in both descending phrases and in phrases which ascend to it but do not immediately proceed to the Ni' or Pa' above. Many Psaltai follow a somewhat dubious Thessalonikan fashion and flatten Vu in descent as well.

Exceptionally, the melody *Ton Taphon Sou Sôtēr* is sung to a chromatic mode; usually it is sung in the soft chromatic scale, but some modern versions offer a related melody in a hard chromatic mode. Since it belongs to the Tone One *Anastasimatarion*, the melody is said to be in Tone I Chromatic; it could equally be assigned musically to Tone II.

Sticheric melodies are sung to a mode which uses the same scale, but which uses different melodic loci and cadences.

STONE TWO:

Scale Type: CHROMATIC.

Basic Note:	Irmic melodies:	Pa
	Sticheric melodies:	Di , sometimes Bou
Dominant Notes:	Irmic Melodies:	Pa, Di
	Sticheric Melodies:	Ni, Bou & Di

MODES: The Irmic melodies of Tone Two are normally sung to a mode based on the Hard Chromatic scale, with Pa as its basic note. Sticheric melodies are sung to a mode which uses the Soft Chromatic scale, with Di as its basic note. Some Pappadic melodies use a mode based on the Soft Chromatic scale with Vu as its basic note.

The use of two modes, one based on the hard chromatic scale, one on the soft chromatic scale is also found in the Plagal Second Tone.

The second tone is very widely used in Psalmody. It is the Tone commonly used for the Ekfonesis, the Antiphons and the Trisagion of the Divine Liturgy. Correctly, Tone II should be used for all the main melodies of the Synaxis, but in contemporary practise Tone V and Tone VIII are commonly used. [*The XIXth century composer Chaviara was solemnly condemned by the Ecumenical Patriarch for having the Divine Liturgy sung in VIII.*]

STONE THREE.

Scale Type: ENHARMONIC

Basic Note: Ga

Dominant Notes: Pa, Ga & Ke

MODES: Both Irmic and Sticheric melodies are constructed in modes which use the enharmonic scale on Ga. In practice some singers do not make a clear systematic distinction between the scale on which they sing Tone III and the scale they use to sing Tone VIII melodies based on Ga. The sharper Vu of Tone III is, however, important for the colouring it gives.

STONE FOUR

Scale Type: DIATONIC and CHROMATIC

Basic Note:	Irmic & Short Sticheric	Bou
	Slow Sticheric	Pa

Pappadic	Di
Dominant Notes: Irmic & Short Sticheric	Vou, Di
Slow Sticheric	Pa, Vu & Di

MODES: The Fourth Tone makes use of a complex family of modes. Legetos, a diatonic mode based on Vu is used in short Irmic and short Sticheric melodies. (*In practise, Greek and Cypriot Psaltai generally sing Legetos to a distinctly non-diatonic tuning.*) A second Diatonic mode based on Pa and Di, but having its Final and Emphatic Cadences on Vu is used in slow sticheric melodies. A third mode based on Di is used in some Ornate melodies and in the Pappadic style.

In Legetos it is usual to sharpen slightly the Pa below the basic Vu both when Pa acts in effect as a leading note to Vu and in the Locus Bou-Pa-Ni-Pa Vou.

A second and very common mode used in short Irmic and Sticheric styles uses both a slightly sharpened Pa and a slightly flattened Ke; this makes it virtually indistinguishable from the soft chromatic mode of Tone Two. It is now customary to accept that this mode of Four is indeed in the soft chromatic scale and to mark it with the signs and tokens of that scale. This soft chromatic mode is of great importance since it is used for *Theos Kyrios* and for most Apolytikia and Kontakia in Tone Four. The Emphatic Cadence of this mode is normally on Di.

When the note Zo' occurs as an unemphatic note in a descending passage or when the melody rises to it and then descends without emphasising it, it is frequently flattened.

The automelon kathisma *Kataplagi Iosif* is sung to a very beautiful melody in a mode of the soft (or sometimes the hard) chromatic scale. Since *Kataplagi Iosif* is the automelon of very many prosomia, care must be taken to distinguish this, the proper melody of the automelon, from a second melody in a mode of the soft chromatic scale used for the prosomia of *Kataplagi Iosif* when they are sung as apolytikia - this is an important set of apolytikia including *Apegrafeto Pote*, *Etimazou Bēthleem*, *Ek tis Rizis Iessai* and *I Amnas Sou*.

An uncommon but beautiful enharmonic mode of the Fourth Tone also exists.

TONE FIVE or TONE PLAGAL ONE

Scale: DIATONIC.

Basic Note:	Short Irmic & Sticheric modes:	Ke
	Slow Irmic & Sticheric modes:	Pa or Ke
Dominant Notes:	Short Irmic & Sticheric:	Ke, Pa, Ni
	Slow Irmic & Sticheric:	Pa, Di, Ke

MODES: Most pieces in Plagal I use a mode of the diatonic scale based on Ke or the identical mode transposed to the base Pa. Pieces in the Slow, Ornate or Pappadic styles frequently use a more complex mode which uses both the diatonic scale on the base Pa and the enharmonic scale on Ga used in Tone Three. Some pieces in these slow styles are written in what is called the Pentaphonic mode of Plagal I; this is a beautiful and lyrical mode which has Pa, Ga, Di and Zo^b as its Dominant Notes, and many of its phrases begin typically on Zo^b.

TONE SIX or PLAGAL TWO

Scale: CHROMATIC

Basic Note:	Irmic & short Sticheric modes	Vu or Di
	Slow Sticheric & Ornate modes	Pa
Dominant notes:	Irmic & short Sticheric:	Vou, Di
	Slow Sticheric & Ornate:	Pa, Di Ke

MODES: The Second Plagal Tone uses modes based on the soft chromatic scale and modes based on the hard chromatic scale. The Irmic and short Sticheric styles use modes of the soft chromatic scale based on Vu or Di . The Slow sticheric and Ornate styles use modes of the hard chromatic scale based on Pa.

BARYS, THE GRAVE TONE

Scale: DIATONIC and ENHARMONIC

Basic Note:	Enharmonic Modes:	Ga or Zo ^b
	Diatonic Modes:	Zo or Zo ['] .
Dominant Notes:	Enharmonic Mode on Ga:	Ga, Di , Zo ^{b'}
	Enharmonic Mode on Zo ^b :	Bou ^b , Di , Zo ^b
	Diatonic Modes:	Pa, Ga, Di , Zo ^{b'}

MODES: The short Irmic and Sticheric styles make use of one mode based on the Tetrachordal Enharmonic scale on Ga, and of modes based on the (Octave-System) Diatonic scale on Zo. The first of these uses the same Tetrachordal Scale as Tone Three, but the Dominant Notes, Melodic Loci and Melodic Cadences of Barys are quite different. The Diatonic modes of Barys are used in the short styles and also in slow and Ornate styles. A family of such modes exists:

Tetraphonic Diatonic Barys: or Pentachordal Diatonic Barys, whose melodies are based on the lower Zo, has typical melodic loci that rise up to Ga, but avoid phrases passing directly through it, frequently use Di ^b as a downward "leading note" to Ga, and making frequent use of Di ^b and Zo^{b'}.

Pentaphonic Diatonic Barys: or Hexachordal Diatonic Barys, or Protobarys is similar to the Irmic mode of Tone One in its lower scale, but makes frequent use of an emphatic Zo^{b'} in the upper part of the scale. Its Melodic Loci are closely similar to those of Tone One.

Heptaphonic Diatonic Barys: is a dramatic mode of Barys with a very high tessitura. It uses the upper Zo of the Diatonic scale as its basis, and generally ranges from Ga# to upper Ga[']. It makes regular use of Ke# and of Bou^b in its melodies, and uses Di and Zo['] as its dominant notes.

The Octave-System Enharmonic Barys based on Zo^b is used in a variety of melodies in the Slow and Ornate styles.

TONE EIGHT or PLAGAL FOUR

Scale: DIATONIC

Basic Note:	Octave-System mode:	Ni
	Tetrachordal mode:	Ga
Dominant Notes:	Octave-System mode:	Ni, Vou, Di
	Tetrachordal Mode:	Ga, Di , Ke

MODES: There are melodies of all styles, short, slow, Irmic and Sticheric, of Tone Eight which use both the Octave-system mode and the Tetrachordal mode. (Some melodies

can be sung either on Ni or on Ga depending on the Psaltes' preference and the relation of the particular hymn to the melodies preceding and following. Such hymns have a restricted range and can usually be sung equally easily at either pitch.)

10.MARKS, TOKENS & ACCIDENTALS

To distinguish the notes of one scale from another, **Identifying Marks** (*Martyria*) are used. An Identifying mark stand at the end of each phrase of the written melody to indicate the note on which that particular Melodic Cadence will end. An Identifying Mark is also frequently used before the start of a written melody, or a passage of written melody, to indicate the starting point, basic note and scale of the melody.

The notes of the natural Diatonic scale carry the following Identifying Marks:

Di	Ke	Zo	Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni	Pa	Vu
ⲁ	ϩ	ϯ	ν	π	ⲃ	Ⲓ	Ⲉ	κ	ϯ'	ν'	π'	ⲃ'
Δ	κ	ϯ	ⲁ	ϩ	κ	Ⲓ	ⲁ	ϩ	κ	Ⲓ	ϩ	κ

The equivalent Identifying Marks of the notes of the Soft Chromatic Scale are:

Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni
ν'	π'	ⲃ'	Ⲓ'	Ⲉ'	κ'	ϯ'	ν'
ⲁ'	ϩ'	ⲁ'	ϩ'	ⲁ'	ϩ'	ⲁ'	ϩ'

Those of the Hard Chromatic scale are:

Di	Ke	Zo	Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni	Pa	Vu
ⲁ	ϩ	ϯ	ν	π	ⲃ	Ⲓ	Ⲉ	κ	ϯ'	ν'	π'	ⲃ'
Δ	κ	ϯ	ⲁ	ϩ	κ	Ⲓ	ⲁ	ϩ	κ	Ⲓ	ϩ	κ

And those of the Enharmonic Scale:

Di	Ke	Zo	Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni	Pa	Vu
ⲁ	ϩ	ϯ	ν	π	ⲃ	Ⲓ	Ⲉ	κ	ϯ'	ν'	π'	ⲃ'
Δ	κ	ϯ	ⲁ	ϩ	κ	Ⲓ	ⲁ	ϩ	κ	Ⲓ	ϩ	κ

In addition to the Identifying Marks, Byzantine notation also uses **Modulation Tokens** (*phthorai*). The practical use of the Modulation Tokens is to indicate the scale used by a melody from the point where the Modulation Token occurs. A Modulation Token can be used together with an Identifying Mark to make clear the exact mode to be used in a melody. More commonly one occurs during the course of a written melody indicating that the note over which the Token is placed belongs to the scale indicated by that particular Token, and that, consequently, the melody shifts to that scale at the point where the Token is placed. The four sets of Tokens are as follows:

Diatonic Scale Tokens:

ℓ	φ	⚡	φ	α	σ	⚡	ℓ
12	10	8	12	12	10	8	
Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni'

Soft Chromatic Scale Tokens:

—⊖	σ	—⊖	σ	—⊖	σ	—⊖	σ
8	14	8	12	8	14	8	
Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni'

Hard Chromatic Scale Tokens:

⚡	σ	⚡	σ	⚡	σ	σ	⚡
6	20	4	12	6	20	4	
Ni	Pa	Vu	Ga	Di	Ke	Zo	Ni

Octave-System Enharmonic Scale Tokens:

ρ	α	⊖	ρ	φ	α	⊖	ρ
12	12	6	12	12	12	6	
Zo ^b	Ni	Pa	Vu ^b	Ga	Di	Ke	Zo ^b

Tetrachordal-System Enharmonic Scale Tokens:

ρ	α	⊖	ρ	α	⊖	ρ	α
12	12	6	12	12	6	12	
Ni	Pa	Vu	Ga	Di	Ke	Zo ^b	Ni

ACCIDENTALS:

Psalmodia makes use of three types of accidentals; sharps and flats affecting a single note, sharps and flats affecting every subsequent note of a given pitch until neutralised and the "shades," complex accidentals which shift the pitch of whole groups of notes.

[A] Sharps and Flats:

Since Psalmodia uses a wide range of intervals, it is no surprise that it makes use of not one but several kinds of sharp (*diesis*) and several kinds of flat (*yffesis*). Unfortunately, musical theorists are not consistent in the number or meaning of the sharps and flats used. The great Chrysanthos defined signs to raise or lower the pitch of a note by 1/4, 1/3, 1.2, 2/3 and 3/4 of a tone. An official statement from the Patriarchate's officials in 1881 defined signs for sharps and flats of 1/6, 2/6, 3/6, 4/6 and 5/6 of a tone! Neither of these extravagant systems of accidentals has really any practical use, and both have passed into virtual oblivion. Even so, there is no single coherent system of sharps and flats to be found in the written corpus of Psalmodia. Some writers use only one flat sign and one sharp sign, some writers recognise three of each, but rarely use more than two. Irritatingly, those who use three signs of each kind do not agree as to the degrees

of sharpness or flatness they indicate; some see them as sharpening or flattening a note by 1/3, 1/2 and 2/3 tone, others by 1/4, 1/2 and 3/4 tone! The easiest way to read the three signs is as flattening or sharpening a note by less than a semitone, about a semitone and more than a semitone - i.e. as a **flattish**, a **flat**, and a **very-flat**, a **sharpish**, a **sharp** and a **very-sharp**.

The signs you are most likely to find in musical texts are the following:

FLAT

A. ρ B. ϱ

SHARP

A. ϳ B. ϴ

Unfortunately, the use of these different signs is not consistent, especially in older texts. Chrysanthos himself used the signs marked A to indicate a flattening or sharpening of a quarter-tone tone and the signs marked B to indicate a flattening or sharpening of a semitone. The Patriarchal Authorities, however, in 1881 defined the value of the signs marked A as flattening or sharpening a note by one sixth of a tone. In more modern use the B signs tend to represent a flat or a sharp and the B signs a flattish or sharpish. A very-sharp or a very-flat is indicated by adding a second bar to the A signs. Where only a single sharp and a single flat sign is used, it will normally be the A signs used. In that case it can be read it as sharpening or flattening by about a semitone, but it will depend on the mode in use what kind of semitone that is.

[B] General Sharps and Flats:

The following signs affect every subsequent note of a particular pitch until neutralised:

General Sharp

Ϸ

on Ga affects Vu

General Flat

ϸ

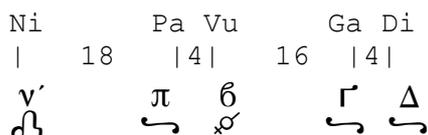
on Ke affects Zo

[C] The "Shades."

The Shades (*Chroai*) are an important and distinctive feature of Psalmodia in modern practice, a feature Psalmodia shares with classical Ottoman music. There are three Shades, the Yoke (*zygos*), the Tilt (*kliton*) and the Sabre (*Spathi*). Each of the Shades affects a number of successive notes of the scale, changing the musical complexion of the mode in use. The Shades are subtle and complex colourings that can be used to great effect in melodic composition.

1. The Yoke: ϳ

The yoke is written over the sign for the note Di and modifies the intervals below it as follows:



Note the Identifying Marks of the Shaded notes.

2. The Tilt: σ

The Tilt is also written above the sign for Di . It affects the notes below it as follows:

Pa	Vu	Ga	Di
	14		12 4
π	δ	Γ	Δ
σ	ρ	λ	γ

or, according to an alternative interpretation of the intervals:

Pa	Vu	Ga	Di
	12		14 4

3. The Sabre: \ominus

The Sabre is normally found over the note Ke or the note Ga. On Ke its effect is as follows:

Ga	Di	Ke	Zo	Ni
	20	4 4	14	
Γ	Δ	λ	ζ'	ν'
γ	σ	ρ	γ	δ

on Ga, however, the Sabre affects the scale as follows:

Pa	Vu	Ga	Di	Ke	Zo	Ni
	12		6		8	
					16	4
						14

11. RHYTHM and TEMPO:

Psalmody is strongly rhythmic. Its rhythmic basis is twofold:

[A] TONIC RHYTHM or ACCENTUAL RHYTHM:

The accented syllables of the text normally carry a clear musical accent. Sometimes this is the only or the predominant rhythmic element in the music, as for example in musical reading of scriptural texts, in the simple psalm tones, in chanted prose prayers, and in the priests' and deacons' part in the chanting of services.

[B] METRIC RHYTHM:

Many musical forms follow fixed rhythmic patterns. This is most evident in the case of prosodia which share the metric structure both of their literary text and of their melody with the corresponding automelon. Accentual rhythm, however, can modify the metrical structure of a melody so that, for example, different prosodia of the automelon may have subtly different rhythmic structures depending on the exact accentual pattern of the poetic text.

Traditional Psalms theory analyses the metric rhythm of hymns on the model of the metrical feet of Classical Greek poetry. This is both cumbersome and unnecessary. All that is required is the recognition that musical metre can be of considerable flexibility and complexity, and that the musical metre of a hymn will express its poetical metre -

the poetic metre is, of course, the stress-accentual metre of post-classical Byzantine verse, not the quantitative metre of classical verse.

In the absence of any other metrical indication, the musical text is presumed to be written in duple or quadruple rhythm, except where accentual rhythm dictates otherwise. The name of the automelon to which a prosomion is sung, the use of bar-lines to mark the feet of the musical metre and direct rhythmic instructions such as "*trisimos*" - in triple time - may all be used to indicate metre.

In recent years, some melodes have begun to iron out the melodic irregularities of the traditional melodies of the prosomia, singing virtually them all in a regular quadruple rhythm that completely annihilates the rhythmic subtlety of the hymns. It does, however, make it somewhat easier for congregations to learn the troparia.

The chant makes use of a variety of *Tempi*, and the signs for them are differently interpreted by different singers and different schools. One important thing to note is that the pace at which the troparia of a Canon should be sung is a brisk musical walking pace, a much more rapid pace than that at which Western hymns are normally sung.

The following table of signs identifies the customary signs of tempo which will be found in the musical text and the number of rhythmic beats per minute the tempo marking indicates. The table is, of course, no more than a set of very approximate guidelines. The tempo of reading in particular needs care: the pious and ponderous style affected by some readers is quite as inappropriate to the reading of the sacred text as is the near unintelligible gabble adopted by others in the inane belief this is somehow truly 'Orthodox'. What is required is clear, well-enunciated reading at a normal reading pace that makes the text fully accessible and comprehensible to the hearer. *On rare occasions a liturgical text which is always sung is marked to be read **chyma**: in such cases the text is chanted in a near monotone.*

TEMPO		SIGN	Beats per minute:
Slow	(<i>Bradeia</i>)		80 - 100
Medium	(<i>Mesi</i>)		100 - 100
Moderate	(<i>Metria</i>)		120 - 160
Quick	(<i>Tacheia</i>)		160 - 180
Very Quick	(<i>Tachytati</i>)		180 -
Speech	(<i>Chyma</i>)		180 ?-

Of these six tempi, the middle three and the last, the speech tempo, are the most regularly used. *The terms mesi and metria are sometimes reversed in use.*

12. PSALMODIA IN PRACTICE

INTRODUCTION.

Psalmody is a liturgical art. Scholars and musicians may find Psalmody of great historical, aesthetic or musicological interest; for the Psalter, while these things may be of interest, the heart of his or her calling is the carrying out of a liturgical ministry. Psalmody is prayer: the Psalter is a prayer-leader.

Psalmody is part of the public prayer of the Church. The texts of the chant take precedence over the music: the music of the chant is there to carry and to express the text.

The Psalter's role is not to impose on the chant any personal meaning or emotion, but to realise in song the meaning and the feeling that are **there** in the text and the music. It is important that the Psalter should seek to acquire an accurate awareness of the meaning of the liturgical texts and reflect intelligently on the significance and feeling of the melody belonging to the text. The Psalter exercises a liturgical ministry of great importance, chanting the sacred texts on behalf of the People of God, and has a crucially important function in enabling and supporting the prayer of the whole congregation.

THE VOICE.

The Psalter needs to have an accurate sense of pitch and a voice appropriate to the liturgical ministry he or she is to exercise. A weak or unsteady voice is undesirable. The modern habit of introducing microphones into the church has at least the merit of enabling singers with particularly quiet voices to function more effectively as Psaltai.

Ideally, a Psalter should have a clear, accurately pitched, melodious and pleasing voice and a range encompassing at least the two octaves from low to high F or low to high G.

Singers trained in operatic or lieder styles need to learn a quite different approach to singing before they can sing Psalteric music. Psalteric chanting is essentially a religious act, not a musical performance and certainly not a dramatic performance. The congregation is not an audience to be entertained and impressed. The liturgical offices are prayer offered in the presence of the Living God, not an exotic form of oratorio. They are part of the public prayer of the Church, not an exercise in personal devotion. The Psalter exercises a ministry on behalf of the congregation; that is something quite different from giving a musical performance for the people's edification.

THE FORMS of CHANT.

The Liturgical offices contain a wide variety of chant. The Psalter needs to understand and appreciate the character and function of each.

A) LITANIES

The Byzantine Rite is particularly rich in litanies, from the catena of petitions of the Eirenika to the brief dialogue of the Small Ektenia. Essentially a Litany is a dialogue, usually between deacon and people; the deacon (or the priest) chants a petition to which the people, led by the Psaltai, make a brief, simple response, e.g. "Lord have mercy," or "Grant this, O Lord." Each Litany normally ends with a brief prayer of commendation, to which the people reply "To You, O Lord," and a doxology sung by the priest, to which the response is "Amen."

The Litany is, and is meant to be, a simple, popular form of prayer. The responses belong to the people, and are one form of chant it is easy to return to the people, especially if the Psaltai are content to give an effective lead, and keep, generally, to simple traditional melodies.

If the Psaltai do make the responses to the litanies, the usual custom is for one choir to make the first six responses of a set of twelve, the other the next six. It is equally possible for the two sides to respond alternately, or for sets of responses to be broken into clusters of three or four.

B) LITURGICAL DIALOGUE

Besides the Litanies, there are many other forms of liturgical dialogue in the Byzantine Rite. The Leitourgika are the most important instance. The Leitourgika are normally sung in the Tone (Echos) of the day. This is the norm, but in practice many churches do not follow it, and use a narrow range of chants traditional in that

particular community. Many priests, moreover, are unable to chant the Liturgy in all eight Tones, and this makes it difficult if not impossible to use the full range of Tones for the Leitourgika.

The Leitourgika should be chanted to a suite of melodies that give a sense of unity and continuity to the music of the Anaphora. The words chanted in Liturgical Dialogue must always be clear and intelligible. No musical settings should be used that obscure the words by melodic over-elaboration or decorative excess.

All the Psaltai should make the responses of the Leitourgika together. If the melodies are familiar, the congregation may well chant the responses with them.

C] APOLYTIKIA, TROPARIA, KATHISMATA, KONTAKIA &c.

The Apolytikia and Kontakia of the Little Entrance in the Liturgy, the Apolytikia and Theotokia at the end of Hesperinos and after *Theos Kyrios* in Orthros, the Irmoi, Troparia and Katabasiai of the Kanons have all a similar musical character, they are verses sung either to short, syllabic melodies, or more rarely to slow melodies where each syllable of text is carried on two or three notes. They are to be sung clearly, simply and normally at a fairly quick tempo. Hymns of this kind are sung to melodies in the Irmic modes of the appropriate tone.

D] STICHERA

The later verses of the psalms chanted at Hesperinos and Orthros are interleaved with short verses from the Parakletike, the Triodion, Pentekostarion or Menaia. These verses have also both Short and Slow versions. Normally the Short versions are used, though in some communities it is the custom to use the Slow stichera for Sunday services or on solemn feasts. Many of the stichera of the Menaia are Prosomia.

E] IDIOMELA

Idiomela are used most typically as the hymns of the Lity or at *Lord I Have Cried* on Feasts of the Lord. They are always sung in the Sticheric modes of the appropriate tone.

F] KYRIE EKEKRAXA & PASA PNOI

These verses have a parallel use, the one to introduce the sequence of Lucernary Psalms at Vespers, the other to introduce the Psalms of Laud (*Ainoi*). Both Short and Slow melodies exist. The *Kyrie Ekekraxa* should be sung slowly (c. 96 beats per minute), prayerfully, with compunction; the *Pasa Pnoi*, on the other hand is an expansive, celebratory chant.

The slow melodies in current use descend from the reforming eighteenth century *Anastasimatarion* of Peter Lampadarios, usually from the reworked edition published by Joannis Protopsaltes in the mid nineteenth century. An older, much more melismatic style of melody is represented by the work of Jakovos Protopsaltes, whose long, lyrical settings, though of great beauty are relatively rarely heard. Short melodies of the *Kyrie Ekekraxa* and the *Pasa Pnoi* were published in the *Anastasimatarion* of Joannis Protopsaltes. They are melodies of quite extraordinary beauty. In many churches it is customary to use the Short melodies on weekdays and the Slow

melodies for Saturday evening and Sunday Morning. If the short melodies are used, they should be sung at a rather slower pace than the verses that follow.

GJ DOXASTIKA

In both Hesperinos and Orthros the sequences of stichera end with one or more Doxastika, and a similar Doxastikon-Theotokion completes the verses of the Aposticha. Doxastika are normally sung to Slow melodies of some complexity. Short settings also exist, and, though they are rarely used, they are very beautiful. Whichever version is used, the Doxastikon should be sung expansively, at a slower pace than the verses which precede it.

HJ CHERUBIKON & KOINONIKON

The music of the Divine Liturgy varies in pace. At two points, the preparation for the Great Entrance and the Communion of the Clergy, slow, extremely elaborate chants are normally used, in the Tone of the day. Both of these chants reflect the identity of this Liturgy, here in this temple, with the angelic worship of the Court of Heaven. The chant of both Cherubikon and Koinonikon should be slow, serene, recollected. In both cases, however, shorter melodies also exist which require a different, plainer style of execution.

IJ GREAT DOXOLOGY

The Great Doxology is a very ancient Christian hymn. It is sung antiphonally. A great variety of both Short and Slow melodies are in use. This hymn stands at the end of Orthros, as the culminating act of glorification of God. The great Doxology should be sung in an exultant (*diastaltikon*) style and at a pace suitable to a celebratory chant.

JJ TRISAGION

The Trisagion hymn stands before the Scriptural readings which form the focal point of the Liturgy of the Word of the Synaxis. The cry "Holy, Holy, Holy" is the cry of the angels about the Throne of God, to which in the Liturgy our voices are joined. The hymn is normally sung in Tone II, the customary echos of the Synaxis, but can be sung in any echos. The Trisagion should be sung in an exultant manner, the Dynamis even more so. The Dynamis should be a powerfully exultant piece, lifting the hearts and minds of the people, readying them to hear and receive the inspired word of the scriptural readings.

KJ PSALMS

The chanting of the Psalms has given ecclesiastical chant its name, *Psalmodia*. The psalms are chanted in a number of different ways: in **direct psalmody** the singer or singers chant the psalm as a single continuous poem, in **antiphonal psalmody** to singers or two choirs chant alternate verses of the Psalm, in **responsorial psalmody** one singer or choir sings the verses of the psalm, while the rest of the singers respond with a refrain.

The sung psalms of Hesperinos and Orthros, including the psalm *Eleison Me O Theos* are normally sung antiphonally: the Prokeimena, when sung in their full form, are examples of responsorial psalmody. The Antiphons of the Liturgy are originally antiphonal psalms, though a refrain has come to be attached to the Psalm Verses. Normally Psalms are sung to simple, rapid melodies which vary little from verse to

verse. Sometimes slow melodies are used, especially for the Polyeleos and the Anoixantaria.

Reading Psalmodia

Part III

Sections 13 through 19 of the Text

David J. Melling

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13. PITCH.

Modern Psaltai tend to regard the pitch of the written notes as entirely relative. The nineteenth century Patriarchal authorities, on the other hand, attempted to fix the pitch of the written notes in relation to a precisely defined pitch for Ni. In effect, they defined the Ni of Tone Eight as slightly flatter than the C of Concert Pitch. This attempt at exact definition was part and parcel of an international nineteenth century culture of numerical precision: just as the pitch of Ni was precisely defined in terms of vibrations per second, precise (but not always the same precise) definitions were offered of the microtonal intervals both of the two chromatic scales and of the intervals produced by the effect of accidentals. Eventually a monstrous instrument was invented to play all the possible notes of psaltic music – something stringed instruments can do perfectly well.

In practice, there is no possibility of giving an exact pitch to Ni or Pa as a means of defining the exact pitch of every note of every mode. Firstly, Psaltai have different voices with different ranges, and pitch the music differently in order to sing it well and reverently. Secondly, the priest and the deacon have also voices with a particular range that leads them to prefer to sing their own parts of the service at a particular pitch. Indeed, considerations of vocal range can lead to conflict between clergy and singers as to the pitch at which a service should be sung. On the whole, peace seems to be attained most easily if the priest makes clear the note on which he prefers to chant, and the Protopsaltes organises the Psalmody in such a way as to accommodate him. *(This may mean singing at a higher or lower pitch than he would otherwise prefer, or, in extreme cases, where, for example, the priest sings Ni=G or Ni=F, by basing the Psalmody on the tetrachord below the base note of the mode or on the upper tetrachord of the modal scale - e.g. singing Tone VIII based on the G below Ni or on the G above, or in the case of Tone I, basing the scale on the Ke below Pa or basing the melodies in the tetrachord on the Di above. &c.)*

If both clergy and Psaltai have a good vocal range, then a pitch can be chosen that approximates to that officially laid down by the Patriarchal Epitropoi, i.e., the Ni of Tone VIII can be pitched somewhere between B flat and C.

During a service it is not appropriate for the tuning of the Psalmody to be shifted, unless it is absolutely essential. Where such changes occur they should reflect the structural divisions of the Liturgy.

In an extreme case it is possible for priest and psaltes, or even for protopsaltes and lampadarios, to sing at different pitches, the result is bizarre and undesirable but perhaps better than a diet of screeching and groaning.

MODULATION from TONE to TONE:

Within a single service, and sometimes even within a single piece, the chant will move amongst the different Tones, and from one mode to another within a single Tone. Normally the modulation is accomplished without transposition of pitch. In the case of the diatonic modes this is easy to understand: the Pa of Tone I becomes the Pa of Tone VII or of Tone V, the Vu of Tone IV becomes the Vu of Tone I or of Tone VIII. The Enharmonic and Chromatic modes require more careful attention: modulation without

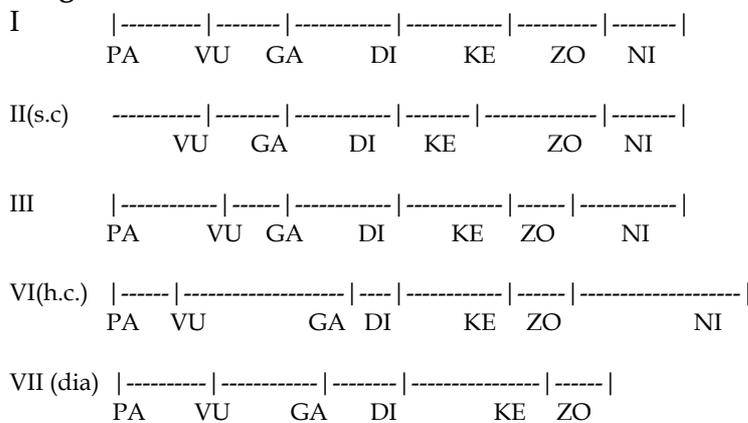
transposition is easy to achieve once the identity or non-identity of the corresponding notes of different modes is established. For example, it should be clear that the notes Pa and Vu of Tone I cannot *both* be identical with the corresponding notes of Tone VI: the note Vu of Tone I is a minor diatonic tone above the note Pa of Tone I, whereas the note Vu of Tone VI (Plagal II) is a small chromatic semitone above the Pa of Tone VI. Nor can the Pa and Vu of Tone I both be identical with the Pa and Vu of Tone III: the Vu of Tone III is an enharmonic semitone above Pa.

Traditionally, teachers of Psalmodia taught their students the scale (Pa-Pa') of the First Tone before they learned any other. More recent teachers, influenced by the importance of the major scale in European music, often begin by teaching students the diatonic scale Ni-Ni' of Tone VIII. It is possible to create a stable base for Tone to Tone modulation by treating Ni or Pa as a fixed note, and defining all other tones of all other scales in relation to that note. The note Di, however, has a greater stability across the different Tones than either Ni or Pa. In addition, the Musical Range of Psalmodia is defined in terms of a two octave di -Di -Di ' scale. For these reasons, the note Di provides the best fulcrum for Tone to Tone transposition.

A simple diagram will make the problem clearer.

If we assume that the note Di has the identical pitch in the different modes, then the pitch of other notes will differ approximately as follows:

Diagram A

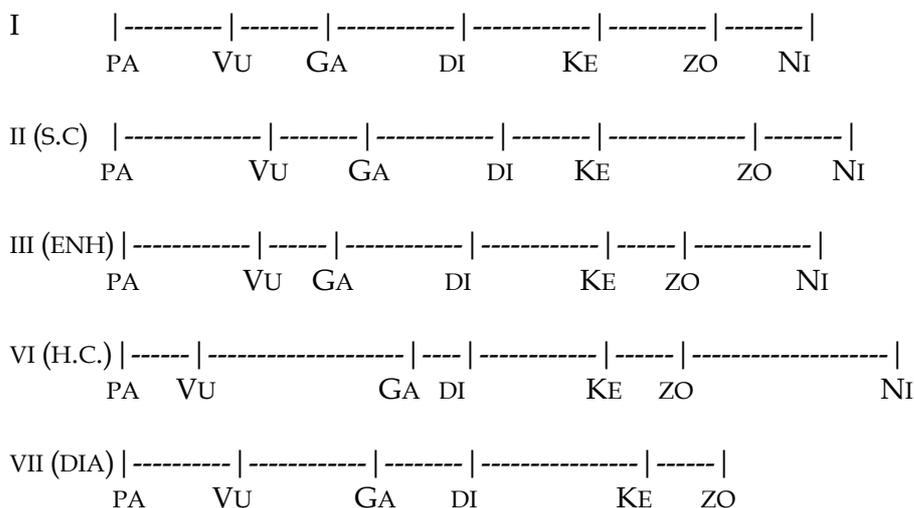


From the diagram it is easy to see that if the note Di remains constant in the scales illustrated, i.e. Tones I, II (soft chromatic,) III (enharmonic) VI (Plagal II, hard chromatic) and VII (diatonic with microtonal sharpening of Ke,) then in most scales the note Pa is also constant.

The most serious problem of transposition occurs in moving from Tone II to other scales. The soft chromatic scale uses a range of intervals that means it has very few notes in common with certain other scales. One might be tempted to infer that this problem has been caused precisely because we have chosen to treat Di as a fixed note. This problem is not solved if instead of accepting Di as a fixed note we accept Pa. As the diagram below illustrates, the soft chromatic scale still has very few notes in common with other

scales even if we accept Pa rather than Di as having a constant pitch across scales. The problem arises from the nature of the soft chromatic scale and the specific notes it uses, rather than from the choice of Pa or Di as a constant pitch across modes.

DIAGRAM B



Apart from not solving the problem of the relation of Tone II to other Tones, as the above Diagram B illustrates, taking Pa as a constant offers no advantage over the choice of Di .

Two radical solutions have, however, been proposed to the problem of the relation between Tone II and the other Tones.

The great Protopsaltes *Georgios Raidestinos* (1833-89) attempted to persuade his colleagues that Tone II should take Ke as its basic note, not Di , i.e. that we should sing melodies in II as they are now sung, but **thinking** the note we now write as Di as Ke, the note we write as Pa as Vou. His reasons for arguing this are to do with the relation we should normally expect to exist between an Authentic Tone and its corresponding Plagal Tone, but quite different reasons for taking his thesis seriously will emerge from an inspection of the relation between different Echoi that becomes visible if we consider them side by side both in his system and in the more conventional. If his arguments were to be accepted, then the two diagrams would have to be redrawn as illustrated below.

The first diagram shows the effect of accepting Raidestinos's account of Tone II on the diagram that illustrates the relation of notes in the different Tones which holds if we assume the note Di to have a constant value. The result, Diagram C, is, to say the least, a convincing argument in favour of Raidestinos's thesis: suddenly, Tone II ceases to look like an unhappy anomaly within a well-ordered and intelligible system of Tones, and its notes now have a much more intelligible relation to the notes of other scales. Diagram C should make this clear. Diagram D confirms what Diagram C has already shown: Raidestinos's version of Tone II makes much more sense than the conventional account. Both diagrams yield a set of scales where the pitch of both Pa and Di remains constant **in every Tone**. Indeed, as the reader may have noticed, the two diagrams C and D are

identical. Raidestinou seems to have musical logic on his side - unfortunately the whole corpus of published Psalmidia other than his own is written on the common assumption that Tone II has Di as its basic note. Sadly, there is little prospect of reviving Raidestinou's argument about the base of Tone II with any great hope of success.

RELATION OF NOTES OF THE TONES ASSUMING

1] DI REMAINS CONSTANT;

2] THAT TONE II IS BASED ON KE NOT DI

Diagram C.

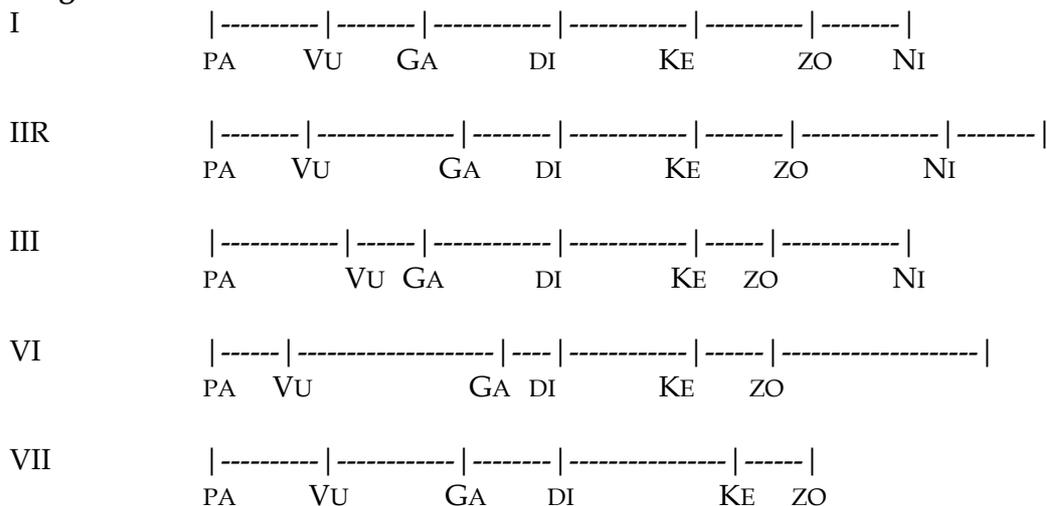
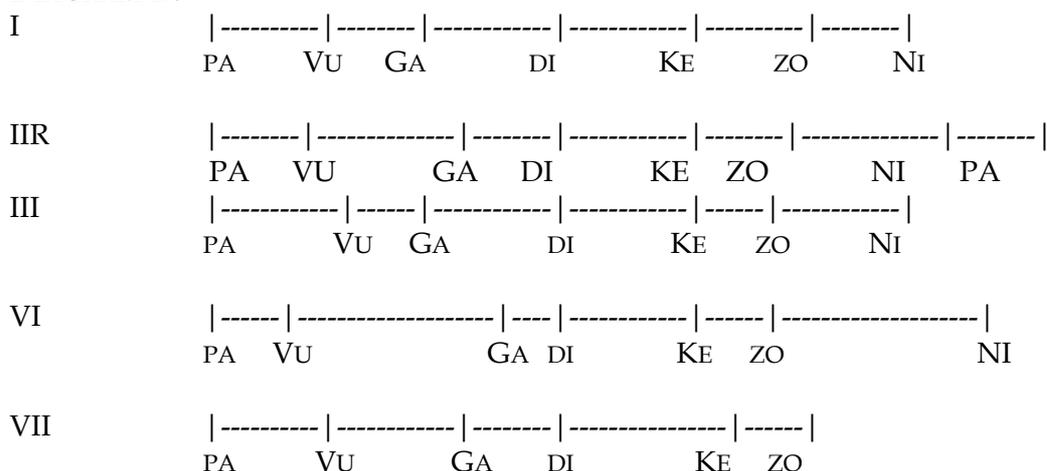


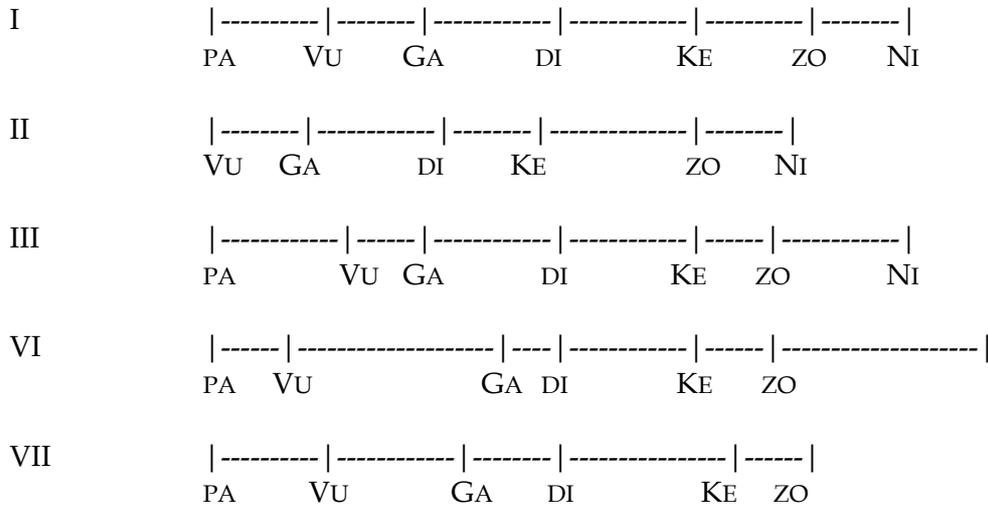
DIAGRAM SHOWING RELATION OF NOTES AS ABOVE, BUT TAKING PA AS CONSTANT AND FOLLOWING RAIDESTINOUS' INTERPRETATION OF TONE II.

DIAGRAM D.



The second radical approach to the problem of modulation into and out of Tone II is that used those teachers of Psalmidia who instruct their students to modulate by treating the Pa of Tone I as the Vu of Tone II. This practice is remarkably widespread, though it reduces the relation amongst the Tones to utter chaos and violates the most basic musical logic. Here is the pattern of pitch values it produces:

DIAGRAM E



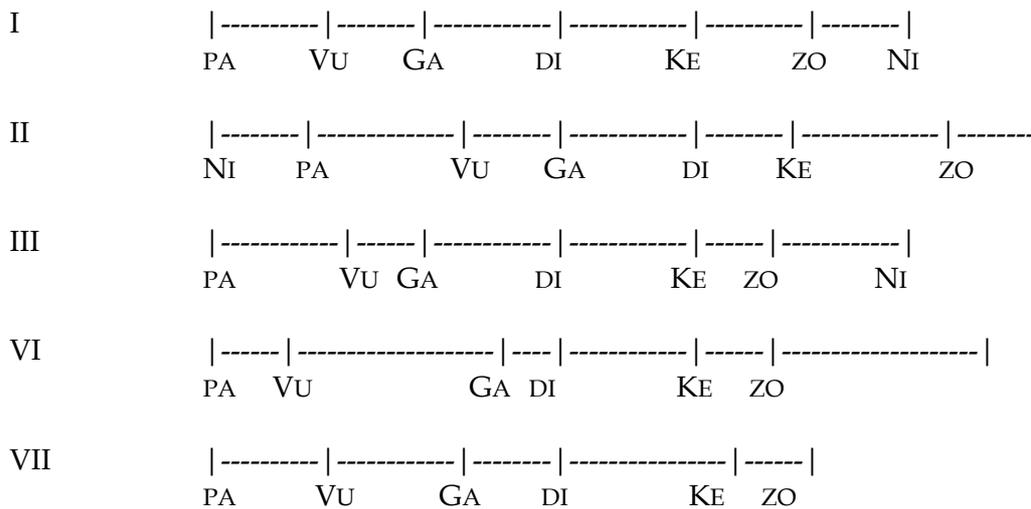
What is to be done? The practice of moving from I to II by turning the Pa of I into the Vu of II is musically illogical and should not be followed. Two solutions seem to yield coherent musical results:

1] **To keep the note Di at a constant pitch across all Tones.** This yields the relation amongst Tones illustrated in Diagram A above.

OR

2] To achieve Raidestinos's intended objective by **identifying the Ke of Tone I with the Di of Tone II** (as the music of the Tone is commonly written.) This latter method produces the following result:

DIAGRAM F



The second of these methods seems preferable. Indeed, the practice of making the Pa of I the Vu of II seems rather like a misguided attempt to attain the same end. Whichever of these two systems of modulation is used, it is essential that all Psaltai and ison singers are aware of it and use it.

14. THEORY and PRACTICE.

One of the less acceptable aspects of many conventional manuals of Psaltic theory, is the easy and oft repeated assertion that there is a difference between theory and practice. This view has at least an ancient pedigree: the theoretical manuals produced in the Palaiologan period accepted the same view. Already in the Mediaeval manuals the gap between theory and practice emerges since the theorists were determined to deal with interesting mathematical aspects of musical theory that might find little image in practice, and equally since the authors based their theorizing on older texts which both attempted to link Byzantine music with what they knew of ancient Greek music, and tended to discuss the chant as it may have existed at an earlier period rather than analyse contemporary practice.

Byzantine chant is part of a living, developing musical and liturgical culture. External influences played a significant role in the chant's development. During the period of Ottoman rule, the great Psaltai of Constantinople found themselves in demand as court singers. Many Psaltai studied and performed Ottoman Perso-Arabic classical music as well as Byzantine Psalmodia. Indeed, Peter Lampadarios, Konstantinos Protosaltes, Zacharias Hanade and Theodoros Phokaeos were all great experts on Ottoman music as well as significant figures in the history of modern Psalmodia.

Eighteenth century theorists of Psalmodia freely accepted the identity of the Tones of Psaltic chant and certain of the Maqams (modes) of Ottoman music. Konstantinos Protosaltes explains the relation between Tones and Maqams with quite extraordinary clarity and conciseness in what was published later as the *Ermeneia Tis Exoterikes Mousikes*. His exposition makes it evident that a family of maqams corresponds to each Tone, each maqam differentiated from the other by a subtle difference in the tuning of specific notes, or by a different pattern of melodic progress in ascent or descent or both, and a difference in range. The Psalmodia of the Ottoman period was composed by musicians who were frequently steeped in Ottoman court music as much as in Byzantine chant, were familiar with Muslim religious music, and often acquainted with both the notation and the practice of Western European music. It should not, then, be a surprise that the Psaltic compositions we have inherited bear the marks of both Ottoman and Western influences: the great Psaltai who composed or arranged the chant were working within a living and confident tradition that was open to adaptation, and they were ready to take into Psaltic practice elements that enhanced and beautified it, rather than attempting to maintain absolute purity of tradition.

For theorists, the flexibility and adaptability of the Psaltic tradition poses a problem. The books produced by their predecessors describe an earlier state of Psalmodia that can be significantly different from contemporary practice. There is, moreover, a considerable problem for theorists in finding the right balance between prescriptive and descriptive approaches. It is, for example, quite clear that modern Psaltai generally use a scale for pieces in Tone IV on Vu which uses different notes from the scale they use to sing pieces in Tone VIII. Now, how is the theorist to cope with this? Is the practise of singing Tone IV on Vu in a distinctly non-diatonic mode simply a corruption of the diatonic system to be ignored by the theorist, or is the theorist to measure the intervals *actually* used when Tone IV is sung in this non-diatonic mode, and to present these as the tuning of Tone IV

on Vu? The same question arises with regard to the modern custom of flattening Vu in descent in Tone I: is this a corruption or simply a new development?

Certainly, Petros Lampadarios might have been surprised to hear a modern version of the Kanon in IV or the introduction of a flattened Vu into his compositions in Tone I. On the other hand, he would have noticed that the *Anastasimatarion* usually published under his name does not actually contain his music as he wrote and sang it, but a nineteenth century version of it edited by John the Protopsalt. Indeed, much of the classic repertoire of chant does not consist of classic pieces in their original form, but in an edited and reworked form better adapted to the taste of a later period, frequently by melodic elaboration and enhanced chromaticism.

At the end of the day, it is neither possible nor desirable to freeze Psalmodia in the form current at some particular period of history. Procrustes must not become the patron saint of Psaltic practice. On the other hand, a merely descriptive approach to Psaltic theory poses two virtually insoluble problems, collection and selection - how to collect the enormous mass of evidence that would be required in order to describe the full range of Psaltic practice, and how to select precisely which version of the practice is to be taught.

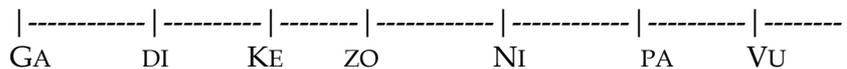
In this manual, I advise singers not to take up the habit of flattening Vu in Tone I and to consider using a true diatonic tuning of Tone IV. The reason for these choices is partly a matter of musical taste, partly a desire to defend a conservative version of Psaltic practice, partly a wish to have the classic repertoire sung in a tuning its composers would recognize, and partly a feeling that the modern taste for florid psaltic music ornamented with complex chromatic flourishes is inappropriate to a liturgical art, puts an unnecessary price on virtuosity and emotionalism, and, given where this book is written, is singularly ill-suited to the development of Psalmodia in Great Britain.

C] DIATONIC and ENHARMONIC.

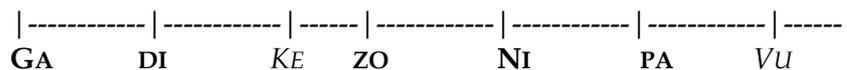
There is a close relation between the diatonic modes and the so-called enharmonic modes. In order to sing the scale of Tone III, for example, all that is required is that the notes Vu and Ke are sung slightly sharper than in the corresponding diatonic scale. Consider

Diagram G:

DIATONIC SCALE ON GA



ENHARMONIC SCALE ON GA



As the diagram makes clear, the notes Ga, Di, Zo, Ni, and Pa of the diatonic scale on Ga are sung at **exactly** the same pitch as the corresponding notes in the enharmonic scale on Ga.

DJ HARD and SOFT CHROMATIC

Psalmody makes use of two chromatic scales, the Soft Chromatic and the Hard chromatic. The relation between them in current practice is frankly quite obscure. Indeed, moving between them is probably the most difficult exercise in Tone to Tone modulation. In Diagram H the two scales are presented side by side:

Diagram H

II (S.C.) -----|-----|-----|-----|-----|-----|-----|
PA VU GA DI KE ZO NI

VI (H.C.) |-----|-----|-----|-----|-----|-----|
PA VU GA DI KE ZO NI

If, however, we take Raidestinos's proposal to see Ke as the basic note of the soft Chromatic scale, a very different, and much more intelligible pattern emerges, that allows us to interpret much more easily the precise relation between the two forms of Chromatic scale.

Diagram I

II (RAID) |-----|-----|-----|-----|-----|-----|
PA VU GA DI KE ZO NI

VI (H.C.) |-----|-----|-----|-----|-----|-----|
PA VU GA DI KE ZO NI

The two chromatic scales in this interpretation are close variants of each other: the notes Pa, Di and Ke have the same pitches in the two scales, the chromatic intervals which define Vou, Ga, Zo and Ni are closer to diatonic intervals in the soft scale and further from the diatonic in the Hard.

15 MELODIC ACCENTS

A characteristic feature of Psalmody is the use of melodic accents, small decorations or melodic flourishes, which mark accented notes in the melody. Flutter (*petasti*,) Heavy Accent (*bareia*,) Accented Diminuendo (*psiphiston*,) Ripple (*omalon*,) and Shake (*antikenoma*) are all used to indicate such melodic accents. In practice, different Psaltai interpret these signs in widely different ways. The following interpretation of the signs is, accordingly, no more than a suggestion. Individual teachers may have quite different interpretations to offer.

Melodic accents are a normal part of Psalms to the extent that a Psalter will frequently use them even when the musical text does not show them. A sequence of syllable sung on the same pitch or to a pattern of rising or falling seconds with not other accent than the stress or emphasis given by the rhythm of the chant is alien to Psalmody. Faced with such a phenomenon, the Psalter feels well-nigh compelled to add tiny melodic flourishes to certain accented notes to enliven the chant. A well-written musical text will normally indicate the melodic accents and their placing.

The Flutter (e) is a common sign. It indicates a rise of one note (a second,) but unlike the step (w) it calls for a tiny melodic flourish at the start of the note which brightens and enlivens it. The Flutter is sung as follows: the Flutter indicates a rise to the step of the scale next above the one which precedes the Flutter, the voice rises to that pitch with a distinct attack, then a rapid ornament is sung in which the voice rises very briefly to

the next step above and then returns. The ornament is executed not as a sequence of distinct notes, but as a slight disturbance of the single note. Most Psaltai place the accent on the raised part of the Flutter, but without disturbing the melodic rhythm. Some Psaltai sing a more complex ornament for the Flutter, where the voice rises very rapidly twice or even three times to the higher pitch, falling back each time to the note of the Flutter.

If the Flutter has a Roll written beneath it (f), then the brief rising ornament occurs at the end of the first beat, and if the simple version of the Flutter ornament is sung, in many contexts it will be sung more slowly, so that the raised part of the note lasts anything up to half a beat.

The Heavy Accent accentuates the note which follows it. The note is normally at the same pitch or one step below the note preceding the Heavy Accent. In either case, it can be accentuated by means of an attack which begins on the step next above that on which the accented note is to be sung, and then descends to the step on which the note is sung, energising the note at its normal pitch with an emphatic accent. In some combinations of signs, some Psaltai displace the raised note of the Heavy Accent and begin the accented note at the pitch indicated by the written sign and then introduce an ornamentation similar to that used in the Flutter.

The Accented Diminuendo (↪) accentuates the note under which it is written by adding a small melodic flourish in which the voice begins from the step of the scale next below that on which the note will be sung and then moves rapidly to the note which is sung with a marked emphasis. If the Accented Diminuendo is followed by a descending sequence of notes sung to the same syllable of the text, it also affects those notes, indicating they are to be sung increasingly softly and without accentuation or emphasis. If, however, the note after the Accented Diminuendo carries a new syllable, it is accentuated according to the rhythm of the piece and the logic of the text.

The Ripple (↪) is normally found written beneath the Level or Step or beneath two such signs. It affects the sign under which it is written, or indicates a melodic ornament at the conjunction of the two notes indicated by the pair of signs it affects. Psaltai interpret the Ripple in many different ways. It is clear, however, the Ripple indicates a short, rather emphatic figure which is added at approximately the midpoint of a single note, or at the point of conjunction of a pair of notes. Usually it is sung as a glottal shake or turn, or as a figure rising suddenly to a pitch two or even three steps above the note it affects and returning with a rapid and rather jagged movement (i.e. without any portamento.) The "throatiness" of the Ripple is an essential part of its character.

The Shake (↪) is found both under signs for ascent and for descent, but in both cases is normally followed by a sign for descending motion by a single step. The Shake calls for a melodic flourish to the latter part of the note under which it lies, and for the singer to sing the note bearing the Shake and the note following as a combined figure, with no attack on the second note.

16. TRANSCRIBING PSALMODIA into EUROPEAN NOTATION

Psaltic notation is a completely different kind of notation from the European staff notation. The basis of the staff notation is its ability to show the pitch and duration of the notes to be played or sung: psaltic notation shows the duration of notes, but unlike the staff notation it shows not the pitch of a specific note, but the interval between that note and the note preceding it. Moreover, the nature of the staff notation means that the musical text works as a sort of diagram of the melody; the rise and fall in pitch is represented by the place the notes of the melody occupy on the staff. In psaltic notation, all the musical signs lie on or about a straight line, so that the musical text has no real diagrammatic function. Transcribing music from the one notation to the other involves representing the melody in a quite different way from that in which it is represented in the original text.

The staff system uses the semitone as its smallest interval, whereas psaltic music uses microtonal intervals. In general, music written in staff notation is interpreted in terms of the equal temperament system of intervals that corresponds to the tuning of Tone III; there is no obvious way of representing the intervals of the true Diatonic and the two Chromatic scales used in Psalmodia.

Grave as these problems may seem at first sight, they are not insuperable. It is worth recalling that the exact intervals intended by the signs of the psaltic notation is only determinable if we know the Tone in which a piece is to be sung. The same sequence of signs represents a quite different sequence of intervals in pieces written in different Tones. This suggests at least one way of solving the principal problem of transcription: if the Tone of a piece is identified, then the staff notation can be re-interpreted to intend the intervals used in the scales of the specific mode in use. There is, unfortunately, a serious disadvantage to this solution: an inexpert musician attempting to read a piece of Psalmodia transcribed into staff notation will be misled as to the actual intervals intended by the musical text unless she or he knows the tuning of the Tone in use.

Most existing transcriptions intended for use by singers simply transcribe the notes of the melody representing microtonal intervals as semitones and leaving it to the singer's knowledge of the Tones to suggest a more exact interpretation. When, as, for example, in the set of 'bilingual' versions of the liturgical hymns published by Kapsakes, psaltic and staff notations face each other on opposite pages of the book, there is no grave danger of misunderstanding: if the staff notation alone is presented, then misunderstanding is all too probable.

The easiest way to enable accurate transcription of psaltic melodies into staff notation is to add a few new accidentals to the staff system. It has already been argued above that in practice Psalmodia uses three degrees of flat and three degrees of sharp. If we retain the normal flat and sharp of the staff system to represent the middle degree of flatness or sharpness, then we require signs to represent the flattish, the sharpish, the very flat and the very sharp. Two of these already lie at hand: in the equal temperament system a double-flat flattens a note by a whole tone, a double-sharp sharpens it by a whole tone. Psaltic music does not require double-sharp or double-flat signs for such a purpose, leaving them available for use to represent the very-flat and the very-sharp of psaltic

music - a use that has at least the merit of being highly intuitive. If we use the double-flat and the double-sharp in this way, then we need only a pair of signs for the flattish and the sharpish.

A question may well arise as to exactly what interval a flattish or a very-flat intends. This is a difficult question to answer confidently, since the musical theorists, as has already been pointed out, differ as to whether the chant uses twelfths, sixths or quarters of tones. Nonetheless, a general sketch of an answer can be constructed. If we divide the octave into 72 equal steplets, then

- a flattish flattens a note by approximately 1-3 steplets
- a sharpish sharpens a note by approximately 1-3 steplets
- a flat flattens a note by approximately 4-6 steplets
- a sharp sharpens a note by approximately 4-6 steplets
- a very-flat flattens a note by approximately 6-9 steplets
- a very-sharp sharpens a note by approximately 6-9 steplets

The exact interval intended by a specific accidental depends on the Tone in which a given melody is sung. In the Enharmonic modes of Tones III and Varys, for example, the flat lowers a note by an enharmonic semitone of six steplets, whereas in the Diatonic scale on Ni of Tone VIII a flat on Pa flattens it by 5 or 6 steplets, a flat on Vu flattens it by 4 or 5. The theory books in common use all offer a more precise definition of the precise degrees of flatness or sharpness the different accidentals intend, but these precise prescriptions are frankly implausible, and generally ignore the different interval structure of the different Tones.

APPENDIX.: Alternative Analyses of the Scales of the Tones.

So far this book has presented an analysis of the scales used in the Eight Tones which represents the consensus of modern writers on Psalmodia. Other accounts exist. In this appendix a few examples will be offered taken from the *Introduction to the Theory and Practice of Ecclesiastical Music* by Chrysanthos of Madytum, one of the three Great Teachers of the reformed notation (Paris 1821/ Athens 1977) and from the *Interpretation* of Konstantinos Protopsaltes (Constantinople, 1845.)

Unfortunately, neither the Bishop nor the Archcantor uses the 72 steplet division of the octave as the basis of his analyses. Both divide the octave into 68 steplets. This means, of course, that the steplets of the octave as Chrynanthos and Konstantinos analyse it, do not conveniently divide into six whole tones or twelve semitones. Of necessity, any account of a scale six tones or twelve semitones analysed into 68 steplets must result in some tones and semitones being seen as larger intervals than others. It follows from this, that Chrysanthos and Konstantinos cannot possibly have accepted the current analysis of the enharmonic scale of Tone III into five equal tones and two equal semitones, exactly half a tone in size, i.e.

Ni.....12.....12.....6.....12.....12.....6.....12

On page 34 of his *Introduction* Bishop Chrysanthos analyses this scale as follows:

Ni.....12.....13...3.....12.....12.....5.....11

Archcantor Konstantinos offers a quite different analysis. On page 71 of his *Interpretation* he identified Echos III with the Maqam Çargah. (He is not alone in making this identification though some writers identify Tone III with Maqam AcemaÖran.)¹ His analysis of the scale of Çargah, is , however, something of a surprise:

Ni.....12.....9.....7.....12.....12...3.....13

Signell, for example, analyses the scale of Çargah into 53 steplets as follows:

C.....9.....9...4.....9.....9.....9...4

While this analysis does not yield a scale identical with the **12..12..6.12..12..6.12** scale, it is at least more similar than that proposed by Konstantinos.

¹ see KARL L. SIGNELL, MAKAM, Da Capo Press, N.Y. 1986.

What are we to conclude from this? Were Chrysanthos and Konstantinos simply incompetent at analysing what they heard, sang and played? Or are they recording two ways of tuning the scale of Echos III that differ notably from that accepted as normative in modern books of psaltic theory? One thing is clear: it is ludicrous to imagine that so accomplished a psalter and melurge as Konstantinos was capable of confusing a small interval of 3/68 of an octave with an enharmonic semitone of 6/72 .

The difference between the analyses Chrysanthos and Konstantinos offer and the **12..12..6.12..12..6.12** analysis is not simply a consequence of their having used a scale of 68 steplets rather than 72: Signell's analysis uses 53 steplets, and although even his analysis of Çargah is not identical with the **12..12..6.12..12..6.12** analysis, it has five equal tone and two equal semitones, though the semitones are analysed as half a Pythagorean comma less than half a tone. What is truly startling in the accounts of Chrysanthos and Konstantinos is that they both present three sizes of tone and two of semitone in the scale, though they differ from each other in the size of the tones and of the semitones.

Alygizakis in his excellent study "H OKTAHXIA" (Thessalonika: P.Pournara, 1985), records several theorists, including Chrysanthos, as identifying Maqam Acem AÖran with Tone III, rather than Çargah. Konstantinos analyses the scale of this Maqam thus:

Di12...3.....13.....12.....9.....7.....12

Signell, on the other hand, analyses the Maqam as:

F.....9.....9...4.....9.....9.....9...4

- which makes the scale of Acem AÖran identical with that of Çargah transposed a fourth higher.

Bishop Chrysanthos's analysis of the intervals of the soft chromatic Scale of Tone II is as follows:

Ni.....7.....12.....7.....12.....7.....12.....7

The modern consensus is that the soft chromatic scale has the following intervals:

Ni.....8.....14.....8.....12.....8.....14.....8

This case too is puzzling. Chrysanthos records all the larger intervals of the scale as of the same size; the modern analysis distinguishes two sizes, 12 and 14 steplets. Is this indeed a distinction Chrysanthos failed to notice?

There is no doubt that in modern practice the interval Ga-Di is a normal large diatonic tone. Equally, there is no doubt that the intervals Vou-Pa and Ke-Zo are audibly larger (*though passages moving from Vu to Pa and then upward without descending to Ni and passages*

rising from Ni through Pa are often sung with the diatonic tuning of Pa.) Is Chrysanthos reflecting a different practice, a subtly different way of singing Tone II?

On page 42 of his *Introduction* Bishop Chrysanthos analyses the scales of two modes of Tone Plagal II:

a) The **pure hard chromatic scale**:

Pa.....7.....18...3.....12.....7.....18...3

And

b) the **mixed hard chromatic and diatonic scale**:

Pa.....7.....18...3.....12.....9.....7.....12

Comparing example a) with the standard modern analysis of the hard chromatic:

Pa.....6.....20...4.....12.....6.....20...4

suggests that here too Bishop Chrysanthos is representing the scale as it is currently sung. The distribution of intervals is similar, the very small intervals and the very large intervals occur in corresponding places.

The mixed scale represents a common modal variation that usually occurs within a piece, where a melodic passage is based on the upper tetrachord of the diatonic scale rather than that of the hard chromatic. Many Doxastika contain such passages, as does the familiar chant of the Antiphon *Simeron krematai epi Xylou*.

On page 47 of the *Interpretation* Konstantinos asserts that Maqam Segah is Echos Legetos, and Alygizakis (p.216) shows that this Maqam is generally thought to correspond to Tone IV. Konstantinos gives the scale of Segah as

Zo...4.....12.....9.....7.....12.....12.....9
 |
 Vou

This time the scale he presents seems to represent reasonably well the pattern of intervals in Tone IV Legetos as it actually sung, though many singers would sharpen the note Pa more than is suggested here.

Kakoulides, in his useful “ΘΕΩΡΙΑ ΚΑΙ ΠΡΑΞΙΣ” Athens, 1988, (p. 63) analyses the scale of Tone IV showing an ambiguity in the pitch of Ke and Zo. Here are the two versions of the scale his diagram implies:

- a) Vou.....8.....12.....12.....10.....8.....12.....10
- b) Vou.....8.....12.....10.....12.....8.....12.....10

Konstantinos identifies Maqam Rast with Tone Plagal IV, and analyses its scale as follows:

Ke.....12...4.....12.....9.....7.....12.....12

Signell records the intervals of Rast as:

G.....9.....8.....5.....9.....9.....8.....5

The accepted structure of the scale of Tone VIII is

Ni.....12.....10.....8.....12.....12.....10.....8

If we transpose the scale Signell gives for Rast a fifth lower we get the following scale

Ni.....9.....8.....5.....9.....9.....8.....5

This does not correspond exactly to the psaltic scale, but is very close in pattern. Indeed if we multiply the values of intervals in the psaltic scale by .75 we get a scale of

Ni.....9.....7.5.....6.....9.....9.....7.5.....6

which is as close to Signell's version of Rast as one could hope given the fact that one model is originally based on 72 and the other on 53 steplets to the octave. What then of the Archcantor's version of Rast? His analysis begins on Ke rather than Di

Ke.....12...4.....12.....9.....7.....12.....12

To make Konstantinos's transcription comparable to Signell's we need to begin the scale at Ni rather than Ke:

Ni.....12.....9.....7.....12.....12.....12...4

This scale differs from the one given by Signell mainly in the intervals between Ke and Zo and Zo and Ni: Zo is sharper in Konstantinos's analysis.

These interesting examples may be enough to suggest that the precise tuning of the psaltic scales is not quite so cut and dried a matter as the consensus of modern theorists can all too easily suggest.