

# Production fields of theoretical terminology of the Psaltiki

## Πεδία παραγωγής της θεωρητικής ορολογίας της Ψαλτικής

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### A. INTRODUCTION

Theory means cognitive oversight. As it has been written, it is an «imposition–description of meaning on experience». In order to understand the empirical world, human reason uses specific mechanisms such as naming, measuring, numbering all that can be numbered, classifying, categorizing, grouping or describing by means of similes. Language follows this procedure either on a first level, e.g. by attributing substantives to objects, or on a second level, e.g. by attributing comparative, numeral (cardinal and ordinal) etc. adjectives to substantives, or, finally, on a third level, a theoretical one, that includes more abstract concepts in their appropriate grammatical forms. Several techniques known from the study of language, such as grammatical analysis (e.g. division into substantives, especially those that signify action or quality, adjectives, verbs, etc.), etymology, semantic extension or reduction, metaphor, amelioration, deterioration and transformation, mechanism of selection and deviation, levels of classification from the more concrete to the more abstract, etc. provide us with useful insights into the study of Terminology.

Terminology is always a scientific problem. Terms are verbal signifiers characterized by polysemy. The multiple meanings of several terms (*Κανών, Μέθοδος, Αρμονία, Γένος, Χρόα*, etc.) are well known, whereas they may change significance from one theoretical author to another. For instance, in Kyriakos Philoxenis, the terms *Βάσταμα* (=~*endurance*) means prolongation with time characters, *Γρόνθον* (=~*fist!*) means outpour of sound on the flute, but also octave scale, *Ένωσις* (=union) means accord and *Κόμμα* (=cut) means a pause connected to an imperfect cadence. Some frequent errors that are committed even during the teaching of Musical Theory include the attribution of the term «*Εναρμόνιον*» to the hard diatonic genre, the confusion concerning the terms *Ετεροφωνία, Ομοφωνία, Μονοφωνία, Φωνητικότητα* or the confusion about the units *Κόμματα – Μόρια – Τμήματα* for measuring intervals.

A coherent and reliable terminology, well documented and free from arbitrary name giving, is a requisite for Byzantine Music, since in a spectacular corpus of more than 500 theoretical terms encountered in texts dating from the Byzantine era up to the present time there are many misconceptions and difficult interpretations.

There has been a debate on whether the approximately 100 terms of the Byzantine notation (Parasemantike) should be included in theoretical terminology or not. Some terms of Morphology (e.g. «*Ειρμολογικός Δρόμος*» = such way as the Heirmologic chant), Organology (e.g. the instrument *Κανονάκι* = Kanun = rule, or the fret «*μπαζ μπερντέ*» = the fret that represents the base of the melody), or even History (e.g. *περίοδος Νέας Μεθόδου* = New Method's era) are sometimes intertwined with Theory. As far as Notation is concerned, the answer must be unreservedly yes, since, for example, the terms «*Ισον*» (Ison=equal or straight) or «*Φθορά*» (=decay) cannot be understood without a previous theoretical construction of a scale with a given base and specific intervals. Here a phrase by Apostolos Konstas is very enlightening: The *Grammes* (= notation Formulas) include «both melody and rhythm», whereas elsewhere he writes that the *Grammes* comprise «major and minor voices, formations, half-voices and gesture».

On the contrary, we have not included the approximately 130 terms referring to maqams or to the terminology related to them (e.g. *sioupe, usul, tiz*). These terms are encountered in theoretical texts, but they refer to comparisons between the theoretical system of Psaltic Art and the corresponding theory of secular music, especially that of Constantinople. These terms never replaced the Greek terminology of Psaltic Art. In the few musical texts in which they are found, they are always accompanied by the terminology of the Modes. We also chose not to include some terms referring to European music and encountered in theoretical essays of a special type, such as the *Theoretikon* of Hieronymos Tragodistes, since they are used only with a view to offering parallel examples to specialists of European music. Some notation terms in Hieronymos, such as «*ανωμιφωνόφθορο*» or «*Ισοτέτραργον*» and other composite words similar to them display a certain originality, yet they never knew any diffusion whatsoever.

The fundamental need that defines the generative fields of terminology is precisely the need to describe the main traits of Psaltic Art, i.e. the Modality, that places emphasis on melodic movement, the Heterophony, the multi-intervalty, the phonetic character, the learned level that demands teaching, notation and theory, and the specific ritual use. Studies on the production and use of the terms and on their rehabilitation based on the specific traits of Psaltic Art and on the correct use of language (both on a descriptive and on an analytical-semantic level of abstract notions examined through time) can, in my opinion, contribute positively to the evolution of musical science.

## B. THE FIELDS OF TERMINOLOGY PRODUCTION

Among all possible mechanisms of term production, each civilization selects specific fields of experience and thought from which it eventually draws its theoretical terminology. The names of ancient Greek Modes are race names (*Δώριος, Λύδιος*, etc), those of Byzantine Modes are ordinal numerals (*Πρώτος, Δεύτερος* = *first, second*, etc.), whereas in the names of the Maqams are included many geographical terms (*Hicaz, Rast, Acem*, etc.). In every civilization one expects to encounter some terms such as those of arithmetic, that correspond to fundamental thought functions.

A kind of fundamental terminology deriving from notions such as “genus, species, ingredients, measure, amount, quality, small, large, primary, secondary, redundancy, lack of”, etc. is obviously valid, in some way, for Psaltic Art. By «fields of terminology production» we mean in particular the areas from which the more specified vocabulary is drawn. In the case of Psaltic Art, these are the following:

- The field of ascribing a term to the visual shape of some notation marks.
- The field of producing terms based on the use of instruments, especially string instruments, and of course of human voice.
- The field of quantitative analyses, mainly based on Pitch and Time, where number, size, comparison and order are attributed to the musical material.
- The field of psychoacoustic description of the musical event, consisting in imitation and description of movement, durations, actions, acoustic impressions or even of entire melodic ensembles. This field is directly associated to the description of ethos, i.e. of specific feelings generated by both fundamental musical components (melodies, rhythms, modal categories, etc.) and broader structural units, such as the famous *Theseis=Formulas*.

**B1.** Some notation terms are named precisely after their shape. They usually do not convey any important theoretical information. Examples of this category are the terms *Κέντημα* (or *Κεντήματα*), *Σταυρός*, *Σπάθη*, *Ζυγός*, *Ημίφι* (= half «Φ», that does not exist really in Byzantine notation), *Τροχός* (=wheel) or, *Τροχίσκος*, and the more recent term *παρεστιγμένα* (=with a dot). There are also some more abstract terms: *σημείον* or *σημάδι* (=sign), *νεύμα* (=neume), *Μαρτυρία* (= indication of the base or of a cadence), *σχηματισμοί* and *Γραμμές* (= formulas). However, the stenographic *Γραμμή* (Formula), as a synthesis of

characters, functions rather as visual point on a more complex level than that of the simple note, since it is also linked to gesture. Thus a writing must be elegant to the eye and comply to orthographic rules, and this is how the term «*Ευμορφοτονία*» (=beautiful sign's synthesis), encountered in the theoretical text «*Ακρίβεια κατ' Ερώτησιν και απόκρισιν...*», acquires its significance.

**B2.** Ancient Greek terminology is mainly based on string instruments. Many terms such as *τόνος* (=by tension), *διάτονον*, *συντονισμός*, *συγχορδία*, *τετράχορδον*, *διαπασών*, *ένταση*, *κανόνας*, *υπάτη*, *μέση* (*χορδή*=string), etc. as well as the expression of intervals by means of string ratios, and even the word *Ψαλτική* are based either on the use of instruments such as the lyre or the psaltery, or on special constructions such as the monochord and polychord *Canon* or the *Helicon*. The terms *Παραχορδή*, *τιναγμός* (= string pulse) and *Κανόνιον* are interesting additions. The *Κανόνια* are diagrams based on the Pandouris and the monochord Canon and have been established, mainly after Apostolos Konstas of Chios, as diagrams of scales and of the intervals thereof.

Sometimes the issue is raised whether primeval models of organology, such as the use of wind instruments, have served as a field of terminology production. In fact, some terms such as *βόμβος* (= hum or drone), *α' φωνή*, *β' φωνή* etc, corresponding to the first, second etc. hole of the aulos, or *μία φωνή άνω του βόμβου* = *Πρώτος Ήχος*, *δύο φωνές άνω Β' Ήχος* (one voice above the drone = first Echos, two = second) and so on, and even the term «*Πνεύματα*» (=Spirits) in notation, are all related to wind instrument practices. Nevertheless, the prevailing of Apollonian aesthetics, imposing the model of the free mouth and voice, is overwhelming.

There are also, as one would expect, some terms related to the characteristics and the technical capabilities of human voice. Terms such as *φωνή* (=voice), *γεροφωνία*, *μσηφωνία*, *διπλοφωνία*, *παραραφωνία*, *ταυτοφωνία*, *ισοφωνία*, *μετροφωνία*, *διφωνία*, etc., *δίφωνος* etc., *ενδόφωνον*, *ημίφωνον*, *έκφωνος*, *προσωδία*, *φθόγγος* are clearly produced from this field.

**B3.** In the field of quantitative analyses, classification etc., there are distinct groups of terms based on the use of the notion of «size». Of course all the terms indicating size, numbering etc. function as adjectives attributed to substantives, so there is an additional field involved in the production of the term. For instance, the term «*tetrachordon*» refers to the field of quantitative measurement, but also to the string instruments, whereas the term “*A' Echos* or *Stoichos* or *Stochos*” refers also to the psychoacoustic description of the specific structure and alignment of a melody.

In the theory of intervals, terms vary from the exact Pythagorean expression of intervals by means of string ratios to the more empirical measurement proposed by Aristoxenos, and

even to more simplistic classifications, for practical use only. Thus we encounter terms such as *ὅπως διὰ τεσσάρων* (=by four parts of string), *τετράχορδο*, *ημιόλιος*, *τετραφωνία*, *διπλασμός* (=doubling), *διφωνίες*, *τριφωνίες*, *επταφωνίες*, etc. In some Byzantine and post-Byzantine *Theoretika* there are some interesting pairs of terms, such as *Τόνοι – Ημίτονα*, *Φωναί – Ημίφωνα*, *Φθοραί – Ημίφθορα*, *Χρόνοι – Ημίχρονα*. Some original terms are also to be found, such as the «*λεπτά των φωνών, ημίση και τρίτα*» (*the thin voices, the half ones and the thirds*) or the curious term «*ημιτριτόνης*» (which probably means half tritone, correspondent to trisemitone). In the simplistic description of Apostolos the classification refers to *γεροφωνίες*, *μισσηφωνίες*, *ελιπέστερα υφέσεων και διέσεων (ως διαστημάτων) και ακόμη ελιπέστερα* (*full tones, semi tones, smaller than ypheseis and dieseis [in the sense of intervals], and even more smaller*). In more recent texts, e.g. in Basileios Stephanides, one encounters some other terms as well, whose precision and functionality are sometimes doubtful, e.g. *Υφέσεις* etc. – *Ημιυφέσεις*, *Ημιδίτονα*, *Ημιπεντάφωνα*, *Δεκατημόρια*, *Επιδιμερής λόγος = 3/5*, *Επιτριμελής = 5/8*, *Ήμισυ νενανώ* or even *Υφεις Ελάσσονος*, *Ελάχιστος Μείζονος* in the Committee of 1883. In more recent *Theoretika* there is an obvious endeavor to substantiate a high level theory of intervals based on Mathematics. Thus one encounters exact measurements and complete series involving the terms *Συμφωνίες*, *Τρίτες*, *Τόνοι (Υπερμείζων, Μείζων, Ελάσσονες, Ελάχιστοι)*, *Ημίτονα*, *Διέσεις*, *Λείμματα - Αποτομές, Κόμματα, Μόρια*.

The *Modes* are numbered *Πρώτος*, *Δεύτερος*, etc., and their generative pattern from the alchemistic *Stochos* obeys to a specific logic: from the *Κύριος* (=main) down to the *Πλάγιος* there is a distance of a fifth, in the middle of which one finds the *Μέσος* and in corresponding distances the *Δίφωνος*, *Τρίφωνος*, etc. A base position is also indicated by the terms *Παράμεσος*, *Παραπλάγιος*, *Παρακύριος* and also *Διπλότριτος* or even *Εσω* (=in) and *Εξω*(=out) *Ήχος* in a distance of Trochos, that is of a Pentachorde.

Size is also indicated by the systems of *επταφωνία* or *διαπασών* (*των επτά χορδών της λύρας*= by all the seven Lyre's strings), *τετραφωνία* or *τροχός* (four radius wheel), *τριφωνία* and *διφωνία*.

Size measurement is obvious on the time axis and in the marks indicating time, such as *Απλή*, *Διπλή* etc, *Γοργόν*, *Δίγοργον*, *Αργόν*, *Ημίαργον*, *Δίαργον* etc., *μέγα και μικρό Κράτημα*, *μεγάλοι και μικραί Άργιαι*, as well as in the terms *δίσημος*, *τρίσημος*, *τετράσημος*, *επίτριτος*, etc. referring to rhythm.

A quantitative code is also encountered in some old Byzantine signs that are reminiscent of the logic of production of the quantity characters, such as *Διπλή (Οξεία)*, (*δύο*) *Απόστροφος*, *Δύο*, *Τρία* and *Τέσσερα* (as neumes), *Διοξεία*, *Διπλοβάρεια*, *Διπλοπέταστον*, *Ολίγον*, *Ελαφρόν*,

and of course, by opposition, in the famous *Ίσον* which *φωνείται μεν, ου μετρείται δε* (= *it is sung, but not counted*). A notion of quantity is also implied in the term *Μεγάλα σημάδια* (= *Grande signs*) or *Μεγάλες Υποστάσεις* (Great Hypostases).

**B4.** As it should be expected, the terms generated from the field of psychoacoustic interpretation of the musical phenomenon do prevail. The way that we understand musical events depends on how we perceive and describe our surroundings, using parallel images, similes, imitations and so on. We usually use a few fundamental axes of archetypal elements, such as the frequency width of the notes, their duration and evolution in time, the rendering of melodic movements, the indication of changes from an initial model and the description of the emotions provoked by what we listen.

The most usual model, that applies to the Psaltic Art as well, is to divide the frequencies of the notes in high and low ones. This is of course a purely subjective feeling, related to psychokinetic models (e.g. «climbing is difficult»). From History we know some other models too, such as the converse ancient terminology «*Υπάτη – Νήτη*» (= *highest=the low note – the farthest=the high note*) based on the position of the strings in the instrument, or «*Βαρεία – Οξεία*» (*heavy, grave – acute*), based on the particularities of human voice. In Byzantine terminology, apart from the model «high – low», bearing the corresponding marks, there is a remarkable pair formed by the terms «*Ἐσω – Ἐξω*» (= *in – out*). *Ἐσω* means low (Mode's bases, the sign *Ἐσω Θεματισμός* which turns to down, downward movements, etc.) and *Ἐξω* means high. S. Karas has suggested that this terminology stems from string instruments such as the lyre and the luth, whose outer string is at a distance of one fifth from the inner one – there is even an expression: «Play out». Nevertheless, the most plausible interpretation is that this pair of terms have originated from the expression «*ἔσωτέρῃ τῆ φωνῇ*» (= *by inmost voice*), which refers to the Prayers' recitation and means in a low, almost inaudible voice, the high frequency notes thus being excluded, and from its opposite «*ἔξω φωνῇ*», a voice capable of being heard loudly, and therefore consisting of high frequency notes. Furthermore, a set of terms refers to the ascending and descending quality of the melody: *Ἀνάβασμα – Κατάβασμα, Αναρροή - Υπορροή, Υψηλή – Χαμηλή, Οξεία – Βαρεία, Ἀπέσω Ἐξω, Ἄνω και Κάτω επταφωνίες*. The verbs *εξηχώ, προέρχομαι* and *εβγαίνω* mean to ascend to higher notes, whereas the term *Πλάγιος* stems precisely from its descending position in relation to the main Mode.

On the time axis, there is the distinction slow vs. quick, expressed in the terms *ἀργίαις* (=durations), *ταχυτήτες* (=speeds), *Γοργόν, Γοργοσύνθετον*, etc., the temporal «*συνάγματα*» (=gathers) and their corresponding signs, and the terminology of rhythm, whose feet and

meters are called *δίσημοι*, *τρίσημοι* (=in two bits, three bits), etc. There also are some later European additions incorporated into Greek, such as *diastoles*, *tempos* and *pauses*. Sometimes one encounters strange terms, e.g. *συνεπτυγμένος* (=short) or *τροχαλός* (=running) *ρυθμός*.

The field of melodic movements has generated many terms, such as *Διάστημα* (=interval), *Τρόπος*, *έλξις* (=pull), *δίεση* = *διέλευση* (=transit), *εσώτες και κινούμενοι φθόγγοι* (=fix and movable notes) *καταλήξεις* (cadences), *πλοκή* (=twist), *παρέκβασις* (=deviation). Many names of notation signs describe movement: *Απόστροφος*, *Πεταστή*, *Εκστρεπτόν*, *Κύλισμα*, *Λύγισμα*, *Τσάκισμα*, *Ψηφιστόν*, *Τελεία*. Gabriel, discussing the etymology of *Χόρευμα* (=dancing), compares its melodic movement to a dance, and especially a circular one. Furthermore, the notation of Psaltic Art is neumatic, i.e. a description of movements, not of frequencies.

Terms such as *χρώμα* (=chromatic = colored), *εναρμόνιο* (=well fit - settled), *παραλλαγή* (= variation), *φθορά*, *έκλυσις*, (=decay) *μαλακό – σκληρό* (= hard – soft), *ιδέα Ήχου* (= mode's idea – view), *Ομαλόν* (= flat, smooth), *Στοχός – Στοίχος* (= alignment and, by alliteration, *Echos*), *δεσπίζοντες φθόγγοι* (= dominant notes), *πόδες* (=feet) are also associated to the use of parallel impressions drawn by experience.

Finally, there is a group of terms that describe *Ethos*, i.e. emotional mood. This group includes the ancient terms *συσταλικόν*, *διασταλικόν*, *ησυχαστικόν* (=shrinking, enlarging, pacifying), the notation signs *Παρακλητική*, *Παρακαλέσματα*, *Τρομικόν*, *Επέγεσμα*, *Σείσμα*, as well as some names of Theseis - Formulas, such as *Ράπισμα*, *Γρονθίσματα*, *Ανατρίχισμα*, *Κολαφισμός*, *Χαιρετισμός*, that allude to specific emotions. In the last case, the effort of rendering subtle emotional shades is intense and sometimes admirable. It has worked for centuries, offers a rich material for morphological and, more generally, aesthetic study and must be considered as an achievement of Byzantine Art.

### 3. OBSERVATIONS

The terminology of Psaltic Art is undoubtedly a product of Greek language. It incorporates without any difficulty whatsoever the quasi-totality of ancient Greek terminology and is completed by means of garnering Byzantine, post-Byzantine and modern Greek terms, with very few foreign additions in the course of fifteen centuries. Ancient Greek terminology is sporadically encountered in the purely psaltic Byzantine Theoretika, then it shrinks in the post-Byzantine ones and is dynamically reintroduced in the beginning of the 19th century with Chrysanthos and Stephanides. Whatever the field that produced the terms, the system appears integrated, independent, highly functional and suitable for Psaltic Art and also, it is

open to any fruitful addition (e.g. the term «σκληρόν» [hard] genre, as opposed to ancient «μαλακόν» [soft], has been introduced as late as the beginning of 20th century).

Greek theory has lended terminology and term-constructing logic both to the East and the West. Ancient Greek terminology constitutes the basis for European music's theory. It is well known that European neumatic notations copy the Byzantine models and the term-constructing logic associated to them, even when the language changes from Greek to Latin. Furthermore, the early Byzantine practice of naming the Modes using as a basis the ordinal numerals seems to be the model of some Arabo-Persian terms, such as *Yegah*, *Dugah*, *Sehgah*, *Chahargah*, etc., i.e. First, Second, Third basis and so on. The division in Primary and Secondary Maqams follows the logic of the division in Authentic and Plagal Modes, despite the fact that in the case of the Maqams the method of changing modes into plagal ones is not used. On the other hand, the introduction of foreign terms in Psaltic Art is very rare, the most serious case being that of the Maqams and of a very few European terms.

Greek language has a dominant international presence in the production of terms for the most modern sciences such as Medicine, Physics, etc. The functionality of the terms, deriving from the very music they describe and expressed in the language of the corresponding civilization, guarantees the uninterrupted survival of Greek theoretical musical terminology through the material of Psaltic Art as well.