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THE ORGANIZATIONAL RHYTHMIC STRUCTURE OF GREEK DANCE

Key words: rhythm, stress, structural units, kinetic motif, kinetic cell.

ABSTRACT

The aim of the project was to examine the relationship between three ‘cornerstones’ of the organizational rhythmic structure of modern Greek dance. 16 Greek dances were chosen ($n = 16$) and 18 structural analyses of these dances were carried out based on the analytical morphological and taxonomic choreographic method adapted to the research protocol. To process the collected data, an analysis of frequencies and correlation analysis were carried out. The analysis of the three ‘cornerstones’ of studied dances revealed that the ratios between them follow the commonly accepted standard (1:1, 2:1, 3:4, 5:8). In particular, it can be established that modern-day Greek dance technique is directly related to lyrical, melodic and dynamic stress, while a unique correlation takes place between the kinetic cell and beat. The kinetic cells, in a specific proportion, create kinetic motifs of the dance phrase, which possess a relative autonomy without necessarily corresponding to a bar.

INTRODUCTION

Since ancient times dance in Greece has been perceived as a ‘three-cornered’ concept. According to Aristoxenos [2], the three ‘adjustables’ of dance included lyrics, melody and body movement, i.e., gestures and posture. In the world of scholarship, it is generally accepted that what was referred to as the three-cornered dance structure in Ancient Greek philosophical thought is still valid today in modern Greek dance [14, 18, 27].

Dance is not simply a combination of component features but a structured unit which owes its significance to the interdependence of these parts. Modern Greek dance possesses characteristics which are related as much to its own peculiarities as to the development of specific ratios between the three cornerstones [19, 23, 24, 26].

The Ancient Greeks based their system of musical time on prosody, i.e. on the alternation of long and short syllables [6]. The present-day music bar is tonic and not prosodic, thus the main characteristic of modern Greek dance is tonality, not time [18]. During the performance of modern Greek dance the stressed syllables coincide in time, i.e. lyrics, melody and dynamic stress are ‘tied together’ [4, 26]. As prosody has fallen into disuse today, an issue has arisen of tempo-rhythmic coincidence of the above stresses so that the phenomenon of prosodic stress (PT) is created, i.e. the lengthening or shortening, depending on the circumstances of grammatical syllables [11].

Literary sources [1, 4, 9, 12] define the motif as a structural unit of movement, equivalent normally to a bar. This view has more recently been embraced by Greek scholars who, adhering to this

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‘western’ reasoning, accept the absolute correspondence between bar and kinetic motif as a dogma. More specifically, they define the kinetic motif as whatever corresponds to a bar, without considering its independence [10, 25].

Just like in ancient prosodic ‘feet’ lyrics, melody and movement coincided in terms of time during the dance [13, 18], the steps, i.e. kinetic cells – which when joined together in certain proportions comprise the so-called kinetic motif – are still created today [16]. Therefore the issue of independence of the kinetic motif remains very important [20].

This issue has been dealt with in more recent research, in an effort to find an internationally acceptable definition of motif [8] as well as in Greek dance. Present-day research supports the view that the kinetic motif may be case-dependent [27] and display relative independence without necessarily corresponding to a bar [19, 21].

The aim of the project was to study the relationship between the three ‘cornerstones’ which comprise the organizational rhythmic structure of modern Greek dance, so that, during the basic analytical-compositional teaching process, the amount and, more importantly, the quality of reproduction, can be rendered more efficient.

METHODS

In order to study the above relationships, 16 Greek dances were chosen ($n = 16$). These dances are part of a year-long introductory Greek dance programme for young school children, based on particular rules and principles [22]. More specifically, the following dances were studied: Hasapia, Syrtos sta tria 3/8, Syrtos sta tria 4/4, Omal Kars, Trehatos, Tsourapia, Podaraki, Kalamatianos, Tsakonikos, Karagkouna, Zonardikos, Syrtoballos, Xesyrtos, Giar-giar, Tsamikos and Palamakia. 18 ($n = 18$) structural analyses of these dances were subsequently carried out, based on the analytical morphological and taxonomic choreographic method [4, 12] adapted for the research protocol [14]. Hasapia and Syrtos sta tria 3/8 presented two different forms: specifically, the tonality of the lyrics (incomplete bar) in the first phrase of Hasapia, and another different rhythmic form (4/4) in the second part of the Syrtos sta tria accompanied by the song ‘Kontoula Lemonia’.

In order to process the data, an analysis of frequencies and, subsequently, a correlative analysis (Pearson’s r) were carried out.

RESULTS

Of the 18 structural analyses and a comparative study of the structural units as well as parameters that were studied, 6 involved instrumental music (as regards the accompaniment to the dances), while the other 12 the lyrics. In all the cases involving lyrics prosodic tonality (PT) was found. In four of the eighteen analyses (22.2%) the phenomenon of incomplete bar (IB) was noticed (Tab. 1).

As shown in Table 1, the musical phrase – dance phrase ratio values (MP:DP) indicate that the listed dances could be divided into four categories. More specifically, 6 dances were characterized by the MP:DP ratio of 1:1 (33.3%), 1 dance – 2:1 (5.5%), 9 dances – 3:4 (50%) and 2 dances – 5:8 (11.1%).

Four categories can also be distinguished with regard to the bar – kinetic motif ratio (Mm:km): 1:1 (5 dances – 27.7%), 2:1 (4 dances – 22.2%), 1:1 and 2:1 (8 dances – 44.4%) and 2:1 and 4:1 (1 dance – 5.6%).

Furthermore, the structural analysis revealed that in almost each case there was a corresponding step in each part of the beat (kinetic cell). This phenomenon was observed in 17 out of 18 cases (94.4%), while only in the Syrtos sta tria dance with the accompanying song ‘Kontoula Lemonia’ the ratio amounted to 3:1 (5.5%).

As far as the complexity and organization of the rhythmical-bar form is concerned, 5 dances (27.8%) displayed a two-group bar, 2 dances (11.11%) a two-group bar of 6/8, 1 dance (5.6%) a two-group bar of 7/16, 1 dance a three-group bar of 3/8, 1 dance (5.6%) a three-group bar of 3/4, 1 dance (5.6%) a three-group bar of 7/8, 4 dances (22.22%) a four-group bar of 4/4, 1 dance (5.6%) a four-group bar of 9/8 and 1 dance (5.6%) a five-group bar of 3/4.

Finally, as far as tempo is concerned, 10 dances (55.55%) progressed at a moderate speed ($\theta \sim 85 - 116$), 7 dances (38.8%) at a high speed ($\theta \sim 120 - 144$) and 1 dance (5.6%) at a very high speed ($\theta \sim 208$).

Table 1. Results of structural analysis of 16 dances with regard to the ratios between musical phrase and dance phrase (MP:DP), bar and kinetic motif (Mm:km) and beat and cell (b:c)

Dance	Theme	Origin	Rhythmic Pattern	Tempo	MP:DP	Mm:km	Special feature
Hasapia a'	<i>Sto Galata</i>	Thrace	E ε+εε	θ ~122	3:4	1:1&2:1	I.B + P.T.
Hasapia b'	<i>Ehe geia</i>	Thrace	E ε+εε	θ ~122	3:4	1:1&2:1	P.T.
Syrto sta tria a'	<i>Kontoula Lemonia</i>	Epirus	E+ε+ε	θ ~96	3:4	2:1&4:1	b/step 1:1 P.T.
Syrto sta tria b'	<i>Kontoula Lemonia</i>	Epirus	Θ+ εε+ θ+θ	θ ~116	3:4	1:1&2:1	
Syrto sta tria	<i>To feggari</i>	Roumeli	Θ+ εε+ θ+θ	θ ~120	3:4	1:1&2:1	P.T.
Omal Kars	<i>Seranta mila</i>	Pontos	Θ+ εε+ θ+θ	θ ~ 92	3:4	1:1&2:1	I.B + P.T.
Trehatos	<i>Instrumental</i>	C. Macedonia	Ξξξ+εε	θ ~ 208	3:4	1:1&2:1	
Tsourapia	<i>Instrumental</i>	C. Macedonia	Θ+εε+ θ+θ.	θ ~140	3:4	1:1	
Podaraki	<i>Instrumental</i>	E. Romulia	Θε+εεε	θ ~96	1:1	2:1	
Kalamatianos	<i>Diamanti dahtylidi</i>	Peloponnese	Eεε+εξξ+εε	θ ~144	1:1	2:1	P.T.
Tsakonikos	<i>Sou eipa mana m'</i>	Peloponnese	Θ+εε+εε+E.ξ+εε	θ ~104	1:1	1:1	P.T.
Karagkouna	<i>Karagkouna</i>	Thessaly	Θ+εε+θ +θ	θ ~112	1:1	1:1	P.T.
Zonaradikos	<i>Lianohortaroudia</i>	Thrace	Θ ε + εεε	θ ~96	3:4	1:1&2:1	P.T.
Syrtoballos	<i>Armenaki</i>	C. Aegean Sea	E. ξ+εε	θ ~85	1:1	2:1	P.T.
Xesyrtos	<i>Den pantrevisti</i>	Thrace	E∨∨+εε	θ ~120	2:1	2:1	P.T.
Giar-giar	<i>Instrumental</i>	N. Aegean Sea	E∨∨+εε	θ ~120	5:8	1:1&2:1	
Tsamikos	<i>Poulaki xeno</i>	Roumeli	E.ξ+εε+εε	θ ~104	5:8	1:1	I.B + P.T.
Palamakia	<i>Instrumental</i>	Epirus	E. ξ+ξξξε	θ ~90	1:1	1:1	

MP:DP – musical phrase – dance phrase ratio

Mm:km – bar – kinetic motif ratio

b:c – beat – cell ratio

IB – incomplete bar

PT – prosodic tonality

b:step – bar – step ratio

The obtained data reveal a statistically significant correlation between the MP:DP and Mm:km ratios ($r = 0.509^*$, $p < 0.05$). Negative correlations were found between bar form and tempo ($r = -0.091$), and between the MP:DP ($r = -0.064$) and Mm:km ratios ($r = -0.267$); however, they were non-significant.

DISCUSSION

The phenomenon of prosodic stress found in all the studied dance-related songs corresponds with earlier research findings [3, 11, 13] and is due to the historicity, continuity and common roots of Greek rhythmic technique [13, 18]. The phenomenon of incomplete bar which, musically, is

owing to syncopation and counter-rhythms [26], is directly linked with the phenomenon of circumvention of grammatical tonality observed in all the dances under study, and emerges when the three stresses: lyrical, melodic and dynamic, do not coincide [11, 23].

It should be noted that music and language are fundamental interdependent elements of the cultural and spiritual expression of human experience and behavior. Although these are clearly different research areas involving specific scientific disciplines, nevertheless they have from time to time approached each other, provoking a discourse involving linguistics, anthropology, ethnic musicology, musical theory, philosophy and cognitive sciences [7]. The results related to the MP:DP ratio are in agreement with those of a recent study on a larger study sample ($n = 58$), during which 32.75% of the dances displayed the ratio of 1:1, 50% – 3:4, 6.90% – 2:1 and 10.34% – 5:8 [14]. The groupings which can be observed in the correspondences between bar and kinetic motif are confirmed by recent research into kinetic motif in Greece [21, 27].

The unique correspondence between beat and kinetic cell in the present study has been confirmed in all previous studies [23, 26]. The only exception is the 'Kontoula Lemonia' song, which is due to the fast tempo of the bar of $3/8$, whose parts are grouped on one beat, and which forms a creative metrical unit of other complex bars [24].

The highest correlation was noted between the MP:DP and Mm:km ratios ($r = 0.509^*$), which is quite logical since they do form structural units of the same system which is created using a particular technique. The musical phrases are created by means of repetition of the same specific musical metres, and the dance phrases by means of repetition of specific kinetic motifs.

The negative correlation ($r = -0.091$) between tempo and bar form means that the more complex the bar form is, the slower the tempo, and the simpler the bar form the faster the tempo. This confirms the theory of the basic principles of organizational order [16]. According to this view, it is recommended that children at the early school age should start their dance education by using and reproducing simple rhythmical structures ($2/4$, $6/8$) and then progressing to more complex ones [15]. Likewise, at this age the concepts of medium tempo and gradual speed increase should be introduced [16, 20].

In addition, the negative correlation between rhythmic figure and MP:DP ($r = -0.064$) indicates that the simpler the rhythmic figures, the more they correlate with the analogous 1:1 between MP:DP; while the more complex they become, the more they deviate from it. This confirms the diversity of the structure of modern Greek dance, since, as mentioned in the relevant bibliography [17], musical patterns are characterised mainly by cultural peculiarities. Moreover, all the elements, both of the lyrics and melody, and of movement, are built on earlier codes constituting the identity of a culture [27, 19]. Besides, modern Greek dance is closely connected with the synthesis and organization of the rhythmic pattern and much less with 'western' dance models [5, 18, 11]. This confirms the likewise negative correlation between rhythmic figure and Mm:km ($r = -0.267$).

The comparison of the three 'cornerstones' of studied dances shows that the ratios between them follow the commonly accepted proportions (1:1, 2:1, 3:4, 5:8) observed in Greek dances since ancient times. In particular, it can be established that modern-day Greek dance technique is directly related to lyrical, melodic and dynamic stress, while a unique correspondence appears between the kinetic cell and beat. The kinetic cells, in a specific proportion, create the kinetic motifs of the dance phrase, which displays a relative autonomy without necessarily corresponding to a bar. Consequently, the three-part structure of modern Greek dance, the development of which reveals a set of organized correlations among its constituent parts, is still as valid as it was in Ancient Greece.

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