ANTROPOLOGY OF THE TURKISH AND TARTAR POPULATION IN SOUTH DOBRUGJA

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Due to its geographic position, Dobrudja was at the crossroad of important commercial, nautical and terrestrial roads that joined here, coming from the North-Pontic steppes, from Anatolia and from the Mediterranean world. Dobrudja played in the history of civilization, the role of "bridge" and "gate" through which passed in both directions the goods of the natives' civilization and those from abroad.
Dobrudja was the main entrance gate of the Christianity in Dacia (Vasile Pârvan) "an extremly rich laboratory of comparative ethnology, through the extraordinary mosaic of races" (Eugen Pittard). The Turkish colonized the Asian and Mongolian people, and the immigrations from Russia diversified this ethnical mosaic.
For consolidating their power, the ottoman authorities populated Dobrudja with Tartars from the North of the Black Sea and with Turks from Asia Minor (Anatolia).
Thanks to its geographic variety, Dobrudja attracted people of various races, ethnic groups, confessions, beliefs, and thus it remained an Europe and Asia in miniature, a "huge live ethnographical museum" (C. Brătescu).
In this regard, the current paper represents the first anthropologic study on the Turkish population in Dobrudja, from the beginnings of the settlement of these ethnic minorities on the Romanian teritory.

Kay words: Anthropology; Dobrudja, Turks, Tartars (Grant 19/2007–2008).

INTRODUCTION

From the settlement of the Turkish and Tartar population in Dobrudja more than 800 years ago, Romanians and foreigners left us tesimonies on the origin of Turks and Tartars, on their language, customs, lifestyle, occupations, houses, religion, costume, traditional holidays, which still exist today.

The Turks and Tartars held an important position in Dobrudja, coming from the Central Asia, either through the North–Pontic steppes – migratory waves of Turks in the IIIrd century – Avars, Alans, Huns; in the VIth century – Slavic tribes; in the IXth century appeared in Dobruja the first Turkish people: Petchenegs, Cumanans, Tartars, Selgiucide Turks that seem to have settled in South Dobrudja, and then the Ottoman Turks (Osmanli); or through the South of the Black Sea, on the meridional Balkan road, coming from Anatolia, such as Oghuzes, Selgiucide Turks, Osmanli.

They were mentioned by the famous Arabian traveller Ibn Batutan, in 1334, in the North of Dobrudja, like a compact sedentary population. The hoards of coins discovered at Cara-Murat, Isaccea and in other localities, issued by the khans of the Golden Horde, between 1280 and 1312, certify the existence of the Tartars in Dobrudja still since the end of the XIIIth century, living together with the autochthonous Romanian population (Mehmet Ablay).

The great mass of Tartars settled for good under the reign of the great commander Noghay in the region of Dobrudja and in the North of the Balkan Peninsula (1280–1310).

At the beginning of the XVIth century, the Polish sources mention "the Tartars of Dobroczii". During the XVIIth and the XVIIIth centuries a continuous migration took place from Crimea to Dobrudja, migration that became massive after Crimea was annexed to the Russians. (1783).

The Tartars came in Dobrudja not only on the roads in the North of the Black Sea, as in 1525 groups of Oghuzes and Tartars from Sinop and Samsun (harbours in the Black Sea in North Anatolia) came by sea and settled in North Dobrudja, in Babadag area.

In Dobrudja settled two big groups of Tartars: the Nogaic group (the Tartars from Bugeac between Prut and Dniester and the Nogai Tartars) and the Crimean group, from the migration of the Crimean Khanat, after this separated from the Golden Horde Khanat (that extended its domination up to the South of the Delta of Danube, especially under prince Noghay).

What we do not know about the Turkish and Tartars ethnics are the anthropological data regarding the physical appearance of these populations. These anthropological features characterize them and differentiate them from the other ethnic groups. Eugen Pittard, Swiss anthropologist (after the First World War) made researches in Dobrudja, especially as concerns some ethnographical aspects of the Turkish and Tartar population; especially (1967) Horia Dumitrescu carried out an anthropological study on the Turkish population on Ada-Kaleh island.

Our research aims at highlighting the characteristics of the Turkish ethnics and for the first time the characteristics of the Tartar population in South Dobrudja, anthropological contributions to the history of the populations in Dobrudja.

METHODOLOGY

Between 2007 and 2008, within a Grant project of the Romanian Academy, we carried out a series of anthropological studies on the populations in Dobrudja, on 10 Romanian communities and two communities in the South of Dobrudja, Turkish ethnics (Fântâna Mare or Baspunar) and Tartar ethnics (Independența commune or Bairam Dede).

There were studied 162 Turkish ethnics from Fântâna Mare and 154 ethnics Tartars from Independența (men and women).

There were measured 9 cephalo-facial dimensions and 9 somatic dimensions and 8 cephalo-facial indices and 5 somatic indices were calculated.

There were drawn up the graphs of the dimensional and conformation cephalo-facial morphograms.

Fântâna Mare, the most representative community for the Turkish population in Dobrudja, is an endogamous community, with an isolated ethnical and religious character, in a small corridor depression, at the entrance in a canyon developed in strongly altered schists. It has the aspect of a typical Anatolian traditional Turkish village, with narrow and labyrinthic streets, bordered with stone walls – made of blocks of stones of 1–2 m height and joined together with clay.

On this territory were discovered the vestiges of a rural settlement, where some reliefs were found (Dionysos, Mithra, Thracian knight, dating probably from the IInd and the IIIrd centuries). The mosque dates from 1860, year that would mark the existence of a Turkish ethnic population.

At the census in 2005 the population in Fântâna Mare registered 374 inhabitants, out of which 371 were Turkish ethics.

For a comparative anthropological analysis of the Turks in Romania we used the study carried out by Horia Dumitrescu *et al.* on the Turks on Ada-Kaleh island (1967). The Turkish population was settled there for over two centuries and a half and coming from the Turkish ex garrison cities in Dobrudja, Albania and Turkey (on the island were registered 444 Turks and 61 Romanians).

Taking into account that both Turks and Tartars emigrated in Dobrudja also on the meridional–Balkan road, from Anatolia (Asia Minor), we carried out also a comparative analysis of the populations from Asia Minor (European) – Edirne community; population on the south seaside of Marmara Sea – Bursa community (Adrianopol); Ankara community – situated in the Central Plateau of Anatolia and Zanguldak community, harbor in the Black Sea, situated in the north west of the Plateau of Anatolia, (these areas were studied by Aykut Enginalev and the results appeared in HOMO magazine in 1963).

Dobrudja is today the only Romanian territory that holds an important Tartar ethnic minority. Taking into account the fact that certain historians talk about the Tartar branch of the ancestors of the Doubrudjan population and the fact that both the Turks and the Tartars emigrated from Central Asia, we considered useful a structural anthropological analysis of the two ethnic groups, a biological document with historical value for the future studies.

For each studied population we took into account the cephalo-facial and somatic dimensional and conformation characteristics, pigmentation, illustrated through cephalo-facial dimensional taxonomic morphograms.

THE ANALYSIS OF THE RESULTS

Comparative variability of the anthropological structure of the Turkish ethnic population

For the Turkish ethnic minority, we made a comparative anthropological analysis, through successive signification texts of the differences between the population in Fântâna Mare, the population in Ada-Kaleh and the populations of the 4 communities in Turkey (Edirne, Bursa, Ankara and Zonguldak, in the Anatolian area), for all the cephalo-facial and somatic dimensions and the conformation indices.

All the combinations resulted from the multivariate analysis through "T" test led to the conclusion that the population in Fântâna Mare presents anthropological characteristics similar (for

most of the analyzed parameters) with those of the population in Ada-Kaleh and of the population in Bursa (Tables 1–3).

We notice the fact that the population in Bursa differs at the same time from all the communities analyzed in Turkey (Table 1).

The cephalic index (CI) – **the male population** in **Fântâna Mare** has an average of 83.05, thus entering in the category of the brachicephaly (at the middle of the class) resulted from the ratio between the maximum cephalic transversal wideness, average (eu-eu = 153.15 mm) and the maximum antero-posterior cephalic length, medium to long (g-op = 184.58 mm);

At the **female population** in **Fântâna Mare** the cephalic index presents an average value of 83.04 that indicates brachicephaly, resulting from the ratio between eu-eu (147.51 mm, average) and g-op, incipient long (177.78).

At the **male population** in **Ada-Kaleh**, the cephalic index of 83.39 indicates the brachicephaly of the population, resulting from the ratio between the eu-eu diameter, medium (152.67 mm) and an antero-posterior cephalic diameter, medium to long (183.06 mm).

At the **female population** in **Ada-Kaleh**, the cephalic index of 85.12 indicates the brachicephaly of the population, resulting from the ratio between a maximum transversal cephalic diameter of 152.26 mm and a maximum cephalic antero-posterior diameter, long of 178.71 mm.

At the **male population** in **Bursa**, the cephalic index presents an average value of 82.90 that indicates brachicephaly; it results from the ratio between eu-eu (153.74 mm) and g-op (184.73 mm), medium towards the upper limit of the class.

Eugen Pittard, in his studies on the Turkish ethics in Dobrudja, noticed the prevalence of the brachicephaly, based on the cephalic index with a value of 81.90, resulted from the ratio between an eu-eu diameter of 152.40 mm and a g-op diameter of 185.40 mm situated at the upper limit of the class.

The differences between the cephalic indices of the three communities of Turkish ethics are not statistically significant.

The facial index (FI) – at **the male series** in **Fântâna Mare,** registers an average value of 88.61 indicating leptoprosopy – narrow faces – and it results from the ratio between a height of the face, n-gn of 124.94 mm (situated in the high category of values) and a maximum transversal width of the face, zy-zy of 141.15 mm (situated in the middle category).

At the **female series** in **Fântâna Mare**, the facial index presents an average value of 81.02 indicators for mesoprosopy, the resultant of the ratio between a n-gn diameter of 110.43 mm and a zy-zy diameter of 136.41 mm, wide.

At the **male population** in **Ada-Kaleh** the facial index with the average value of 88.99 enters the leptoprosopy category, with a height of the face of 123.45 mm (medium to high) and a maximum transversal width of the face of 138.69 mm.

At the **female population** in **Ada-Kaleh** the facial index with the average value of 85.22 indicates leptoprosopy, resulted from the ratio between the height of the face of 115.26 mm and the maximum transversal width of the face of 133.79 mm.

At the **male population** in **Bursa** (Asia Minor or Anatolia) the facial index has an average value of 87.98, this indicating a leptoprosopy of the population, resulted from the ratio between a height of the face of 123.14 mm, medium to high and a bizygomatic width of 139.91 mm.

Analyzing the variability of the facial index in the Turkish ethnic communities, we notice the leptoprosopy of these populations.

The nasal index (NI) – at the **male population** in **Fântâna Mare** presents an average value of 63.01 (medium), resulting from the ratio between a medium bialar width (34.27 mm) and a n-sn length of 54.76 mm, (medium).

At the **female population** in **Fântâna Mare** the nasal index with the average value of 67.98 is the result of the ratio between the bialar width of 32.45 mm and the length of the nose of 47.92 mm.

At the **male population** in **Ada-Kaleh** the nasal index presents an averge value of 65.47 (wide nose) resulted from the ratio between the bialar width (32.25 mm) and the n-sn height of 47.92 mm.

At the **female population** in **Ada-Kaleh** the nasal index with the value of 60.43 (medium towards wide) results from the ratio between the al-al diameter (29.67 mm) and the nasio-subnasio height of 50.60 mm.

At the **male population** in **Bursa** the nasal index with the average value of 66.87 enters “large” category, with a bialar diameter of 34.82 mm and a height of the nose of 52.93 mm.

We conclude that the Turkish ethnics in South Dobrudja present an anthropological structure similar to the populations in Ada-Kaleh and in Bursa. This is explained through the isolated ethnic and religious character of the population in Fântâna Mare, which led to the endogamy of these

populations and that allowed the conservation of certain anthropological characteristics definitory for the Turkish ethics population, in time and space.

Comparative variability of the anthropological structure of the Tartar and Turkish ethic population in South Dobrudja

The Turkish and Tartar ethnics, groups of Islamic confession, settled in the XIIIth century in Dobrudja.

For the Turkish and Tartar minorities, Dobrudja is the place where their ancestors settled, the place where they configured their identity, the place where they preserved the particularities of their origin, language, Islamic belief, culture.

„Dobrudja is for us, Turkish and Tartars, and through our efforts, a land of understanding and humanity, a land where preserving our language, folklore, music, traditional occupations, Islamic religion, our spirituality, we became Romanian through citizenship, our ideals and destiny." (Hagi Ibram Ali).

Dobrudja is today the only Romanian territory with an important Tartar community and one of the European regions where the Christianity coexisted with the Islam almost for over 500 years.

It is acknowledged that the Turkish ethnics in Dobrudja descend both from the ethnic groups arrived from the north-pontic steppes, and from the Oghuz groups arrived through the meridional Balkan roads from Central Asia.

The Turkish scholar Mahmut Kasgarli (XIth century) mention Tartars through the first ten Turkish tribes from the Northern group of Asiei.

In other Muslim sources of the X-XI centuries, we find the Tartars included in the Oghuz Turkish family.

The term *Tartar* was used by the foreign people and by the states, to indicate the North-pontic Turkish that designated the population of the Golden Horde (XIIIth century).

The settlement of a numerous population of Selgiucide Turkish in 1263 in Babadag represented the prelude of the settlement of the later Osmanli Tirkish, coming from Anatolia and Balkans in Dobrudja.

Cephalo-facial dimensional and conformation differences

For analyzing these differences between the Turkish and Tartar ethnics, we commented the taxonomic morphogram, which allows visualizing the ratios between dimensions and indices on the one hand, and on the other hand the register they include into on a dimensional scale with five categories of classification (Tables 4 and 5; Figures 1, 2 ,3 and 4)

If we analyze the size ratios between dimensions and conformation indices, we notices that they differentiate the Turkish populations from the Tartars:

- at the male Turkish ethnics: g-op > eu-eu < t-v > ft-ft; go-go < zy-zy > n-gn; al-al < n-sn; C.I. < V.L.I > V.T.I.; F.T.I > F.Z.I < G.Z.I: F.I > N.I.
- at the female Turkish ethnics: g-op > eu-eu > ft-ft; go-go < zy-zy > n-gn; al-al > n-sn; C.I. < V.L.I > V.T.I; F.T.I > F.Z.I < G.Z.I; F.I > N.I.
- at the male Tartar ethnics: g-op < eu-eu < t-v > ft-ft; go-go < zy-zy > n-gn; al-al > n-sn; C.I.. < V.L.I > V.T.I.; F.T.I > F.Z.I < G.Z.I; F.I > N.I.
- at the female Tartar ethnics: g-op < eu-eu < t-v > ft-ft; go-go < zy-zy > n-gn; al-al > n-sn; C.I. < V.L.I > V.T.I.; F.T.I > F.Z.I < G.Z.I; F.I > N.I.

The Tartar ethnics differentiate from the Turkish ethnics, at the male series, through different ratios between the various cephalic and nasal dimensions (different dimensional constellations).

If we analyze the size "registers" that include dimensions (especially) and the cephalo-facial indices, we notice a relative macrodimension of the Tartar ethnics, which enters, in opposition with the Turkish ethnics, in the upper registers of dimensions.

In the upper register of the taxonomic morphogram at the male Tartar population, enters: eu-eu, ft-ft, zy-zy, go-go, t-v, al-al; C.I., V.T.I, F.I, N.I.

At the Tartar female ethnics, in the upper register enters: eu-eu, zy-zy, n-gn, n-sn, al-al; C.I., V.T.I, V.L.I, F.T.I, F.I.

If we analyze more profoundly the data, we notice that, although both Turkish and Tartar ethnics are brachicephalic (category prevalent also in the classification scale), their brachicephaly is the result of different dimensions.

At the Turkish male ethnics, the brachicephaly (83.05%) is due to a maximum transversal diameter of the head (eu-eu) medium as size (153.15 mm) and by a maximum antero-posterior diameter of the head (g-op) situated at the upper limit of the middle category (184.58 mm).

At the female population: C.I.. of 83.04 reveals a brachicephaly, resulted from the ratio between a medium eu-eu diameter (147.51 mm) and a long incipient g-op (177.78 mm).

At the Tartar ethnics, at the male series, C.I. is of 84.92 – this entering to the brachicephaly category, which results thus from dimensions with another size order: a eu-eu transversal diameter of 158.29 mm that enters the wide or large category and a g-op of 186.64 mm that enters the long diameters.

At the female series, the brachicephaly (85.63%) is also due to maximum transversal diameters of the head (eu-eu) large (151.15 mm) and g-op diameters (176.68 mm) that are medium to long.

From these differences of dimensional sizes result the cephalic macrodimensioning of the Tartar ethnics, in comparison with the Turkish ethnics, within the same dominant brachicephaly.

The differentiation between the Turkish and Tartar population as concerns the anthropological ratio is noticed at the level of the horizontal dimensions, of the width of the skull and of the face. Thus, at males there are significantly bigger dimensions at the level of eu-eu, ft-ft, zy-zy, go-go, al-al diameters, at the level of the cephalic index (C.I.), the vertico-transversal index (V.T.I.), the facial index (FI), the nasal index (N.I). At the females, the larger horizontal dimensions are the diameters: eu-eu, zy-zy, n-sn, al-al, C.I., V.L.I, V.T.I, F.T.I, F.I.

At the dimensional level it is better illustrated the difference between the two ethnic groups and, as we noticed the cephalic index, the facial index, the gonio-zygomatic index and the nasal index reflect most obviously the difference of anthropological structure of the Turkish and Tartar ethnics.

The facial index is leptoprosop, this meaning that the Turkish population has narrow faces at males, while the Tartar ethnics are mesoprosop, with wide zygomatic bones.

A characteristic of the Tartar ethnics is represented by the ratio between the maximum width of the face (zy-zy) and the mandible width (go-go) that is large both at males and females, significantly larger in comparison with the Turkish ethnics, even if G.Z.I is medium.

The same way are interpreted the nasal index and dimensions, which at the Tartar ethnics is wide for both sexes and results from large bialar diameters.

We conclude that the differences of anthropological structure between the Turkish and Tartar ethnics are determined by the horizontal dimensions of the cephalic and facial segment, significant being the ratio between the width of the face and the width of the mandible.

Somatic differences

Stature – at the **male population** enters the supramedium category for all the Urkish communities analyzed: Fântâna Mare – 1,699.98 mm, Ada-Kaleh – 1,673.90 mm, Bursa – 1,693.20 mm.

At the **male population** in Fântâna Mare, stature has an average value of 1,552.80 mm, and at the population in Ada-Kaleh is 1,574.51 mm.

For the Turks in Dobrudja, Eugen Pittard found an average value of the stature of 1,680 mm, while Kansu found for the Turks in Anatolia an average value of the stature of 1,650 mm.

Body Mass Index (BMI) measures the ratio between weight and stature; it is an indicator of the physical health of a population, because according to different variables taken into account- age, sex, ethnic group, occupation etc. – it defines on the one hand the normality state, on the other hand the two limits of the population variability scale, defining or including the tendencies with pathologic potential, insufficiency and excessive weight.

From this point of view, on Quetelet classification scale (Table 6), the analysis of the variability of is index indicates a net sexual dimorphism between Turkish male and female ethnics, as regards the prevalence of the excessive weight and obesity (27.87% at males and 62.30 at females); at the Tartar ethnics, the male series has a prevalence of the excessive weight and obesity of 46.75%, while the female series has 67.68%.

Prevalence of the excessive weight and obesity is significantly different for the two ethnic groups, not only for the male population (27.87% the Turkish ethnics and 46.75% at the Tartars; the female populations does not differ significantly from this point of view, the Turkish females have a frequency of 62.30%, while the Tartar females have a frequency of 67.68%).

The tendency towards excessive weight and obesity at females, regardless the ethnic group, corresponds to the general tendency of the Romanian populations in Dobrudja.

Pigmentation at the Turkish and Tartar population in South Dobrudja

– *At the male Turkish ethnics*, more dominant is dark brown (39.34%) and dark chestnut brown hair (36.06%). The frequency of the blond hair is of 9.83%. At females, more dominant is dark chestnut (44.26%), blond and red hair have a frequency of 8.19%. As regards the iris pigmentation, at the male series prevail the hazel eyes (50.84%), but the blue eyes are also well represented (36.10%); at the female series prevail the hazel eyes (65.57%), followed by the blue eyes (21.31%). Blond hair and blue eyes have a frequency of 27.27%, at the male series and 30.77% at the female series, which also have persons with red hair and hazel eyes. The blond hair is associated with green eyes for 16,67% of the population.

At the Tartar male ethnics prevails the dark brown hair (59.74%), while the blond hair has a frequency of 1.29%; the female series has the same

Table 4

"T" significance test between the Turkish and Tartar in Dobrudja, male series

DIMENSIONS	FÂNTÂNA MARE (1)			INDEPENDENȚA (2)			T Test
	No.	Average	σ	No.	Average	σ	1/2
G-OP	61	184.58	6.57	77	186.64	7.15	–1.76 ns
EU-EU	61	153.15	4.16	77	158.29	6.60	**–5.57 s**
FT-FT	61	106.55	4.76	77	108.58	5.28	**–2.38 s**
ZY-ZY	61	141.15	5.17	77	144.79	7.46	**–3.38 s**
GO-GO	61	108.85	5.75	77	111.31	6.70	**–2.32 s**
N-GN	61	124.94	6.55	77	123.77	7.29	0.99 ns
N-SN	61	54.76	4.28	77	54.57	4.14	0.26 ns
AL-AL	61	34.27	3.46	77	35.78	3.83	**–2.42 s**
T-V	61	125.76	4.21	77	127.66	4.96	**–2.44 s**
V-SOL	61	1699.98	60.36	77	1713.51	77.41	–1.15 ns
V-SEZ	61	901.03	37.87	77	908.08	39.55	–1.06 ns
L. M. I.	61	798.95	39.74	77	805.43	48.67	–0.86 ns
GREUT.	61	68.82	12.93	77	74.75	16.38	**–2.38 s**
DAP-TOR.	61	213.10	23.96	77	229.18	27.52	**–3.67 s**
A-A	61	361.25	16.93	77	396.04	24.72	**–9.79 s**
IC-IC	61	308.00	25.68	77	274.82	19.16	**8.41 s**
PM–TOR.	61	998.90	80.18	77	999.81	105.71	–0.06 ns
PM-ABD.	61	898.11	120.23	77	942.47	141.86	–1.99 ns
INDICES							
I. C.	61	83.05	3.16	77	84.92	4.49	**–2.87 s**
I.V.L.	61	68.18	2.87	77	68.47	3.06	–0.56 ns
I.V.T.	61	82.17	3.43	77	80.74	3.54	**2.40 s**
I.F.T.	61	69.59	3.10	77	68.67	3.50	1.62 ns
I.F.Z.	61	75.54	3.32	77	75.14	4.54	0.60 ns
I.G.Z.	61	77.14	3.43	77	77.05	5.86	0.11 ns
I.F.	61	88.61	5.30	77	85.68	6.34	**2.95 s**
I.N.	61	63.01	8.38	77	65.79	7.41	**–2.04 s**
Ind. Quetelet	61	23.77	4.03	77	25.37	4.81	**–2.13 s**
I. CR.	61	53.00	1.45	77	53.02	1.30	–0.06 ns
I. L. U.	61	21.26	0.98	77	23.12	1.11	**–10.47 s**
I. L. B.	61	18.13	1.47	77	16.06	1.25	**8.74 s**
I. A. IC.	61	85.32	6.63	77	69.60	5.90	**14.52 s**

Table 5

"T" significance test between the Turkish and Tartar ethnics in Dobrudja. female series

DIMENSIONS	FÂNTÂNA MARE (1)			INDEPENDENȚA (2)			T Test
	No.	Average	σ	No.	Average	σ	1/2
G-OP	61	177.78	5.75	66	176.68	6.78	0.99 ns
EU-EU	61	147.51	4.55	66	151.15	5.96	**–3.89 s**
FT-FT	61	104.10	3.92	66	104.27	5.58	–0.21 ns
ZY-ZY	61	136.41	4.86	66	138.62	5.72	**–2.35 s**
GO-GO	61	102.55	4.97	66	104.52	7.20	–1.80 ns
N-GN	61	110.43	5.61	66	114.62	5.99	**–4.07 s**
N-SN	61	47.92	2.98	66	50.41	3.26	**–4.50 s**
AL-AL	61	32.45	3.10	66	34.48	3.13	**–3.67 s**
T-V	61	122.00	4.57	66	123.05	4.91	–1.24 ns
V-SOL	61	1574.51	67.75	65	1578.29	60.45	–0.33 ns
V-SEZ	61	847.36	41.95	65	847.46	40.79	–0.01 ns
L. M. I.	61	727.15	42.03	65	730.83	40.40	–0.50 ns
GREUT.	61	65.52	12.27	66	68.62	12.91	–1.39 ns
DAP-TOR.	61	210.92	25.55	65	227.23	30.58	**–3.26 s**
A-A	61	335.66	20.20	65	360.00	19.70	**–6.84 s**
IC-IC	61	306.95	19.44	65	282.49	25.84	**6.03 s**
PM-TOR.	61	966.64	89.34	65	975.31	99.56	–0.51 ns
PM-ABD.	61	901.15	130.33	65	944.85	149.51	–1.75 ns
INDICES							
I. C.	61	83.04	3.21	66	85.63	3.74	**–4.19 s**
I.V.L.	61	68.65	2.41	66	69.70	3.06	**–2.16 s**
I.V.T.	61	82.74	2.72	66	81.45	2.83	**2.60 s**
I.F.T.	61	70.63	3.28	66	69.04	3.76	**2.54 s**
I.F.Z.	61	76.38	3.47	66	75.25	3.37	1.87 ns
I.G.Z.	61	75.19	2.95	66	75.42	4.67	–0.34 ns
I.F.	61	81.02	4.26	66	82.81	5.12	**–2.15 s**
I.N.	61	67.98	7.83	66	68.74	8.02	–0.53 ns
Ind. Quetelet	61	26.50	5.12	65	27.75	5.47	–1.32 ns
I. CR.	61	53.83	1.59	65	53.70	1.70	0.45 ns
I. L. U.	61	21.34	1.27	65	22.84	1.36	**–6.38 s**
I. L. B.	61	19.52	1.36	65	17.94	1.85	**5.48 s**
I. A. IC.	61	91.63	6.07	65	78.64	7.65	**10.59 s**

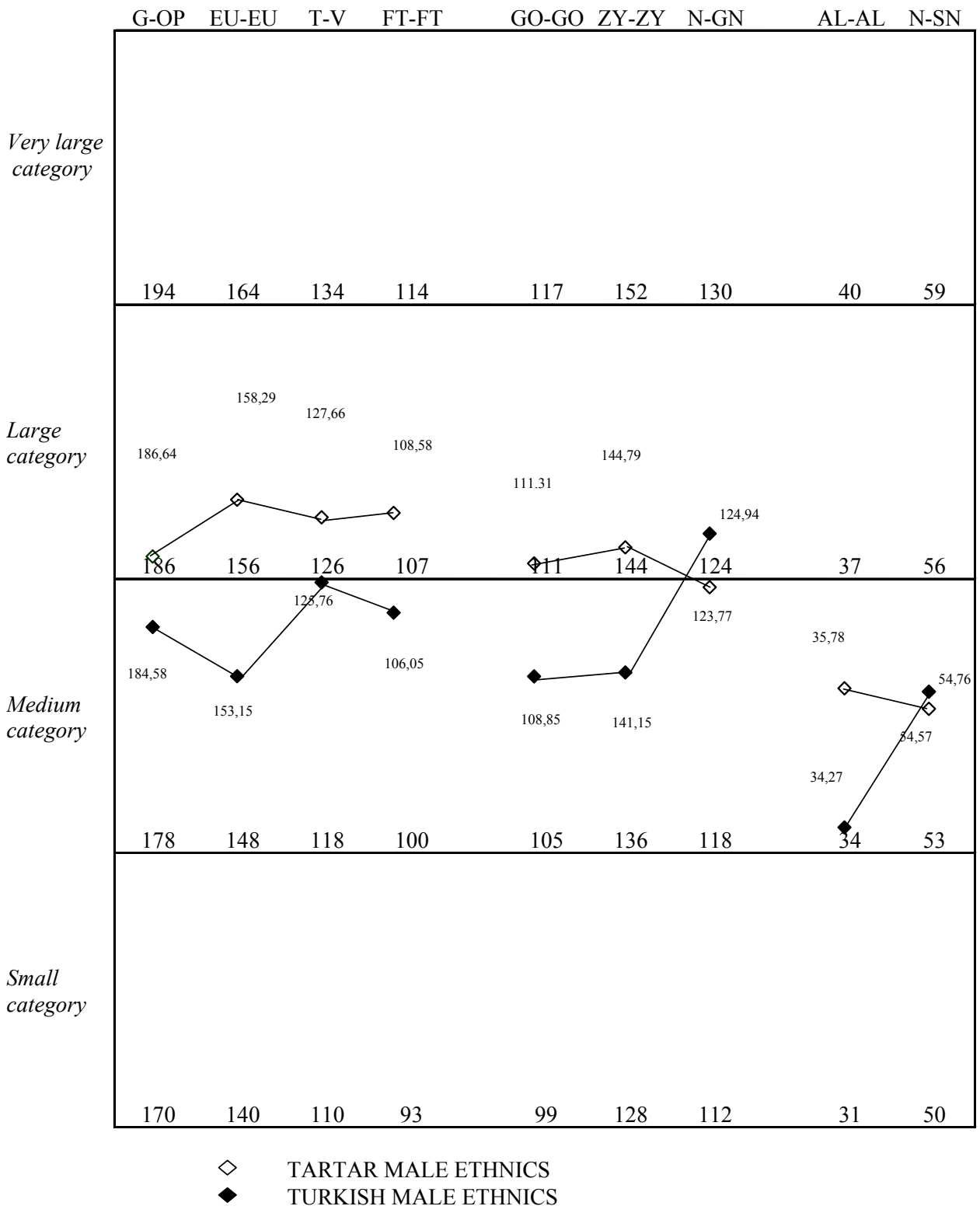

Fig. 1. Comparative dimensional morphogram – male series – between the Tartar and Turkish ethnics.

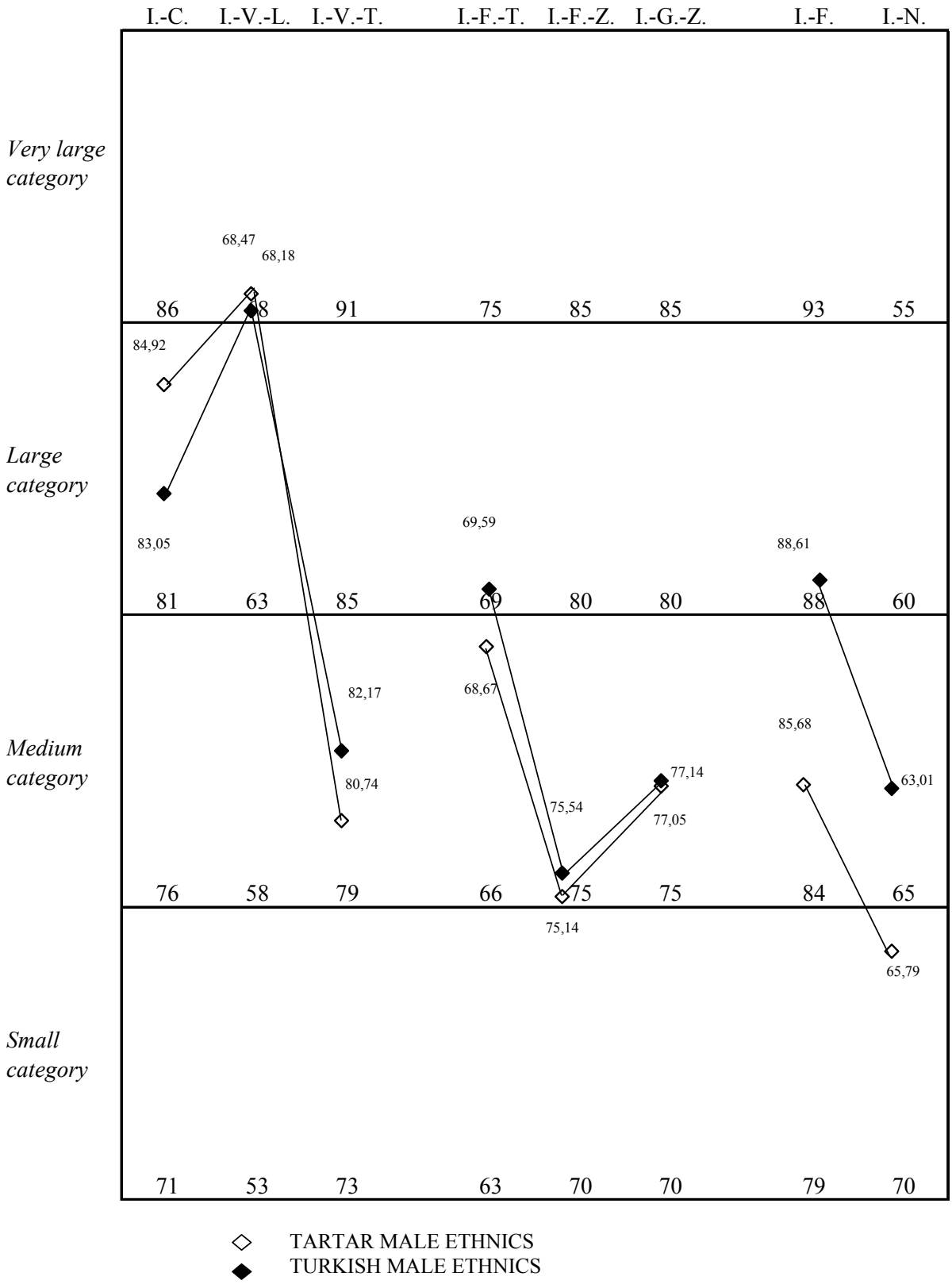

Fig. 2. Comparative dimensional morphogram – male series – between the Tartar and Turkish ethnics.

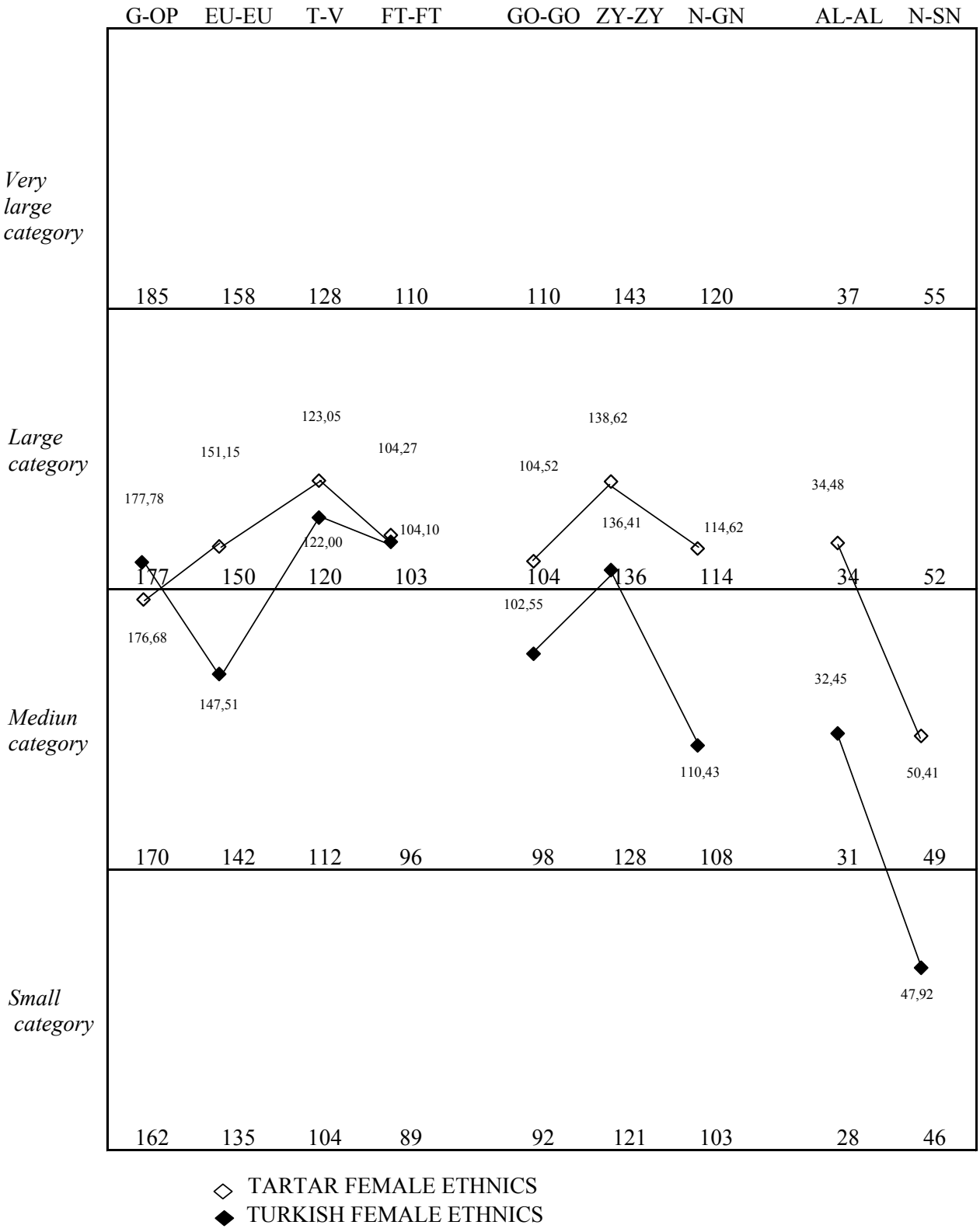

Fig. 3. Comparative dimensional morphogram – famale series – between the Tartar and Turkish ethnics.

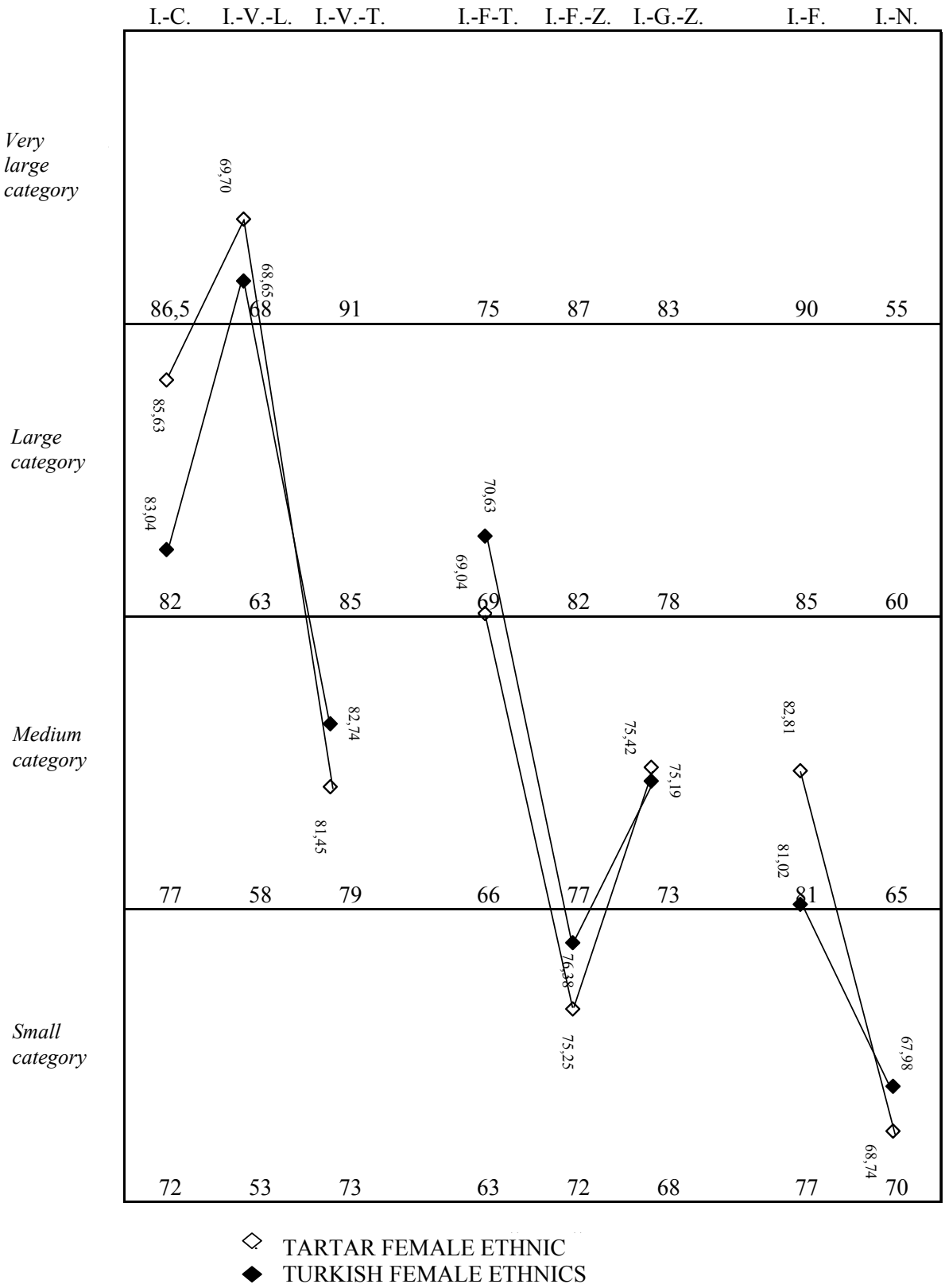

Fig. 4. Comparative dimensional morphogram – famale series – between the Tartar and Turkish ethnics.

Table 6

Comparative variability of the body mass at the Turkish and Tartar ethnics

Categories		Turkish ethnics				Tartar ethnics			
		MALES		FEMALES				MALES	
		N	%	N	%	N	%	N	%
Underweight	< 16	0	0.00	0	0.00	0	0.00	0	0.00
	16–16.99	0	0.00	1	1.64	1	1.30	0	0.00
	17–18.49	2	3.28	2	3.27	1	1.30	1	1.54
Total		**2**	**3.28**	**3**	**4.91**	**2**	**2.60**	**1**	**1.54**
Normal weight	**18.50–24.99**	**42**	**68.85**	**20**	**32.79**	**39**	**50.65**	**20**	**30.78**
Excessive weight	25–29.99	11	18.03	21	34.43	21	27.27	22	33.84
Obesity	>30	6	9.84	17	27.87	15	19.48	22	33.84
Total		**17**	**27.87**	**38**	**62.30**	**36**	**46.75**	**44**	**67.68**
Total general		***61***	***100***	***61***	***100***	***77***	***100***	***65***	***100***

Table 7

Correlative pigmentation of the iris and of the hair at the Turkish and Tartar ethnics in Dobrudja

Turks – male series											
IRIS	**HAIR**										**Total**
	Blond (1)		**Light chestnut (2)**		**Dark chestnut (3)**		**Brown (4)**		**Red (5)**		
	N	%	N	%	N	%	N	%	N	%	N
Blue (1)	6	27.27	7	31.82	4	18.18	5	22.73	0	0.00	**22**
Green (2)	0	0.00	0	0.00	2	25.00	6	75.00	0	0.00	**8**
Hazel (3)	0	0.00	2	6.45	16	51.61	13	41.94	0	0.00	**31**
Black (4)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	**0**

Turks – female series											
IRIS	**HAIR**										**Total**
	Blond (1)		**Light chestnut (2)**		**Dark chestnut (3)**		**Brown (4)**		**Red (5)**		
	N	%	N	%	N	%	N	%	N	%	N
Blue (1)	4	30.77	6	46.15	2	15.39	1	7.69	0	0.00	**13**
Green (2)	1	16.67	1	16.67	4	66.66	0	0.00	0	0.00	**6**

Table 7 (continued)

Hazel (3)	0	0.00	4	10.00	21	52.50	10	25.00	5	12.50	**40**
Black (4)	0	0.00	0	0.00	0	0.00	2	100.00	0	0.00	**2**

Tartars – male series											
IRIS	**HAIR**										**Total**
	Blond (1)		**Light chestnut (2)**		**Dark chestnut (3)**		**Brown (4)**		**Red (5)**		
	N	%	N	%	N	%	N	%	N	%	N
Blue (1)	1	7.69	3	23.08	2	15.38	7	53.85	0	0.00	**13**
Green (2)	0	0.00	5	22.73	4	18.18	13	59.09	0	0.00	**22**
Hazel (3)	0	0.00	4	9.52	12	28.58	26	61.90	0	0.00	**42**
Black (4)	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	**0**

Tartars – female series											
IRIS	**HAIR**										**Total**
	Blond (1)		**Light chestnut (2)**		**Dark chestnut (3)**		**Brown (4)**		**Red (5)**		
	N	%	N	%	N	%	N	%	N	%	N
Blue (1)	0	0.00	1	25.00	1	25.00	2	50.00	0	0.00	**4**
Green (2)	2	10.00	4	20.00	6	30.00	8	40.00	0	0.00	**20**
Hazel (3)	1	2.44	2	4.88	14	34.14	24	58.54	0	0.00	**41**
Black (4)	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	**1**

prevalence of the dark brown (53.03%) and dark chestnut brown hair (31.81%); the blond hair has a frequency of 4.54%. As regards the iris pigmentation. at males prevail the hazel eyes (54.55%). followed by the green eyes (28.57%) and blue eyes (16.88%); at females more dominant are al the hazel eyes (62.20%). followed by the green eyes (30.30%).

At males. the blond hair is associated with the blue eyes for 7.69% of the population. while at females the blond hair is associated with green eyes for 10.00% of the population.

We conclude that from the point of view of the anthropological structure the Tartar ethnics differ significantly from the Tartar ethnics. having higher values of all the width dimensions. either at the cephalic level. the maximum transversal width of the head (eu-eu) and the minumum frontotemporal width (ft-ft); or at the facial level. the maximum transversal width of the face (zy-zy). the maximum transversal width of the mandible (go-go). the maximum width of the se at the level of the nasal wings (al-al).

The heigth of the head (t-v) follows the same trend of macrodimension of the Tartar population in comparison with the Turkish ethnics.

The dimensional taxonomic morphogram illustrates clearly the fact that the cephalo-facial dimensions of the Tartar ethnics correspond to an upper value register. certifying the role of the horizontal dimensions in the anthropological differentiation of the two ethnic groups.

TARTAR MALE ETHNICS

TARTAR FEMALE ETHNICS

TURKISH MALE ETHNICS

TURKISH FEMALE ETHNICS

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