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Frontal, lateral and occipital aspects of a skull from the medieval town of Kabyle, Southeastern Bulgaria (12th - 14th century) (see below Diana Toneva et al., *Investigation of an orbital defect in a medieval skull from Bulgaria*, pp. 15-27).

OVERVIEW ON MICROSCOPIC METHODS FOR DENTAL WEAR EVALUATION IN PALEODIET STUDIES

OZANA-MARIA PETRARU^{1,2}, LUMINIȚA BEJENARU^{1,2}

Dental wear is one of the most important approaches to assess dietary. This paper provides a theoretical review of methods used in reconstruction of diets in ancient animals and humans. The microscopic based methods (i.e. dental macrowear, dental microwear and dental microwear texture analysis=DMTA) are described and compared by highlighting their limitations and particularities. Each of these techniques has a contribution in interpreting how diet evolved at different time scales: in long period of time (macrowear) and in the weeks or months before death (microwear and DMTA).

Keywords: microscopic methods, dental wear, paleodiet, review.

INTRODUCTION

Diet underlies changes in aliments consumption adaptation which plays an important role in biological, ecological and cultural evolution of past humans (Ungar *et al.* 2006). Bioarchaeologists and paleontologists have been studied and reconstruct diets of ancient peoples and animals to highlight health, adaptation and evolution of the species (Ungar *et al.* 2008). Teeth provides an excellent material for multidisciplinary research, representing a direct contact zone between the organism and the surrounding environment (Percher *et al.* 2018). One major quality of teeth is that of resistance to the taphonomical process. Due to their excellent preservation based on their hard tissues (i.e. enamel, dentine and cementum), the teeth are stable markers and indicators for certain studies concerning the past human and animal populations (Gómez-Robles *et al.* 2007; Guatelli-Steinberg and Huffman 2012). Traces of somatic development, life history and significant biological phenomena are preserved in teeth and can offer a wealth of information about the individuals from which they were once a part (Bailey and Hublin 2007).

In paleoanthropological research, diet has been studied through various methods such as: microscopic methods used in evaluation of dental wear (Sołtysiak 2011; Górká *et al.* 2016), stable isotopes (Richards *et al.* 2002), microbial DNA sequencing approach and starch grain microfossils,

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phytolith and pollen, all provided from dental calculus (Henry and Piperno 2008; Buckley *et al.* 2014; Weyrich *et al.* 2017; Cummings *et al.* 2018).

The aim of this study is to provide a theoretical review of quantitative microscopic based methods used in dental wear studies of past human and animal remains. Our objective is to highlight the suitability of methods and techniques, limitations and advantages, in a comparative approach.

DENTAL WEAR

Dental wear is strongly correlated with the physical properties of the consumed food (Peigné and Merceron 2017), therefore the relationship between teeth wear and paleodietary has been approached and debated in the late years. Based on factors such as processing food, the rate of dental wear was higher in the past compared to those of contemporary populations (Mays 2002), due to hard particles contained by unprocessed aliments. Although the scientific literature shows the abundance of scoring qualitative methods for assessing dental wear (Molnar 1971; Scott 1979), quantitative microscopic methods are also used in the last decade (Galbany *et al.* 2011; Górká *et al.* 2016; Petraru *et al.* 2018). Microscopy is an important tool for the dental wear research. Usually, specimens used for paleodiet studies (e.g. molars) are first examined under a stereomicroscope at a low magnification to evaluate the macrowear (Capasso *et al.* 2001), and then they are observed under high magnification of a light or electronic microscope to evaluate the microwear. Dental macrowear and microwear analyses use both non-destructive research techniques.

Dental macrowear

Dental macrowear have been approached in several studies in an attempt to characterize dietary of past peoples (Górká *et al.* 2016; Petraru *et al.* 2018) and primates (Galbany *et al.* 2011; Galbany *et al.* 2014). Dental macrowear is an overall enamel tissue loss on the occlusal surfaces of teeth and it is result of a cumulative process which takes place over an individual's life (Fiorenza *et al.* 2018). Besides diet, the dental tissue loss is connected with lifestyles, habits and food preparation techniques (Dawson and Brown 2013). Dental macrowear depends of variables such as sex and age (Kaifu 1999; Petraru *et al.* 2018) creating patterns and degree of wears (Kaifu 1999; Kaidonis 2008; Petraru *et al.* 2018). The types of dental wear are included in the non-carious cervical lesions (NCCLs) and are divided in two categories: mechanical wear type – such as abrasion, attrition, abfraction; and chemical wear type – erosion (Deter 2009; Deter 2012; Levrini *et al.* 2014).

The first study of dental macrowear, based on quantifying and measuring the dental wear on photographs, was published in 1977 by Behrend (Behrend 1977). An improved method based on image analysis is assigned to Clement and Freyne (Clement and Freyne 2012). The method requires two-dimensional pictures, taken by camera and tripod (Clement and Freyne 2012) or stereomicroscope with an camera attach (Petraru *et al.* 2018). The last method is based on highlighting the areas of exposed dentine and enamel (Figure 1), using a basic software for image

analysis such as ImageJ or Sigma Scan Pro 5. Percentage of dentine exposure (PDE) was revealed in this case using mathematical expression (Górka *et al.* 2016).

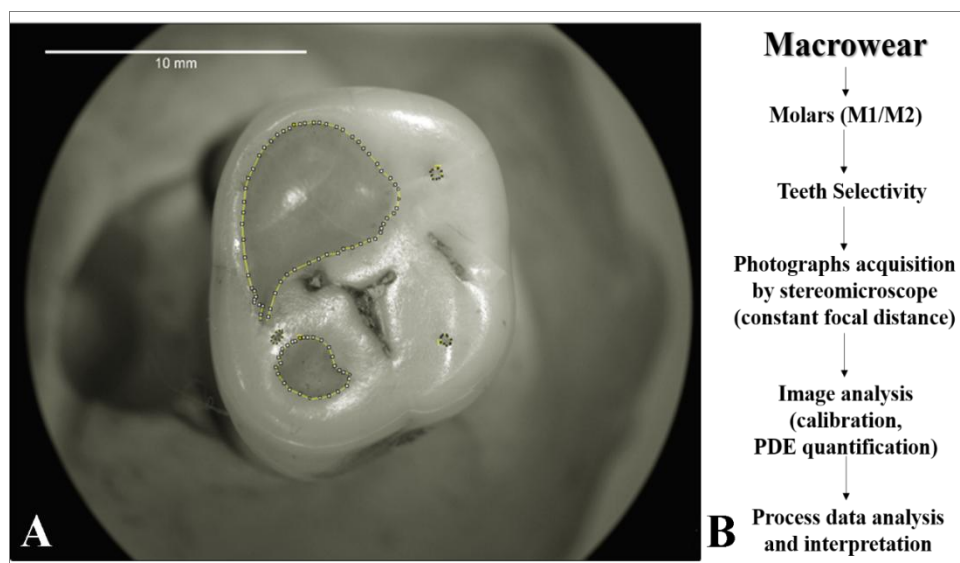


Figure 1:

A. M² molar under stereomicroscope showing areas of exposed dentine.

B. Main steps in quantitative dental macrowear analysis.

Dental microwear

Dental microwear leads us to characterized paleodiets through a high-resolution magnification of the microscope. The first mention of dental microwear was in 1962, when Dahlberg and Kinzey examined the surface of modern human teeth using light microscopy, and they concluded that microwear variation within and among groups permit the interferences in diet (Dahlberg and Kinzey 1962). Afterwards, this method was applied also in palaeoanthropology (Ungar *et al.* 2008). After almost a decade (1976), Phillip Walker, published the first research on microwear in non-human primates using scanning electronic microscope (SEM) (Walker *et al.* 1978). Usually, dental microwear can be observed on the occlusal surface of the teeth and it relies on the microscopic marks on the enamel and/or dentine (Schmidt 2010; White *et al.* 2011; Strani *et al.* 2018). Microscopic features of microwear refers at: striae, scratches, punctures and pits (Figure 2), which reflects the mechanical properties of food and abrasives consumed in the weeks or months before death (Scott and Halcrow 2017).

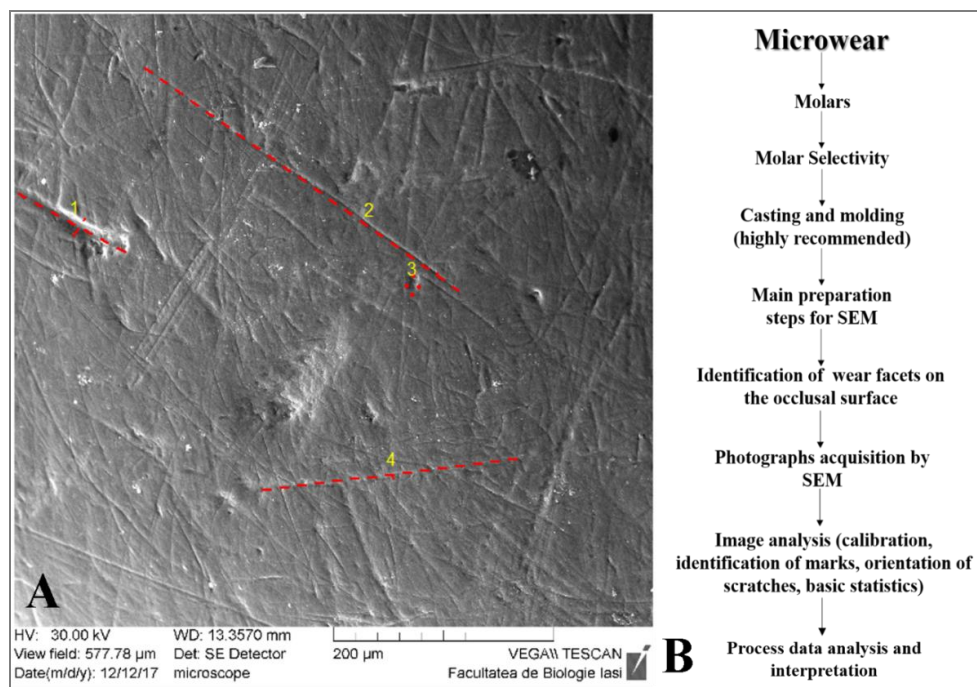


Figure 2:

- A. SEM micrograph showing different types of marks on enamel: 1 – coarse scratch; 2, 4 – fine scratches; 3 – large pit.
- B. Main steps in quantitative dental microwear analysis.

The density, distribution, size, morphology, and the orientation of the longitudinal marks provide information about dietary at a short time scale before death. The presence of pits may be caused by both intrinsic and extrinsic factors (microliths, sand, silt) (Schmidt 2010). Intrinsic factors such as small fragments of bone, nutshells or hard parts of fruits and seeds, and phytoliths may cause pitting. This type of *micromark* can be also produce by sand that can accede to plant roots, stems and leaves (Mahoney 2006b; Schmidt 2010). It is known that phytoliths can cause both pits and scratches. Striation with a width about 5 μ m or less usually reflects a diet based on plants. Scratches with a width more the 10 μ m (10-45+) can be also caused by much larger silica phytoliths (Sanson *et al.* 2007).

An abrasive dietary is characterized by a high number of scratches although some pits can be present (Soltysiak 2011), while harder diets can produce more wider pits and wider scratches (Mahoney 2006b; Xia *et al.* 2015).

Microwear analysis requires the high-resolution magnification of a scanning electronic microscope. In the last two decades, special zones used in wear analysis were identified, such as “Facet 9” (Mahoney 2006b; Ungar *et al.* 2006). After the two-dimensional micrographs acquirement, a 4:1 length-to-width ratio is used to distinguish the micromorphological marks (Mahoney 2006a; Estebaranz *et al.* 2009; Schmidt 2010). Furthermore, a specialized software such

as Microware (Ungar 2002) or MicroWeaR (Strani *et al.* 2018) is needed to quantify microwear variables: total number of features (total number of pits and scratches combined); mean and percent of pits; mean of scratches; mean length and width of pits; mean length and width of scratches – for Microware software (Mahoney 2006b), and: number of pits; number of small pits; number of large pits; percentage of pits; pits/mm²; number of scratches; number of fine scratches; number of coarse scratches; scratches/mm²; number of pairs of parallel scratches; number of scratches that cross each-other; percentage of parallel scratches; percentage of scratches that cross each-other - for MicroWear software (Strani *et al.* 2018).

Dental microwear texture analysis

Dental microwear texture analysis (DMTA) is the newest approach in the attempt to evaluate and characterize diet. It was developed in 2003-2006 by Scott, Ungar and colleagues (Ungar *et al.* 2003; Scott *et al.* 2006). DMTA is used in various studies for diet reconstruction (Figure 3), from mammal dietary (Schulz *et al.* 2010; Schulz *et al.* 2013), fossil hominids and modern humans (Scott *et al.* 2005; El Zaatari *et al.* 2011; Scott *et al.* 2012; Ungar *et al.* 2012; El Zaatari and Hublin 2014).

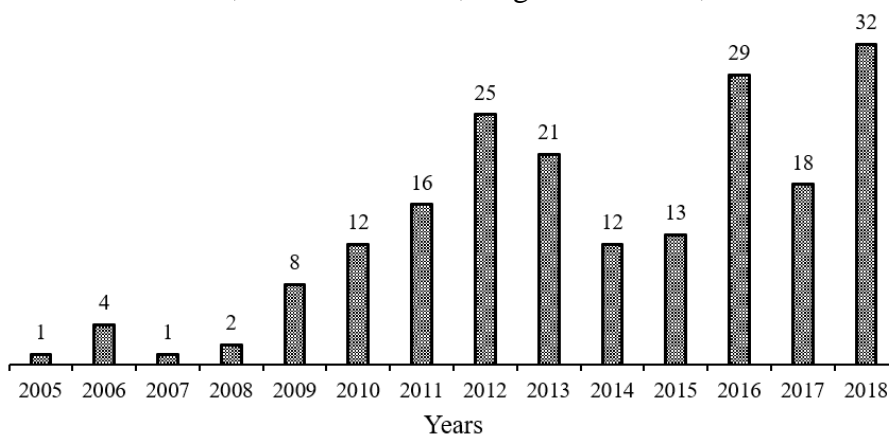


Figure 3:

Dynamics in number of articles with DMTA approaches; data from *Web of Knowledge*, accessed at March 11, 2019.

DMTA works with 3D surface structures or surface data (Scott *et al.* 2006; Strani *et al.* 2018) usually requiring a white-light confocal microscope and a scale-sensitive fractal analysis (SSFA) (Ungar *et al.* 2008). DMTA does not need identification of microwear marks by the researcher, the analysis being automated. This method is faster but expensive (Strani *et al.* 2018). Also, it demands commercial software and additional plugins. The major advantage of DMTA is that it solves the error in measurements (Ungar *et al.* 2008) and allows comparisons between studies.

Dental microwear texture analysis is now applied in a wide range of samples to fossil primates, modern human, bovids and reptiles, in order to clarify questions with regarding aspects in paleo- and neocology.

WHICH METHOD IS SUITABLE FOR YOUR RESEARCH?

In paleoanthropology, in the attempt to characterize diet, one handy tool to begin your research is the microscope. Due to the advances in technology, a wide range of improved methods are now available. Characteristics such as cost efficiency, infrastructure availability and method limitation may influence the type of the chosen method (Table 1). Dental macrowear is the cheapest method to approach dietary. An advantage is the cost efficiency, including the equipment required for the picture acquirement. Also, the image analysis software to quantify the percent of dentine exposure (PDE) is open access. A common limitation is the availability of the material – M3 and M1 molars are avoided, because of the rare occurrence and variable morphology, usually with flattened cusps and unclear pattern (Petraru *et al.* 2018). *In situ* teeth (teeth still attached in a skull) are highly recommended because of the data shown such as: tooth type, orientation, ontogenetic age and species identification (Green and Croft 2018). It is also important, for both microwear and macrowear analyses, to use the same sample type for all individuals, the same wear facet, according to the aim and species in study. The choice of tooth type and wear facet for sampling depends on the question being addressed and the group being studied. It is optimal to have a standardized sampling protocol that targets the same wear facet on the same tooth across all individuals. Another limitation in dental macrowear method is the selectivity of molars; only teeth with dentine exposure and without pathologies are considered suitable to apply the method.

Dental microwear and DMTA correspond to short time scale processes that reflects the mechanical properties of food and abrasives consumed in the weeks or months before death (Scott and Halcrow 2017). Microwear evaluation is not limited by the integrity of the occlusal surface which means that molars with dentine exposure may be used, but not those which show dental pathologies on the occlusal surface. A disadvantage is represented by the expensive costs; the method requires specialized software for the analysis of microscopic marks.

Recently, a new open access package from R software, called MicroWear (Strani *et al.* 2018) is available, beside the commercial software Microwear (Ungar 2002). Different from microwear, DMTA works on 3D surface data and needs the availability of a white light confocal microscope and a scale-sensitive fractal data. A advantage of DMTA is that it solves the error in measurements (Ungar *et al.* 2008), allows comparisons between samples, requires much less time and effort and it is an automatic analysis. Despite the various dietary studies in which this method is used, a limitation is that it requires specialized software (Surfract) and additional plugins (ToothFrax and SFrax); DMTA demands CLSM (Confocal Laser Scanning Microscope) that are available for

fewer researchers, comparative to scanning electronic microscopes or stereomicroscopes (Green and Croft 2018).

Table 1:
Advantages and limitations of microscopic based methods for evaluation of dental wear

<i>Characteristics</i>	<i>Microscopic methods for dental wear</i>		
	<i>Macrowear</i>	<i>Microwear</i>	<i>Dental microwear texture analysis</i>
Magnification	low magnification	high-resolution magnification	high-resolution magnification
Microscope type	stereomicroscope	scanning electronic microscope (SEM).	white light confocal microscope and scale-sensitive fractal data
Image acquired	two-dimensional	two-dimensional	three-dimensional
Cost and time efficiency	low-cost and fast	expensive and slower	expensive and fast
Software and plugins required	basic software for image analysis (e.g. ImageJ)	specialized software for analysis of microscopic marks (e.g. Microwear and MicroWeaR).	specialized software (Surfract) and additional plugins (ToothFrax and SFrax)
Time scale	refers to a cumulative process during the individual's life	refers to food consumed in the weeks or months before death	refers to food consumed in the weeks or months before death

CONCLUSIONS

Methods for evaluation of dental wear, such as macrowear, microwear and DMTA are widely used by bioarchaeologists and paleontologists in the attempt to characterize the diet of past humans and animals. Each method, based on a microscopy technique, has his own characteristics. This comparative approach reveals the importance and aims of each method; it highlights the limitations, adaptability, suitability and advantages. Each method has his own particularity in interpreting the diet, during the individual's life and shortly before the subject death.

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INVESTIGATION OF AN ORBITAL DEFECT IN A MEDIEVAL SKULL FROM BULGARIA

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In this study, we describe a defect of the right orbit, which affects the lateral surface and part of the orbital apex. The defect was observed on a skull from the medieval town of Kabyle, Southeastern Bulgaria (12th - 14th century). The skull belonged to a female at the beginning of adulthood (20-25 years). The orbital defect was observed macroscopically and via industrial μ CT imaging. It represents an excision with a semilunar shape of the orbital surface in the greater wing of sphenoid bone. The margin of the excised part is relatively smooth with oblique inclination. The most probable causes this orbital defect could be an orbitocranial trauma or orbital trepanation due to some orbital pathological condition.

Keywords: orbitocranial trauma; orbital trepanation; orbital apex; medieval; μ CT imaging.

INTRODUCTION

Anatomically, the orbits (or eye sockets) are bilateral and symmetrical bony cavities of the skull, occupied by the eyeballs and the associated muscles, nerves, blood vessels, fat, and much of the lacrimal apparatus. Each orbit is shaped like a four-sided pyramid, with its apex situated posteriorly and its base anteriorly (O’Rahilly *et al.* 2008). The human eye makes up just 0.27% of the body surface area and less than 4% of the facial surface area (Hughes 2008). The orbital apex takes up the most posterior 13-17 mm of the orbit and communicates with the middle cranial fossa via the optic canal (OC) and the superior orbital fissure (SOF). It gathers numerous important structures, which makes the lesions in this area dangerous and with serious consequences.

In the extant literature we could not find information concerning paleopathological data of trepanation on the orbital apex relevant to some pathological condition. In fact, the cases with patterns of orbital trepanation in the past are very few. Sauter (1959) described an orbital trepanation in a female Neolithic skull from Switzerland, which was performed in the medial wall of right orbit

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and showed no traces of healing. Han and Chen (2007) reported a case of a survived orbital trepanation in a young adult male dated about 2000 BC. An irregularly-shaped perforation located on the frontal part of the inner corner of the orbit was observed, which might have been performed to treat an infection of the frontal antrum.

Another reason for a surgical intervention on the orbit could be an orbitocranial injury. The rarity of this kind of trauma as a whole (Paiva *et al.* 2010) could explain the scarce information and lack of historical evidence about such paleopathological findings. However, a well-known case of such an injury was this of Henry II, King of France, who was injured by a broken lance during a tournament. The wooden lance entered the King's right orbit, destroying his eye and leaving many splinters (Martin 2001). Although it was initially believed that a surgical intervention was performed, Zanello *et al.* (2015) proved that there was no such a treatment and the King died 11 days later from periorbital cellulitis caused by a retained foreign body in the wound and complicated by a left interhemispheric empyema.

In this study we report and discuss a case of an orbital defect of a medieval skull. We consider the most probable reasons for this excision in the orbital region.

MATERIAL AND METHODS

The skull investigated was found during archaeological excavations at Kabyle, Southeastern Bulgaria in the late 70s of twentieth century. The individual was buried in a medieval necropolis near the northwestern gate of the ancient town of Kabyle. The graves took place in the ruins of the gate and the adjacent fortress. Based on the Christian burial rite and grave goods, the necropolis probably dated to the last centuries of the existence of the medieval town /12th - 14th century/ (Cholakov *et al.* 1991). The sample was kept as part of the osteological collection at the Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences.

The skull was completely preserved except for a postmortem fragmented region on the right half of the frontal bone, which was partially reconstructed. All teeth were in place, except for the right upper lateral incisor, which was lost postmortem. The postcranial bones were missing and there was not any documentation about them. The sex and age of the individual were determined taking into account the morphological characteristics of the skull, sutural closure and dental attrition (Alekseev and Debetz 1964; Buikstra and Ubelaker 1994).

The metrical characterization of the skull (28 linear measurements, 4 angles and 11 indexes) was performed according to Bass (1995) and Martin and Saller (1957), using a sliding caliper, spreading caliper, mandibulometer, goniometer and craniophor (Mollison type).

The orbital defect was macroscopically observed and described. An industrial μ CT imaging was applied for a more detailed study of the bone structure of the defect margin. The CT scanning was performed on a Nikon XT H 225 system with reflection head and a voltage of 84 kV, a power of 7.56 W, a tube current of 90 μ A, and an exposure time of 708 ms. A series of 3000 sequential 2D X-ray images were captured as the object was rotated at 360°. The images were then reconstructed to generate a 3D volumetric representation of the object with voxel size of 35 μ m, as the voxels

were isotropic. For cross-sectional inspection in the three orthogonal planes and volumetric rendering, VG Studio Max 2.2 software has been used.

RESULTS

Description of the skull

It was determined that the skull belonged to a female at the beginning of her adulthood /20-25 years/ (Fig. 1). The main metrical characteristics of the skull are presented in Tables 1 and 2.

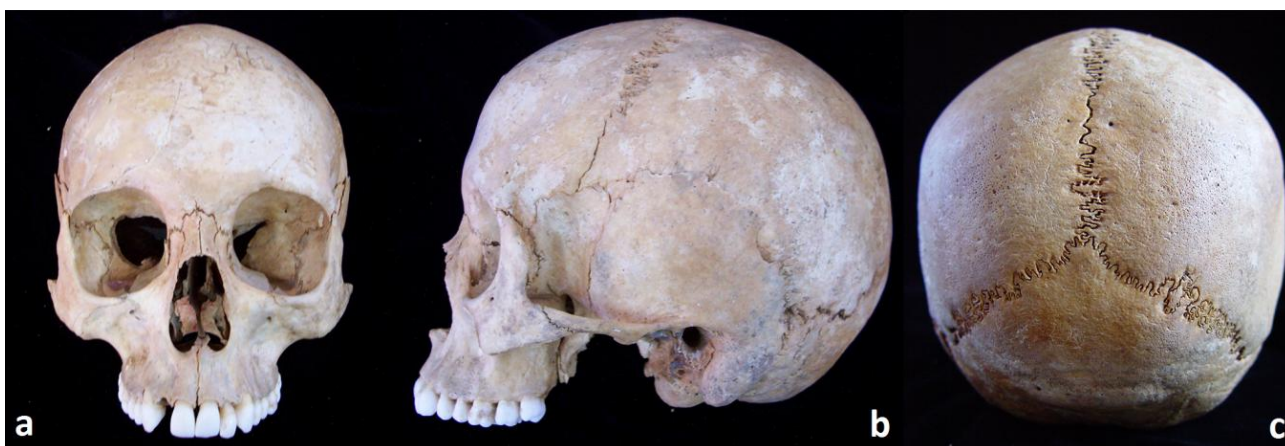


Fig. 1:
Frontal (a), lateral (b) and occipital (c) aspects of the skull.

Table 1. Measurements of the skull

Nº	Measurements	mm
<i>Measurements according to Bass (1995)</i>		
1	Maximum length (g-op)	162
2	Maximum breadth (eu-eu)	133
3	Basion-bregma height (ba-b)	133
4	Porion-bregma height (po-b)	109
7	Minimum frontal breadth (ft-ft)	93
8	Total facial height (n-gn)	108
10	Bizygomatic breadth (zy-zy)	123
11	Nasal height (n-ns)	46
12	Nasal breadth (al-al)	21
13	Orbital height	35
14	Orbital breadth (mf-ec)	38
15	Maxilloalveolar length (pr-alv)	47
16	Maxilloalveolar breadth (ecm-ecm)	59

17	Palatal length (ol-sta)	40
18	Palatal breadth (enm-enm)	37
19	Bicondylar breadth of mandible (cdl-cdl)	110
20	Bigonial breadth (go-go)	105
21	Height of ascending ramus	51
22	Minimum breadth of ascending ramus	27
23	Height of mandibular symphysis (gn-idi)	30
<i>Measurements according to Martin and Saller (1957)</i>		
5	Cranial base length (ba-n)	93
12	Biasterionic breadth (ast-ast)	106
23	Cranial circumference	473
40	Basion-prosthion length (ba-pr)	87
43	Upper facial breadth (fmt-fmt)	99
48	Upper facial height (n-pr)	62
67	Front mandible breadth (ml-ml)	43
68	Mandibular length	80

Table 2. Angles and index characteristics of the skull

№	Angles	Degrees	Characteristics
<i>Angles according to Martin and Saller (1957)</i>			
72	Total facial angle (n-pr-FH)	80°	Mesognathous
73	Nasal profile angle (n-ns-FH)	83°	Mesognathous
74	Alveolar angle (ns-pr-FH)	68°	Hyperprognathous
79	Mandibular angle	140°	-
<hr/>			
Symbo l/№	Indexes	%	Characteristics
<i>Indexes according to Bass (1995)</i>			
A	Cranial index	82.1	Brachycranial
C	Cranial length-height index	82.1	Hypsycranial
D	Cranial breadth-height index	100	Acrocranial
H	Fronto-parietal index	69.9	Metriometopic
I	Total facial index	87.8	Mesoprosopic
K	Nasal index	45.7	Leptorrhinic
L	Orbital index	92.1	Hypsiconchic
M	Maxilloalveolar index	125.5	Brachyuranic
N	Palatal index	92.5	Brachystaphylinic

<i>Indexes according to Martin and Saller (1957)</i>			
I 60	Alveolar/Gnathic index	93.5	Orthognathic
I 62	Mandibular index	72.7	Dolichostenomandibularic

Description of the orbital defect

The defect was observed in the right orbit of the skull and was located at the orbital apex (Fig. 2). It represented an excision of the orbital surface of the greater wing of the sphenoid bone. The excision started from the orbital surface of the frontal bone at the level of the speno-frontal suture and ended at the lower end of the orbital surface of the greater wing slightly above the inferior orbital fissure (IOF) with a bony ridge. There were no traces from the outline of the SOF. The lesser wing of the sphenoid bone along with the OC were missing. The excision was semilunar in shape and the distance between its uppermost and lowermost points was 20 mm. The excised part was oblique and the outer diameter was bigger than the inner one.

A smoothing on the outer edge was visible along the whole length of the excision. Furthermore, we observed a partial coverage of the diploë by a thin layer of compact bone tissue in the lower section of the defect (Fig. 2b, Fig. 3). At that site, the thickness of the orbital surface of the greater wing of the sphenoid bone along the oblique inclination of the excision was 5 mm, while the internal table was 1 mm. The layer of compact bone tissue started from the external table and extended up to 2.5 mm inwards. The remaining uncovered diploic space from the side of the internal table had a thickness of 1.5 mm.

The skull did not show any pathological changes. However, cribra orbitalia were observed on the roofs of both orbits and were more pronounced in the right one (Fig. 4).

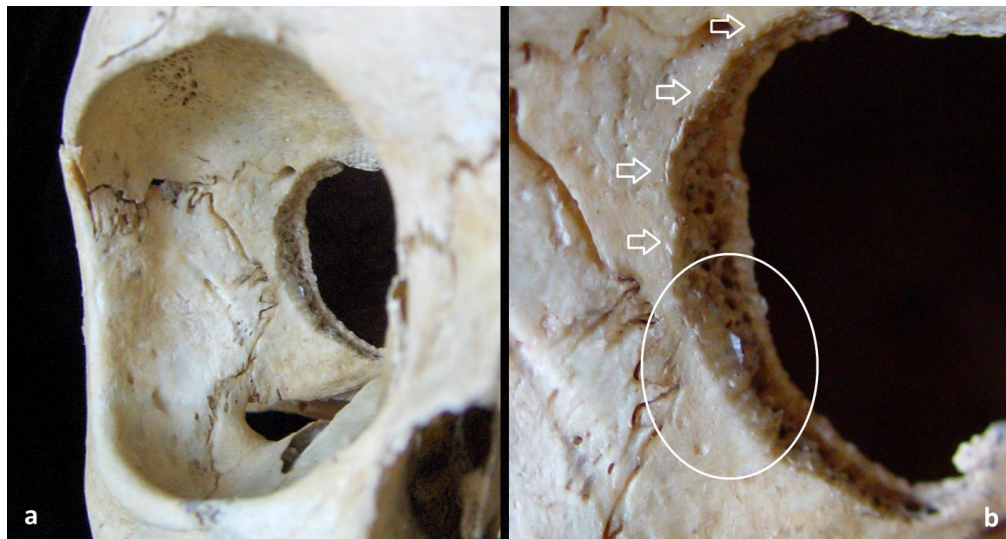


Fig. 2:

Right orbit with orbital defect (a). A closer view of the defect (b). The arrows indicate the smoothed outer edge; the circle encloses the coverage of the diploë by a thin layer of compact bone tissue.

DISCUSSION

The case we describe herein is of great importance because of the scarcity of previously reported paleopathological findings of orbital defects. Here, we consider consecutively the most probable reasons for such an excision on the orbit. It is worth noting that any possibilities for the origin of the defect as a result of taphonomic processes were excluded because of the defect shape and morphology. In particular, we did not find any visual traces from animal gnawing or changes from other natural taphonomic factors altering the bone, such as cracking or flaking.

Causes for the intervention

Several possible hypotheses explaining the orbital defect observed in the investigated skull could be supposed. We could hypothesize that the excision was a direct result from an orbital injury or there was a secondary intentional intervention (trepanation) of the trauma. If we assumed that there had been a surgical treatment, than we could also accept a pathological condition as a possible reason for it.

Trauma

The first possible reason for such a defect could be an orbital trauma caused by a transorbital injury penetrating into the brain, in which part of the orbital apex was affected as the penetrating object might have remained stuck in the orbit. Nowadays, trauma is responsible for 4.5% of all orbital pathology (Rootman 1988). The penetrating injuries of the skull and brain are relatively uncommon, comprising about 0.4% of all head injuries (Gennarelli *et al.* 1989). According to Paiva *et al.* (2010), orbitocranial injuries caused by high-speed projectile foreign bodies are rather unusual events, while penetrating traumatic brain injuries with low-energy trauma are even rarer. It could be supposed that war and accidental injuries of the orbital region were more frequent in the past compared to nowadays.

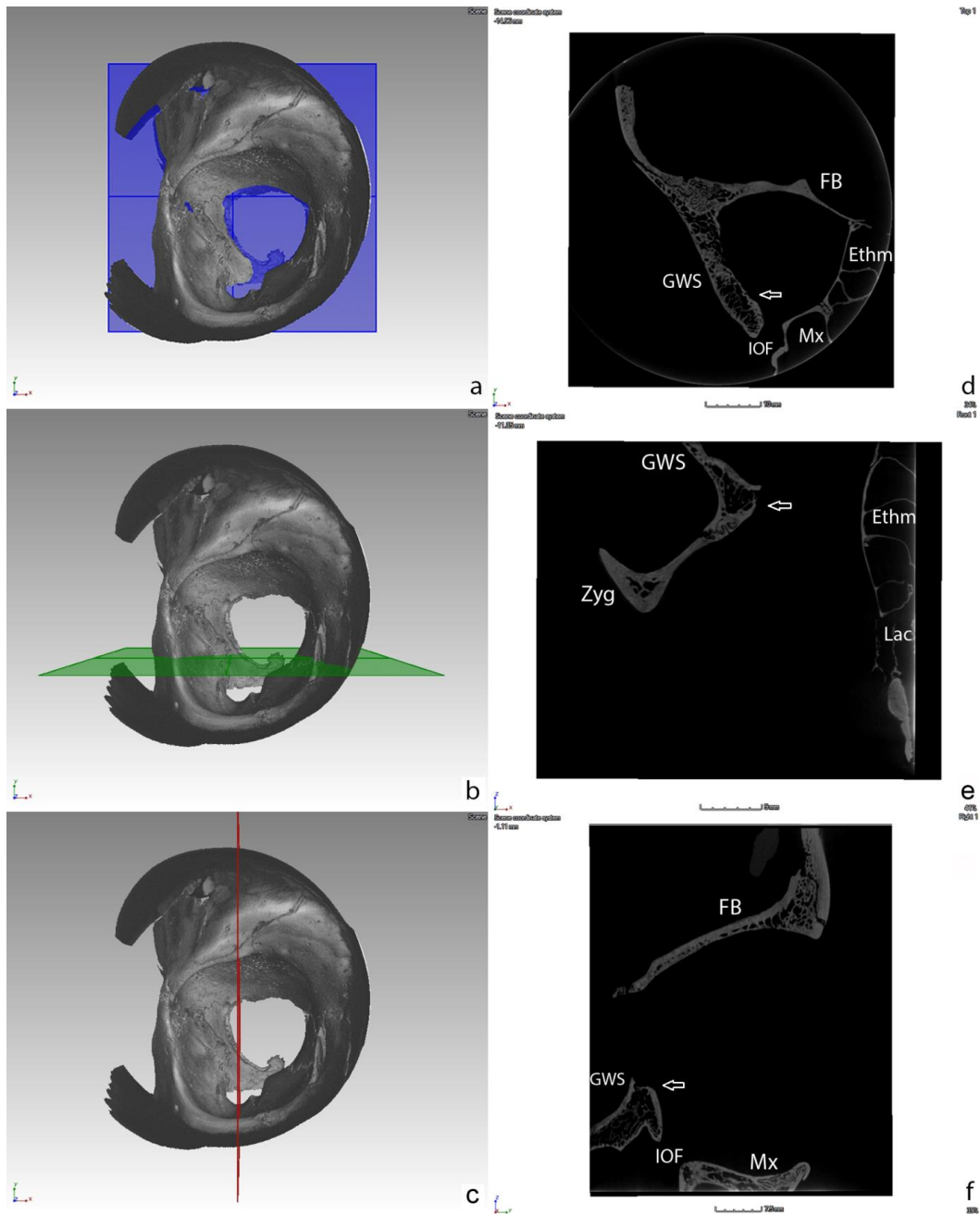


Fig. 3:

CT-images of the orbital defect. (a-c) a 3D volumetric representation with illustrated coronal, transversal and sagittal plane at the level of the defect; (d-f) the corresponding coronal, transversal and sagittal section at the same level. The arrows indicate the partial coverage of the diploë by a thin layer of compact bone tissue. GWS, greater wing of the sphenoid bone; FB, frontal bone; Ethm, ethmoid bone; IOF, inferior orbital fissure; Mx, maxilla; Zyg, zygomatic bone; Lac, lacrimal bone.



Fig. 4:
Cribra orbitalia on both orbital roofs.

The horizontal pyramidal shape of the orbit deflects penetrating objects toward its apex, and the SOF, IOF, and OC serve as direct passageways to the cranial cavity. The eyeball is often pushed aside as the foreign body traverses the orbit (Turbin *et al.* 2006). Penetration through the OC leads to irretrievable damages of the optic nerve (van Duinen 2000), while penetrating injuries through the SOF may affect the oculomotor, trochlear, trigeminal (its ophthalmic branch) and abducens nerves, the arteries of the circle of Willis and the carotid artery (Dunya *et al.* 1995).

According to Turbin *et al.* (2006), high-speed penetrating objects with a perpendicular trajectory to the orbital wall cause direct bone fractures. Vertically directed objects may pierce the orbital roof and horizontally penetrating ones may cause fractures of the ethmoid bone or posterior orbital wall. In contrast, the low-speed objects tend to slide along the orbital wall towards the apex and passing via SOF, OC, and/or sphenoid wing, may damage the temporal lobe, carotid artery, cavernous sinus, and brain stem, which is the most frequent pattern of injury among the non-occult cases. In our case, if there were a transorbital penetrating trauma, since there was a lack of fracture lines, it may have involved a low-velocity penetrating object, which affected either of the apical passages (SOF or OC). This in turn probably required performing a surgical intervention aiming to extract the foreign body.

Arslan *et al.* (2012) noticed that intracerebral hematoma, cerebral contusion, intraventricular hemorrhage, pneumocephalus, cranial nerve damage, severe permanent neurological damage, brain stem injury and cerebrovascular injury are amongst the immediate complications of a transorbital penetrating trauma. On the other hand, delayed complications include cerebrospinal fluid fistula, pneumocephalus, orbital cellulitis, carotid-cavernous sinus fistula, central nervous system infections, traumatic aneurysm and delayed intracranial hemorrhage. Kitakami *et al.* (1999) noticed a high risk of severe infections such as meningitis and brain abscess in cases of foreign object retention. Aarabi and Cook (2005) reported that the overall mortality associated with penetrating transorbital brain injuries with wooden objects in the pre-antibiotic era was 85% (58% were abscess related, 25% meningitis/cerebritis related and 17% were due to other non-infectious causes), while the overall infectious complications amounted to 78%.

Nowadays, transorbital penetrating injuries require an immediate surgical intervention with a removal of the foreign object, debridement and resection of all involved skull bones, hematoma

evacuation, careful hemostasis along the trajectory, and dural closure to reduce cerebrospinal fluid leak so as to prevent any fatal complications (Arslan *et al.* 2012). However, Kitakami *et al.* (1999) give a good prognosis when the brainstem and the major intradural vessels are not affected. It could be supposed that the absence of such damages might have led to a longer survival of the individual in our case.

We could infer that because of the sex of the individual, a war trauma is a less likely than an accidental one. The lack of a postcranial skeleton did not enable us to examine for other bone damages. The presence of such traces could conduce to a more detailed interpretation of the case in which the orbital defect occurred.

Tumors

It is important to note that the operation in our case was performed only on the right orbit, which suggests that the lesion was unilateral as well as the manifestation of the concomitant symptoms.

Typical lesions of the orbital apex are optic nerve gliomas and meningiomas (Bejjani *et al.* 2001). Optic nerve gliomas are the most common tumors of the optic nerve and comprise about 1% of all intracranial tumors (Dutton 1994; Miller 2004). They are almost always unilateral and occur more frequently in females. However, in most cases these tumors become symptomatic in childhood (Miller 2004). The symptoms associated with optic nerve gliomas include decreased vision, proptosis (bulging eye), optic disc swelling or pallor, and strabismus (Tow *et al.* 2003). Optic nerve sheath meningiomas are rare tumors of the anterior visual pathway, constituting approximately 2% of all orbital tumors (Eddleman and Liu 2007) and affecting predominantly middle-aged adults (Dutton 1991). They almost always lead to progressive visual decline, color blindness, and finally a complete loss of vision (Eddleman and Liu 2007). Besides, the OC can also be affected by sphenoid wing meningiomas (Bejjani *et al.* 2001). These tumors may expand medially into the wall of the cavernous sinus, anteriorly into the orbit, and laterally into the temporal bone. Moreover, they are more frequent in females, but the average age of onset is 50 years (Zachariah 2014).

On the other hand, cavernous hemangiomas are the most common primary orbital neoplasm in adults (Alford and Nerad 2006). They are more frequently observed in females with a peak incidence in early middle age (Harris and Jacobiec 1979). The typical clinical presentation for this type of neoplasm includes painless proptosis, lid swelling, diplopia, lump, and recurrent obstructed vision (Kahn and Sepahdari 2012). However, Tanaka *et al.* (2004) noted that schwannomas can also cause exophthalmos, optic neuropathy, and diplopia, similar to cavernous hemangiomas. Orbital schwannomas constitute 1% of orbital tumors. They typically arise from the intraorbital branches of the ophthalmic nerve and produce symptoms related to local mass effect (Kahn and Sepahdari 2012). They commonly occur in young and middle-aged adults (Gündüz 2014).

Therefore, taking into account the clinical manifestation and frequency of the tumors involving the orbital apex, they appear to be a good reason for a surgical intervention.

Other pathological conditions

Other pathological conditions affecting the orbital apex could be the orbital apex syndrome (Yeh and Foroozan 2004), the superior orbital fissure syndrome (Kline 1982; Evans *et al.* 2012), and the cavernous sinus syndrome (Foroozan 2004).

Concerning the pathological manifestations, proptosis appears to be one of the most common symptoms in orbital pathology. Besides tumors, there are numerous other causes for a bulging eye, such as infection, trauma, inflammation, etc. Thyroid-associated orbitopathy is considered the most common cause for proptosis (Wein 2005) and it is typically bilateral (Alsuhaibani and Nerad 2007). Therefore, the above-mentioned tumors, the orbital apex syndrome, and the superior orbital fissure syndrome, which are more frequently unilateral, could be a more probable reason for the defect in the investigated skull.

In addition, it should be noted that the cribra orbitalia observed in our case may not be an indicator for any of the discussed pathological conditions. Although it was initially related to orbital hemangiomas (Lewis 2006), nowadays it is not considered a concomitant symptom to any of above-mentioned conditions.

Conditions and performance of the possible orbital intervention

The possible surgical intervention was probably due to a removal of the eye, severing the optic nerve and the optomotor nerves supplying the eye muscles. It also affected the blood vessels passing through the SOF and OC. Besides, such a partial excision of the orbit would create a direct contact with some intracranial structures, especially the temporal lobe and the cavernous sinus. This is to show that the intervention must have been accomplished very precisely so as to be survived. Because of the lack of blood transfusion and the limited available anaesthesia in the Middle Ages, operators had to act very quickly and precisely in order to improve the patient's condition, to stop the bleeding and finish the operation (Newman 1961). Boev (1959) noted that trepanations, performed with a knife or chisel, were accomplished in 30 minutes up to 1 hour. Bearing in mind the very complicated operation in this case, the lack of time must have been a reason for more drastic actions of the operator, such as excision of a bone fragment, removal of the eye and a direct approach to the cranial cavity. Newman (1961) described that in cases of more severe wounds with affected major blood vessels, operators in the Middle Ages used tourniquets, pressure, ligatures, or cautery to slow down or stop the bleeding. Any bony fragments and foreign bodies were extracted with forceps, tweezers, or tongs. The severely damaged surrounding tissues, which were not expected to heal or could become a source of infection in the wound, were cut out with a knife or scalpel. At any rate, all these procedures must have been very painful, which required the use of some kind of anaesthesia. Before the 15th century the most common anaesthesia was probably the use of liberal quantities of alcohol with or without opium and a wooden stick to bite down upon (Hirst 2004). Boev (1959) supposed that poppy (*Papaver somniferum*), mandragora (*Mandragora officinalis*), hemp (*Cannabis sativa*) and most probably henbane (*Hyoscyamus niger*) were used as anaesthetics on the territory of Bulgaria in the past, and presumed that spirits were also used before trepanations. However, it remains as a possibility that the individual in the reported case was unconscious during the operation in consequence of a suffered injury. Boev (1959) also noted that people in the past had empiric knowledge about aseptic techniques and antiseptics, although in the Middle Ages they were rarely applied.

Survival after the intervention

The morphology of the defect margin implies that the female probably survived some time after the intervention. Nerlich *et al.* (2003) stated that the remodelling of the trepanation defects

extends over a long period of several years and defects with “smoothed” margins and a loss of the diploic skull bone structure prove that the individual must have survived for at least several months. According to Boev (1959), the initial process of filling the diploë with a few millimeters of new compact tissue suggests a survival period of several weeks after the operation. Thus, the smoothed outer edge of the described defect and the loss of typical layering in its lower part suggest that the individual probably survived for a certain period of time.

CONCLUSION

In this study, we describe a case of an orbital defect resulting directly from an orbitocranial injury or from intentional treatment due to either trauma or some pathological condition. The defect margin implies that the individual survived a certain period of time after the operation. The described case enables interpretation and reconstruction of a possible healing procedure in the Middle Ages.

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MORPHOMETRIC BIOINDICATORS IN THE TYPOLOGY OF HUMAN SKULLS: A SAMPLE OF 17TH CENTURY FROM IAȘI CITY (ROMANIA)

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This study concerns the determination of morphometric bioindicators to facilitate the typological evaluation of human skulls. The metric data analysed in this paper belong to human skeletons of 17th century (males and females) recovered in 2008 during a rescue archaeological excavation in Iași city (Romania). This research resulted in the development of effective discriminant function for distinguish groups with predominant mediteranoid and dinaroid features, in particular. In the male skulls, with an accurately 65.8%, the function between the facial index (47/45) and the orbital index (52/51) was more reliable to discriminate the mediterranoïd by dinaroid features. In females, the total facial index (47/45), cranial index (8/1) and orbital index (52/51) have the most significant role in intra-variability. But, the small number of females in the sample makes as our hypothesis, concerning the reliable of these variables in distinguishing human typologies, to be debated in further studies. Also, it is necessary the morphometric analysis of a larger sample to confirm the role of these craniofacial indices as morphometric bioindicators in the typological assessment of human skulls.

Keywords: Craniofacial indices, discriminant function, skull typology, 17th century, Iași city, Romania

INTRODUCTION

Situated on the road between cities White Citadel (*Bilhorod-Dnistrovskîi*) and Lviv, the Iași settlement became in the Middle Ages an important economic centre (Cihodaru 1980, Cloșcă 2008), attracting various peoples, including merchants, from adjacent areas (Spinei 1994). This reason makes us assume that Iași was a kind of crucible in which people of various anthropometric typologies interacted. For instance, the carts traveling on these European roads were accompanied by security guards who were not necessarily native, but Cossacks, Polish, Tatar, Turkish, etc. (Cihodaru 1980).

As a sign of the economic development in the 17th century, the location of the princely court ("Curtea Domnească") in the place of Iași City certifies the presence of people with various morphometric typologies (e.g. ambassadors with their servants from different countries, officers, guards, soldiers, etc.).

A previous paleoanthropological analysis of the human skeletons from the "Curtea Domnească" necropolis of Iasi highlighted some particularities: individual and collective burials with poor inventory, absence of children (0-14 years), the highest frequency for the subjects of 35-60 years old (50%), more males than females (report 80/31), typological polymorphism (Groza et al. 2012, Groza 2013). These peculiarities could outline the idea that in the analysed cemetery, discovered in the eastern side of the princely court, men with lower ranks predominate (maybe foreign soldiers and servants). Such people had a limited lifespan, being more exposed to illness,

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fight injuries, deficitary diet etc. We presume that the nobles were buried separately with their families.

Starting from a sample of skeletons with an accentuated typological polymorphism, we are looking for morphometric bioindicators to facilitate the statistical evaluation of the human skull typology. Discriminant function analysis becomes one of the most useful statistical models in morphometric evaluation and many researchers used it in their studies obtaining a better accuracy rates than a direct comparison of the measurements (Kajanoja 1966, Uytterschaut 1996, Steyn and İşcan 1998, Garson 2012).

MATERIAL AND METHODS

The data analysed in this study are craniofacial measurements of male and female skeletons recovered in 2008 during the rescue archaeological excavation at “Curtea Domnească” necropolis of Iași (Iași County, Romania). According the archaeological information, the analysed sample comes from the eastern side of the princely court, and it is dated to 17th century. The analysed sample (58 skulls, Table 1) is stored at the “Olga Necrasov” Centre of Anthropological Research, in Iasi, Romania.

The paleoanthropological analysis of this human osteological sample was published in previous studies (Groza et al. 2012, Groza 2013, Groza 2014), and the evaluation of the anthropological type for each skeleton was carried out mainly according to the classifications and scales proposed by von Eickstedt (1934) and Valois (1965) (Von Eickstedt 1934, Vallois 1965)

The present paper is focused strictly on the statistical analysis of some skull metric data in order to identify significant morphometric indicators in the assessment of the cranial typology. The craniofacial indices utilized in this study are according to Martin (1928), as following: cranial index (8/1), basio-bregmatic longitudinal index (17/1), basio-bregmatic transversal index (17/8), porio-bregmatic longitudinal index (20/1), porio-bregmatic transversal index (20/8), gnathic index (40/5), total facial index (47/45), orbital index (52/51).

The Grubs’s test was applied to correct for measurement errors, to detect outliers in a univariate dataset that follows an approximately normal distribution (Grubbs 1969, Stefansky 1972), so the skulls considered as outliers were removed from analysis. Data were assessed for normality using the Kolmogorov-Smirnov test (Chakravarti et al. 1967). The confidence limit was considered 0.95, and value of p smaller than 0.05 was considered as statistically significant value.

The Principal Components Analysis (PCA) is a very widely used method in multivariate statistics and is probably the oldest and best known of the techniques of multivariate analysis (Jolliffe 2002). In our study, the PCA was used as a preliminary tool to reduce the number of variables in a dataset (in our case the indices) by finding linear combinations of those variables that explain most of the variability (Slaus et al. 2004).

Canonical Variates Analysis (CVA) and Discriminant Function Analysis (DFA) were employed to select the best indices for discrimination among the typological groups. These methods have two uses: analysis – interpretation of the way in which the groups differ from each other, and classification – the procedure generates classification function coefficients that are used to assign new cases to groups on the basis of shared similarities (Hammer et al. 2001, Slaus et al. 2004).

To reduce the effects of the sexual dimorphism, the statistical analysis was completed for males and females separately.

The multivariate statistics were performed using Past: Paleontological Statistics Software Package for Education and Data Analysis (Hammer et al. 2001), Data Analysis ToolPak (Ms Excel 2016) and SPSS vers.19 (free version).

Table 1:
Analysed material in this study (after Groza 2013)

Skeleton code	Typology (Groza 2013)	Sex	Burial type
GAa	East-europoid with alpinoid and dinaroid influences	male	collective burial
GAb	Alpino-mediterranoid	male	collective burial
GAc	Mediterranoid-dinaroid	male	collective burial
GAd	Dinaroid-mediterranoid with alpinoid influences	female	collective burial
GBa	Medirranoid-dinaroid with east-europoid influence	male	collective burial
GBb	Mediterranoid-nordoid	male	collective burial
GBc	East-europoid with alpinoid and mediterranoid influences	male	collective burial
G1-M1A	Medirranoid with alpinoid influences	male	collective burial
G1-M3	Mediterranoid with dinaroid influences	male	collective burial
G2-M4	Mediterranoid with east-europoid influences	male	collective burial
G2-M5	Mediterranoid-dinaroid with east-europoid influences	male	collective burial
G3-M11	Dinaroid with east-europoid influences	male	collective burial
G3-M9	Dinaroid-mediterranoid with east-europoid influences	female	collective burial
G5-M16	Dinaroid-mediterranoid	female	collective burial
G7-M20A	-	male	collective burial
G9-M26	Dinaroid-alpinoid with east-europoid influences	male	collective burial
G9-M27	Mediterranoid-dinaroid with east-europoid influences	female	collective burial
G9-M28	East-europoid with alpinoid influences	male	collective burial
G10-M33A	Mediterranoid with dinaroid influences	female	collective burial
G11-M34	Alpinoid with dinaroid influences	male	collective burial
G12-M36	-	female	collective burial
G12-M37	Dinaroid with east-europoid influences	male	collective burial
G14-M45	Dinaroid with east-europoid influences	male	collective burial
G14-M47	Dinaroid with east-europoid influences	male	collective burial
G17-M57	Alpinoid with mediterranoid influences	male	collective burial

G17-M58	Mediterranoid with east-europoid and dinaroid influences	male	collective burial
G17-M59	Meditarranoid	male	collective burial
G19-M64	Dinaroid-mediterranid with east-europoid influences	male	collective burial
G19-M65	Mediterranoid with east-europoid influences	male	collective burial
G19-M66	Mediterranoid with east-europoid influences	male	collective burial
G20-M67	Dinaroid with east-europoid influences	male	collective burial
G20-M68	Dinaroid-alpinoid	female	collective burial
G20-M69	Dinaroid-mediterranoid with east-europoid influences	female	collective burial
G20-M70	Mediterranoid with east-europoid influences	male	collective burial
G20-M71	Mediterranoid-dinaroid with east-europoid influences	male	collective burial
M1	Mediterranoid with east-europoid influences	male	individual burial
M2	Mediterranoid	male	individual burial
M62	Mediterranoid-dinaric	male	individual burial
M63	Dinaroid with alpinoid influences	male	individual burial
M84	Dinaroid with mediterranoid influences	male	individual burial
M85	Mediterranoid-dinaroid	male	individual burial
M86	Dinaroid-mediterranid	male	individual burial
M87	Alpinoid with dinaroid influences	male	individual burial
M88	Dinaroid-mediterranoid	male	individual burial
M89	Dinaroid with east-europoid influences	male	individual burial
MI	Mediterranoid-dinaric with east-europoid influences	male	individual burial
MII	Dinaroid with nordoid influences	male	individual burial
MIII	Dinaroid with east-europoid influences	male	individual burial
MIV	Dinaroid with east-europoid influences	male	individual burial
MV	Mediterranoid with dinaroid influences	female	individual burial
MVI	Dinaroid with east-europoid influences	male	individual burial
MVI	Mediterranoid with dinaroid influences	female	individual burial
MVII	Dinaroid with mediterranoid influences	male	individual burial
MX	East-europoid	male	individual burial
MXI	Dinaroid with east-europoid influences	male	individual burial
MXII	Dinaroid-alpinoid	male	individual burial
MXIII	Dinaroid-mediterranoid with east-europoid influences	male	individual burial
MXIV	Dinaroid with mediterranoid and east-europoid influences	male	individual burial
MXV	Mediterranoid with east-europoid influences	female	individual burial

RESULTS

Male skull analysis

To explore the role of craniofacial indices in defining morphometric variability within the sample, Principal Component Analysis (PCA) was used. PCA calculated 7 principal components for describing the skull variability in dataset, the main two of which accounted for 59.66% of the sample variability (Table 2). The first principal component describes 38.54% of the total variation and two indices have the highest loadings along this axis; therefore, the individual position on the plot is defined by the relation established by the two facial indices: orbital index (52/51) and total facial index (47/45). The second principal component accounts for 21.22% of the total variation and has a minor importance for intragroup variability. The following indices have the highest loadings on this second axis: basio-bregmatic longitudinal index (17/1), basio-bregmatic transversal index (17/8) and gnathic index (40/5) (Figure 1).

Table 2:
Loadings of craniofacial indices on the first two principal components in male dataset

Variable	Axis 1	Axis 2
8/1	0,08675	0,1274
17/1	0,06393	0,5097
17/8	-0,02003	0,4738
20/8	-0,09169	0,234
40/5	-0,09011	-0,5871
47/45	0,6181	-0,1053
52/51	0,7677	0,001484

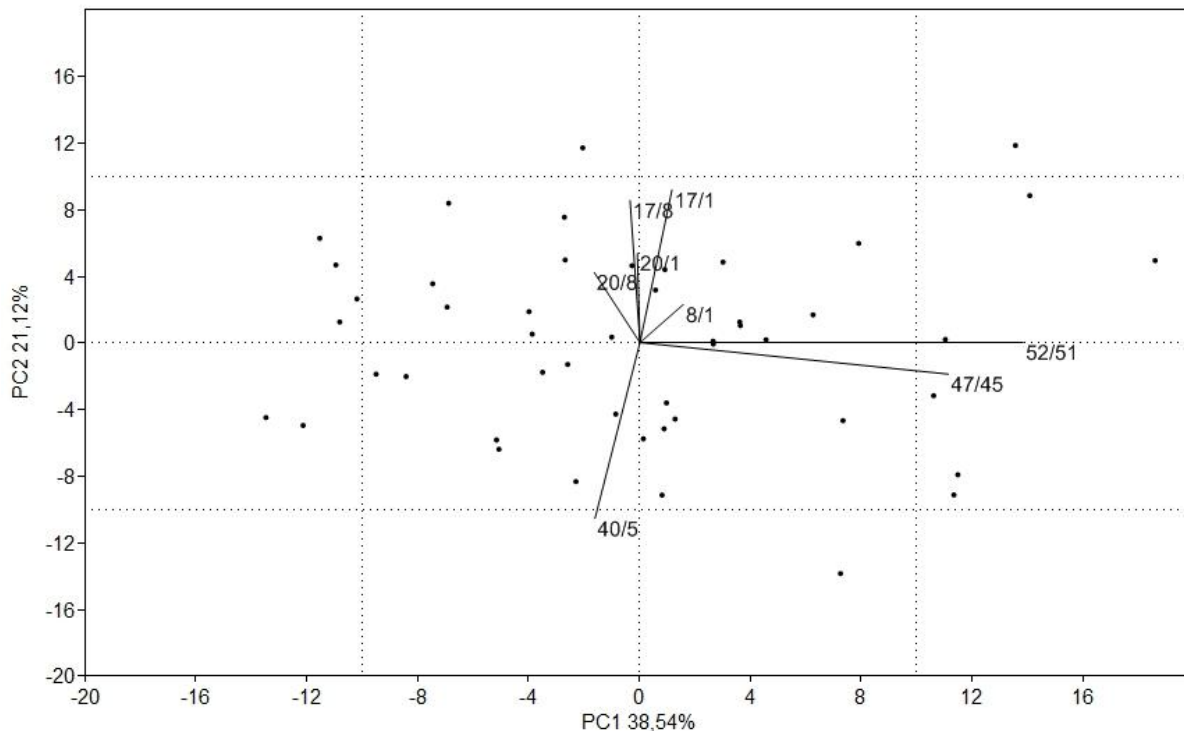


Fig. 1:
Biplot of PC 1 and PC2 in male dataset

A division of metric data into 3 groups was realized according to the typology established by Groza and collaborators (Groza et al. 2012, Groza 2013). Multivariate analysis of variance (MANOVA) and Post-Hoc analysis were applied on these a-priory typologies. Results reveal significant difference between groups with dominant features: mediterranoïd, dinaroid and mixed (F test 5,48; $p < 0,05$). The value for post-hoc significance is shown in the Table 3.

The overall significance test for Canonical Variates Analysis (CVA) confirms the result of the previous test, highlighting statistically significant differences for the 3 a-priory groups.

The plot of CV1 and CV2 is presented in Figure 2 and 76% of the among group variation was accounted for the first two canonical axes. It shows the clear distinction of individuals with predominant dinaroid features and those with medditeranoid and mixed features. The function of 47/45 and 52/51 are the main responsables for this distribution of data on the graph are mainly. The degree of maxillary projection (porio-bregmatic longitudinal index 20/1) and gnathic index 40/5 have insignificant contributions for this variability intragroup.

Tabel 3:
Result MANOVA in male dataset

Wilks' Lambda 0,2153/ F test 5,48; p<0,05			
Post-Hoc: Pairwise comparisons (p values)			
Dominant Features	Mixture	Mediterranid	Dinaroid
Mixture	0	0.033241	9.77E-06
Mediterranid	0.033241	0	0.000567
Dinaroid	9.77E-06	0.000567	0

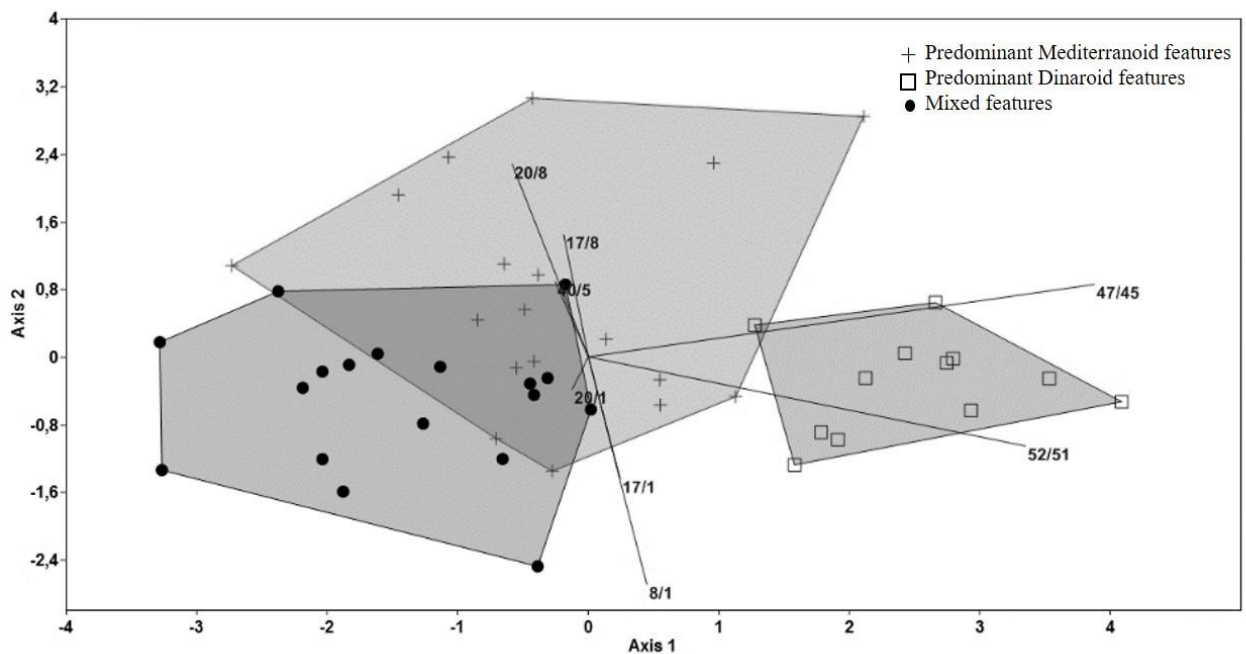


Fig. 2:
Plot of CV1 and CV2 in male dataset

Regarding the discriminant function analysis, the functions for significant indices were computed. This analysis is especially useful when dealing with fragmented crania or with doubtful typology. Stepwise analysis performed on variables has produced a function based on the facial indices: orbital (52/51) and total facial (47/45) indices. This discriminant function has an accuracy of 65.8% after cross-validation and has canonical form: $F1 = -18.961 + 0.114 * 52/51 + 0.106 * 47/45$.

Female skull analysis

The sample of female skulls has a small size, and is not suitable for a complex analysis, but PCA was applied as an instrument to explore the importance of indices in variability, as in the case of the male skulls.

To evaluation of PCA, contributions of the first three axis will take in account. These axis represent 67.11% of the total variability. Only those variables with a loading value above ± 0.5 are considered having a higher aport in variability. The total facial index (47/45) has the best contribution to describe the variability in the sample, followed by the cranian index (8/1) and the orbital index (52/51) (Table 4). Noteworthy is that 8/1, with a high weight for axis 2, highlights the individual positions on the plot according to the typology established by Groza (2012). An such analysis of a small sample, separating in two clusters, is only orintative (Figure 3) and calculating discriminant functions would give just erroneous results.

Table 4:
Loadings of craniofacial indices on the first two principal components in female dataset

Variable	Axis 1	Axis 2	Axis 3
8/1	0.3166	0.5110	0.1391
17/1	0.3516	0.3507	0.2845
17/8	0.06854	-0.0994	0.1853
20/1	0.3308	0.1908	0.4437
20/8	0.09455	-0.2188	0.4119
40/5	0.4141	0.0915	-0.1769
47/45	-0.6045	0.7068	0.06123
52/51	-0.341	-0.2459	0.681

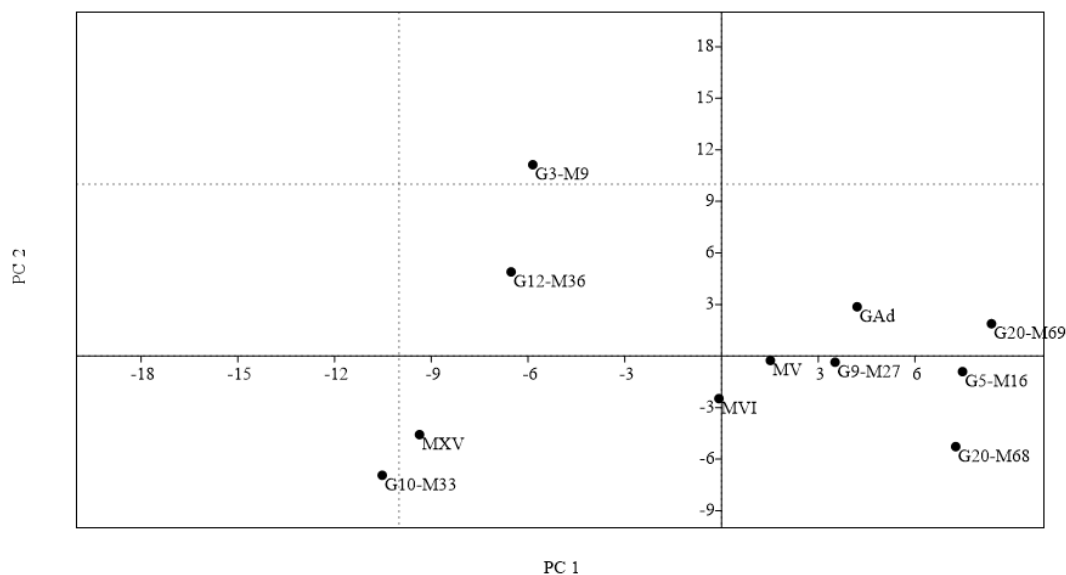


Fig. 3:
Biplot of PC1 and PC2 in female dataset.

To compare the relations among groups (male and females) relative to the functions of 47/45 and 52/51 indexes, a bivariate analysis was used. In the biplot of Figure 4, a clear distinction between cluster 1 and cluster 2 of male series is obvious, but there is very clear revealed by results that the two clusters of the female series overlap on those of male series.

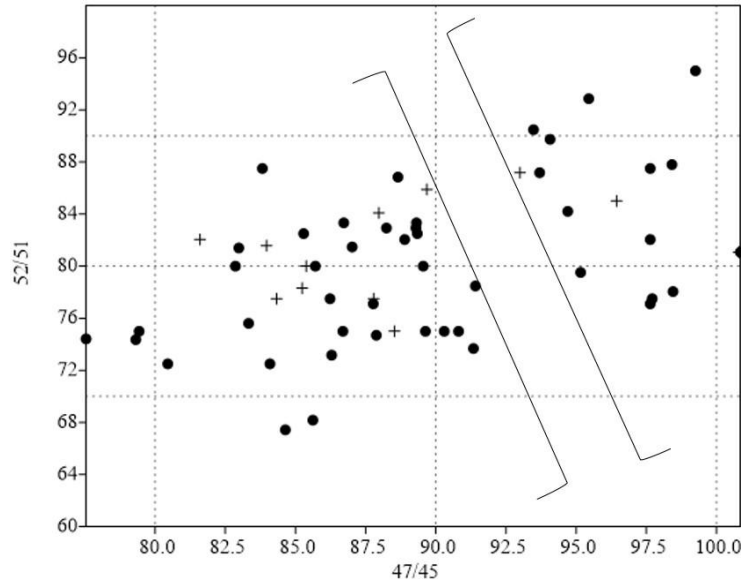


Fig. 4:
Biplot of bivariate analysis in both male and female datasets (+ female; • male).

DISCUSSION

This study focused on the accuracy and reliability of the craniofacial indices in the discrimination of human skull typologies through multivariate statistical procedures. Metric data of 8 craniofacial indices were initially introduced into multivariate analysis. A large variability is clearly evidenced in the sample of the male skulls. In case of female skulls, in a very small number, we cannot discuss about clear and conclusive results. However, we consider the approach to their variability necessary in order to obtain as much information as possible about the studied sample.

The results of the Principal Components Analysis reveal a greater importance of some craniofacial indices for intragroup variability (i.e. orbital index 52/51 and total facial index 47/45) and a less significance of others (i.e. bregmatic transversal index 20/8, and basio-bregmatic transversal index 17/8). The variables for cranial volume (porio-bregmatic longitudinal index 20/1) and for the degree of maxillary projection (gnathic index 40/5) have insignificant contributions for this intragroup variability.

This research has also resulted in the development of effective discriminant function for distinguish groups with predominant mediteranoid and dinaroid features, in specially.

The facial and orbital indices differentiated with an accurately over 65% between groups with predominant dinaroid and medditeranoid features.

As with other researches, the significant role of orbit is also demonstrated in this study. Orbit is one of the most complex and variable regions of the human skeleton. Orbital measurements are essential not only from the medical point of view but also anthropologically. Orbital index is the relationship between the width and height of the orbit, which contributes to the face shape. The orbital index has been used for both quantitative and qualitative, determining sex, ethnicity and ancestry estimation from the beginning of anthropometry (Evereklioglu et al. 2002, Mekala et al. 2015, Patil 2015, Lal et al. 2016). Variations in the orbital index in different races and regions prove that craniofacial growth depends on genetics, ethnic, social and dietary backgrounds (Patil 2015).

The total facial total index is also one of the indices with high discriminative function, also demonstrated in other studies of anthropometry. The facial indices are used to describe the facial proportion and indicate the direction of growth of craniofacial complex (Tsunori et al. 1998, Kumari et al. 2015, Saini 2017). It represents relation between facial height and bizygomatic width.

Graphic representation of the biological distances among males a-priori groups shows the most homogeneous is the one in which the dinaroid features are predominant. Another obvious aspect is the small overlap of this group with the others. The group with predominance of mediterranoid features is the most heterogeneous and overlapped with the group having mixed characters. The large heterogeneity of the mediterranoid group suggests that it might be the native group. The overlap between the mediterranoid and mixed groups suggests a longer cohabitation, and breeding.

According to the discriminant functions of the present results, there are some typological peculiarities that define the male skull sample.

The cluster of subjects with predominantly dinaroid features is defined by brachycephalic to hyperbrahycephalic skull, orbital cavity relatively height and large, high mandible.

The cluster of subjects with predominant mediteranoid features of group is defined by long and narrow neurocranium, oval orbit (or a more rectangular shape), narrow forehead.

Our study didn't focus on sexing differentiated, but an encouraging result was obtained in the comparative analysis of correlation between the main two facials indices (total facial and orbital indices) (Figure 4). This result may be additional information on the role of these indices as typological morphometric bioindicators. Both female and male skeletons in 8 of 10 collective burials have been identified as sharing similar functions of facial indices. Lüdemann (1994) defined the "collective burial" as simultaneous burial of several individuals in one grave; it appears quite regularly since early medieval times, both females and males of all age categories being grouped together. Possible reasons for burying two or more individuals together in one grave at nearly the same time are manifold and frequently discussed in archaeology (Lüdemann 1994, Rott et al. 2018). Besides economic reasons, simultaneous burial of several individuals within a single grave are often interpreted to imply a familial relationship, especially within an archaeological context (Stojanowski 2015). However, the possibility of family members passing away at the same time is unlikely, but it is not impossible. On the other hand, a revolt, a war or an epidemic can affect at the same time more family members.

CONCLUSIONS

The identification of morphometric bioindicators facilitating the typological evaluation of human skulls was the subject of this study. The three different quantitative analyses undertaken in this study demonstrated a significant variability intragroup. Of all the studied variables, only the functions established by some of them have an important role as morphometric bioindicators in the typological assessment of the human skulls. In the cases of the male skulls, with an accuracy of 65.8%, the function between the total facial index (47/45) and the orbital index (52/51) were more reliable to discriminate the mediterranean by dinaroid features. In females, the highest significant indices in the craniometric variability are the total facial index (47/45), the orbital index (52/51) and cranial index (8/1). The small number of female skulls in the sample makes as the hypothesis about the reliability of these variables in distinguishing human typologies to be debated in further studies. Also, it is necessary the morphometric analysis of a larger sample to confirm the role of these craniofacial indices as morphometric bioindicators in the typological assessment of human skulls.

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ÉTUDE ANTHROPOLOGIQUE CONCERNANT L'HARMONIE DES CERTAINES PROPORTIONS CORPORELLES CHEZ UNE POPULATION FÉMININE DE ROUMANIE. ASPECTS DE DIMORPHISME SEXUEL

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This paper appreciate the harmony of corporal development in metric and/or modular system based on 12 dimensions from the longitudinal ax of the human body, parts of the stature, calculating 38 proportions from which 36 have been compared with various canons from the history of plastic arts and architecture. The research material is a sample of 691 adult women, on average of 32.43 ± 10.37 years old, from all the Romanian historical provinces. The distance from canons and sexual dimorphism have been appreciated by calculating the differences between the values of women's average proportions and the canons for the former and the values of men's average proportions from the same sample (771 men, presented in a previous paper) for the latter, through the sexual dimorphism index and the Student's significance tests, χ^2 , normal distribution test z. The dimensional sexual dimorphism is clearly favoring the men and the closing to the conventional canons illustrates through the proportions' values from the „ $M \pm \sigma$ ” interval a more harmonious men's bodily development compared with women's (72.22:55.56%). The results reclaim a future study of the variability on age categories.

Keywords: anthropométrie, proportion corporelle, module, canon, dimorphisme sexuel

« Le nez de Cléopâtre: s'il eût été plus court, toute la face de la terre aurait changé. » (Pensée de Blaise Pascal)

Notre travail continue et développe une étude antérieure concernant l'harmonie des proportions corporelles des certaines dimensions situées sur l'axe longitudinal du corps, composantes de la stature, par la comparaison aux divers canons de l'histoire des arts plastiques et de l'architecture et aux données nationales. (Luca, 2018 : 69-83).

L'anthropologie roumaine consigne beaucoup de recherches sur les dimensions et proportions corporelles pour caractériser les types anthropologiques et constitutionnels des roumains mais les références aux celles-ci sont assez restreintes dans les Atlas de la Roumanie et les Atlas des provinces roumaines historiques (Vlădescu, Vulpe, 2005 : 271-277 ; Glavce, Radu, 2006 : 116-132 ; Radu, Glavce, Bulai-Știrbu, 2011 : 47-100 ; Vulpe, 2012 : 23-26).

Dans l'histoire des arts plastiques et de l'architecture on consigne beaucoup de modules et de canons utilisés pour représenter le corps humain masculin ou féminin. Notre travail antérieur fait une courte rétrospection et présente quelques tels modules et canons utilisés aussi dans notre étude

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concernant les proportions chez une sélection des hommes romains provenant de tout le pays. (Luca, 2018 : 69-83)

Les arts plastiques inscrivent au cours de leur histoire beaucoup de chefs-d'œuvre qui représentent le corps humain dans sa beauté naturelle ou idéale et des grands artistes, de l'antiquité jusqu'aux nos jours, ont été préoccupés de trouver la plus belle proportion, « l'unité en multiplicité », la section d'or, en effectuant eux-mêmes des études anthropométriques et des calculs mathématiques. Cette fois-ci, parce que le sujet c'est la femme, il faut que nous souvenions quelques telles représentations artistiques de la femme au cours du temps. Dès les petites statuettes (figurines) de la fertilité de l'époque de la pierre de type Venus, aux caryatides des temples, les statues de l'antiquité grecques des jeunes femmes (kore) en grandeur naturelle et les diverses statues de Venus, ou aux nus de Rodin, dès les peintures de la Renaissance – « La Primavera » de Botticelli, « La Gioconda » de Leonardo, « Venus endormie » de Giorgione, « Venus d'Urbino » de Tizian, « Venus au miroir » de Velàzquez, « Venus » de Cranach Le Vieil, etc. - en suivant les siècles XVII - XIX avec « La Grande Odalisque » d'Ingres, « Maja desnuda » de Goya, « Olympia » de Manet, « Femmes au soleil » de Renoir, « Les Grandes Baigneuses » de Cézanne, ou les nus des femmes tahitiennes de Gauguin, finalisant pendant le XX-ème siècle avec les caryatides et le « Nu couché » de Modigliani, « Les Mademoiselles d'Avignon » de Picasso et, comme si un retour aux créations archaïques, « Femme » de Miró ou « Vénère bleue » de Klein, toute cette énumération incomplète veut exemplifier l'image du corps féminine en arts plastiques au cours du temps. Les architectes ont cherché aussi d'harmoniser les proportions des édifices aux celles du corps humain : « Aucun temple ne peut pas être comme il faut si ses parties composantes ne se trouvent pas les unes par rapport aux autres comme les membres (parties) d'un homme bien achevé », soutenait Vitruvius (I s.av.J.-C.) et la devise de Corbusier (1887-1965) était « Tout à l'échelle de l'homme ! ». (Ghițescu, 1965 : 13-267 ; Radian, 1981 : 7-64, 87-270 ; Buchholz, 2010 : 24-53, 152-316, 364-445 ; Borden, 2010: 42-49; 410-413; Luca, 2016: 327-336 ; Luca, 2018 : 69-83). (Figures 1–3).

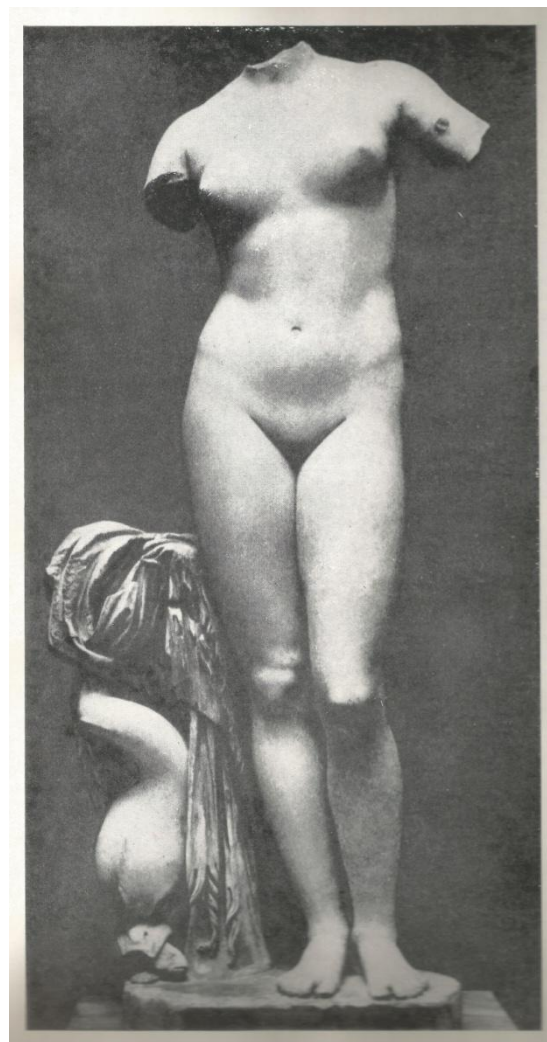


Fig. 1 :
Venus (Aphrodite) de Cyrénaïque
(après Ghițescu, 1965 : 54)

Le travail qui apprécie l'harmonie corporelle par rapport aux différents canons chez les hommes analyse plus de proportions mais dans la recherche des femmes le nombre des proportions a été restreint entre des limites où nous avons considéré que les canons sont mieux précisés. Les résultats concernant les proportions des hommes sur l'axe longitudinal du corps illustrent, moyennement, une grande concordance avec les canons et un développement harmonieux (Luca, 2018, 69-83).

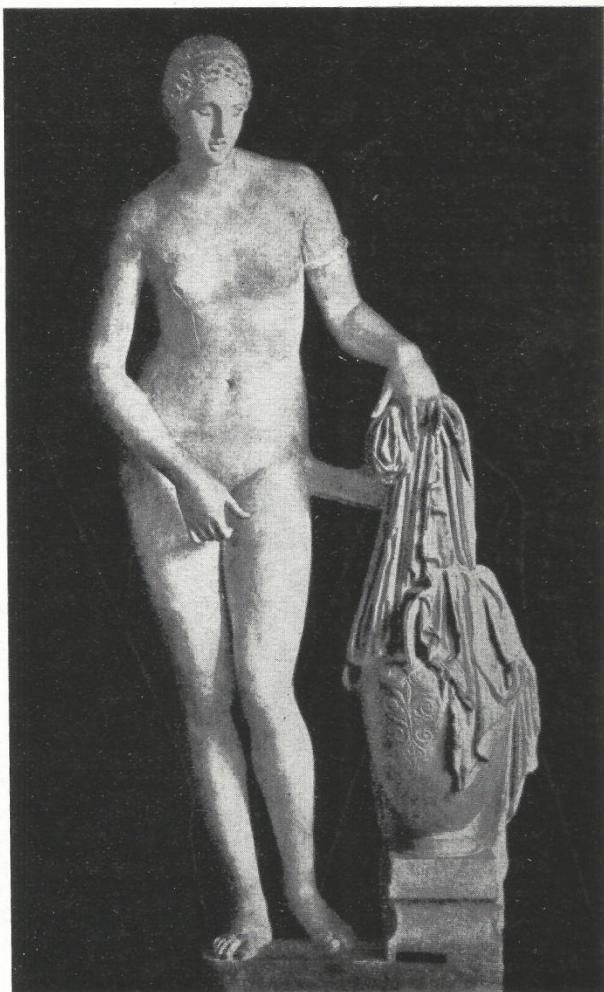


Fig. 2 :
Venus (Aphrodite) de Cnide,
Praxitèle, IV s. av.J.-C. (après Ghițescu, 1965 : 89)

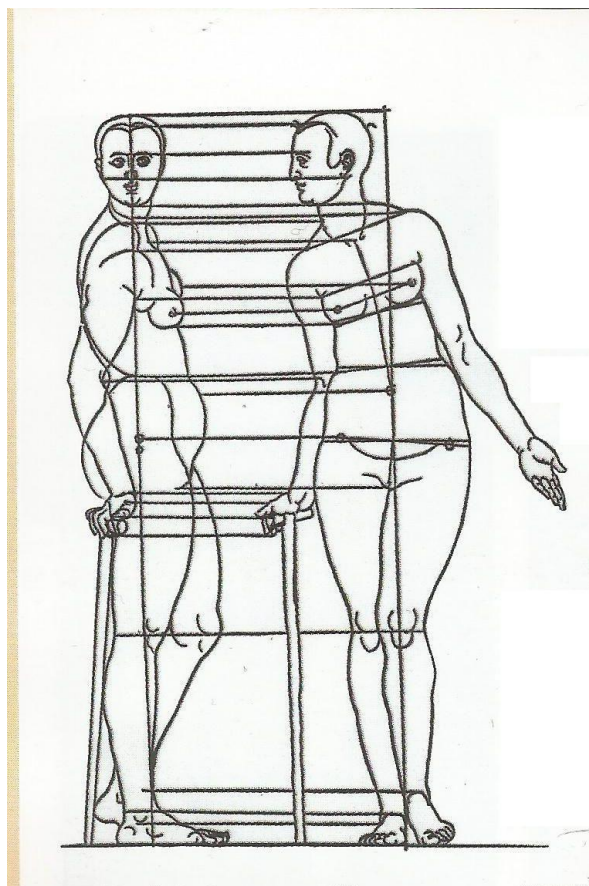


Fig. 3 :
Albrecht Dürer, *Modèle des proportions du corps féminin,* Quatre livres sur les proportions du corps humain, 1528 (après Buchholz, 2010: 204)

MATERIEL ET METHODES

La sélection féminine du lot d'étude est constituée par 691 femmes d'âge moyen de $32,43 \pm 10,37$ ans provenant, comme les hommes, de toutes les provinces historiques de la Roumanie actuelle. Le volume des sujets est variable selon l'échantillon, le caractère considéré et collecté pendant la recherche respective. L'amplitude des âges moyens a un minimum de $23,42 \pm 5,32$ ans pour l'échantillon des étudiants et un maximum de $38,56 \pm 8,95$ ans pour les femmes de Soveja. Au niveau de la sélection féminine prédominent les catégories de 21-30 ans (38,41%) et de 31-40 ans (30,72). (Fig. 4-6).

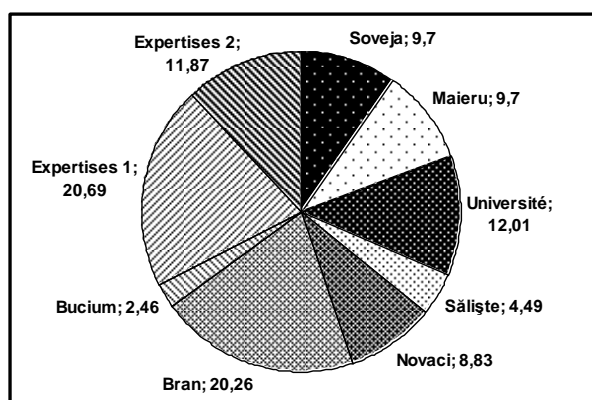


Fig. 4 :
Variation du volume des échantillons féminins (%)

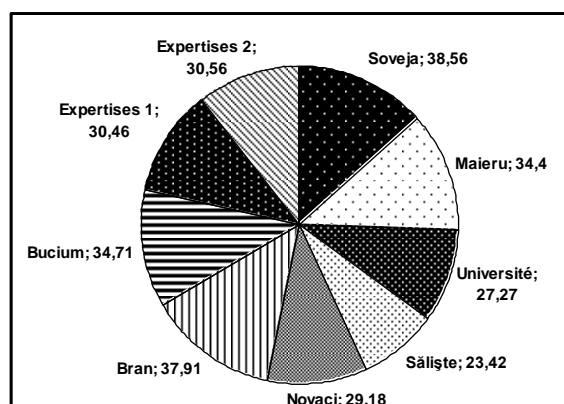


Fig. 5 :
Âge moyen des échantillons féminins (%)

On a calculé les valeurs moyennes des différentes variables anthropométriques dimensionnelles et proportionnelles et leur amplitude de variation phénotypique. (Tableaux 1 et 2). Le développement et l'harmonie corporelle des femmes ont été appréciés selon 13 dimensions composantes de la stature mises en relation en 38 proportions comparées aux différents canons de l'histoire des arts plastiques ou de l'architecture. On note que les unes de dimensions ont été déduites : ex. la longueur des membres inférieurs = stature – taille-assise ; V-sst (tête+cou) = Taille-assise – hauteur du tronc ; hauteur du sternum = hauteur du tronc – hauteur de l'abdomen etc. L'éloignement des résultats par rapport aux canons a été prouvé par la différence arithmétique en unités de proportion = u.p. et par la distance réduite z en unités sigmatiques = u.s. (Tableaux 3-4 ; Fig. 8).

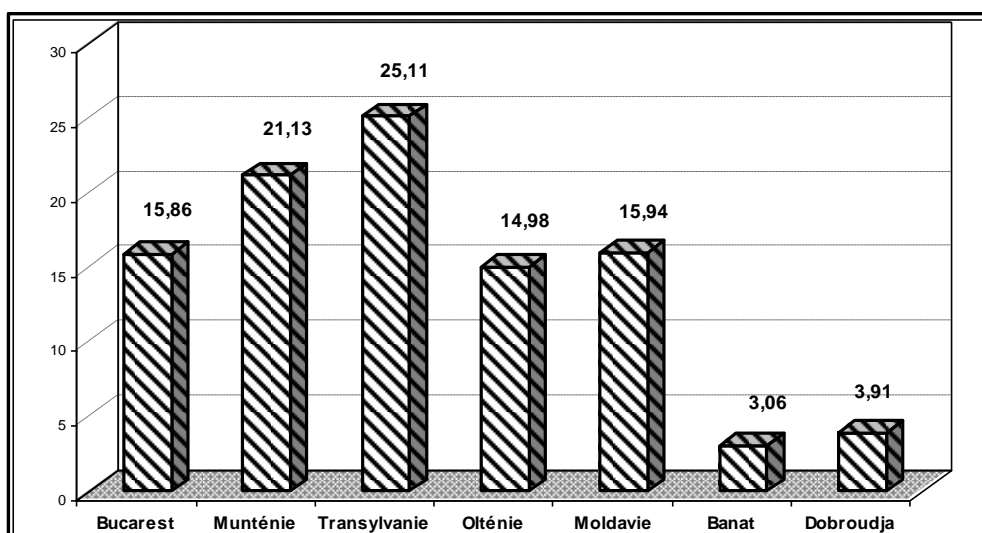


Fig. 6 :
Lieu de naissance des sujets (%)

Le dimorphisme sexuel a été estimé au niveau des dimensions et des proportions par la différence entre les valeurs moyennes des deux sexes %, par l'indice de dimorphisme sexuel et aussi par le test Student et χ^2 . (Tableaux 3-4). (Aron, 1997 :22-263 ; Darmois, 1975 :87 ; Krogman, 1941 : 5 ; Luca, 1999 : 31-36 ; Radian, 1981 :87-270, Radu, 1985 : 25-35 ; Radu, Glavce, Știrbu, 2011 : 47-100 ; Trebici, 1985 :133-171 ; Vlădescu, 1982 : 40-46 ; Vulpe, 2012 : 23-26).

RESULTATS ET COMMENTAIRES

Caractérisation des femmes du lot de recherche (Tableaux 1 et 2)

Tableau 1 :

Valeurs moyennes des dimensions mises en proportions chez les femmes

Dimension (mm)	Femmes			Amplitude de variation	
	N	M	DS	Valeurs moyennes	V. individuelles
V-sol	649	1592,79	61,9	1560,55-1641,62	1400-1792
V-assis	630	864,6	35,46	839,4-873,69	750-1020
Long.m.inf.	630	738,92	42,9	720,31-769,46	600-888
V-sst	233	296,85	18,73	290,23-302,23	239-343
sst-assis	236	553,4	27,3	541-560,28	480-680
sst-xy	172	188,73	20,43	179,82-199,87	137-246
xy-assis	172	364,21	26,16	356,41-372,41	302-433
sty-da	375	165,12	9,75	160,75-171,79	135-196
t-v	584	119,62	5,78	117,58-122,12	105-134,5
sa-sba	475	60,5	4,28	58,8-61,43	46,5-77
tr-gn	46	174,02	7,1		161-189
n-gn	686	115,65	6,58	113,69-125,52	100-143
n-sn	688	53,84	3,09	51,65-60,28	41-73

La caractérisation des dimensions et des proportions des femmes suit, selon le cas, les échelles de variation utilisées dans les Atlas anthropologiques roumains et se réfère aux valeurs moyennes des caractères au niveau du lot et à leur variabilité phénotypique moyenne et individuelle selon les échantillons composantes.

La *stature des femmes* (V-sol) est, moyennement, grande au début de la catégorie dans l'échelle Martin (1592,79 mm) avec une amplitude des phénotypes individuels entre 1400 et 1792 mm. Les valeurs moyennes selon l'échantillon varient entre sur-moyenne à Maieru (1560,55mm) et grande aux étudiantes (1641,62mm). La *taille-assise* (V-assis) est sur-moyenne (864,6mm) en échelle Schlaginhaufen à une amplitude individuelle entre 750 et 1020mm et une amplitude des valeurs moyennes entre moyenne (839,4mm) à Bran et sur-moyenne (873,69mm) aux étudiants. La proportion de la taille-assise en stature, *l'indice cormique*, illustre, moyennement, metriocormie (53,57) en échelle Vallois (après Giuffrida-Ruggieri) et varie selon les phénotypes individuels entre brahicormie (49,64) et macrocormie (59,46) et selon les valeurs moyennes des échantillons entre metriocormie (53,1) à Novaci et macrocormie (54,35) dans Expertises 2. La *longueur des membres inférieurs* des femmes varie, moyennement, entre un minimum à Maieru (720,31mm) et un maximum chez les étudiants (769,46mm), les phénotypes individuels au niveau du lot ayant une amplitude de variation entre 600 et 888mm.

La *hauteur V-sst* (tête +cou) a des valeurs moyennes comprises entre 290,23mm à Maieru et 302,23mm à Novaci. La *hauteur du tronc* (sst-assis) enregistre une valeur moyenne minimale à Novaci (541mm) et une valeur maximale à Soveja (560,28mm). La *hauteur du sternum* (sst-xy) a une valeur moyenne minimale à Maieru (179,82mm) et une valeur maximale, très grande même par rapport aux hommes, à Soveja (199,87mm). Les valeurs moyennes de *la hauteur de l'abdomen* (xy-assis) sont comprises entre 356,41mm à Novaci et 372,23mm à Maieru. La *longueur de la main* (sty-da) a, moyennement, une amplitude entre 160,75mm dans le Couloir Bran-Braşov et 171,79mm dans les Expertises 2, mais au niveau des phénotypes individuels entre 135mm et 196mm.

La *longueur de l'oreille externe* (sa-sba), en échelle Martin, a une valeur moyenne (60,5mm) inscrite dans la catégorie mésot et les valeurs moyennes selon l'échantillon sont comprises entre mésot (58,8) dans les Expertises 2 et macrot au début de la catégorie (61,43mm) dans les Expertises 1. Les valeurs individuelles varient entre 46,5mm et 77mm, les deux limites à Bran-Braşov. La *hauteur de la tête* (t-v) du lot est moyenne en échelle Rutil à la limite supérieure de la catégorie (119,62mm) et l'amplitude de variation des valeurs moyennes est comprises entre une hauteur moyenne (117,58mm) à Sălişte et une hauteur grande (122,12mm) chez l'échantillon des Expertises 2. La variation phénotypique individuelle a un minimum, basse, à Novaci (105mm) et un maximum, très haute, dans les Expertises 1 (134,5mm). La *hauteur physiologique de la face* (tr-gn) caractérise seulement les étudiants auxquels varie entre 161mm et 189mm avec une valeur moyenne de 174,02mm. La *hauteur morphologique de la face* (n-gn) a une valeur moyenne (115,65mm) inscrite en échelle Lebzelter-Saller dans la catégorie haute et l'amplitude des valeurs moyennes est comprise entre 113,69mm (moyenne à la limite supérieure) dans les Expertises 2 et 125,52mm (très haute) à Soveja. La *hauteur du nez* (n-sn) a une valeur moyenne au niveau du lot de catégorie haute, en échelle Eickstedt, et l'amplitude des valeurs moyennes des échantillons est comprise entre un nez moyen à la limite supérieure (51,65mm) chez les étudiants et un nez très haut (60,28mm) à Soveja.

Position des certains caractères des femmes du lot par rapport aux données synthétiques nationales (Fig. 7)

Les valeurs de la distance réduite (z) concernant l'éloignement des quelques dimensions incriminée et l'indice cormique par rapport aux données nationales sont comprises entre -0,5 (xy-assis) et +0,77 (V-assis), donc $z < (\pm 1)$ et les différences entre les valeurs moyennes du lot et les celles synthétiques nationales ne sont pas statistiquement significatives. (Fig.). Mais on peut souligner que les femmes du lot ont, comparativement aux données nationales, la stature, la taille-assise, le sternum et le nez plus grands et la hauteur de l'abdomen plus basse.

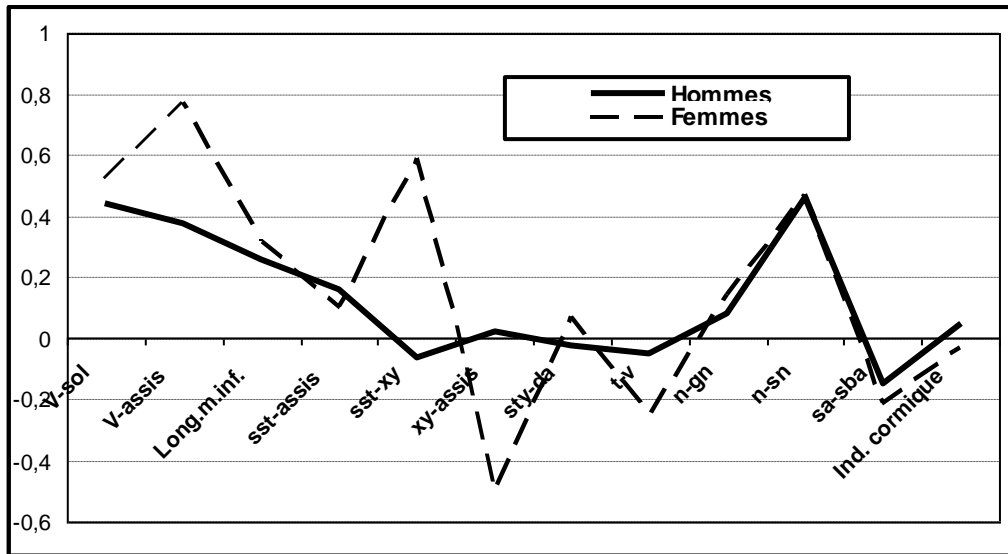


Fig. 7 :
Position du lot par rapport aux données nationales (Z)

Comportement des certaines dimensions de l'axe longitudinal du corps par rapport à la stature et aux autres composantes de la stature chez les femmes (Tableau 2, fig. 8)

Nous faisons ici des références aux dimensions mises en proportions et aux proportions comparées aux canons.

La distance V-sst (hauteur tête+cou) représente approximativement 1/5 de la stature (18,8 :20%). L'éloignement par rapport au canon en u.p se ressemble à celle en u.s. (-1,22 u.p. : -1,27 u.s.), la dernière distance étant statistiquement significative ($z > \pm 1$).

La hauteur du tronc (sst-assis) représente un peu davantage que 1/3 de la stature (34,98 :33,33%), à un éloignement de 1,65 u.p. et 1,17 u.s., donc faiblement significatif. La proportion du tronc en *taille-assise* est moins que 2/3 (65,01 :66,66%) mais la différence n'est pas significative (-1,65 u.p. : -0,84 u.s.).

La hauteur de l'abdomen (xy-assis) entre en stature dans un poids de plus 1/5 (22,81 :20) et l'éloignement par rapport au canon est significatif (2,81 u.p. : 1,7 u.s.). En *taille-assise* (V-assis) réalise une proportion d'approximativement 2/5 (42,87 :40) à une différence significative au canon (2,87u.p. :1,05u.s.). Mais la hauteur de l'abdomen réalise dans la hauteur du tronc (sst-assis) une proportion de 2/3 (65,72 :66,66), très proche au canon (-0,94u.p. :-0,23u.s.).

La hauteur du sternum (sst-xy) est approximativement 1/10 de la *stature* (11,86 :10) et la distance par rapport au canon est significative (1,86u.p. :1,43u.s.) à cause de grandeur du sternum à Soveja. Néanmoins, *le sternum* réalise presque 1/5 de la *taille-assise* (22,22 :20), 1/2 de la *hauteur de l'abdomen* (52,36 :50) et 1/3 de la *hauteur du tronc* (34,13 :33,33), les éloignements par rapport aux canons correspondants n'étant pas significatifs ($< \pm 1$).

La longueur de la main (sty-da) est 1/10 de la *stature* (10,39 :10), très proche de canon comme prouvent les tests (0,39u.p. :0,7 u.s.). Mais la proportion de la main en hauteur de la face totale (94,03 :100) s'éloigne significativement par rapport au canon (-5,94u.p. :-1,31u.s.).

Tableau 2 :
Valeurs moyennes des proportions chez les femmes du lot

	Proportions	Canon (%)	Femmes			Amplitude des valeurs	
			N	M	DS	moyennes	individuelles
1	V-assis/V-sol		630	53,57	2,08	53,1 - 54,35	49,64 - 59,46
2	L.m.i./V-sol		630	46,38	1,52	45,95 - 46,77	40,54 - 50,29
3	V-sst/V-sol	20	232	18,78	1,1	18,62 - 18,98	14,94 - 21,81
4	sst-assis/V-sol	33,33	236	34,98	1,41	33,98 - 35,37	30,97 - 40,33
5	xy-assis/V-sol	20	172	22,81	1,65	22,41 - 23,86	18,76 - 26,84
6	sst-xy/V-sol	10	172	11,86	1,3	11,3 - 12,52	8,46 - 14,82
7	sty-da/V-sol	10	334	10,39	0,56	9,92 - 10,82	8,8 - 11,78
8	t-v/V-sol	6,66	578	7,52	0,4	7,25 - 7,63	6,29 - 8,89
9	sa-sba/V-sol	3,33	433	3,79	0,29	3,64 - 3,86	2,94 - 4,84
10	tr-gn/V-sol	10	46	10,63	0,54		9,66 - 11,66
11	n-gn/V-sol	6,66	644	7,29	0,25	6,96 - 7,86	6,22 - 9
12	n-sn/V-sol	3,33	647	3,39	0,31	3,15 - 3,77	2,44 - 4,43
13	sst-assis/V-assis	66,66	229	65,01	1,97	64,08 - 65,41	60,98 - 72,03
14	sst-xy/V-assis	20	172	22,22	2,35	21,36 - 23,26	15,69 - 28,6
15	xy-assis/V-assis	40	172	42,87	2,72	41,98 - 44,18	36,4 - 50,7
16	t-v/sst-xy	66,66	133	64,06	6,97	61,89 - 66,27	49,11 - 83,12
17	sa-sba/sst-xy	33,33	39	33,89	5,49		25,61 - 51,09
18	n-gn/sst-xy	66,66	171	63,92	7,17	62,99 - 64,86	47,15 - 83,94
19	n-sn/sst-xy	33,33	171	30,53	4,26	30,04 - 30,97	21,14 - 40,59
20	sst-xy/xy-assis	50	171	52,36	8,01	48,8 - 55,7	31,86 - 73,21
21	sst-xy/sst-assis	33,33	172	34,13	3,53	32,6 - 35,67	24,16 - 42,27
22	xy-assis/sst-assis	66,66	172	65,72	4,07	64,39 - 66,97	57,73 - 75,84
23	sst-xy/sty-da	100	39	110,3	15,31		82,39 - 150,92
24	t-v/sty-da	66,66	283	72,67	6,16	71,69 - 73,67	60,37 - 86,1
25	sa-sba/sty-da	33,33	368	36,61	3,08	34,36 - 37,63	26,33 - 44,59
26	n-gn/sty-da	66,66	372	69,41	4,62	66,45 - 70,72	57,38 - 83,78
27	n-sn/sty-da	33,33	374	31,95	2,85	30,59 - 32,55	24,86 - 43,29
28	sty-da/tr-gn	100	40	94,03	4,55		83,78 - 102,12
29	t-v/tr-gn	66,66	46	68,65	3,72		61,62 - 78,31
30	sa-sba/tr-gn	33,33	38	34,93	2,14		30,05 - 38,82
31	n-gn/tr-gn	66,66	46	65,91	2,86		59,46 - 70,9
32	n-sn/tr-gn	33,33	46	30,15	2,21		23,98 - 34,36
33	sa-sba/t-v	50	370	50,23	4,84	48,04 - 51,01	36,61 - 61,68

34	n-gn/t-v	100	580	97,05	6,41	93,16 - 103,04	78,03 - 119,27
35	n-sn/t-v	50	581	45,26	4,47	42,82 - 49,53	33,33 - 60,53
36	n-sn/sa-sba	100	475	87,86	8,43	86,42 - 91,85	65,22 - 118,28
37	sa-sba/n-gn	50	472	52,93	4,14	51,68 - 53,5	40,09 - 64,54
38	n-sn/n-gn	50	686	46,53	3,01	45,21 - 48,03	37,27 - 56,1

La hauteur de la tête (t-v) en stature (7,52 :6,66) s'éloigne significativement par rapport au canon (0,86u.p. :2,12u.s.) mais réalise presque 2/3 en proportion des modules considérés égales entre eux : hauteur du sternum (64,06 :66,66), longueur de la main (72,67 :66,66) et la hauteur de la face physiologique (68,65 :66,66) où le test y n'est pas significative ($z < \pm 1$).

La longueur de l'oreille externe (sa-sba) réalise en stature (3,81 :3,33) et en longueur de la main (36,61 :33,33) des proportions éloignées significativement aux canons ($z > \pm 1$), mais la même dimension réalise des proportions très approchées aux canons, sans significations statistiques, avec le sternum (33,89 :33,33), la face totale (34,93 :33,33) et morphologique (52,93 :50) et avec la hauteur de la tête (50,23 :50).

La hauteur de la face totale (tr-gn) réalise 1/10 de la stature (10,63 :10) quoique le z indique un éloignement faiblement significative (0,63 u.p. :1,17u.s.).

La hauteur de la face morphologique (n-gn) réalise en stature (7,29 :6,66) une proportion qui s'éloigne significativement au canon (0,63u.p. :1,17u.s.). En échange, les proportions réalisées en hauteur du sternum (63,92 :66,66), longueur de la main (69,41 :66,66), hauteur de la face physiologique (65,91 :66,66) et en hauteur de la tête (97,05 :100) ne s'éloignent significativement par rapport aux canons correspondants, le test z étant $< \pm 1$.

La hauteur du nez (n-sn) réalise en stature (3,39 :3,33) une proportion presque identique avec le canon (0,06u.p. :0,19u.s.). Les proportions du nez réalisées en hauteur du sternum (30,53 :33,33) et en longueur de la main (31,95 :33,33) s'approchent aux canons pendant que les proportions du nez en hauteur de la tête (45,26 :50), de la face morphologique (46,53 :50) et en longueur de l'oreille (87,86 :100) sont significativement éloignées par rapport aux canons ($z > \pm 1$).

En ce qui concerne l'éloignement des proportions des femmes par rapport aux canons selon la simple différence arithmétique, en unités de proportion (u.p.), on voit que 30,55% sont très approchés, à une différence $< \pm 1$, parmi ceux étant la longueur de la main et toutes les dimensions céphaliques et faciales rapportées à la stature. Les proportions les plus éloignées aux canons sont sst-xy/sty-da (sternum/main), dont la valeur moyenne est au-dessus au canon à une différence de + 10,3 u.p. et n-sn/sa-sba (nez/oreille), située par la valeur moyenne au-dessous du canon, à une différence de -12,14 u.p.

Les éloignements des proportions par rapport aux canons calculés par le test z, en unités sigmatiques (u.s.) qui se situent au-dessous de ± 1 u.s. totalisent 58,33%, au-dessous de ± 2 u.s., 36,11% et seulement 5,55% dépassent ± 2 u.s.. Les différences significatives plus grandes caractérisent deux proportions de la hauteur de la tête (2,12 u.s.) et de la face morphologique en stature (2,48u.s.). (Fig. 8)

Les trois dimensions –modules, *la hauteur du sternum* (sst-xy), *la longueur de la main* (sty-da) et *la hauteur de la face physiologique* (tr-gn), dont réalisent chez les hommes de même lot trois égalités relatives en proportion de la stature ($z < \pm 1$) ont un comportement peu différent chez les femmes : ici seulement la longueur de la main rapportée à la stature s'approche statistiquement au canon (0,7 u.s.) pendant que les autres deux s'éloignent significativement ($z > \pm 1$).

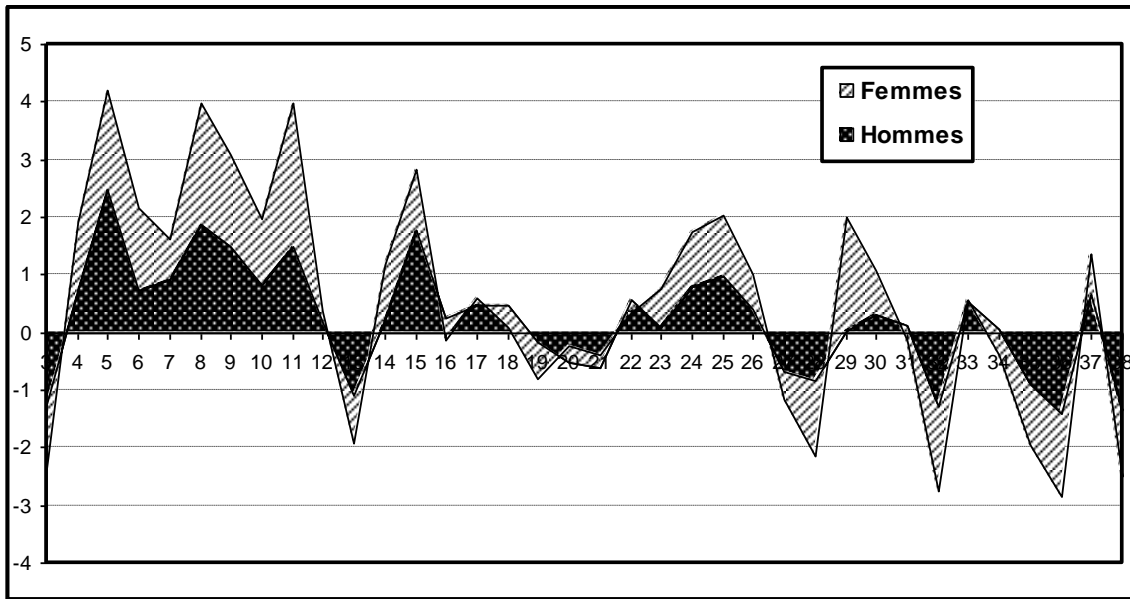


Fig. 8 :
Éloignement des proportions du lot par rapport aux canons (Z)

Aspects de dimorphisme sexuel

(Tableaux 3-4, Fig. 8)

Les différences entre les femmes et les hommes du même lot de recherche ont été appréciées sur la totalité des valeurs moyennes des caractères considérés : 13 dimensions et 38 proportions (Tableaux 3-4).

Tableau 3 :
Valeurs moyennes des dimensions. Différences sexuelles

Dimension (mm)	Hommes	Femmes	Différences sexuelles		
	M	M	T.Student	Diff.sex. %	Ind.D.sex.
V-sol	1709,81	1592,79	27,4	6,84	93,16
V-assis	901,11	864,6	17,22	4,05	93,07
Long.m.inf.	808,11	738,92	28,95	8,56	91,44
V-sst	317,99	296,85	13,21	6,65	93,35
sst-assis	583,21	553,4	12,68	5,11	94,89
sst-xy	184	181,62	1,02	1,29	98,71
xy-assis	396,99	364,21	12,96	8,26	91,74
sty-da	180,66	165,12	21,29	8,6	91,4
t-v	125,37	119,62	16,43	4,59	95,41
sa-sba	65,49	60,5	16,63	7,62	92,38
tr-gn	182,9	174,02	3,95	4,86	95,24
n-gn	125,55	115,65	27,5	7,89	92,11
n-sn	57,56	53,84	18,6	6,46	93,54

En ce qui concerne les dimensions, excepté la longueur du sternum, les hommes dépassent significativement les femmes (t) à une grande intensité, spécialement par la stature

(1709,81 :1592,79mm), la longueur des membres inférieurs (808,11 :738,92mm), la hauteur de la face morphologique (125,55 :115,65mm) et la longueur de la main (180,66 :165,12mm). Les indices de dimorphisme sexuel montrent la même situation, les dimensions pour lesquelles leurs valeurs illustrent la position la plus éloignée des femmes par rapport aux hommes (91-92%) sont la longueur de la main, des membres inférieurs, la hauteur de l'abdomen, de la face, la longueur de l'oreille. (Tableau 3)

Concernant les proportions, un poids de 65,79% de différences est statistiquement significative (t). Par exemple, les hommes dépassent les femmes plus fortement par la longueur des membres inférieurs en stature, la hauteur de la face en hauteur de la tête et du sternum, tandis que les femmes dépassent les hommes par le sternum en taille-assise et en hauteur de l'abdomen et la hauteur de la tête en stature. Les différences sexuelles calculées par les indices de dimorphisme sexuel offrent une situation équilibrée : les poids des proportions favorables aux hommes ou aux femmes sont égales, $\approx 42\%$ et les proportions dont les valeurs moyennes sont approchées de 100% (99-101%) ont un poids de $\approx 16\%$. Parmi les proportions presque égales c'est la proportion de la hauteur du nez en stature qui est identique chez les deux sexes (M=3,39, Indice=100%). (Tableau 4)

En ce qui concerne l'éloignement par rapport aux canons, en considérant le total de 36 proportions, les hommes réalisent 26 proportions situées par leurs moyennes dans l'intervalle « $M \pm \sigma$ » (72,22%) tandis que les femmes réalisent seulement 20 proportions (55,55%), une différence statistiquement significative ($\chi^2=7,18$). (Fig. 8)

Concernant la triade dimensionnelle des modules *main - face physiionomique - sternum* on voit que chez les hommes les trois dimensions sont plus approchées en valeur moyenne comparativement aux femmes qui se caractérisent par une variabilité plus grande et une différence accentuée entre ces dimensions. C'est la raison qui augmentent au niveau de la signification statistique les distances des proportions du sternum et de la face totale en stature par rapport aux canons ($z > 1$). Chez les hommes toutes les dimensions de la triade font en stature des proportions approchées aux canons correspondants. (Tableaux 3-4, Fig. 8)

Tableau 4 :
Valeurs moyennes des proportions. Différences sexuelles

	Proportions	Hommes	Femmes	Dimorphisme sexuel		Ind.D.sex.
		M	M	Student	Diff.sex.%	
1	V-assis/V-sol	52,82	53,57	-5,76	-1,42	101,42
2	L.m.i./V-sol	47,26	46,38	11	1,86	98,14
3	V-sst/V-sol	18,69	18,78	-1	-0,48	100,48
4	sst-assis/V-sol	34,24	34,98	-6,17	-2,16	102,18
5	xy-assis/V-sol	23,36	22,81	3,23	2,35	97,65
6	sst-xy/V-sol	10,82	11,86	-8,67	-9,61	109,61
7	sty-da/V-sol	10,53	10,39	3,5	1,33	98,64
8	t-v/V-sol	7,36	7,52	-8	-2,17	102,17
9	sa-sba/V-sol	3,81	3,79	1	0,52	99,48
10	tr-gn/V-sol	10,5	10,63	-0,93	-1,24	101,24
11	n-gn/V-sol	7,37	7,29	4	1,09	98,91
12	n-sn/V-sol	3,39	3,39	0	0	100
13	sst-assis/V-assis	64,77	65,01	-1,41	-0,37	100,37
14	sst-xy/V-assis	20,47	22,22	-8,75	-8,55	108,55
15	xy-assis/V-assis	44,17	42,87	5,42	2,94	97,06

16	t-v/sst-xy	68,36	64,06	5,58	6,29	93,71
17	sa-sba/sst-xy	35,66	33,89	1,72	4,96	95,04
18	n-gn/sst-xy	70,3	63,92	7,33	9,08	90,92
19	n-sn/sst-xy	32,67	30,53	3,63	6,55	93,45
20	sst-xy/xy-assis	46,69	52,36	-6,52	-12,14	112,14
21	sst-xy/sst-assis	31,74	34,13	-5,08	-7,53	107,53
22	xy-assis/sst-assis	68,42	65,72	5	3,95	96,05
23	sst-xy/sty-da	100,9	110,3	-3,43	-9,32	109,32
24	t-v/sty-da	70,09	72,67	-2,32	-3,68	103,68
25	sa-sba/sty-da	36,27	36,61	-1,54	-0,94	100,94
26	n-gn/sty-da	68,7	69,41	-2,03	-1,03	101,03
27	n-sn/sty-da	31,29	31,95	-3,3	-2,11	102,11
28	sty-da/tr-gn	95,02	94,03	0,74	1,04	98,96
29	t-v/tr-gn	66,77	68,65	-1,86	-2,82	102,82
30	sa-sba/tr-gn	34,56	34,93	-0,45	-1,07	101,07
31	n-gn/tr-gn	67,04	65,91	1,57	1,69	98,31
32	n-sn/tr-gn	30,65	30,15	0,98	1,63	98,37
33	sa-sba/t-v	52,15	50,23	5,81	3,68	96,32
34	n-gn/t-v	100,38	97,05	9	3,32	96,68
35	n-sn/t-v	46,18	45,26	3,83	1,99	98,01
36	n-sn/sa-sba	86,91	87,86	-3,95	-1,09	101,94
37	sa-sba/n-gn	52,92	52,93	0,04	-0,02	100,02
38	n-sn/n-gn	45,96	46,53	-4,07	-1,24	101,24

CONCLUSIONS

L'objectif de notre travail a été l'appréciation de l'harmonie corporelle d'un lot des adultes, hommes et femmes de tout le pays par les proportions résultées de l'interrelation des certaines dimensions composantes de la stature comparées aux différents canons de l'histoire des arts plastiques et de l'architecture.

À la base de l'appréciation du développement corporel des sujets, femmes et/ou hommes, se trouvent 13 dimensions : la stature, 10 composantes de la stature sur l'axe longitudinal du corps auxquelles s'ajoutent la longueur du main et de l'oreille externe – modules importants des certains canons. Les valeurs moyennes des dimensions se situent par rapport aux données nationales, chez les deux sexes, dans l'intervalle « $M \pm \sigma$ ». Les dimensions ont été mises en 38 proportions qui par leurs valeurs moyennes prouvent à un poids appréciable (72,22% les hommes et 55,55% les femmes) l'approchement par rapport aux canons historiques ou déduits conventionnellement.

En ce qui concerne le dimorphisme sexuel, les différences selon les dimensions, les proportions et l'éloignement des proportions aux canons sont favorables aux hommes. éé

La recherche des proportions corporelles des certains individus ou des populations trouve son importance dans une multitude de domaines qui concerne l'activité et la santé humaine, ayant aussi des connotations culturelles.

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COMPARISON OF SELF – PERCEPTION OF WEIGHT AND MEASURED HEIGHT AND WEIGHT AT ADOLESCENTS FROM BUCHAREST

CRISTINA STAN*

Childhood obesity has reached epidemic levels in European countries. Overweight and obesity in childhood are known to have significant impact on both physical and psychological health. Almost all researchers agree that prevention in childhood could be the key strategy for controlling the current epidemic of obesity. Children should therefore be considered the priority population for intervention strategies.

We initiated a campaign to identify the weight problems at the children and adolescents in a few high-schools from Bucharest. Eighth grade students (67 girls and 89 boys) and twelve grade students (72 girls and 35 boys) were measured for the most important anthropometric scales marks and were asked to complete self-report assessments of their weight perception. After that we compared their answers with their BMI to see if the adolescents are able to appreciate their corpulence and if they are prepared to make some changes in order to lose some weight.

Keywords: obesity, adolescence, self-perception, weight.

INTRODUCTION

Childhood obesity has reached epidemic levels in European countries. Overweight and obesity in childhood are known to have significant impact on both physical and psychological health [Akerman et al., 2007]. Almost all researchers agree that prevention in childhood could be the key strategy for controlling the current epidemic of obesity [Song, 2006]. Children should therefore be considered the priority population for intervention strategies [OMS, 1995, Lissau et al., 2004].

The prevalence methods at children and adolescents are increasing in order to eliminate the obesity related diseases [Hassapidou et al., 2006, Gracey, 1996]. Childhood overweight and obesity is related to the development of a number of preventable chronic diseases in childhood and adulthood, such as type 2 diabetes and hypertension; very important is the influence of diet on the development of cancer [WHO, 2003].

Children and adolescents are urged to maintain a healthy life style by controlling body weight, increasing physical activity and avoiding detrimental dietary habits [Escot, 2008, Haines, 2002].

METHOD

We initiated a campaign to identify the weight problems at the children and adolescents in a few high-schools in Bucharest. Eighth grade students (67 girls and 89 boys) with ages ranging between 14 and 15 years and twelve grade students (72 girls and 35 boys) with ages ranging between 18 and 19 years, were measured for the most important anthropometric scales marks [ISO, 1989] and were asked to complete self-report assessments

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of their weight perception. After that we compared their answers with measured BMI to see if the adolescents are able to appreciate their corpulence and if they are prepared to provide against overweight.

RESULTS AND DISCUSSIONS

The adolescents were asked to state their perception about their physical condition: *How do you appreciate your physical condition in this moment?* They should appreciate the physical condition on a 5-point scale. The statements included: “Very good”, “Good”, “Reasonable”, “Not very good” and “Weak”.

The boys with BMI values in the normal range have a better opinion about their own physical condition comparative with the girls (Fig. 1), specially twelve grade boys (79%). The girls reported themselves to be less self-confident with their physical condition (Fig. 2).

Fig. 1:
The answers for the question: *How do you appreciate your physical condition in this moment?* –
The boys with BMI values in the normal range

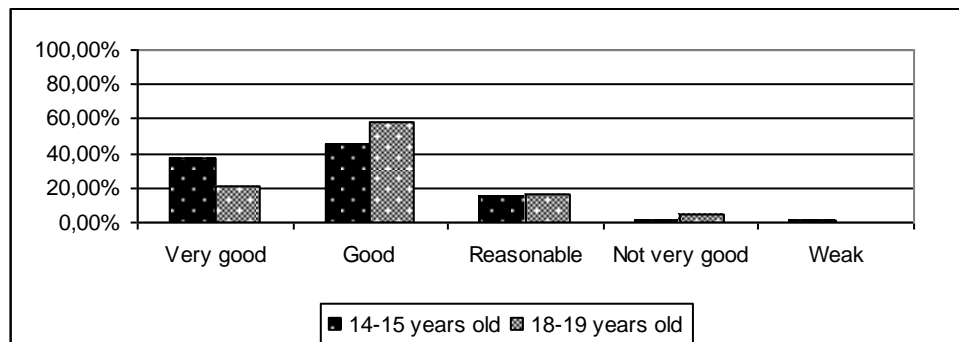
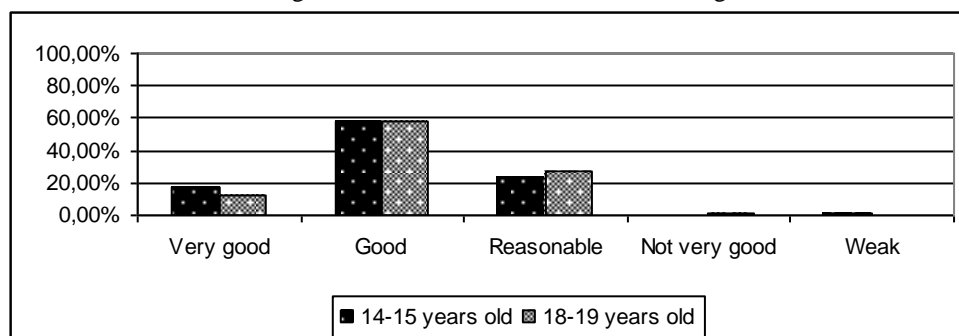
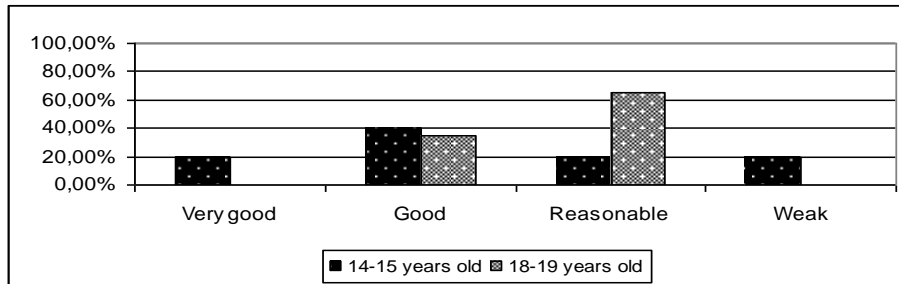


Fig. 2:
The answers for the question: *How do you appreciate your physical condition in this moment?* –
The girls with BMI values in the normal range



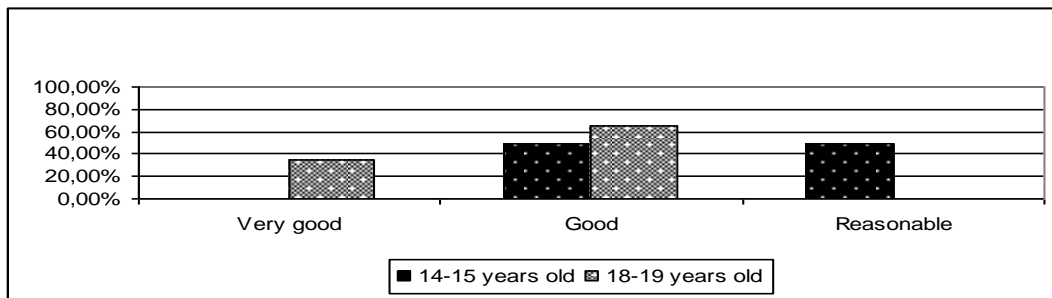
Overweight boys reported themselves as having a *very good* physical condition (20%) and a *good* one (40%) - the eight grade boys, but the twelve grade boys are more concerned of this problem: 65% admitted that they have a *reasonable* physical condition (FIG. 3).

Fig. 3:
The answers for the question: *How do you appreciate your physical condition in this moment?* –
The boys with BMI values in the overweight range



Overweight eight grade girls from this study had a better opinion about their physical condition: 50% responded good. Twelve grade girls are more content of their physical condition: 65% responded *good* regarding this aspect (Fig. 4).

Fig. 4:
The answers for the question: *How do you appreciate your physical condition in this moment?* –
The girls with BMI values in the overweight range



The next question was: *In the last 6 months did you take up more intensive physical activity?* The boys with BMI values in the normal range, from the eight grade (84%) and the boys from the twelve grade (87,5%) reported more than girls that they increased the time for physical activities (Fig. 5). Many girls (43%) from eight grade and 28% from twelve grade answered they didn't make more sport in the spare time (Fig. 6).

Fig. 5:
The answers for the question: *In the last 6 months did you have a more intensive physical activity?* –
The boys with BMI values in the normal range

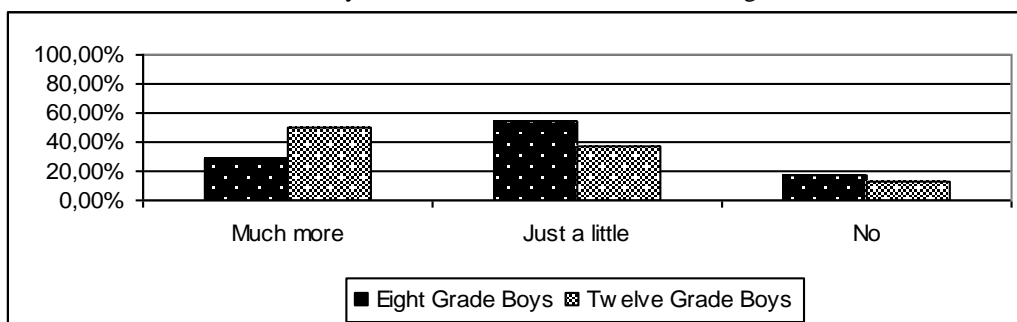
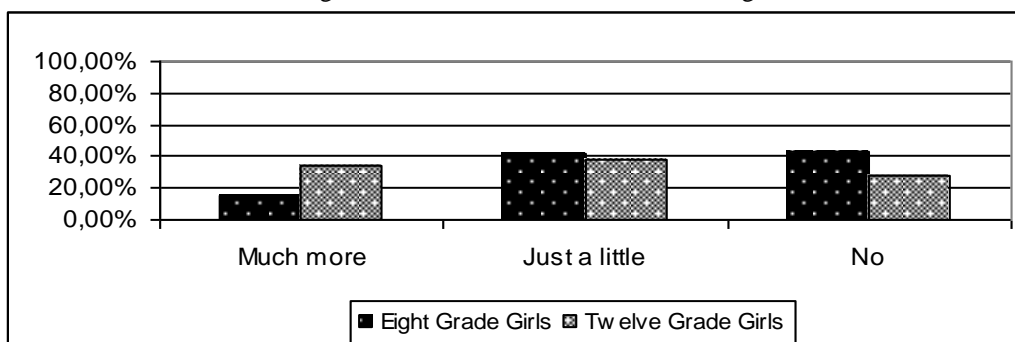


Fig. 6:
The answers for the question: *In the last 6 months did you have a more intensive physical activity?* –
The girls with BMI values in the normal range



Even if they have a problem with a few extra kilograms, overweight boys reported that they are not increasing the time for sports: 40% from the eight grade and 65% from the twelve grade (Fig. 7). At the overweight girls we can see the same problem: 65% from the eight grade and 35% from twelve grade hadn't made more sport in the last six months, even if they are interested in becoming thinner (Fig. 8). They have no idea that physical exercises are crucial both in weight reduction and maintenance a proper weight and a good health.

Fig. 7:
The answers for the question: *In the last 6 months did you have a more intensive physical activity?* –
The boys with BMI values in the overweight range

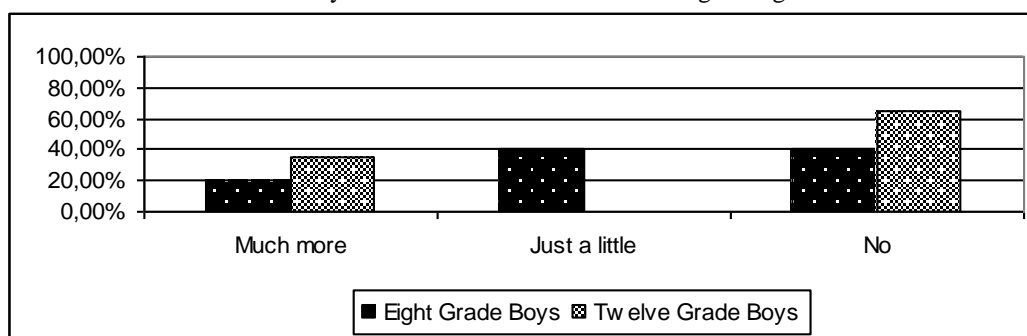
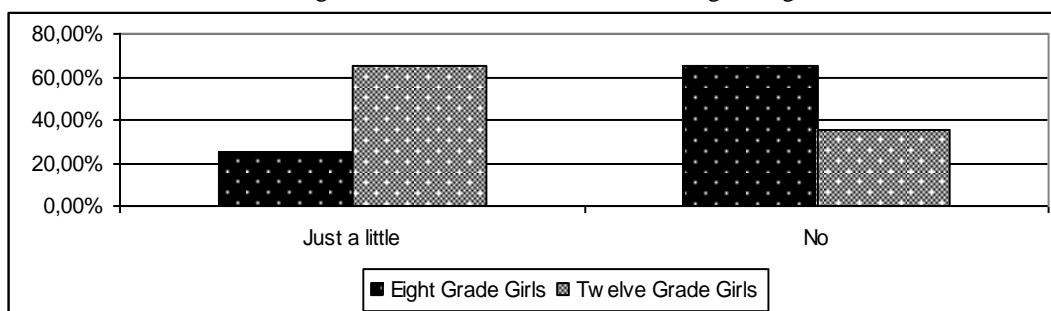


Fig. 8 - The answers for the question: *In the last 6 months did you have a more intensive physical activity?* –
The girls with BMI values in the overweight range



At the question: *In which category do you think you are regarding your weight?* the girls (57 % from the eight grade and 62 % from the twelve grade) and the boys (59 % from the eight grade and 62,5% from the twelve grade) with BMI values in the normal range, consider themselves as having a proper weight. A big number of male subjects (23 %) reported that they are “Just a little below the normal weight”, maybe because boys at this age tend to believe that by being fatter, they look stronger (Fig. 9). On the other hand, the 23 % of the girls from the eight grade and 29% from the twelve grade are wishing to lose some weight because they think that thinness has become a standard of attractiveness (Fig. 10).

Fig. 9:

The answers for the question: *In which category do you think you are regarding your weight?* – The boys with BMI values in the normal range

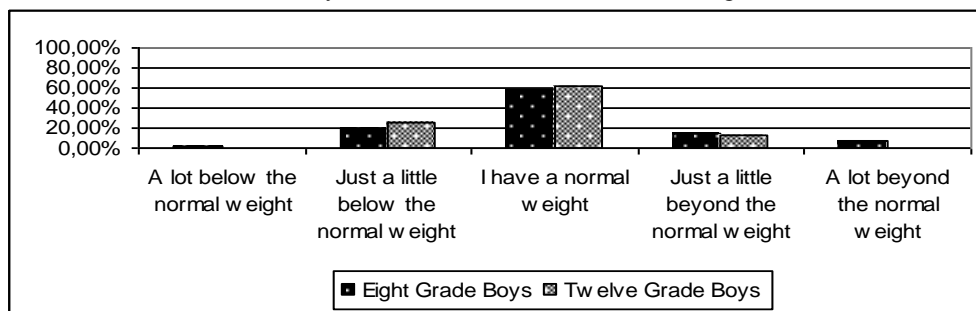
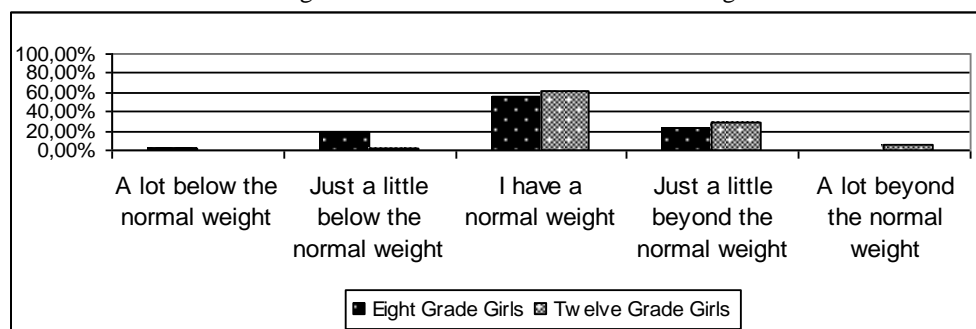


Fig. 10:

The answers for the question: *In which category do you think you are regarding your weight?* – The girls with BMI values in the normal range



The boys with BMI values in the overweight range, from both age groups, considered themselves as heaving a normal weight (40% - eight grade and 35% - twelve grade) (Fig. 11). At the girls we observed that no one considered herself as heaving a good weight (Fig. 12). This may reflect a males more positive feeling about theirs bodies and the idea that stigmatization of overweight and obesity is grater for women. 57% of the eight grade girls and 68% of the twelve grade ones are thinking about themselves as having “a lot beyond the normal weight”.

Fig.11:
The answers for the question: *In which category do you think you are regarding your weight?* –
The boys with BMI values in the overweight range

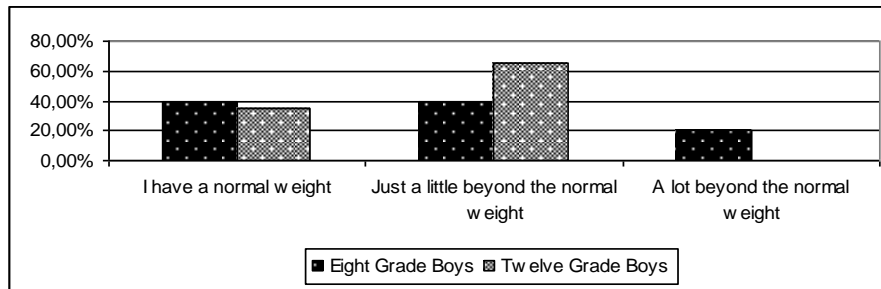
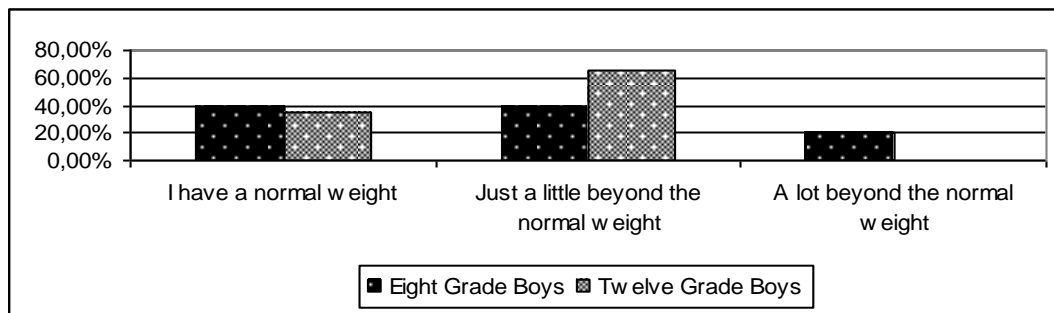


Fig. 12:
The answers for the question: *In which category do you think you are regarding your weight?* –
The girls with BMI values in the overweight range



Next question: If you would be obese, what would you do to lose some weight? The statements included: “I would follow my parent’s advice”, “I would follow my friend’s advice”, “I would follow a diet from a magazine”, “I would ask an advice from my doctor/nutritional doctor” and “I would take up more physical activities”. Most of the male subjects with BMI values in the normal range (Fig. 13) said that they are going to ask a doctor (75, 34% from 8th grade and 75% from 12th grade) or to take up more sport (73% from 8th grade and 83,33% from 12th grade). There is a small number of boys from both age groups which declared that they would do nothing in order to lose some weight if they would have problems with a few extra kilos (4% from 8th grade and 4% from 12th grade). The results show, in the girls case, almost the same answers (Fig. 14): they are going to ask an professional advice from a doctor (77% from 8th grade and 88% from 12th grade) and, in the same time, are prepared to take more physical activities (75% from 8th grade and 84,5% from 12th grade) convinced that the combination of diet and exercise is the most effective way to lose weight.

Fig. 13:
The answers for the question: *If you were obese, what would you do to lose some weight?* –
The boys with BMI values in the normal range

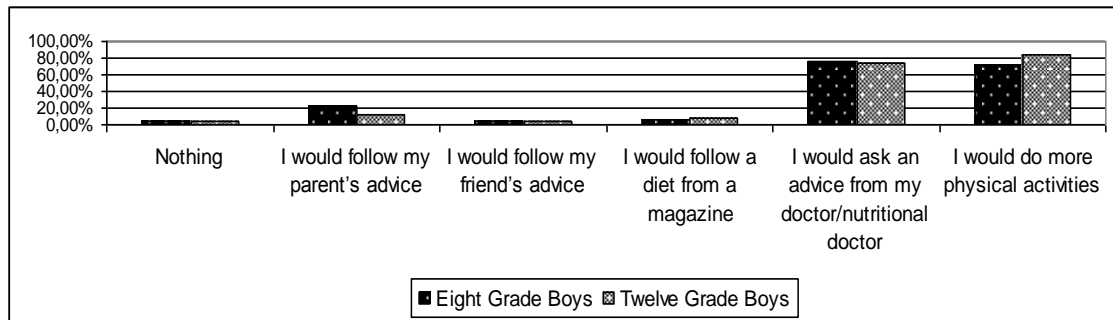
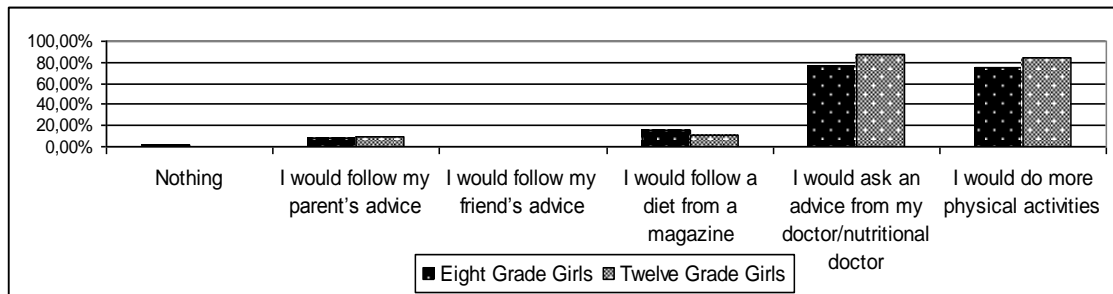


Fig. 14:
The answers for the question: *If you were obese, what would you do to lose some weight?* –
The girls with BMI values in the normal range



Regarding the overweight subjects, the situation is different. The male subjects from eight grade (FIG. 15) answered they would intend to follow parent's advice (30%), to ask a doctor's advice (20%) or to take more physical activities (50%). At the adolescents from the twelve grade 100% of the subjects said that it's a good idea to ask help from a doctor and 65% to make more sport (Fig. 15). Almost all the 12th grade girls are aware of the dangers of being overweight and are prepared to work with their doctor and other health professionals to help and support and, in the same time, to take up more physical activities (Fig. 16).

Fig. 15:
The answers for the question: *If you were obese, what would you do to lose some weight?* –
The boys with BMI values in the overweight range

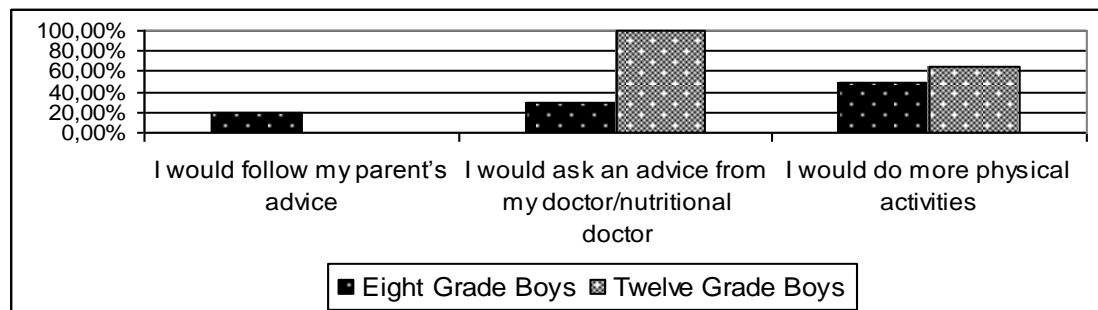
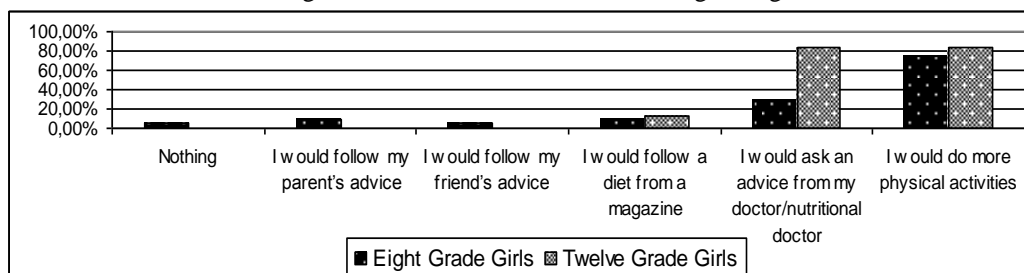


Fig. 16:
The answers for the question: *If you were obese, what would you do to lose some weight?* –

The girls with BMI values in the overweight range



Two important questions for testing the knowledge regarding the obesity: *Do you think that obesity is a risk factor for a future disease?* (Table 1) and: *Do you think that obesity is a disease?* (Table 2) At those two questions the subjects showed that they have knowledge regarding obesity problem, specially the ones with weight problems, maybe because they had been more interested about this problem. They are aware that the health depends on how they take care of themselves and that with a good life style they can prevent sickness.

Table 1:

The answers for the question: *Do you think that obesity is a risk factor for a future disease?*

	Subject with BMI values in the normal range			
Do you think that obesity is a risk factor for a future disease?	Eight Grade Boys	Twelve Grade Boys	Eight Grade Girls	Twelve Grade Girls
Yes	87,67%	95,83%	96,67%	94,83%
No	12,33%	4,17%	3,33%	5,17%
Do you think that obesity is a disease?				
Yes	71,23%	83,33%	85%	91,38%
No	28,77%	16,67%	15%	8,62%

Table 2:

The answers for the question: *Do you think that obesity is a risk factor for a future disease?*

	Subject with BMI values in the overweight range			
Do you think that obesity is a risk factor for a future disease?	Eight Grade Boys	Twelve Grade Boys	Eight Grade Girls	Twelve Grade Girls
Yes	75%	100%	100%	100%
No	25%			
Do you think that obesity is a disease?				

Yes	100%	100%	100%	100%
No				

CONCLUSIONS

The purpose of this study was to determine the relationship between adolescent's perceptions of their weight status and weight status defined using Quetlet's body mass index (BMI).

There are a lot of problems regarding weight at adolescents:

- Being overweight or obese increases the risk of many diseases and health conditions

- Adolescence is a period of time when you can take potentially harmful weight-management practice and determine a future eating disorder (anorexia, bulimia). That's why is very important to make sure that adolescents are awarded of the risk represented by their own weight and to help them to interpret their own weight in a realistic way in order to avoid the drastic diets which are going to determine medical problems.

- At adolescents psychological and behavioral factors, rather than biological factors, are primarily responsible for weight problems. That's way the correlations between the adolescent's BMI and the weight self-perception is helpfully to establish if they are aware of the real danger of obesity and if they are going to take measurements in order to maintain a healthy life style.

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CROSS-CULTURAL ANALYSIS OF THE LEVEL OF MODERN ADOLESCENTS' INTELLECTUAL DEVELOPMENT IN RUSSIA

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The authors of the article present an overview of the scientific and psychological approaches used in the research of the phenomenon of an individual's intellectual activity, as well as a cross-cultural analysis of the level intellectual development and the structural components of intellect of modern adolescents. The information processing approach represented by R. Sternberg and E. Hunt became the methodological basis of the research. The information processing approach views a person's intellectual development as a combination of elementary processes of information processing, in which the main role is assigned to correlative and factor analysis of intellectual differences.

To study the level of the intellectual activity of modern adolescents' personality, the authors used the BOT (Brief Orientative Test) and STMD (School Test of Mental Development).

The sample set consisted of 251 adolescents from Moscow School No. 170 (Russia) (n=127) and Ismayilli City School No. 1 (Azerbaijan) (n=124).

The results of the empirical study and statistical analysis using Student's t-test confirmed the authors' hypothesis that the cultural environment has a significant impact on the level of intellect development.

The authors of the research have proved the influence of the socio-cultural environment on the level of a modern adolescent's intellect development.

Keywords: intelligence; intellectual activity of an individual; secondary education; adolescence; sociocultural environment.

INTRODUCTION

Cross-cultural analysis of the intelligence level of modern adolescents from various cultural environments is determined by the analysis of modern society's problems and

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explores the dynamics of the socio-cultural public transformations that every adolescent is going through.

Mass movement of emigrational flows and fundamental change of ethnic composition of metropolises bring their conditions into the educational environment. Nowadays, educational institutions face the issues of resocialization of migrant children who have become victims of economical, religious, ethnic conflicts, as a result of which they had to leave their homeland together with their families and appear in a different, absolutely unfamiliar and foreign social environment. These children have lost touch with their familiar environment and experience the grief of loss more intensely than their adult relatives who are engulfed in their everyday worries.

It is necessary to conduct an in-depth study of migrant children's and metropolis native inhabitants' personalities to understand and alleviate the state of migrant children, as well as innate children of a metropolis who have appeared in a complicated situation of having to accept the above-mentioned adolescents into their ranks and prevent the teaching staff of educational institutions from isolating. Also, it is important to look for common traits and tendencies that can unite adolescents, as well as help them accept the uniqueness and 'otherness' of a foreign culture. To develop a positive ethnic identity and build a constructive interpersonal dialogue, first of all, it is necessary to have an understanding and a generalized perception of the surrounding sociocultural environment.

We consider the development level of intellectual activity to be one of the basic and essential components of an adolescent's personality. Following Mishina M. M., we understand *the intellectual activity of the individual as the dynamic, hierarchical and semantic system of the unity of 'the external and the internal'; the interaction of the subject with himself, other people, surrounding world and information* (Mishina, 2013; Mishina, Mursaliyeva, 2016).

The issue of the study of intellectual activity of adolescents is always at its peak for psychologists. The aim of our study was to analyze the influence of the environment on the development level of intellectual activity formation of modern adolescents from various cultural environments.

The review of scientific-psychological literature allows presenting various approaches to the phenomenon of the intellectual activity of the personality of modern adolescents. Below, we present the description of various scientific methodological approaches characterizing the phenomenon being studied.

LITERATURE REVIEW

Philosophical-psychological approach characterizes the individual as an ideal component of the real activity of a social person who modifies external nature and himself with his mind (through labor) (Aristotle, 1984; Lectorsky, 1995; Mamardashvili, Piatigorsky, 2009). Representatives of this approach include forms of senses, intuition, representation, comprehension in the structure of intelligence. All the above-mentioned components and many other forms can be included in the notion 'intellectual activity of the individual'.

Psychophysiological approach views the intellectual activity of the individual as an integral activity of higher cerebral functions (Ananiev, 2010; Melnikov, Yampolsky, 1985). The authors assign a special role to schoolchildren's psychophysiological features of the development of mental abilities and differentiation of cognitive structures during the learning process. In their research, scientists have proved that a higher academic progress is

characteristic of students with a weak nervous system, while, those with a strong nervous system generally have a lower academic progress. S. A. Izyumova (1994) believes that in order to disclose the potential capabilities of the individual, it is necessary to provide the maximum conditions for the development of natural preconditions (Ratanova, 2005; Teplov, 1996; Chuprikova, 1995).

The studies of B. M. Teplov (1996) focus on partial typological properties characterizing the work of separate regions of the cortex revealed in relation to various analyzers. According to this approach, the nature lays uniqueness and various potentials for development in each person (early manifestations of musical abilities, abstract thinking abilities, inclination to technology and interest in learning life processes, etc.).

Genetic approach emphasizes the adaptive nature of intellectual activity manifested in new, more complex conditions of the surrounding world where the individual resides and interacts. According to U. O. Charlesworth (1976), common sense plays a key role in adaptation. Genetic approach includes Piaget's operational theory of cognitive development. According to Piaget, the genetic method of psychology and the controlled psychological studies of children's cognitive development are designed to experimentally answer the fundamental questions of the cognitive theory, for example, how the transition from ignorance to knowledge or from less reliable to more reliable knowledge takes place; whether innate ideas exist or whether our knowledge is derived from experience; how the main categories of knowledge (object, space, time, quantity, etc.) are formed, etc. (Berry, 1997).

Functional-level approach defines intellectual activity as a complex mental activity which is a unity of cognitive functions of different levels (Ananiev, 2010). This approach studies the intellectual activity of the individual depending on cross functional connections of the main cognitive processes manifested at different levels of cognitive reflection.

Humanistic approach considers motivation as the basis of the individual's intellectual activity and maintains that each person has a positive core the development of which should be stimulated. Freedom of the individual is presented as an absolutely inherent value, preserving which the individual forms his mindset. A free, creatively developed individual is the pinnacle of development (Maslow, 2001; Rogers, 1994).

Individual approach (Asmolov, 2007; Belousova, 2003; Melnikov, Yampolsky, 1985; Merlin, 1986) characterizes the individualized intellectual development of a personality, which is part of an individual's life meaning and choice, the search for a means to master one's behaviour, the use of various protective mechanisms and means to resolve and reorganize situations that lead to deviation from the normative line of behaviour within the school curriculum or further education. This approach is based on the account of the intellectual activity development uniqueness of the individual and the pattern of its influence on personality development. It makes it possible to develop a programme of intellectual development of the individual which can be applied in individual or group studies.

Informational approach views intellectual activity of the individual as a unity of elementary processes of information processing. In addition, in the research, much attention is paid to the correlation and factor analysis of intellectual differences. For example, J. Eysenck (1995) showed that individual IQ-differences are directly related to the peculiarities of the central nervous system functioning. R. Stenberg (2002) and E. Hant (1978) considered the success of traditional intellectual test performance to be connected with the analysis of cognitive processes where elementary informational processes are micro-operational cognitive.

For the disclosure of the research carried out on the basis of informational approach to the individual's intellectual activity, it is necessary to clarify the concept of information. C.

Shannon (1963) was one of the first to introduce a universally valid definition of information, defining it as a decrease in the uncertainty of the system. The humanitarian sphere uses the official definition of information as the presentation of information about people, objects, facts, events and phenomena regardless of the form. Information decreases the level of uncertainty, incompleteness of knowledge about people, objects, events, etc. Information processing is understood as its transformation.

Based on the informational approach, we put forward the *hypothesis that the level of intellectual activity of an adolescent from traditional environment is considerably influenced by society, he needs to prove his assiduity and responsible attitude to education in accordance with the peculiarities of culture. An adolescent from metropolis is not subject to pressure from society, the level of his intellectual activity is determined by his personal motivation and capability of processing information.*

METHODS

The sample of adolescents consisted of 124 pupils from Ismayilli city school №1 named after I. Hasanov (Azerbaijan) and 127 pupils from Moscow school №170 named after A. P. Chekhov (Moscow). At the time of the study, the respondents were 12-14 years old, they were all pupils of 6-8 grades. The study involved 117 female and 134 male adolescents. The studies showed that gender had no significant impact on the level of intellectual development of the adolescents of this sample group.

To determine the level of intellectual activity, the sample was diagnosed by the method of brief orientative test (Buzin V. N. Buzina T.S. 2006) and school test of mental development (Akimova, Kozlova, 2006).

The main goal of brief orientative test of mental development is the determination of overall performance of students' general abilities. The test consists of 50 questions, the adolescent is presented with a set of tasks chosen to provide a sufficient selection of all the important intellectual functions for the penetration into 'the most critical points of intelligence'. With the help of this methodology, we can study both the intellectual level of a adolescent and its components, highlight and analyze various parameters of general abilities.

The students perform this methodology in 15 minutes. We can determine the *abilities of generalizing and analyzing the material, the ability of abstract thinking and mental flexibility* based on how the adolescents managed to do the tasks with proverbs.

Passivity of thinking and set-shifting as important characteristic features of learning capacities are checked by alternating different types of tasks. The arrangement of the tasks provides the opportunity to quickly switch from one activity to another. The alternation of different types of tasks on a text can make the solution of these tasks difficult for people who have inert connections with past experiences. Such individuals have difficulty shifting from the chosen working way. They are not inclined to change their judgments or switch from one type of activity to another. Their intellectual processes are inactive and their working pace is slow. Besides, the quality of their mental productivity is not high.

Emotional components of thinking and distractibility are determined by tasks that can reduce test scores of the subjects (24, 27, 31). During the performance of tasks, students with increased emotional reaction get distracted from the essence of the task and turn to the experimenter. Thinking should be intensely directed towards the object, the task. The set of test assignments reduces the test score for individuals prone to emotional destruction of mental processes (Task 24, 27, 31, 46). Such probationers tend to start smiling and turning to

the experimenter. In the “aspiration level” test, these individuals are characterized by an impulsive response to success and failure.

Speed and accuracy of perception, distribution and concentration of attention are determined by tasks 8 and 13. These tasks, which are aimed at the diagnosis of students’ ability to work with a wide variety of materials in a limited time, determine the speed and accuracy of perception, concentration of attention and the ability to distribute attention while performing a task. These tasks are aimed at identifying the knowledge of Russian grammar and the level of vocabulary (whether “miner” and “minor” are identical, different, or whether they are not identical and not different in meaning), general awareness, as well as mathematical calculations in limited time intervals. (If gasoline costs 44 cents per liter, then how much does 2.2 liters of gasoline cost?)

Language use and literacy are analyzed based on the performance of tasks on the ability of language use.

Orientation can be determined based on the respondents’ choice of solving tasks. Some adolescents are able to solve all the tasks, some are better at solving mathematical tasks and others are good at verbal tasks.

Spatial awareness is characterized by solving four tasks that involve operations in two-dimensional space.

Thus, with the help of brief orientative test methodology, we studied a relatively larger number of components of general abilities and predicted learning capacities of modern adolescents. In addition, we managed to think of further recommendations that helped our respondents to develop certain aspects of intellectual activity because of which the corresponding tasks were slowly or incorrectly done.

For the comprehensive study of modern adolescents’ intelligence, we used the methodology of school test of mental development. The test has been developed by K.M. Gurevich, M.K. Akimova, E.M. Borisova, V.G. Zar-khnn, V.T. Kozlova, G.P. Loginova and A.M. Raevsky, researchers of the Psychological Institute of the Russian Academy of Education (Pashukova et al., 1996). With the help of this methodology, we studied the level of adolescents’ mental development. This methodology consists of 6 subtests, each of which can include 15-25 similar tasks.

The first two subtests are aimed at determining the general awareness of pupils and allow studying the level of knowledge and understanding of some scientific-cultural and socio-political terms, the frequency and adequacy of their use in speech. “Awareness” presupposes students’ knowledge determined by extracurricular influences. The testee is required to correctly complete the sentence using one answer out of five options.

The questions included in the block of “general awareness” can serve as examples:

The initial letters of a name and patronymic are called:

a) monogram; b) initials; c) autograph; d) index; e) anagram.

“Awareness”. It is required to choose a synonym for the following word out of four options.

Argument — a) reason; b) consent; c) dispute; d) phrase.)

The third subtest is aimed at determining the ability to make analogies, the fourth one is aimed at determining the ability to logically classify the given concepts.

With the help of the fifth subtest, we have the possibility to determine the level of generalization, the sixth subtest is aimed at the study of the level of the adolescent’s mathematical base understanding, for the performance of which it is necessary to have knowledge to find out the rules of constructing numerical series.

This methodology is developed for group study, where each subtest is given a limited time which is completely enough for adolescents. The test is developed in two parallel variants A and B. We used both variants in the research, since the use of two variants excluded the possibility of cheating among the adolescents sitting side by side.

To avoid the randomness of the results of the empirical study of intelligence level, we subjected the obtained results to a mathematical analysis with the help of Student's test.

RESULTS

In table 1, we present the results of the empirical study of the general level of intelligence and its structural components of adolescents from various cultural environments. The study was carried out according to the methodology of brief orientative test (Buzin, Buzina 2006)

Table 1:

The results of the empirical study of the general level of Intellectual skills and structural components of modern adolescents according to the methodology of brief orientative test

Phenomenon under study/ environment type	Cultural	Number of adolescents	Mean observation
<i>Generalization</i> Moscow/Ismayilli		127 / 124	4.61/5.5
<i>Analysis</i> Moscow/Ismayilli		127/124	6.28/6.40
<i>Passivity</i> Moscow/Ismayilli		127/124	4.22/4.29
<i>Set-shfting</i> Moscow/Ismayilli		127/124	2.53/3.12
<i>Emotional component</i> Moscow/Ismayilli		127/124	4.92/5.32
<i>Speed and accuracy of perception</i> Moscow/Ismayilli		127/124	6.00/6.44
<i>Language use, literacy</i> Moscow/Ismayilli		127/124	4.20/4.60
<i>Orientation</i> Moscow/Ismayilli		127/124	2.35/2.57
<i>Spatial awareness</i> Moscow/Ismayilli		127/124	6.08/6.02
<i>General level of intelligence</i> Moscow/Ismayilli		127/124	16.68/ 16.7

Empirical data show that according to the parameters of generalization, ability to analyze, mental flexibility and abstract thinking, adolescents from Ismayilli cultural environment have higher scores. This parameter of intellectual activity testifies that adolescents from Ismayilli cultural environment are able to understand the meaning of proverbs and sayings, generalize and differentiate them by value. Passivity and set-shifting as

components of Ismayilli adolescents' intellectual development are higher than those of Moscow adolescents.

Empirical indicators of the emotional parameter also testify the advantage of adolescents from Ismayilli cultural environment and by this demonstrate a higher level of emotional perception of the given tasks. Speed and accuracy of perception of Ismayilli adolescents are high, they are more concentrated on the performance of tasks and can quickly shift from one type of task to another.

In the framework of this diagnosis, we studied language use and literacy of adolescents from different cultural environments. Ismayilli adolescents demonstrated higher results than Moscow adolescents. This phenomenon is explained by the fact that an adolescent from Ismayilli cultural environment speaks his native language since childhood, the society is more ethnically homogeneous. In the meantime, among adolescents from Moscow cultural environment, there is a large number of students whose native language is not Russian. Empirical data of orientation as a structural component of intellectual activity of Ismayilli adolescents is higher than that of Moscow adolescents. Most of the adolescents performed all the tasks in succession and by this showed a higher result. Spatial awareness and general level of intelligence of Moscow students turned out to be lower than those of Ismayilli students.

Table 2 presents the mathematical analysis, in which Student's t-test was used to prove the conformity of the data obtained in the research.

Table 2:
Rate and value by Student's statistics

	t	dif	P -value
Generalization	- 2,024	249	,044
Analysis	-,401	249	0.689
Passivity	-,304	249	.761
Set-shifting	-3,225	249	.001
Emotional component	-1,422	249	.156
Speed and accuracy of perception	1,791	249	.075
Language use, literacy	-1,672	249	.096
Orientation	-,560	249	.576
Spatial awareness	-1,041	249	.299
General level of intelligence	-1,887	249	.060

Variables that considerably differ between groups ($p < 0.05$) are highlighted in bold italics in the table.

In table 3, the results of school test of mental development are presented. In this table, we present empirical indicators of the adolescents. According to the proposed methodology, we explored the following parameters in the structure of the general level of adolescents' intelligence: *awareness, analogies, classifications of generalization, numerical series.*

Table 3:
The results of the empirical analysis of school test of mental development of modern adolescents.

Phenomena under study /	Number of adolescents	Mean observation
-------------------------	-----------------------	------------------

Cultural environment type		
<i>Awareness</i> Moscow/Ismayilli	127/124	6.08 / 6.25
<i>Analogies</i> Moscow/Ismayilli	127/124	15.01/ 15.58
<i>Classifications</i> Moscow/Ismayilli	127/124	13.14 / 13.45
<i>Generalizations</i> Moscow/Ismayilli	127/124	6.00 / 6.44
<i>Numerical series</i> Moscow/Ismayilli	127/124	4.92 / 5.32

Based on the results of the empirical study by the methodology of school test of mental development, we showed that according to all the parameters (awareness, analogies, classifications, generalization, numerical series) diagnosed by this methodology, adolescents from Ismayilli cultural environment acquired higher scores. Once again, this proves our hypothesis about the influence of the environment on the level of modern adolescents' intellectual activity (Ananiev, 2010).

Table 4 presents the mathematical analysis conducted with the help of Student's t-test aimed at proving the conformity of the data obtained during the empirical study of modern adolescents using the STMD (School Test of Mental Development) methodology. (The authors of this method are presented above.)

Table 4:
Rate and value by Student's statistics

	t	dif	P -value
Awareness	-,560	249	,576
Analogies	-1,041	249	,299
Classification	-,926	249	,355
Generalization	-1,041	249	,299
Numeric series	-1,422	249	,156

Variables that considerably differ between groups ($p < 0.05$) are highlighted in bold italics in the table.

The results of the empirical analysis and further statistical analysis of respondent's answers by Student's test proved our hypothesis that there are significant differences in the level of intelligence components (analogies, generalization, awareness, classifications) of adolescents from different cultural environments.

DISCUSSIONS

Ismayilli adolescents ($n=124$) have an advantage in the level of intellectual activity compared to Moscow adolescents ($n=127$). This phenomenon can be explained by the fact that an Ismayilli adolescent has very few distractions around him compared to adolescents from Moscow cultural environment. Adolescents from Ismayilli cultural environment spend

more time and efforts on knowledge acquisition, as the surrounding society demands this from them. It is known that adolescent period is characterized by the desire for intimate personal communication. At the same time, the environment where an Ismayilli adolescent resides is conservative and traditional. In this society, an adolescent expressing an active interest in interpersonal communication can become an object of social condemnation. The environment of a Moscow adolescent dictates freer morals and the result of their intelligence level is based on their personal motives and aspirations (Merlin, 1986).

Proceeding with the discussion of the obtained results in the context of our hypothesis, we can say that the hypothesis is fully confirmed. The levels of an adolescent's intellectual activity, as well as all the other personal components are formed under the influence of his environment, which corresponds to our hypothesis. In the research of modern psychologists (Malykh, 2017; Chumicheva, 2015), we often encounter analysis of adolescents' personal peculiarities that influence academic success, intellectual activity, socialization (Chuprikova, 1995; Islam, Hewstone, 1993). Jaarsveld S. and Lachmann T. (2017) emphasize the advantage of test tasks in determining the level of intellectual activity. In the same matter, representatives of European psychology (Gansler, Varvaris, Schretlen, 2017) prioritize neuropsychological (not neurophysiological) tests for the determination of the level of intellectual activity: in their work neuropsychological intelligence quotient (NIQ) that can become a substitute for IQ testing is described.

CONCLUSION

Based on the results of the empirical study of intelligence level of modern adolescents from various cultural environments, we can conclude:

1. Environment influences the intellectual level of an adolescent.
2. Adolescents from traditional cultural environments show more interest in education, therefore, they are more intellectually developed.

The article was aimed at the study of intellectual peculiarities of adolescents residing in different cultural environments. We studied the influence of this or that environment on the level of the formation of modern adolescents' intellectual activity. The unstable and paradoxical modern world forces populations of countries to immigrate and as a consequence appear in a society which is alien to them in its mentality, life quality level and values. It influences both those moving to a new country and those who have to accept them. Not everyone successfully resocializes in the new culture and can be rejected by society. Such situations are particularly painful for the adolescent forming his personality and his rejection by society can have fatal consequences and lead to avital actions. Due to this situation, after leaving a megalopolis, an adolescent may become an outcast after returning to their historical homeland, since their intellectual development level formed in the conditions of a megalopolis may be radically different from the level of intellectual development of adolescents living in an ethnically more homogeneous environment.

It is therefore necessary to find the common consolidating peculiarities of adolescents, regardless of their cultural environment. Only the comprehensive study of adolescents from various cultural environments can lead to mutual understanding and building a constructive dialogue.

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POTENTIEL PHYSIQUE, ESTIME DE SOI PHYSIQUE ET APPRECIATION CORPORELLE CHEZ DES JEUNES IVOIRIENS AGES DE 18 A 25 ANS

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L'auto-acceptation corporelle semble se manifester suivant l'effet conjoint du modèle de corps intégré et de la qualité des caractères physiques que présentent les jeunes. L'influence interactive de ceux-ci sur l'auto-jugement corporel des jeunes n'est pas suffisamment analysée. La présente recherche se propose de comparer l'auto-appréciation corporelle des jeunes ayant des niveaux d'estime de soi physique et de potentiel physique différents.

Elle a été portée sur 181 jeunes ivoiriens âgés de 18 à 25 ans dont 84 garçons et 97 filles. L'examen du niveau d'estime de soi physique et de l'auto-appréciation corporelle des groupes de jeunes s'est fait en utilisant l'échelle de Toulousaine et respectivement l'échelle de la satisfaction corporelle de Lentillon-Kaestner et al. (2010). Le potentiel physique des jeunes a été exploré en considérant le poids, la taille, l'Indice de Masse Corporelle (IMC) et l'Indice de Masse Grasse (IMG) de ces derniers. La mesure des paramètres physiques notamment le poids et la stature a été obtenu respectivement grâce à un pèse-personne mécanique réglé de 0 kg à 250 kg et une toise staturale gradué de zéro (0) à deux (2) mètres et demi, avec une épaisseur de cinquante (50) centimètres. Les indices relatifs à la composition corporelle ont, quant à eux, été calculés à partir des paramètres physiques précédemment indiqués.

Les résultats montrent que les jeunes présentant un potentiel physique liminaire et un niveau d'estime de soi physique élevé ne diffèrent pas significativement de leurs pairs de potentiel physique supra ou infraliminaire et d'estime de soi physique basse sur le plan de l'auto-jugement corporel positif ou négatif. Ces résultats ne confirment pas l'hypothèse selon laquelle l'appréciation corporelle est influencée par l'effet conjoint du modèle de corps intégré et la qualité des caractères physiques.

Mots-clés: Acceptation physique, Capacité physique, Côte d'Ivoire, Morphotype, Jeunes, Valeur corporelle.

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INTRODUCTION

L'adaptation de l'individu jeune à son milieu social implique très souvent chez ce dernier une tendance à s'examiner lui-même. Les premières auto-évaluations auxquelles le jeune se soumet, se portent généralement, selon Abbott et al. (2011) sur son corps. Cette relation de mesure que l'individu jeune entretient avec son corps renvoie à ce que l'on pourrait appeler l'appréciation corporelle. Celle-ci se réfère, de ce fait, au degré d'acceptation que le jeune manifeste à l'endroit de ses acquisitions corporelles (Jauregui et al., 2011). Cette relation entre le jugement du corps et le capital physique de l'individu est d'autant régulière que, selon Jauregui et al. (op. cit.), l'acceptation, par l'individu jeune, de son corps qui dépend du niveau de conformité entre la structuration de son corps et le capital physique qui en découle. En d'autres termes, la relation d'acceptation ou non que l'individu entretient avec son corps serait influencée par les acquisitions physiques de celui-ci, c'est-à-dire de son potentiel physique.

Celui-ci renvoie aux différentes composantes physiques adaptatives que présente un individu (Rasmussen et al., 2015). Ainsi, selon la qualité des caractères corporels acquis, le jeune pourrait entretenir envers ceux-ci une relation spécifique. Par exemple, s'il y a une concordance entre la structuration corporelle innée et celle acquise, l'individu aurait tendance à porter un regard positif sur son corps acquis. Une non adéquation entre les deux n'est pas loin d'amener l'individu à un regard négatif sur son corps. La structuration du corps du jeune pourrait entraîner un regard particulier sur son soi corporel, c'est-à-dire une estime de soi physique particulière. Selon Laure et al. (2005), l'estime de soi physique est l'évaluation que l'individu fait de ses qualités, ses compétences et ses potentiels corporels. Il existerait un lien entre le potentiel physique et l'estime de soi physique et le niveau d'acceptation corporelle du jeune.

Dans ce sens, Daniali et al. (2013), par exemple, ont mis en relation l'appréciation corporelle avec l'estime de soi physique. Ces auteurs ont fait remarquer que l'estime de soi est à l'origine du niveau de satisfaction corporelle. Dans la même perspective, Altintas et al (2014) ont examiné le niveau du jugement corporel selon le niveau d'estime de soi chez des individus de sexe différent. Derraik et al. (2016), quant à eux, ont observé des niveaux de perception corporelle différents chez les femmes selon le niveau d'acquisition de la masse grasse adipeuse. L'influence de la structure physique sur l'insatisfaction corporelle a été examinée dans le travail de Bradaric et al. (2015). De même, Wang et Davidson (2010), Pearl et al. (2014) ont mis en évidence la dépréciation corporelle chez les individus présentant des profils physiques déstructurés.

Ces recherches se sont généralement intéressées dans l'examen du jugement corporel à l'estime de soi globale, d'une part, et au potentiel physique, d'autre part. Il semblerait que l'effet conjoint du potentiel physique et de l'estime de soi physique n'ait pas été suffisamment exploré comme variable susceptible d'influencer le jugement corporel des jeunes. Le présent travail se propose d'examiner le niveau d'appréciation corporelle des jeunes par la prise en compte simultanée de leur potentiel physique et leur estime de soi physique.

METHODOLOGIE

Matériel

La présente étude se propose d'expliquer le niveau d'acceptation que les jeunes ont de leur corps selon la structuration et la valeur qu'ils accordent à celui-ci. En effet, les

changements dont subit le corps de l'individu serait plus important à un certain âge. En général, la période durant laquelle ces changements se révèlent plus important semble être celle de la jeunesse (Monique, 2000). Ainsi, Pica et al. (2012) montrent que la plupart des jeunes prennent du temps à soigner leur apparence physique dans une optique tant d'imitation d'un modèle de corps auquel ils se réfèrent que d'acceptation du soi corporel.

Une telle attention à l'égard de son corps pourrait aussi être une caractéristique de ceux, par exemple, vivant en Côte d'Ivoire dont la majorité réside dans les grandes agglomérations, notamment Abidjan. L'on fait état, dans ce sens, de 348318 jeunes qui y vivent (INS, 2014). Ces derniers sont identifiables en nombre important dans les milieux socioéducatifs. C'est le cas de l'Université Félix Houphouët-Boigny d'Abidjan Cocody. Celle-ci fait état de 40.000 jeunes à l'UFHB (confère le Service d'inscription de la scolarité centrale de l'Université Félix Houphouët-Boigny, 2015-2016). Ces jeunes ont l'âge entre 18 et 25 ans et sont repartis dans les UFR et les instituts de recherches, notamment l'Institut des Sciences Anthropologiques de Développement (ISAD). D'ici ont été sélectionnés 206 jeunes de la tranche d'âge précédemment indiquée, 124 garçons et 102 filles de couche socioéconomique défavorisée, de niveau d'étude variable et qui ne présentent aucun handicap physique.

En outre, l'on note que ces jeunes sont issus des grands groupes ethno-géographiques de la Côte d'Ivoire: Akan, Krou, Gur, Mandé. Considérant ces caractéristiques sociodémographiques et sanitaires comme critères d'inclusion ou de non inclusion, 181 jeunes ivoiriens âgés de 18 à 25 ans ont été sélectionnés dont 84 garçons et 97 filles. Cet effectif de jeunes constitue l'échantillon sur lequel s'est portée la présente étude.

Méthodes

La présente étude s'inscrit dans une orientation transversale et analytique. Elle s'intéresse à l'appréciation corporelle des jeunes en rapport avec la qualité de leurs caractères physiques et la valeur qu'ils leur accordent. Ainsi, l'on a administré à 206 jeunes de l'ISAD-UFHB, sélectionnés aléatoirement sur 313, de 09 heures à 13 heures 30 minutes, un questionnaire de 20 items portant sur les caractéristiques sociodémographiques des étudiants, notamment le sexe, l'âge, le niveau d'étude, la nationalité, la situation matrimoniale, le statut socioéconomique, l'état corporel. Le dépouillement des items a permis de retenir, en tenant compte de la similarité des caractéristiques, 181 jeunes ivoiriens, 84 garçons et 97 filles âgés de 18 à 25 ans, de statut socioéconomique défavorisé.

Cette fraction de jeunes a été soumise secondairement aux inventaires de mesure de l'estime de soi physique, du potentiel physique et de l'appréciation corporelle. A cette étape, l'on a, d'abord, examiné l'estime de soi physique de ces jeunes en leur soumettant l'inventaire d'estime de soi physique de Toulousaine. Ainsi, selon Oubrayrie et al. (1994), la valeur que se donne un individu tient également compte de son physique. De ce fait, l'échelle de Toulousaine offre des items qui permettent de mesurer de façon spécifique le regard que le jeune pourrait sortir sur son corps. Les modalités des réponses aux douze (12) items proposés par cette échelle sont ordonnées de «pas tout à fait d'accord» à «tout à fait d'accord» auxquelles sont attribués des scores.

L'obtention d'un score inférieur à 30 est caractéristique d'un niveau d'estime de soi physique bas. Le score égal ou supérieur à 30 décrit un niveau d'estime de soi physique élevé. L'appréciation que les jeunes ont construit à l'égard de leur corps a été ensuite explorée. Pour ce faire, les sujets ont été soumis à l'échelle de la forme corporelle de Lentillon-Kaestner. Cette échelle se révèle être la plus précise, concernant la mesure de la relation d'acceptation ou non que l'individu construit avec son corps. En outre, cette échelle est utilisable chez des

garçons et filles d'un âge supérieur à 15 ans, c'est-à-dire les jeunes (Lentillon-Kaestner et Berchtold, 2010). Structurée en huit (8) items, l'échelle de la forme corporelle a été administrée aux sujets de façon collective. Les propositions de réponses aux items de cette échelle sont classées de «jamais» à «toujours» auxquelles correspondent des scores. Ainsi, l'individu, qui obtient un score total supérieur à 24, est une personne qui accepte son corps. L'individu, qui réalise un score total inférieur à 24, n'accepte pas son corps. Les sujets ont, enfin, été soumis à des mensurations corporelles portant sur le poids et la stature pour examiner le potentiel physique de ceux-ci.

Des séances d'entretien semi-directif, en langue française, ont été organisées avec plusieurs jeunes, en vue d'obtenir des précisions sur les réponses qu'ils ont donnés aux questions contenues dans les questionnaires qui leur ont été administrés. L'analyse des données obtenues, après avoir appliqué ces deux échelles et réalisé les mesures corporelles, s'est fait au moyen du logiciel SPSS version 23. Les données issues de cette opération ont été présentées sous forme de moyenne et de fréquence. A partir de ces données corporelles, on a calculé l'Indice de Masse Corporelle (IMC) et l'Indice de Masse Grasse (IMG) des sujets. Les indices obtenus ont permis de classer les sujets en trois groupes. Ainsi, les jeunes, ayant obtenu un IMC inférieur à 18,5 kg/m² et un IMG inférieur à 15 % de graisse, sont rangés dans la catégorie des individus de potentiel physique infraliminaire. Ceux, d'IMC compris entre 18,5 et 24,99 kg/m² et d'IMG variant entre 15 et 20 % de graisse, sont de potentiel physique liminaire. Les jeunes de potentiel physique supraliminaire sont ceux d'IMC supérieur à 24,99 kg/m² et d'IMG supérieur à 20 % de graisse.

La distribution de ces données quantitatives, par rapport à la courbe gaussienne, a été examinée statistiquement en appliquant le test de Kolmogorov Smirnov. Les résultats montrent que la distribution de l'échantillon ne suit aucune loi normale (0,241 pour l'IMC et 0,075 pour l'IMG). Par conséquent, le test non paramétrique de Kruskal-wallis, le test de khi 2 et le test de Fisher ont été utilisés comme tests statistiques appropriés pour vérifier la significativité ($p < 0,05$) entre ces données quantitatives évaluant le potentiel physique, les données qualitatives mesurant le niveau d'estime de soi physique des jeunes et l'appréciation qu'ils accordent à leur corps.

RÉSULTATS

Le présent travail s'est proposé de comparer l'appréciation corporelle des jeunes âgés de 18 à 25 ans par la prise en compte simultanée de leur niveau d'estime de soi physique et leur potentiel physique. Les observations faites, dans ce sens, auprès des jeunes âgés de 18 à 25 ans vivant en Côte d'Ivoire ont conduit à quelques résultats.

Tableau I:

Comparaison de la fréquence d'acceptation corporelle chez des jeunes âgés de 18 à 21 ans de niveau d'estime de soi physique bas et de potentiel physique liminaire à celle de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique infraliminaire.

Potentiel Physique*		Estime de soi physique					sex	Evaluation corporelle				
Niv	IMC (kg/m ²)		IMG (%)		Poids (kg)	Stature (m)		NAC		AC		Tot
	VM	VN	VM	VN	VM	VM		n	%	n	%	%
ESP	21,86	18,5-24,99	15,35	15-20	65,64	1,71	G	7	50	7	50	100
B*P	22,13	18,5-24,99	26,74	25-30	60,78	1,63	F	13	56,5	1	43,5	100
PL	22,03	18,5-24,99	22,43	22,5	62,62	1,66	Tot	20	54,1	1	45,9	100
ESP	0,0	18,5-24,99	0,0	15-20	0,0	0,0	G	0	0,0	0	0,0	0,0
E*P	16,75	18,5-24,99	19,76	25-30	47,75	1,66	F	5	62,5	3	37,5	100
PI	16,75	18,5-24,99	19,76	25-30	47,75	1,66	Tot	5	62,5	3	37,5	100
		p=0,000	p=0,285	p=0,000	p=0,846			p-value (Khi 2)=0,663 NS				

ESPB: Estime de Soi Physique Basse; ESPE: Estime de Soi Physique Elevée; PPS: Potentiel Physique Supraliminaire; PPI: Potentiel Physique Infraliminaire; PPL: Potentiel Physique Liminaire; n: Effectif; VM: Valeur Moyenne; VN: Valeur Normative, IMC: Indice de Masse Corporelle; IMG: Indice de Masse Grasse; %: pourcentage; NAC: Non Acception corporelle; AC: Acception corporelle; NS: Non Significative; S: Significative; kg: kilogramme; m: mètre; F: Fille; G: Garçon; Niv: Niveau; Tot: Total.

Les jeunes de 18 à 21 ans, de niveau d'estime de soi physique bas et de potentiel physique liminaire, c'est-à-dire de l'indice de masse corporelle moyen = 22,03kg/m² et d'indice masse grasse moyenne = 22,44% de graisse équivalant aux valeurs prises comme normes (pour l'IMC : 18,5 et 24,99 kg/m² et pour l'IMG: 15 et 20 % de graisse), présentent une fréquence d'acceptation corporelle statistiquement identique à celle de leurs homologues de niveau d'estime de soi physique élevé et de potentiel physique infraliminaire (IMC= 16,75 kg/m et IMG = 19,76% de graisse en dessous de la norme) (45,9% contre 37,5%, avec un p-value = 0,663) (tableau I).

Tableau II:

Comparaison de la fréquence de l'auto-acceptation corporelle chez des jeunes âgés de 18 à 21 ans de niveau d'estime de soi physique bas et de potentiel physique infraliminaire à celle de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique liminaire

Potentiel Physique*		Estime de soi physique					sex	Evaluation corporelle				
Niv	IMC (kg/m ²)		IMG (%)		Poids (kg)	Stature (m)		NAC		AC		Tot
	VM	VN	VM	VN	VM	VM		n	%	n	%	%
ESP	17	18,5-	10,5	15-	52	1,72	G	0	0,0	1	100	100
B*P		24,99	5	20								
PI	17,6	18,5-	21,1	25-	50,80	1,68	F	7	70,0	3	30,0	100
	0	24,99	6	30								
	17,5	18,5-	20,2	22,5	50,91	1,68	To	7	63,6	4	36,4	
	5	24,99	0				t					
ESP	21,3	18,5-	15,3	15-	63,4	1,70	G	6	40	9	60	100
E*P	3	24,99	4	20								
PL	21,3	18,5-	25,9	25-	59,4	1,64	F	5	31,2	11	68,8	100
	8	24,99	2	30								
	21,3	18,5-	20,8	22,5	61,35	1,67	To	1	35,5	20	64,5	100
	5	24,99	0				t	1				
	p=0,000		p=0,557		p=0,000	p=0,276		p-value (khi 2)=0,105 NS				

ESPB: Estime de Soi Physique Basse; ESPE: Estime de Soi Physique Elevée; PPS: Potentiel Physique Supraliminaire; PPI: Potentiel Physique Infraliminaire; PPL: Potentiel Physique Liminaire; n: Effectif; VM: Valeur Moyenne; VN: Valeur Normative, IMC: Indice de Masse Corporelle; IMG: Indice de Masse Grasse; %: pourcentage; NAC: Non Acception Corporelle; AC: Acception Corporelle; NS: Non Significative; S: Significative; kg: kilogramme; m: mètre; F: Fille; G: Garçon; Niv: Niveau; Tot: Total

En outre, les jeunes âgés de 18 à 21 ans de niveau d'estime de soi physique bas et de potentiel physique infraliminaire (IMC moyen = 17,55 kg/m² et IMG moyen = 20,20 % de graisse) s'acceptent autant que leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique liminaire (IMC moyen = 21,35 kg/m² et IMG moyen = 20,80% de graisse). L'on observe une fréquence d'acceptation corporelle (64,5 %), chez le premier groupe évoqué, qui est statistiquement similaire à celle du second groupe (36,4%) (p-value = 0,105) (tableau II). La comparaison de la fréquence d'acceptation corporelle chez des jeunes avec de potentiel physique supraliminaire identique et de niveau d'estime de soi physique différent conforte les résultats précédemment obtenus. Les fréquences de non-acceptation corporelle ne diffèrent statistiquement pas entre elles (50% contre 50%, p-value= 0,250) (tableau III).

Tableau III:

Comparaison de la fréquence de l'auto-acceptation corporelle chez des jeunes âgés de 18 à 21 ans de niveau d'estime de soi physique bas et de potentiel physique supraliminaire à celle de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique supraliminaire.

Niv	Potentiel Physique*		Estime de soi physique				sexe	Evaluation corporelle				
	IMC (kg/m ²)	IMG (%)	Poids (kg)	Stature (m)	NAC	AC		Tot al				
	VM	VN	VM	VN	VM	VM		n	%	n	%	%
ESP B*P	0,0	18,5- 24,99	0,0	15- 20	0,0	0,0	G	0	0,0	0	0,0	0,0
PS	29, 33	18,5- 24,99	35, 25	25- 30	80,3 3	1,64	F	3	100	0	0,0	100
	29, 33	18,5- 24,99	35, 25	22, 5	80,3 3	1,64	Tot	3	100	0	0,0	100
ESP E*P	0,0	18,5- 24,99	0,0	15- 20	0,0	0,0	G	0	0,0	0	0,0	0,0
PS	31	18,5- 24,99	37, 21	25- 30	90	1,7	F	0	0,0	1	100	100
	31	18,5- 24,99	37, 21	22, 5	90	1,7	Tot	0	0,0	1	100	100
	p=0,655		p=0,655		p=0, 655	p=0,6 55		p-value (Fisher)=0,250 NS				

ESPB: Estime de Soi Physique Basse; ESPE: Estime de Soi Physique Elevée; PPS: Potentiel Physique Supraliminaire; PPI: Potentiel Physique Infraliminaire; PPL: Potentiel Physique Liminaire.

Tableau IV:

Comparaison de la fréquence de l'auto-acceptation corporelle chez des jeunes âgés de 22 à 25 ans de niveau d'estime de soi physique bas et de potentiel physique liminaire à celle de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique infraliminaire

Potentiel Physique*		Estime de soi physique					sex	Evaluation corporelle				
Niv	IMC (kg/m ²)		IMG (%)		Poids (kg)	Stature (m)		NAC		AC		Total
	VM	VN	VM	VN	VM	VM		n	%	n	%	%
ESP B*P PL	21,2	18,5-	15,39	15	65,63	1,73	G	6	31,6	13	68,4	100
	6	24,99		-								
				20								
	22,1	18,5-	27,16	25	59,60	1,61	F	4	40	6	60	100
	0	24,99		-								
				30								
	21,5	18,5-	19,45	22,	63,55	1,69	Tot	1	34,5	19	65,5	100
	5	24,99		5				0				
ESP E*P PI	17,0	18,5-	10,0	15	50,0	1,69	G	0	0,0	2	100	100
		24,99		-								
				20								
	17,5	18,5-	21,17	25	49	1,65	F	0	0,0	7	100	100
	7	24,99		-								
				30								
	17,4	18,5-	18,69	22,	49,22	1,65	Tot	0	0,0	9	100	100
	4	24,99		5								
	p=0,000		p=0,931		p=0,000		p=0,310		p-value (Khi 2)=0,056 NS			

ESPB: Estime de Soi physique Basse; ESPE: Estime de Soi Physique Elevée; PPS: Potentiel Physique Supraliminaire; PPI: Potentiel Physique Infraliminaire; PPL: Potentiel Physique Liminaire; n: Effectif; VM: Valeur Moyenne; VN: Valeur Normative, IMC: Indice de Masse Corporelle; IMG: Indice de Masse Grasse; %: pourcentage; NAC: Non Acception Corporelle; AC: Acception Corporelle; NS: Non Significative; S: Significative; kg: kilogramme; m: mètre; F: Fille; G: Garçon; Niv: Niveau; Tot: Total

Tableau V:

Comparaison de la fréquence de l'auto-acceptation corporelle chez des jeunes âgés de 22 à 25 ans de niveau d'estime de soi physique bas et de potentiel physique infraliminaire à celle de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique liminaire
 ESPB: Estime de Soi Physique Basse; ESPE: Estime de Soi Physique Elevée; PPS: Potentiel Physique Supraliminaire; PPI: Potentiel Physique Infraliminaire; PPL: Potentiel Physique Liminaire; n: Effectif; VM: Valeur Moyenne; VN: Valeur Normative, IMC: Indice de Masse Corporelle; IMG: Indice de Masse Grasse; %: pourcentage; NAC: Non Acceptation Corporelle; AC: Acceptation Corporelle; NS: Non Significative; S: Significative; kg: kilogramme; m: mètre; F: Fille; G: Garçon; Niv: Niveau; Tot: Total.

Potentiel Physique* Niv	Estime de soi physique						sexe	Evaluation corporelle				
	IMC (kg/m ²)		IMG (%)		Poids (kg)	Stature (m)		NAC		AC		Tot
	V	VN	V	VN	VM	VM		n	%	n	%	%
	M		M									
ES	17,	18,5-	10,	15-	53,43	1,72	G	3	42,9	4	57,1	100
PB	29	24,99	61	20								
*P	0,0	18,5-	0,0	25-	0,0	0,0	F	0	0,0	0	0,0	0
PI		24,99		30								
	17,	18,5-	10,	22,	53,43	1,72	Tot	3	42,9	4	57,1	100
	29	24,99	61	5								
ES	21,	18,5-	15,	15-	62,12	1,69	G	10	40,0	15	60,0	100
PE	56	24,99	65	20								
*P	22,	18,5-	27,	25-	59,69	1,62	F	8	61,5	5	38,5	100
PL	0	24,99	01	30								
	21,	18,5-	19,	22,	61,95	1,67	Tot	18	47,4	20	52,6	100
	71	24,99	54	5								
	p=0,000		p=0,000		p=0,001	p=0,209		p-value (Khi 2)=0,826 NS				

Les auto-acceptations corporelles observées chez les jeunes d'âge post-adolescent (18-21 ans) paraissent identiques à celles notées chez les individus jeunes adultes (22-25 ans).

Chez ces derniers, les jeunes de niveau d'estime de soi physique élevé et de potentiel physique infraliminaire (IMC moyen = 17,44 kg/m² et IMG moyen = 18,69 % de graisse) et leurs pairs de niveau d'estime de soi physique bas et de potentiel physique liminaire (IMC moyen = 21,55 kg/m² et IMG moyen = 19,45% de graisse proches de la norme) ne s'écartent pas sur le plan de l'acceptation corporelle (100% contre 65,5%, avec un p-value = 0,066) (tableau IV).

En outre, la comparaison de la fréquence de l'acceptation corporelle des jeunes âgés de 22 à 25 ans laisse observer que, les jeunes de niveau d'estime de soi physique élevé et de potentiel physique liminaire (IMC moyen = 21,71 kg/m² et IMG moyen = 19,54 % de graisse) acceptent leur corps à une fréquence statistiquement identique à celle de leurs pairs de niveau

d'estime de soi physique bas et de potentiel physique infraliminaire (IMC moyen = 17,29 kg/m² et IMG moyen = 10,61 % de graisse) (52,6% contre 57,1%, avec un p-value = 0,826) (tableau V).

Le sens des observations ne change pas, si l'on passe d'un groupe de jeune à un autre de la même tranche d'âge (22 à 25 ans). Ainsi, chez ces derniers, ceux de niveau d'estime de soi physique bas et de potentiel physique supraliminaire (d'IMC moyen = 27,20 kg/m² et d'IMG moyen = 31,09 % de graisse) rejettent leur corps à une fréquence sensiblement superposable à celle de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique supraliminaire (d'IMC moyen = 38,0 kg/m² et d'IMG moyen = 37,93% de graisse) (80,0% contre 100%, p-value = 0,714 > 0,05); (tableau VI).

Tableau VI:

Comparison de la fréquence de l'auto-acceptation corporelle chez des jeunes âgés de 22 à 25 ans de niveau d'estime de soi physique bas et de potentiel physique supraliminaire à celle de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique supraliminaire.

Niv	Potentiel Physique* Estime de soi physique						sex	Evaluation corporelle				
	IMC (kg/m ²)		IMG (%)		Poids (kg)	Stature (m)		NAC		AC		Tot al
	VM	VN	VM	VN	VM	VM		n	%	n	%	%
ES	27	18,5-	22,3	15-	77	1,66	G	1	100	0	0,0	100
PB		24,99	4	20								
*P	27,	18,5-	33,2	25-	72,5	1,61	F	3	75,0	1	25,0	100
PS	25	24,99	7	30								
	27,	18,5-	31,0	22,	73,40	1,62	Tot	4	80,0	1	20,0	100
	20	24,99	9	5			al					
ES	0,0	18,5-	0,0	15-	0,0	0,0	G	0	0,0	0	0,0	0,0
PE		24,99		20								
*P	38,	18,5-	37,9	25-	104	1,65	F	2	100	0	0,0	100
PS	0	24,99	3	30								
	38,	18,5-	37,9	22,	104	1,65	Tot	2	100	0	0,0	100
	0	24,99	3	5			al					
	p=0,049		p=0,051		p=0,0	p=0,696		p-value (Fisher)=0,714 NS				
					51							

ESPB: Estime de Soi Physique Basse; ESPE: Estime de Soi Physique Elevée; PPS: Potentiel Physique Supraliminaire; PPI: Potentiel Physique Infraliminaire; PPL: Potentiel Physique Liminaire; n: Effectif; VM: Valeur Moyenne; VN: Valeur Normative, IMC: Indice de Masse Corporelle; IMG: Indice de Masse Grasse; %: pourcentage; NAC: Non Acception Corporelle; AC: Acception Corporelle; NS: Non Significative; S: Significative; kg: kilogramme; m: mètre; F: Fille; G: Garçon; Niv: Niveau; Tot: Total.

L'acceptation du corps acquis chez les jeunes serait moins dépendante de l'interaction entre le niveau d'estime de soi physique et le potentiel physique, c'est-à-dire de leur corps inné et du niveau d'acquisition de leur caractère physique. De tels résultats pourraient trouver du sens dans des lois établies et des observations empiriques.

DISCUSSION

Les observations relatives à la corrélation supposée entre le niveau de l'expression de la satisfaction corporelle et le niveau du modèle de corps intégré, le niveau d'expression du capital physique montrent une similarité des auto-appréciations corporelles chez les jeunes, quel (s) que soit (ent) le niveau d'estime de soi physique et / ou le potentiel physique. Ainsi, les jeunes de niveau d'estime de soi physique bas et de potentiel physique liminaire présentent des fréquences d'acceptation corporelle statistiquement équivalentes à celles de leurs homologues de niveau d'estime de soi physique élevé et de potentiel physique infraliminaire (tableaux I et IV).

Les résultats des comparaisons selon le sexe ne révèlent pas de différence statistiquement significative entre les jeunes garçons et les jeunes filles, quel que soit le niveau d'estime de soi physique, le potentiel physique (liminaire, supraliminaire ou infraliminaire) et les tranches d'âge (18-21 ou 22-25 ans) (p -value > 0,05) (tableaux I, II, III, IV, V et VI).

La non différence observée, concernant l'auto-appréciation corporelle chez les jeunes quels que soient les niveaux d'estime de soi physique et de potentiel physique suivant les catégories de l'âge, semble trouver son explication dans plusieurs facteurs. En effet, l'on remarque que les jeunes étant en fin de leur processus de développement physique commencent à maîtriser leur plasticité corporelle, qui les amène à plus accepter leur corps, quel que soient les niveaux de l'estime de soi physique et du potentiel physique. De même, selon Gondoli et al. (2011), les individus, du fait qu'ils s'influencent mutuellement, ont tendance à présenter un modèle de corps identiques et une conformité entre la structure du corps et le modèle établi par la société. Dans ce sens, les jeunes du présent travail développent des attitudes conjointes et des corps sensiblement identiques, qui, par ricochet, les amènent à ne pas se différencier au niveau de l'auto-acceptation corporelle.

D'un autre point de vue ces jeunes sont issus d'un même milieu de vie (défavorisé). Ainsi, le milieu de vie identique dans lequel les jeunes vivent semble présenter des stimulants qui les conduisent à développer un même jugement corporel quel que soit la valeur qu'ils donnent à leur corps suivant la structuration de celui-ci (Leit et al., 2001). En dehors de ces facteurs, d'autres éléments, comme le statut social pourrait expliquer cette non différence. Ainsi, les individus concernés par le présent travail sont tous étudiants. De ce fait, se référant à leurs niveaux d'étude supérieurs, ces derniers manifestent un regard corporel semblable, indépendamment du fait qu'ils présentent une valeur élevée ou basse de leur soi physique et un potentiel physique supraliminaire, liminaire ou infraliminaire.

Les résultats obtenus s'avèrent différents de ceux des travaux antérieurs, notamment ceux de Pajor et al. (2015). Ces auteurs indiquent que les individus qui ont une faible confiance en leur corps du fait d'une structure corporelle moins souhaitée ont tendance à déprécier leur corps que ceux qui ont un niveau de confiance élevé en leur corps et une dimension corporelle approuvée. Dans une perspective similaire, Canpolat et al. (2015) montre que le niveau de dépression élevé, la faible perception corporelle, une faible estime de

soi, une faible efficacité physique et un fort taux de graisse sont associés significativement à une appréciation corporelle faible, négative. Des résultats comparables ont été observés dans l'étude menée par Frédéric et Courtinat-Camps (2013).

Le contraste entre les résultats de la présente analyse et ceux antérieurs pourrait s'expliquer par le fait que les auteurs ont examiné un échantillon ayant une culture différente de celle de l'échantillon interrogé dans le présent travail. De même, ces auteurs ont interrogé un échantillon plus large, alors que celui considéré est moins important. Par ailleurs, la non significativité de l'influence de l'estime de soi physique, du potentiel physique sur l'auto-appréciation corporelle, selon le sexe, serait attribuable à l'âge. Selon Grogan (2008), les jeunes filles et les jeunes garçons, à cet âge (18 à 25 ans), ne varient pas, concernant les soins que ces deux groupes apportent à leur plasticité corporelle. L'auteur indique, en substance, que les individus, de période de croissance et de maturation identique, ont tendance à définir leur corps par rapport à un profil corporel acquis commun à eux. Par conséquent, ils s'influencent réciproquement, quant à l'acceptation ou non de leur profil physique.

En somme, les réponses à la question relative à l'effet conjoint du niveau d'estime de soi physique et du potentiel physique sur l'auto-évaluation corporelle se révèlent insuffisantes dans l'explication de celle-ci. Ainsi, les mécanismes mis en évidence dans l'explication des résultats de ce présent examen ne seraient loin d'être généralisables.

CONCLUSION

L'auto-appréciation corporelle chez les jeunes pourrait être liée aux potentialités psycho-physiques spécifiques. L'examen de ce rapport, chez les jeunes âgés de 18 à 25 ans, ne permet pas de mettre en exergue l'effet conjoint du niveau d'estime des soi physique et du potentiel physique sur l'appréciation corporelle. En d'autres termes, les jeunes (18 à 25 ans) de niveau d'estime de soi physique bas et de potentiel physique infraliminaire présentent un niveau d'acceptation corporelle superposable à celui de leurs pairs de niveau d'estime de soi physique élevé et de potentiel physique liminaire ou supraliminaire.

L'issue des comparaisons ne change pas, lorsqu'on considère le sexe. Le nombre moins important de sujets examinés dans le présent travail amène, toutefois, à une certaine prudence, concernant l'infirmité ou non de l'hypothèse de recherche. Des études ultérieures, considérant un échantillon issu de milieux socio-économiques différents, apporteraient des réponses plus précises à l'explication de l'acceptation corporelle juvénile par la prise en compte simultanée des caractères psychologiques et physiques.

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THE EXPERIENCE OF MENSTRUATION AT SCHOOL: A STUDY WITH HIGH SCHOOL GIRLS IN THE NORTHERN CÔTE D'IVOIRE

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This study pursues two complementary objectives: To understand the extent of the personal, interpersonal, biological, environmental and societal challenges that girls face during menstruation in junior and senior high schools of Korhogo and also to identify the specific educational impacts of menstruation. Qualitative and quantitative data were collected through life tales, individual interviews and focus-groups with 672 willing menstruated girls in the 18 junior and senior high schools in the city of Korogho to which were added direct observations during the month of April 2018. The results show a lack of psycho-social and medical support within the institutions during menstruation. They also highlight a failure of sanitary infrastructure, difficult access to water in school toilets and the existence of negative perceptions of menstruation. Finally, every girls have missed at least one day of school in the last three months because of their periods.

Keywords: *Menstruation, Challenges, Impact, School, Côte d'Ivoire*

INTRODUCTION

It is now well known that investing in women's human capital, especially girls' education, is one of the most effective ways of promoting development (UNESCO, 2012:32). It increases their opportunities and facilitates their participation in civil life and global decision-making. This allows them, consequently, to be more productive actors in society and also to champion the cause of human development for their families. Girls' education has positive social and economic consequences that can be appreciated from their impact on the rate of economic growth and well-being of the population (Rihani, M. et al, 2006: 24).

In Africa, despite recent educational successes and efforts to educate and keep girls and young women at school, there are still many challenges to overcome. One of the major challenges face by girls starting high school at twelve or thirteen is the management of their menstruation at school.

According to UNICEF (Keihas Laura, 2013 :11), African women of school age missed class during menstruation. Data from the World Bank (UNESCO, 2014: 16) also report girls' class absences of about four days every four weeks.

An important link of cause and effect seems to be established between school absenteeism, that is, the voluntary renunciation of girls to education during the period of menstruation. Studies have shown that girls miss classes during periods of menstruation (Fehr, 2010: 66) or that the distribution of sanitary napkin in Ghana reduces by half absenteeism and keeping girls at school. by (Montgomery et al., 2012:4).

Menstruation at school is an important issue because it affects gender equality and girl's education. These latters are Millennium Development Goals that mobilizes the policies of many countries particularly for biological anthropology, especially human growth and

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development, because of its more pronounced interactions than other aspects of puberty with learning, school environment, the symbolic environment and girl's biology. It also includes current reflections about the place of women in African society and women's leadership, the management of menstrual hygiene in training and curricula, sanitation and access to water in schools.

Recent studies and interventions relating to menstruation at school have largely focused on the management of menstrual hygiene. The topics addressed include behaviors and practices of hygiene management (Mason L. et al, 2013: 8; Sommer M., 2010: 275), infrastructure, needs, sanitation and access to drinking water (Crofts T. and Fisher J., 2012: 56; Kirumira , 2004: 72; Freeman MC. et al, 2012: 389), awareness on cultural and social practices (Sommer M and Ackatia-Armah T., 2012: 75), social representations elaborated and related to the management of menstrual hygiene in schools (Sommer M, 2009: 396; McMahan S. et al., 2011, : 4), and finally the training and involvement of educational and health personnel (Teckle Mariam Gultie, 2014: 6). They are also common to come from most English-speaking African countries and from East Africa such as Ethiopia, Eritrea, Uganda Kenya, Rwanda, Tanzania, Malawi.

Excepted Burkina Faso and Niger, which are pioneering countries benefiting from menstrual hygiene management programs which involving sanitation and access to drinking water (Keihas L., 2013:10-11), there are still significant gaps in the knowledge and understanding of the experience of menstruation at school in French-speaking Africa. The subject has not received adequate attention in Francophone Africa. Till today, there is no public policy mentioning menstruation. In Côte d'Ivoire, it is almost impossible to find data on the issue. No in-depth urban or rural surveys were conducted in the educational structures. Despite a recent progress mentioned by the official estimates (MENET-FP, 2018 : 21), the completion rate of girls schooling remains questioning. During the school year 2016-2017, female school completion rates of junior and senior high schools are respectively 49.2% and 24.4% . This study puts to fill this gap. Also, the theoretical perspective adopted is less directly concerned with the management of menstrual hygiene but will instead favor a socio-ecological construction (Ouedraogo T., 2015: 24) more encompassing and holistical on menstruation at school.

This approach will use as pillars in the analysis the various psychological, interpersonal, biological, environmental and societal factors that constituting challenges during menstruation and affecting girls education.

The study therefore has two complementary objectives: To comprehend the extent of personal, interpersonal, biological, environmental and societal challenges that girls face during menstruation in Korhogo high schools; this will help to appreciate the specific educational impacts of menstruation.

METHODOLOGY

Site and population of the study

The study took place in the city of Korhogo, located in the northern Côte d'Ivoire at 635 Km from Abidjan, the economic capital of the country. This city is part with those of Dikodougou, M'bengue and Sinematiali of the area covered by the Government body of National and Technical Education (DRENET) of the Poro region.

According to the high school statistical year book (2017: 21) of the academic year 2016-2017, this region comprises twenty two (22) State high schools against thirty (30)

private others, for a total of number of 488366 students including 20757 girls is 42.50% of students. The city of Korhogo particularly counted during the academic year 2017-2018, eighteen (18) public and private high schools, for a staff of 30816 students composed of 24879 girls.

Selection of study participants

A support from the Government body of National and Technical Education (DRENET) in the Poro region initially facilitated the access to the eighteen (18) high schools of the city of Korhogo. The participants were recruited from within these institutions through a volunteer sampling procedure. Information on the girls' application for participation had previously been given in all schools and classes and therefore accessible to the largest number of pupils. The girls' eligibility criteria were to be menstruating and to show agreement to participate in the study.

On this basis, 672 voluntary girls who have started menstruation from the eighteen (18) high schools in the city of Korhogo were enrolled.

Techniques and tools of data collection

In line with the perspective of the study which is part of the model of socio-ecological analysis as described by Ouedraogo T. (2015:22), It was necessary to inform a set of qualitative and quantitative indicators on societal factors (traditions, cultural beliefs, social norms) environmental (water, sanitation and school resources), personal (knowledge and skills, girls' beliefs), interpersonal (family influence, teachers, pairs) and biological (age, age menarche, symptomatic, duration and intensity of menses) that can be appreciated as challenges during menstruation. The specific educational impacts of menstruation were measured both qualitatively and quantitatively through girls' behaviors and attitudes towards learning and in response to societal, environmental, personal, interpersonal and biological challenges during this period. Data collection was based on individual interviews, focus group discussions, life stories with girls, and direct observations in the institutions during the period from April 04th to 22nd, 2018.

Data analysis method

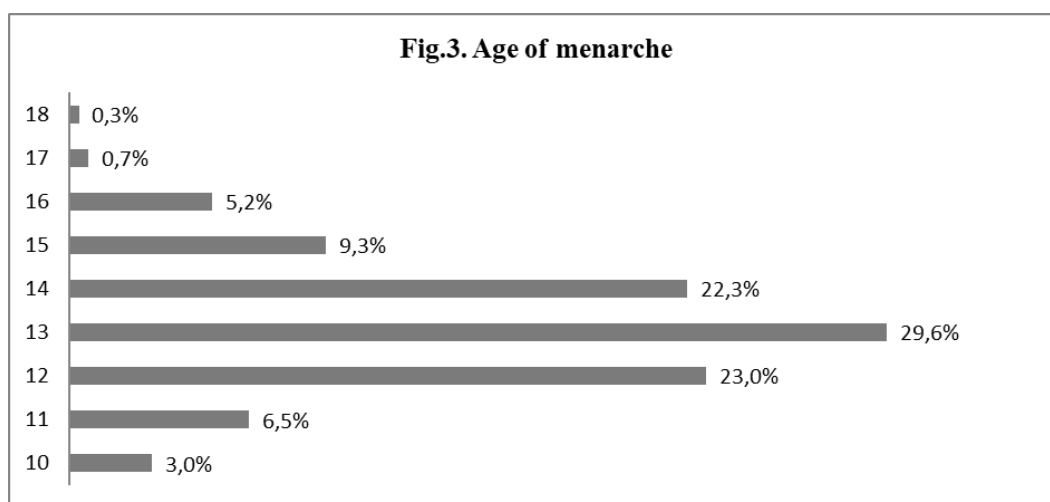
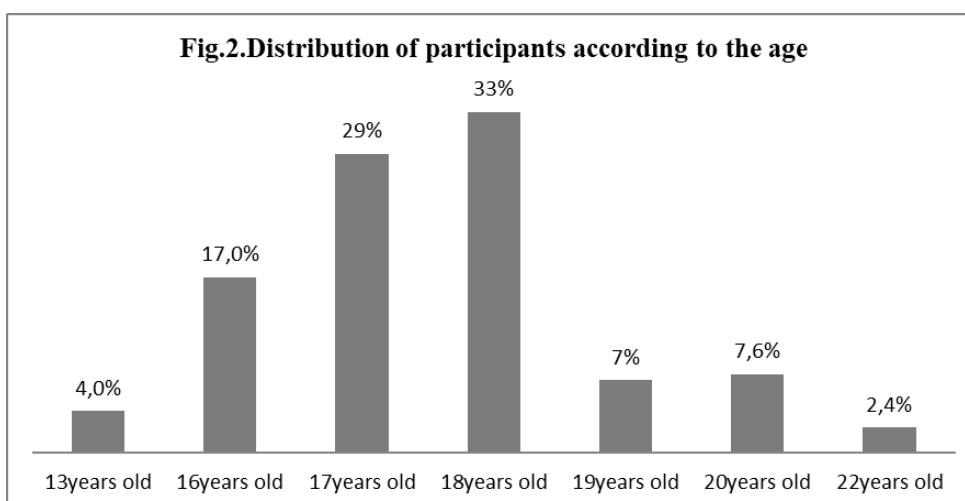
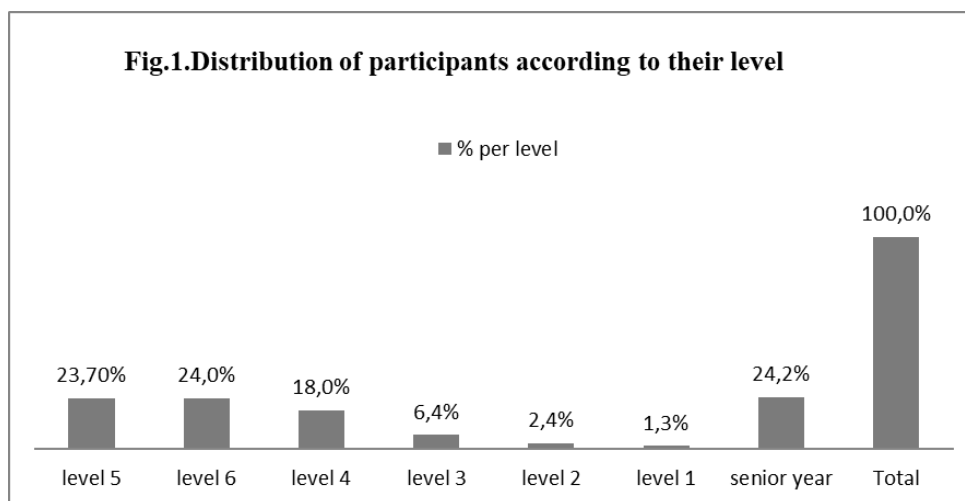
The quantitative data were processed with the software STATISTICA version 10. For qualitative data, information processing was based essentially on the thematic content analysis of the testimonies collected (Paillé and Mucchielli, 2003: 47). This technique of data analysis allowed establishing significant categories from the evidence by carrying out a series of steps so that to distinguish and name different classes of elements with a certain homogeneity. It is under these different categories that the contents of the different utterances collected were then classified, in the form of an information unit corresponding to words, sentences or general ideas, from the transcribed utterances presented as results.

RESULTS

1-Description of the participants

The sample of the study was composed of 672 girls from junior and senior high schools of Korhogo. These girls were recruited from every levels from junior high level 1 to the senior year according to the distribution in Figure 1. Their ages range from 13 to 22 years (Figure 2).

The average age of menarcheal for these girls is 13.14 years +/- 1.46 (Figure 3). The minimum age for menarcheal in this sample is 10 years while the maximum age is 18 years.

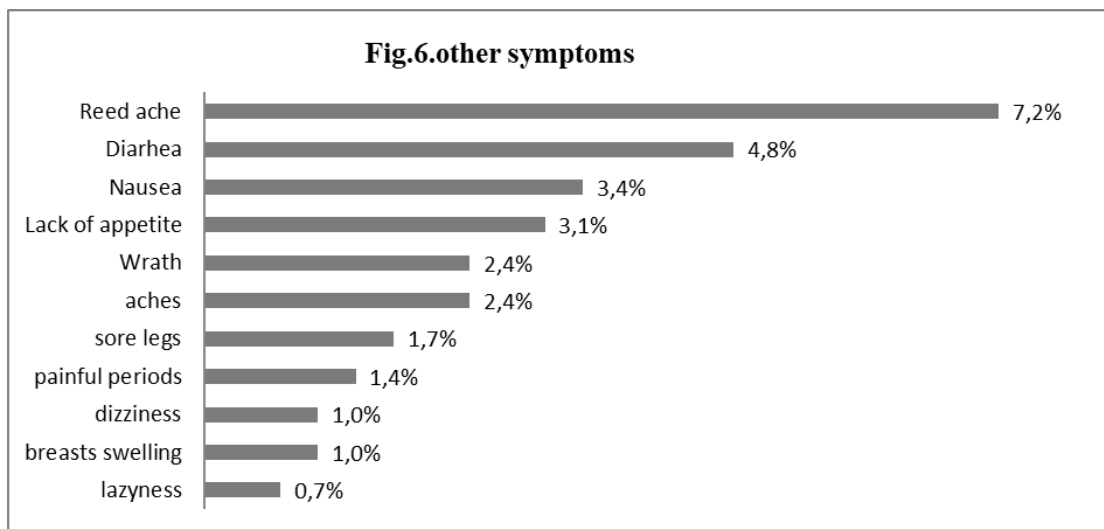
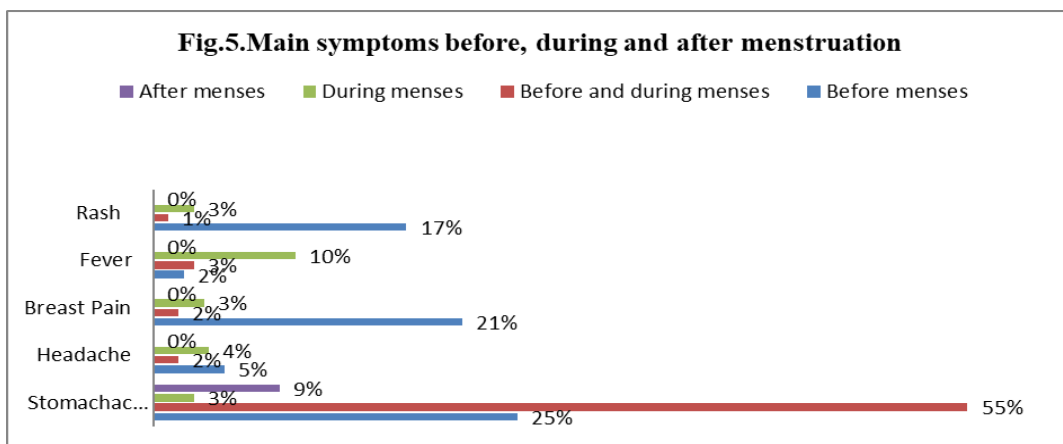
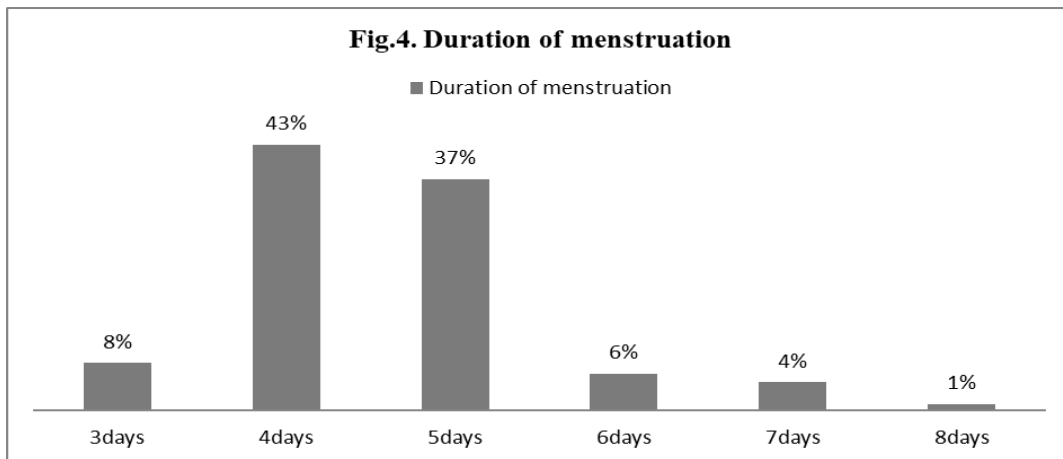


2- The existence of negative perceptions of menstruation in schools

Due to their taboo character in the popular imagination, fear and shame are always associated with menstruation. For our respondents, menses have an "evil" power that should be kept at a distance from people especially male: Men should not even see menstrual blood or touch all things related to it. Women must do everything to get them away. It is the woman's responsibility to keep menstrual blood out of reach. It is thus carried out at distance, put away from women. Worship ceremonies are forbidden to women in menstruation. It is forbidden to cook for her father or her husband. Men should not touch her. Traditional hunters "dozos" avoid chairs for fear that they have already been used by a woman in menstruation. In a word, during her period of blood, such a woman is isolated as if the menstrual blood condenses all the dangers, comes to "extinguish" men the fetish. Menstrual blood is associated with "defilement", "impurity" and "dirt" that can harm anyone who comes into contact with it. This period is associated with social, religious, and food restrictions. Testimonies of this study reveal that the mere sight of menstrual blood can "put in danger", "cause curse or bad luck in the life of the man who faces it and also his family", but it can also, especially because of its origin which is the "receptacle of life", annihilating all kinds of fetishes or mystical protection. The mystery of menstrual flow is as much related to life, construction as death and destruction. The Fodonon, Senoufo of Korhogo, use it in fertility rites as well as to cast spells such as sterility or punish the unfaithful woman who as punishment will be continuously in menstruation. Also, according to the Muslim religion prevalent in Korhogo, a woman in good standing can not pray, nor go to the mosque because she is unfit and her prayers can not reach the heavens. These socio-cultural beliefs lead teachers, boys, school managers to adopt negative attitudes of stigma and social exclusion towards girls in school during menstruation. According to the respondents, all the actors in school life, when they are male, have an attitude of "rejection", "exclusion" or "avoidance" of girls whenever they evoke their menstruation or in case of leaks or stains on their uniforms. Boys move away from girls during menstruation; they share fewer things with them and often avoid shaking hands with them. The story of this 16-years-old girl in the second grade is eloquent: *"My neighbor last year did not come to class each time he knew me in menstruation. Even when he had to be there because of classwork, he did not speak to me. It bothered me a lot. I had to change places"*

3- A lack of psychosocial support and medical care during menstruation

The results of the study showed that girls were subjected during menstruation to different types of physiological constraints. These constraints include the duration of menstruation (which can range from four days (43%), five days (37%) to eight days (1%) (Figure 4), the intensity of menstrual flow and various types of symptoms before, during and after menstruation (Figures 5 and 6). Girls experience abdominal, hip and joint pain, headache, fever, vomiting, loss of appetite, and so on.

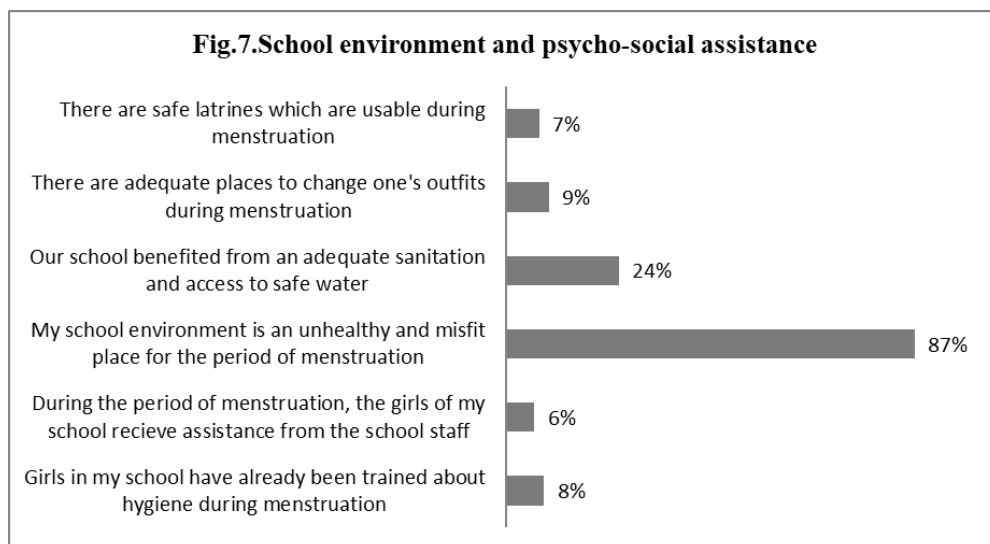


Menstruation is a time of anxiety, stress and fear for these girls who must do everything to manage this situation discreetly because poorly perceived by themselves and those around them. The study also shows that respondents lack knowledge and skills to better understand this period and approach it with much greater serenity. Although 91% of them find it "normal" or "natural", 73% of respondents do not know why women menstruate every month. Interviews and focus group discussions revealed that these girls feel uniquely during this time

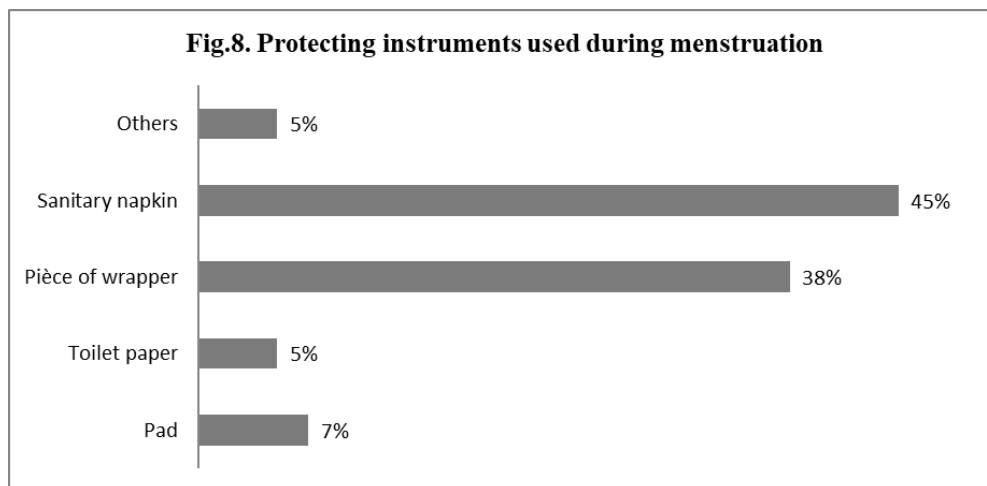
and without support for the management of menses at the school as expressed by this 13-year-old girl of level 5 : *"At home, my mother told me that menstruation is related to maturity and fertility. At school, we have never addressed this issue in class. We can not even approach it with the teachers or the supervisor. We have no co-speaker on this issue; Every month it's all alone that we are entering this period."* Menses are poorly perceived and boys adopt girls' avoidance attitudes during this period. Girls are often teased by boys when their clothes are spotted with blood from menstruation. The boys also accuse them of producing during this period a nauseating, repulsive odor which indisposes and justifies the setting at a distance. Respondents have repeatedly expressed their need for support, understanding and especially medical care during this period as expressed in the biography of this 15-year-old girl of level 4: *"at the beginning of the year, my French teacher kicked me out because I did not follow the course well. In deed, the occurrence of my periods that day gave me terrible pain in the lower abdomen. I did not feel well. How to make it understand to my teacher? With sedatives I could have finished my course"*, or else, these words gathered during the group discussions: *'female teachers on the other hand because they know the menses better understand the girls. They are more willing to help us sometimes discreetly manage menstruation'*.

4-Failure of health infrastructure and difficult access to water in school toilets

Field visits have shown that Korhogo's various high schools and colleges have functioning toilets. However, there is no precise distinction of toilets according to the type of users. The toilets observed in public and private facilities are poorly lit and most often lack maintenance due to the almost permanent shortage of running water in the city. They give off odors that are hard to bear. 87% of the girls in the survey believe that: *"the school environment is an unhealthy space, unsuitable during menstruation"* while 7% say that *"our school has safe latrines, usable during the menstrual period"* (figure 7). Some toilets lack doors, other keys or simply hooks to close properly from the inside to ensure girls safety and privacy. Only 9% of girls said that *"our school has adequate spaces to change during menstruation"*.



The data show that 38% of girls use a piece of loincloth, 45% sanitary napkins, 5% toilet paper and 7% pad as protection (Figure 8).

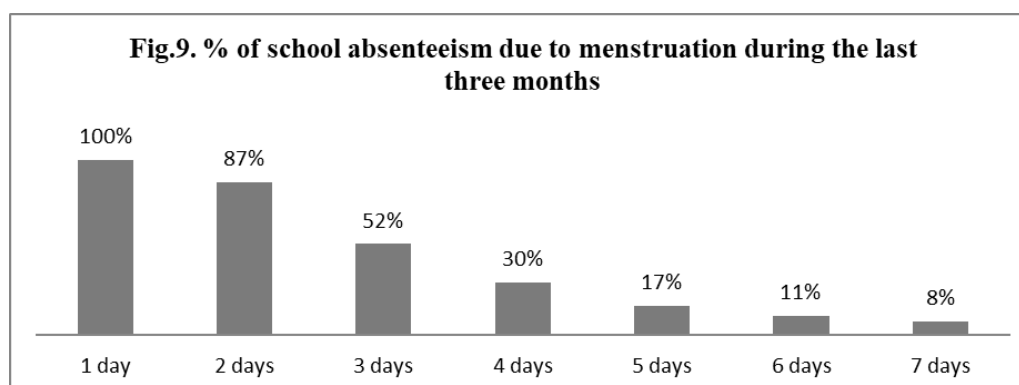


Several interviewees revealed during the group discussions that they needed water and soap to wash the piece of loincloth that serves as a protection and a discreet place to dry it as indicated by a high school girl of 18 years and in senior year : *"after the sport I had leaks on my shorts. I took refuge in the toilets to avoid the pupils' eyes. Clean water and soap would have helped me wash my protection. But unfortunately! I had to go home to change."*

The plumbing devices are far from the toilets. There is virtually no hand washing device, soap, bucket, or kettle in the toilet to allow girls to bathe or have a minimum of toilet. There is no sanitary napkin in the toilet, no bins for towels or waste disposal devices.

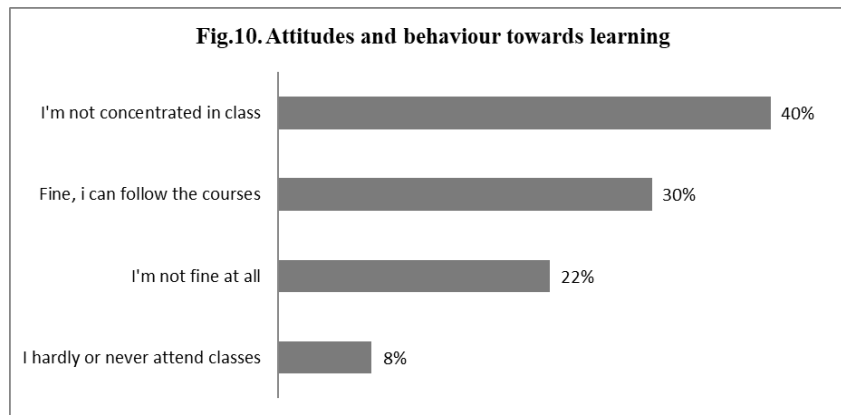
5- The impact of menstruation on girls' attendance and learning

The results of this work show that three months before this study, 100% of girls missed at least one day of school due to menstruation. 52% and 8% of girls said they also missed 3 days and one week (7 days) of school over the last three months, respectively, because of menstruation. (Figure 9).



11% of girls claim to *"come with difficulty in class or not at all during menstruation"*. The interviews with the respondents revealed that the main reason given to justify this demotivation of girls to attend school during menstruation is the set of challenges related to the school environment. For most of them, school is an institution, an environment unsuited to this cyclical period of their biological life. They prefer staying at home in order to satisfy especially the constraints of cleanliness related to this period (Figure 7).

Data from this work also show that menstruation affects girls' participation and performance at school. 67% of girls said they «cannot concentrate in class during menstruation» compared to 22% who say they "do well in class during this period" (Figure 10).



Group discussions showed that most girls are shy or stressed at school at the time of menstruation and participate less because of shame, fatigue or pain. They are eager to go home.

The experience is particularly traumatic when they are not prepared for the event as reported by a 13-years-old schoolgirl: *"It was the second month just after the start of the school year. I was surprised to feel a liquid towards my knees. I did not know what it was. And I pulled up my skirt to see. It was blood. I was scared and wanted to go out but the math teacher had just entered class. I did not want my neighbor to be informed. At the same time it was necessary to hide the blood. I was able to do it for a while. But, I ended up going out without the professor's permission. After, I was ashamed to come to class. So, I came back a week later"*. In this case, we can observe an immediate trauma; a feeling of vulnerability. The learner is unbalanced in that she loses her self-control and adopts avoidance behavior. The revelation of the idea of menstruation pushes the learner to prefer the risk of failure linked to a week's absence compared to the suffering of shame. These feelings during the period of menstruation cause a huge disruption of the emotional state of the learner and poses new situations (cognitive overload) to manage in addition to learning tasks.

DISCUSSION

The average age at menarche in this sample (13.14 years +/- 1.4) is close to those reported in some African countries, particularly in urban Cameroon (13.18) by Pasquet et al (1999:95) and Nigeria (13.19 +/- 1.32) by Ikaraoho et al (2005: 4). However, it differs from results obtained in other environments such as Brazil (11.52 +/-1,35) (Barcellos Gemelli et al, 2016,p485) and developed countries in which age at menarche has stabilized at age 13 +/- 0.5 (Gandineau A. et al, 2010: 386).

This work also showed the importance of socio-cultural beliefs related to menstrual blood in social exclusion and the stigmatization of girls at school. Many studies in Africa (Keihas L., 2013: 62 ; House et al, 2012: 202; UNESCO, 2014: 62) have also shown that girls experience shame when menstruation occurs because of perceptions associated with it. In

Niger, Souley (2016: 37) has shown in schools that menstruation remains somewhat taboo, hidden and that there is a lack of communication on the subject between parents and children. The culture of discretion surrounding menstruation increases the perception of menstruation as a shameful thing that must be hidden, and can reinforce misunderstandings and negative attitudes towards it (Kirk J. and Sommer M., 2006:20; Diorio J and Munro, 2000:362)

Respondents revealed various types of physiological symptoms associated with menstruation. It is now known that menstruation is an aggravating factor of physiological disorders. It acts according to Loirac G-E quoted by J-Y Le Naour and C. Valenti (2005:10) as "*revealing pre-existing disorders*". It is also known that menstruation in addition to physiological consequences leads to psychological disorders. According to Beauvoir cited by JY Le Naour and C. Valenti (2005:10), menstruation causes

"a decrease in automatic control by the central nervous system which releases reflexes, convulsive complexes and results in great instability of mood: the woman is more emotional, more nervous, more irritable than usual and may have serious psychological problems".

In Côte d'Ivoire, there are still no public policies on the management of menstruation at school. The efforts of the rulers are for the moment centered on health, reproduction and more particularly on AIDS, sexually transmitted infections and the precocious pregnancies. This explains the observed lack of psychosocial support in schools. Keihas L., (2013: 62), however, showed elsewhere that 14% of schools in Burkina Faso and 35% of schools in Niger are people who could advise girls.

The School environment studied had no health facilities with adequate accommodations for girls to manage their menstrual periods. The same finding was also conducted by Aniebue U. et al (2009:7) in Nigeria and Caruso B. et al (2012:15) in Sierra Leone.

Many studies have already reported on how the lack of safety, privacy and cleanliness of latrines, lack of water and soap, as well as mechanisms for waste disposal, such as a closed and separate bin, or an incinerator on the school grounds that burns menstrual defenses, prevents girls from enjoying their right to education and undermines the quality of their learning (Tazeen Saeed et al., 2006:196). This work has shown that menstruation negatively impacts class attendance, but at the same time participation in school activities and girls' performance. The work of Mc Mahou S. et al (2011:8) also shows that parents and girls confirm that they are often used to staying home for menstrual periods at least a few days each month. Mc Mahou S. et al (2011:6) and Sommer M., Ackatia (2012:74) also reported that girls stayed at home because of the pain of menstruation, lack of menstrual hygiene products, inappropriateness of equipment, water and sanitation schools, lack of academic support and fear of a menstrual accident.

CONCLUSION

The outcomes of this study revive the debate on equal opportunities and the promotion of girls in the Ivorian educational system. The speeches and utterances produced by high school girls in Korhogo lead to two conclusions: school environment does not allow girls well-off during menstruation; Constraints and challenges have implications for school attendance and girls' performance during this period.

Also, to allow a deeper insight on the phenomenon and to complete these outcomes, the future research perspectives must take into account the social and regional disparities between the students, and also direct their observations towards junior and senior girls' high schools and top schools.

Finally, these outcomes argue in favor of the need to establish policies, and to encourage practical and programmatic innovations towards girls' education.

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SOCIAL ENERGY, MIGRATION, AND THE ENTROPY OF VALUES. TOWARD THE “ETERNAL PEACE” OF THE CULTURAL DIFFERENCES

GHEORGHITĂ GEANĂ*

The starting point of this paper is Leslie White’s theory about culture as a thermodynamic system. After reviewing the applications of this theory to economics and monumental art, the author extends the application to the phenomenon of migration. He analyses the two geopolitical and ideological regions of Europe – East and West – during the “cold war” as thermodynamic systems separated by the “iron curtain”. They were distinct from one another by different states of civility: a highly functional social system based on a real democracy in the West, contrasting with a totalitarian regime in defiance of liberty and human rights in the East. The fall of the iron curtain brought about a flow of migration from the eastern postcommunist countries to the western ones. This migratory movement is seen as a special entropic process the content of which – instead of caloric energy – is represented by social values. Epiphenomenal to the human life, values constitute both a charge and goal in the process of migration. The author discusses the capability of the European Union’s instances to manage this complex social entropic process so that the movement of values be directed towards the high (well structured) standard of civility, not conversely. At the ideological level, migration and the entropy of values find out their reflection in the policy of *multiculturalism*. In its essence, however, multiculturalism is an ideologic trend the flaws of which can be surpassed by an adequate understanding of *cultural relativism*. As against multiculturalism, that cannot be a principle (because of its schizoid potential), cultural relativism *is* a principle, one which calls for co-operation and synthesis; in other words, cultural relativism is a *synergic principle*, the single one that can serve as foundation for the achievement of the Kantian “eternal peace”.

Keywords: culture / thermodynamic system, entropy of values, Kantian “eternal peace”, utopia in music, multiculturalism / cultural relativism

CULTURE AS ENERGETIC SYSTEM

Migration is a general phenomenon in the living world: it is characteristic to the human being, animals, and even to plants (these latter migrate through the agency of the wind that spreads the seeds from one place to another. However – as anthropogeographers like Friedrich Ratzel pointed out (1882/1891) –, the human being is the most dynamic among the all living species of our planet. The vastness of areas and the alert rhythm of movement justify this assertion. And it is to be underlined that in changing their place the humans make use of means of conveyance that are just human creations and the complexity of which increased more and more along the time on behalf of the human mind’s ingeniousness.

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What essentially differentiates the human migration from the migration of other forms of life is its impact to the sphere of values. There are two arguments in the favour of this assertion: first, *human individuals are bearers of values*, and, secondly, when planning a migration any human individual is oriented by *values as goals*. In this way, values stimulate the entelechy (the vital impetus) of a society.

One can say that values express the temperature of a civilization. This is not merely a figurative phrase; the affirmation includes a realist meaning related to the energetist conception of culture. The American anthropologist Leslie A. White formulated this theory in 1943 (see References), and reiterated it later on, in 1959. Here are his own words:

A culture, or sociocultural system, is a material, and therefore a thermodynamic system. Culture is an organization of things in motion, a process of energy transformations. Whether it be chipping an arrow-head, catching a fish, hoeing a hill of beans, avoiding your mother-in-law, calling your father's sister's son "father", performing a ritual, playing a game, regarding a churinga with awe, or breathing a silent prayer, the event is an expression of energy expanded (White 1959: 38).

This general theory found out some interesting applications in a few specialized domains of social life. A first example comes from the domain of *economics*. Without an *ad hoc* reference to White's theory but intimately concordant to it is the theory in which the economic processes are reformulated in terms of "*bioeconomics*". Behind this label, Nicholas Georgescu-Roegen developed his own theory about the thermodynamic foundation of economic systems (Georgescu-Roegen 1999 [1971]). As a branch of physics, thermodynamics delivers an understanding of the movement of calorific energy consisting in new explications, different from those of classical mechanics. The new researches revealed that the displacement of energy carries on towards a unique sense, namely from a high to a low level. This movement was designated as the process of *entropy*. Fascinated by the technical progress induced by the industrial revolution, the most active part of humankind ignores that any progress of such kind has as a latent effect the impoverishment of natural resources. Based on arguments from physics (but mathematically expressed), Georgescu-Roegen demonstrated that the tension between material-economic growth and deterioration of natural milieu will lead – sooner or later – to a crisis that, escaping from control – could not have but a gloomy end, by the brutal action of entropy. This situation would be fatal to humankind. That is why, going beyond the pragmatic interests of business circles, Georgescu-Roegen pleaded for an economic decrease as a way of taming the physical law of entropy.

Another domain in which the theory of culture as an energetic system was applied was the *monumental architecture*, as this became a topic of interest in processual archaeology¹. Archaeologists and historians drew attention upon old huge constructions the dimensions of which went much beyond the current human utility. Such monuments were dissipated all over the world (in Mesopotamia, Egypt, Persia, China, India, in Mexico and Peru, as well as in West Africa), but similar edifices were built in modern times, as for example the American and Japanese skyscrapers, Soviet architecture of the Stalinian epoch, or People's House built in Bucharest under Ceaușescu's rule. More than the political or religious functions of these

¹ Processual archaeology is a theoretical and methodological orientation in American archaeology of the XXth century (decades '50 and '60). Unlike the cultural-historical orientation (according to which the artifacts of museums were considered silent objects of an irrevocable past), in processual archaeology the relics appear as data for supporting the reconstituting of human behaviour proper to a certain epoch. This kind of archaeology draws closer to cultural anthropology than to history (see Willey and Phillips 1958).

edifices, it is just the possibility of raising them that requires an explanation. The answer was that: “In human societies, the control of energy constitutes the most fundamental and universally recognized measure of political power” (Trigger 1990: 119–20). In short, any society has a big energy pool and the leading power may use it discretionary. Generally, an autocratic government directs this energy towards the erecting such monumental edifices as the Egyptian pyramids, megaliths of Stonehenge, temple of Borobudur etc.

THE WEST AND THE EAST AS THERMODYNAMIC SYSTEMS

I think that the energeticalist theory of culture may serve to a better understanding of the migration flow characteristic to the social life of the European continent after the turning year 1989. With this expectation in mind, let us come back to thermodynamics and the concept of entropy.

The simplest scheme to illustrate the phenomenon of entropy presents initially two systems of the same kind and dimensions, but having different temperatures and pressure. The notion of “system” is fundamental in thermodynamics; as it was asserted, a system is “the part of the universe that is at the centre of attention” (Atkins 2010: 1). By bringing the two systems in a reciprocal contact, or by mixing up their contents, the system with the high temperature will cede energy to the system with low temperature. Consequently, the temperature (as a common property) will be generalized at a median level, and the two systems will become homogeneous. As to the illustrative variability of the notion of “thermodynamic system”, it is practically unlimited: “A system may be a block of iron, a beaker of water, an engine, a human body” (Atkins 2010: 1).

In such circumstances, *why could not eastern and western Europe – i.e. the two geopolitical and ideological regions in which our “old” continent was divided until 1989 – be investigated with the instruments of the thermodynamic theory?!* Obviously, unlike a classical thermodynamic physical system, in a social system temperature (as a parameter) is replaced by the degree of civilization expressible by value indicators. The present case is as clear as possible; it is even paradigmatic. On the one hand, we have in West a zone with the highest level of *civilization* ever attained by the human being (a top technology, economic prosperity, comfort and well-being), as well as an outstanding *civility* (a working social organization, based on the careful attitude towards the public good, the respect to human rights, responsible participation in the democratic institutions); it is just this functional state of things that confers to the occidental way of life the justification of being taken for a normative reference mark. On the other hand, the East is/was notable for an alienated (in the Hegelian meaning of the term) civility, with a totalitarian political regime, democratic in theory and coercive in practice, promoter of an egalitarianism against nature; correlatively to this rather² deflected civility, civilization (expressed in the degree of welfare) could only be fallacious, as reflected by a folk anecdote that circulated among Romanians during the communist regime; the story caught the difference between capitalism and communism as follows: capitalism means the unequal sharing of richness, while communism means the equal sharing of poverty.

This tentative of explaining some socio-human processes by the agency of thermodynamic laws should not be dismissed as simplistic and reductive. First, the present discussion hardly attains the spiritual side of culture. As a matter of fact, while the examples

² The deflection was not total. People have a basic collective stock of resistance to historical vicissitudes that makes possible the surviving and, later on, revitalization.

delivered by Leslie White are selected from a large spectrum of cultural facts, his thermodynamic view remains inadequate to such spiritual domains as art or religion. Secondly, it is out of doubt that within the spiritual area, the matrix endowed with the function of engendering and conditioning the values is not the welfare, but a collective soul which, moreover, accounts for the identity of the respective social community. That is why, in spite of any unfavourable social regime (be it communist or of another kind), the folk genius and personalities related to it produced, always, high (or, if preferable, profound) values. Based on the two mentioned reasons, the present application has in view only the values related to material life and its hypostases like economy, institutions, social organizations – i.e. all those elements that constitute by conjunction the content of notions like “civilization” and “civility”, and, at the same time, the ensemble of factors that incite the temptation of migrating³. Finally, above all, one cannot ignore that human society is also a part of nature: it is made up of individuals with biological constitution and, furthermore, their existence as biological beings lies on a physic-chemical substratum. As a consequence, any exaggeration based on positioning human existence at only one of the extremities of the vertical on which it is echeloned – thus breaking it either from natural conditioning or spiritual impetus – would be categorically frustrating. Therefore, we do not speak about an absolute equivalence between a beaker of water (to take one of Atkins’s example) and a geopolitical zone, but neither we can refuse to observe some behavioural similarities as they develop on the account of universal laws of all-inclusive reality. As it was still observed, “thermodynamics and biology have drawn continuously closer and entropy now occupies a prominent place in the explanation of biological processes” (Georgescu-Roegen 1999: 191, with reference to Schrödinger 1944). Also, we have seen the heuristic role some thermodynamic notions and relations could have in the understanding of economical and architectural facts. The present essay is a shaded extension of such applications to a social phenomenon, migration, with demographical, historical, ideological, political, axiological, but – behind all of them – natural aspects.

And as if to validate the likeness of the two geopolitical regions – the West and the East of Europe – to two thermodynamic systems, their reciprocal relation was expressed as a “cold war”⁴, a syntagm in which one term describes a state of temperature! Obviously, behind the common use, the syntagm “cold war” should be read in a subtle key. However, why did the historians and politicians clothe in a metaphorical style such facts, events and states of things that seem to predispose to anything else rather than aesthetical euphoria? Will this have been a way to make bearable the critical situations experienced by the great human communities? Or perhaps the need of some leaders acted towards the exteriorising their real reflexive capabilities (from Caesar to Napoleon, and even closer to our times, a lot of strategists stated memorable sentences and aphorisms)? In any case, inspiration did not lack! In this respect, aesthetically speaking, a still more remarkable is the “iron curtain” – a phrase that designates the separating line between the two geopolitical (here thermodynamical) systems at stake. Stylistically, “iron curtain” is an ontological metaphor, i.e. one among those

³ To keep up the last idea, one can assume until certainty that nobody migrates, for example, to Italy under the motivation that this is Dante’s, Leonardo’s, and Michelangelo’s country, or to Germany for the sake of Kant, Beethoven, or Goethe!...

⁴ Even if the area of that special war was intercontinental – it being extended beyond Europe –, the boundary between the two confronting camps was situated on the “old continent”: it was just the separating line between the “two Europes”.

that describes “events, actions, activities, states”⁵. The cynism of history produced also a smaller copy of the iron curtain, namely: the Berlin Wall. Properly speaking, however, the Berlin Wall was no longer a metaphor; it was a naked and cruel reality, which reproduced at the scale of a single country – Germany – the splitting of a whole continent. This peculiar signification of the Berlin Wall was especially pointed out by Helmut Kohl, the then Chancellor of Germany, in the speech he delivered in Berlin, on 31 August 1994, on the occasion of the retreat of Russian occupancy troops from Germany. To quote him: “We, Germans, had to experience the painful division of our country. (...) The boundary between East and West passed through the middle of Berlin City”; and (in the presence of and contrary to the Russian President Boris Yeltsin) the Chancellor did not hesitate to call this situation “*die Anomalie im Herzen Europas*” (“the anomaly from the heart of Europe”) (Kohl 1994: 556). The abnormality of this separation results from the fact that it converted a relation between two cardinal points (East–West) into an ideological and political relation: for a half of century the indicators East and West as attached to the toponym Europe did not express the orientation in geographical space, but the ideological and political orientation.

THE INNER CURTAINS IN THE HISTORY OF EUROPE

Nevertheless, if in accordance to the logic of things, we perceive Europe as a single entity, the iron curtain appears as an inner border. It was not the single of such kind along the historical time. There were a few *inner curtains* of Europe in the last two millenia. Let us survey them.

A first significant curtain was instituted at the end of the IVth century A.D. and consisted in *the division of Roman Empire* into the Eastern Empire and Western Empire, assumed, respectively, by Arcadius (*pars Orientis*) and Honorius (*pars Occidentis*) – the two sons of the late emperor Theodosius. As a consequence of this imperial curtain, the Western Empire resisted against the barbarian invasions until 476, when Rome fell under the attacks of Heruls, Germanic tribes led by Odoacer. Renamed Byzantium, the Eastern Empire resisted still a millenium, until 1453, when the Ottoman Turks conquered Constantinople.

The second inner curtain occurred in 1054 and remained in history under the denomination of the “*great schism*”. Its importance derives from the prestige of Christianity: adopted as official religion since 391, Christianity moulded the European mentality until our days and, although *nominatio dei* did not receive any room in the Constitution of European Union, this faith entered definitely into the spiritual foundation of human existence on our continent. Nevertheless, after its official recognition and large spreading, Christianity was rationally argued by – among others – a few different theses in the Occidental area vs. the Oriental one. From the doctrinary viewpoint, Occidental theology was founded on the Roman law, while the Oriental theology lies on Greek philosophy. During the first millenium the dogmatic differences became more and more litigious and culminated in the anathema that, in the mentioned year 1054, the Pope of Rome (Leo IX) and the Patriarch of Constantinople (Michael Cerularius) threw to one another. Since then until present Christianity remained separated in the two classical branches: Catholicism in the West, Orthodoxy in the East.

⁵ The ontological metaphors can also express: substances, containers, visual fields, etc. Cf. Lakoff and Johnson 2003 (1980): 25–32.

Although it can no longer be designated by an exact date – but only by relating it to an epoch (especially to the XVIIth and the XVIIIth centuries) –, *modernity*, by the impetuous development of scientific knowledge and its applications to industry in West, generated a discrepancy towards the East, a desynchronization the effects of which were amplified in time. Vaguely delimited, it could be metaphorically designated as the “mist curtain”. It is true that some desynchronizations occurred also within the western perimeter: for example, while in England the industrial revolution took place between 1760–1830, in France it was delayed by the social movements of that period; in Germany – a country with great resources in coal and iron, but with a crumbled territory – the industrial revolution happened still later, in the second half of the XIXth century, after the achievement of national unity. Such desynchronizations were insignificant in comparison to the discrepancy between West and East, having in view that in the eastern countries industrialization scored notable successes only in the XXth century. The question is: how can this desynchronization be explained? Among others, a religious explanation was invoked; under Max Weber’s influence (Weber 1934 [1905]), it has been said that Orthodoxy (the religion of the East) is prevalently contemplative, while Protestantism is more biased towards action. Perhaps the main reason lies in the consumption of social energy (with great sacrifices) to which the most of eastern peoples were forced to resort in order to keep their faith and collective being against the threatening from the Ottoman Empire.

The fourth and heaviest among the all inner curtains of Europe has proved to be the *iron curtain*. It reached to be an element of the geopolitical scenery of the continent soon after the end of the World War II. The denominating phrase was launched by the ex-prime minister of Great Britain, Winston Churchill, who, in a speech delivered on 5 March 1946 stated the famous words: “From Stettin in the Baltic to Trieste in the Adriatic, an iron curtain has descended across the Continent”, with the immediate continuation: “Behind that line lie all the capitals of the ancient states of Central and Eastern Continent” (Churchill 1974: 7290).

Iron curtain was heavy both in the figurative and in the proper meaning of the term; even the substance of which the metaphor is made up speaks by itself. Indeed, the *symbolism of the iron* is dominated by the idea of hard force. Two outstanding state figures received nicknames related to iron: Otto von Bismarck (*Eisenkanzler*) and Margaret Thatcher (*Iron Lady*). Nevertheless, in some cultures, this metal lacked of nobility was invested with sacred virtues. For the present context, I find very suggestive a certain symbolical ambiguity of iron, namely: “iron protects against the bad influences, but at the same time it serves as their instruments” (Chevalier and Gheerbrant 1973 [1969]: 307). Let us take over from these words the invitation to see the iron curtain not a simple instrument with a separating function, but one the double faces of which fulfilled (in relation to human essence) opposite functions: the eastern face served for preserving restrictions, constraints, censorship, prosecutions, etc.), while the western face protected (as a strong backward) the occidental world against the expansion of those harmful practices and, implicitly, maintained in the West the regime of human liberty.

Two among the four inner curtains of Europe are still active, partially. It is the case of the religious curtain. It still exists, but its separating force does no longer act so steadfastly as in the past. On 7 December 1965, when they met at Rome, Pope Paul VI and Athenagoras as Ecumenical Patriarch of Constantinople nullified reciprocally the anathema that had brought about the “great schism” of 1054. Under the same sign of reconciliation between Catholic

Church and the Orthodox one, Pope John Paul II and Teoctist, the Patriarch of Romania, met in Bucharest on 7–9 May 1999; it was the first official visit of a pope in an orthodox country⁶.

The economic curtain shows, too, its presence in contemporary times by profound effects. Never mentioned as such because of its slow setting up (in the course of the two – previously mentioned – centuries), the discrepancy between East and West is not less perceptible today than (let us say) in the XIXth century.

As to the iron curtain, it fell at the same time with the Berlin Wall, but its persistence over fifty years left deep reminiscences within the European consciousness.

THE FALL OF THE IRON CURTAIN AND THE ENTROPY OF VALUES

The spectacular fall of the communist system in the Eastern Europe signified automatically the fall of the iron curtain, that is the abolition of the main barrier between the two geopolitical systems. The immediate effect – unsurprising from the thermodynamic perspective – was the emergency of the migration flows from the eastern former communist countries towards the western ones. This phenomenon could not escape to analysts (see for instance: Böhning 1978 [for the interest in future]; Drbohlav 1997; Zlotnik 1999; etc.). Let us quote one of them:

[W]hen many of the tight administrative barriers between Western and Eastern Europe were lifted, Eastern Europe opened not only its doors but also its windows (Drbohlav 1997: 87).

This happened because:

Until Eastern Europe experienced the collapse of its communist regimes, there had been no large-scale emigration of its people, except for rather rare and very short-term waves to Western Europe (Drbohlav 1997: 87).

All the previous curtains had not impeded the individuals' displacement from one to another part of the continent and – after the Great Discoveries – even beyond its margins, towards the newly discovered and colonized territories. As a matter of fact: “The history of mankind is a history of migration. Early man was a hunter and plant gatherer who moved from one place to another as food became scarce” (Böhning 1978: 11). However, the causes of migration were different in earlier times than today. According to historical and anthropological researches people of ancient epochs left their native region either to look for food, or to escape from an epidemic, or to avoid a local (political or religious) conflict. In the modern age, too, a lot of human individuals migrate in the search of a better life, but in many cases the reason of migration is the *need of liberty*. At this point let us observe, analogically, that also in thermodynamics one speaks about *free energy* and *bound energy*. Anthropomorphism? Rather some universal qualities of the different elements of reality!...

On the other hand, as it was observed, the “enjoyment of life” is to be the very result of the economic process: “Without the concepts of *purposive activity* and *enjoyment of life* we cannot be in the economic world” (Georgescu-Roegen 1999 [1971]: 282 – italics in orig.). By

⁶ As Lelia Munteanu, a woman journalist from a very popular Romanian newspaper, titled her article on that opportunity: “A Slav Pope and a Latin Patriarch will shake their hands in Bucharest” (Munteanu 1999: 1).

resonance, happiness has been recently approached as a possible stimulating factor of migration (see Bartram 2013).

Consequently, *all the reasons for which people migrate are governed by aspirations and options*; in other words, *all those reasons are factors of actualizing values*.

Therefore, *we are justified to consider such an extensive migratory movement as a special entropic process, the content of which is given not by caloric energy but by social values*. Epiphenomenal to human life, values may be seen as a load and at the same time as goals in the process of migration. Perhaps even the terminology in use should be changed: would it not be more adequate to replace the denomination of thermodynamic systems with that of *axiodynamic systems*? In spite of some peculiarities, both natural and social phenomena follow common structural and deterministic ways. Therefore, let us avoid the terminological excess and follow the old advice: *Entia non sunt multiplicanda praeter necessitatem* (Entities should not be multiplied beyond necessity).

In short, we can afford to assert that at the sociocultural level the entropy appears as *entropy of values*. Behind the standard phrase of our days, the “European integration” involves such a thermodynamic process in the form of a social entropy. At this point, the critical problem is that the natural entropy supposes a displacement of energy towards a unique sense, namely: from the high level to the low one. Such a process is unacceptable when at stake is the world of values; in our case this would mean that the well-structured civilization standards of the Occidental Europe should follow a descending movement to come across at a median point the Oriental values just escaped from the distorting frames of the totalitarian regime. The reason of European Union is, on the contrary, to achieve an entropy of values at high standards! This means that entropy loses the connotation of being the measure of disorder, a connotation it inherited from physics. As Schrödinger underlined, living organism (and human society *is* by itself such an organism) seems simply enigmatical by managing to delay the decay in that inert equilibrium which is death. How does it achieve this feat? It feeds upon what Schrödinger called – by an inspired concept – “negative entropy”:

What an organism feeds upon is negative entropy. Or, to put it less paradoxically, the essential thing in metabolism is that the organism succeeds in freeing itself from all the entropy it cannot help producing while alive (2012 [1944]): 71.

However, is it possible such a selection, or, in our context, a *controlled entropy of values* with the double benefit of hindering the “low level” entropy and stimulating the “high level” entropy? The strange “Maxwell’s demon” could solve this problem. In 1871, the British physicist James Clerk Maxwell imagined two equal containers – A and B – full with gas at the same temperature and separated by a wall with a little door. Placed near the door, a small demon carries out the role of controller. It allows the passing from A to B only for the molecules that move quickly, and from B to A only the molecules with slow speed. Thus, the little demon makes the gas from the recipient B to become warmer than the gas from the recipient A. Let us imagine, in our turn, that the European Union Commission has at its invisible door a kind of Maxwell’s demon; or, as this Commission works by the agency of an ensemble of specialized departments (for agriculture, justice, citizen’s rights, etc.), we really deal with a troop of such demons engaged by those departments to carry out the axiological control of in-puts and out-puts.

A CONCEPTUAL CONSTELLATION

At the ideological level, migration and the entropy of values find out their reflection in the policy of multiculturalism. The term “multiculturalism” designates the coexistence of people of different ethnic origin, religious beliefs, or cultural customs within the same geographic and sociopolitical space.

At the first glance, multiculturalism could easily be confused with cultural relativism, but actually they are quite different. Nevertheless, they have in common important aspects, so that the flaws of multiculturalism can be surpassed just by an adequate understanding of cultural relativism. The two labels are not equally frequent in the contemporary ideological language: “multiculturalism” is almost a popular term to the spreading of which even mass media have a notable contribution, while “cultural relativism” is rather a principle which is to be extracted from the scholarly books of anthropology. One must mention, however, that social reality of our time is so intricate that an analytical debate around *multiculturalism* and *cultural relativism* involves other related concepts – *migration* and *human rights* among them –, altogether making up a very *conceptual constellation*.

ONTOLOGICAL FLAW OF MULTICULTURALISM

“I do not crush the world’s corolla of wonders” – sounds one of the most beautiful line in the Romanian literature. Its author, Lucian Blaga (1895–1961), was equally an outstanding thinker, and even the just quoted verse has mainly a philosophical address: poetry – the author wants to say – is a kind of knowing, but unlike the rational way of knowing proper to a scientist that breaks up or dissolves the object of study for analytical purpose, the poetic approach preserves the “mystery” of things. Blaga developed also a theory of culture which is not lacked of anthropologic relevance for somebody interested in the ignored gems of the non-western thought (see Geană 1999: 30–36). *Hic et nunc*, however, I shall take over the metaphor as such for applying it to the cultural diversity of humankind.

Indeed, if seen from a detached perspective, humankind appears as a polychromy of cultures. This corolla of cultures makes all the richness and beautifulness of the human species. Metaphorically, multiculturalism means just perceiving the world as a wonderful corolla of cultures.

Nevertheless, however fascinating this image could be (and really it is), many critiques were addressed to it. For instance, by referring to some social phenomena in the Netherlands, Great Britain, and France, Rattansi brings in discussion the “failure of multiculturalism” (2011: 88–92, 143–151 & passim). George Schöpflin goes further by observing that:

an unbelievable amount of nonsense, charlatanry and covert power plays are purveyed about culture, about what it is or should be, what it is not, how it may be identified and so on. The confusion is not surprising because the concept is, in fact, complex, often contested and, at the same time, the phenomenon is subject to change, making it extremely difficult to grasp – just like life (2012: 211).

Schöpflin’s attack over the culture concept itself is an excess; in a classical book of anthropology (but not only), Alfred Kroeber and Clyde Kluckhohn put order once for all in the meanings and definitions of the concept of culture (Kroeber & Kluckhohn (1963 [1952])). However, the disappointment toward multiculturalism is not at all a whim. Beyond the bias (either political or resulted from strictly subjective applications), multiculturalism is

essentially marked by an *ontological* flaw. From the logical viewpoint, the grammatical prefix “multi-” is a *quantitative* particle: it characterizes the totality of human cultures as a *conglomerate*, and not as an organic whole.

At least three premises converge in bringing about this state of things: (1) human individuals as value bearers; (2) the growth of migrations, both in extension and intensity; and (3) human rights as a principle set out by international institutions in order to protect human beings from various discriminations.

AN OLD PRINCIPLE UNDER CHALLENGE

I want to draw attention upon a special problem related to the condition of individuals as bearers of values. Some of values are inherited, or learned in the native milieu: they are *native values*. With other values individuals come across when passing from their original to an alien culture: these are *adaptive values*. By facilitating migration, the globalization and Europeanization encourage the proliferation of the cases of impact between the native values and the adaptive ones. For centuries, and even millenia, such cases were settled by the principle: “When in Rome, act like Romans”. Integrally in Latin: “*Si fueris Romae, Romano vivito more; si fueris alibi, vivito sicut ibi*” (literally translated: “If you will be in Rome, live according to the Roman custom; if you will be in another place, live according to the custom therein”). Let us call this the *principle of the priority of place*. It contributed – discretely, but efficiently – to the stability of migrant-receiving societies.

In our days, the international (and implicitly intercultural) mobility of human individuals entails a great challenge to this principle. The challenge is strongly supported by the *ethics of human rights*, which has reached in the foreground of the transnational social life.

The human rights movement emerged as an aftermath of the atrocities of the World War II. Its inspiration nourished from the tradition of the “natural law” promoted by the Enlightenment in the XVIII-th century, and especially from the ideas contained in the 1789 French revolutionaries’ manifesto: “The Declaration of the Rights of Man and of the Citizen”. The influence of this old document over the “Universal Declaration of Human Rights” (proclaimed at Paris, in 1948, by the United Nations) is obvious, and, if so, one cannot escape the leaving out in the title – and not only there) – of the word “citizen”! It is not my intention to increase the dissatisfactions towards the Human Rights (as a noble movement, with all its institutional agencies), but, on the other hand, the entity situated under such high protection is an a-temporal and a-spatial human being. Among the large spectrum of rights there are, e.g.: right to life, freedom from slavery, freedom of speech, reproductive rights etc. This floating-through-air human being is nothing else than an *abstract ego*.

It is true that a cultural equipment is also ascribed to this general human being, but this fact is required by the stipulation of recognizing everybody’s right to keep everywhere (i.e. in every country) his/her own original customs – and no mention is made about good or bad customs!...

It seems that such conditions work together for making from the planet of human rights the paradise of multiculturalism! For the time being, let us note that the old principle of the priority of place (see above) is tacitly and little by little substituted for the *principle of the priority of ego*!... Is it well? Is it unwell? In any case, some points of this new ethics oriented by the principle of the priority of ego come against the old and deeply rooted principle according to which “when in Rome, act like Romans”. Some years ago, Umberto Eco (2001) imagined an extreme case of this distressing situation: an individual from a country where the

cannibalism is practiced comes into my country and wants daily to eat a compatriot of mine as a spitted roast. Are we obliged to satisfy his/her desire?

A KANTIAN SUGGESTION

There are still many other signs indicating that multiculturalism is not by itself a utopian state of paradise. Might it, nevertheless, come close to such a state of things? All is possible if – behind the official general formulations – the human wisdom could find concrete solutions of *adjusting cultural differences* between the native (intimate) and the local (matricial) values and, thus, of avoiding the conflicting potential between them.

Such a solution could be taken over from the earlier Kantian idea of “eternal peace”⁷. The outstanding German philosopher had almost an obsession for this latter phrase. In 1776 he published the essay *Proclamation over the Forthcoming Agreement on a Treaty Regarding the Eternal Peace in Philosophy / Verkündigung des nahen Abschlusses eines Traktats zum ewigen Frieden in der Philosophie*, and in 1795 the still more known *Toward the Eternal Peace: A Philosophical Sketch / Zum ewige Frieden: Ein philosophischer Entwurf*. In these essays (and in other similar writings⁸), Immanuel Kant advanced impressive metaphysical projects aiming at a frame of mind in which the possibility of harmful relations among philosophical doctrines or political entities were abolished. It is especially the conflicts among the states that absorbed philosopher’s concern. He dreamed at a kind of political world federation in which both the individuality of each state and general peace were granted. Inspired or not by the Kantian plan, the Ligue of Nations and, then, United Nations validated it practically.

As a representative figure of Enlightenment, Kant emphasized the role of reason. The way for attaining the “eternal peace” was paved by Kant with the arguments related to the moral reason. And although not invoked as such in these political writings, the famous principle of *categorical imperative* lies at their core.

According to Kant, it was observed, “the human will (as an a priori instrument of action – my note, G.G.) is influenced by both reason and inclination. Therefore, human beings don’t necessarily will (and consequently act) as pure reason reveals is right, because they can be led astray by their inclinations. Thus, if human will is to be determined in accordance with the objective moral law, it must be constrained” (Solomon & Higgins 2003 [1993]: 71). This constraining force takes the form of a principle and is reckoned by Kant as an “imperative”. In its categorical variant⁹, this principle receives from its author three formulations:

- (1) “Act only according to that maxim by which you can at the same time will that it should become a universal law” (Kant 1959: 38).

⁷ Quasi-totality of Kant’s English translators chose for the German original “*ewige*” the term “perpetual” as a way to avoid the association of “eternal peace” with the quietness after the death. In fact, Kant made allusion to this syntagma – *ewige Frieden* – just at the beginning of his essay, fully aware of that meaning, but taking it ironically: by referring to the representation and denomination as such of a cemetery on the firm of a Dutch inn, philosopher nettled the pragmatic politicians who ignored the well-intended theorists and could not give up the disastrous wars. Therefore, “perpetual” is congruent with Kant’s intention, but it does *not* respect philosopher’s rhetoric. Consequently, excepting bibliographical references associated with quotations, I have preferred to keep close to the original and translate “*ewige Frieden*” by “eternal peace”.

⁸ They appeared also in several English editions (see, for instance, Kant 1991).

⁹ There is also a hypothetical imperative, but it is vulnerable to desire.

- (2) “Act so that you treat humanity, whether in your own person or in that of another, always as an end and never as a means only” (ibidem: 46).
- (3) “Never choose except in such a way that the maxims of the choice are comprehended as universal law in the same volition” (ibidem: 57).

One can detect in all of these precepts a more or less obvious relationship between a singular human being and its projection at the scale of species, i.e. between the individual and universal human being. There is in this relationship a permanent care for the respect and dignity of the “other”.

After more than two centuries since Immanuel Kant’s project was launched the world peace remained an ideal project, a golden dream of the incorruptible humanists. In the XXeth century they invented the League of Nations and the United Nations Organization, but it seems that they have not found the working secrete for organizing the “eternal peace”. Let me think that this secrete could be discovered in music.

LEARNING FROM MUSIC

“Without music, life would be an error”. In his words, Friedrich Nietzsche criticized philosophers’ ignorance in the matter of music, but his invective has an extensive validity. Music offers the model of what means the organizing of several chaotic elements toward a functional harmonious whole. The word “harmony” (with its derivatives) is a piece of the common language; we hear it often in phrases like “social harmony”, “harmonious family”, etc. Nevertheless, both the term and idea of harmony come from music. A serious musical training includes in the professional knowledge the contents of hard treaties of harmony. Either as a structural model for aspects of human life or as an inspiring factor of world view, music stirred the interest of thinkers from Pythagoras, Platon, Aristotle, Clement of Alexandria¹⁰, to Schopenhauer, Lévi-Strauss¹¹, Higgins¹², and so on. In one of his marvelous lieder – *An die Musik / To Music* – Schubert declares directly his gratitude to this art for its capacity to transport people into a better world¹³. As it was observed:

That capacity itself renders music utopian, for it is this better world and the attempt at and experience of its prefiguration that is the defining character of utopianism (Levitas 2010: 216).

Not accidentally, Robert Owen – a classic of the utopian thought – relied essentially on education, namely on “the significant role played by musical activities in the shaping of a harmonious community” (Davidson 2010: 234). And, notably: “Music had played a large part in Owen’s own happy childhood in Wales, where he learned to play the clarinet and attended dancing lessons” (*ibidem*).

¹⁰ This Christian writer (approx. 150–215 AD) compared humanity with a huge organ.

¹¹ In his research on myth, the French anthropologist followed a structural method inspired by the musical genre of “theme and variation” (see Geană 2011: 47–50).

¹² “Music is a means of exploring the wealth of our ethical world”, she has written at the end of the “Introduction” to one of her books in which she insisted on the ethical echoes of music in social life (Higgins 2011: xx).

¹³ “You lovely art, how often in dark hours, / When life’s wild orbit wraps around me, / Have you kindled my heart to warm love, / And transported me into a better world. // Often has a sigh, escaping from your harp, / A sweet, blessed harmony of yours / Has revealed to me a heaven of better times, / Oh, lovely art, for that I thank you!” (Levitas 2010: 216).

As a matter of fact, *human individuals may be seen as musical notes*. Each musical note has a set of particular qualities (first of all the pitch, which is determined by sound wave). Simultaneously performed, two notes (e.g. *do* and *mi*, or *do* and *sol*, etc.) may bring about the pleasant impression of harmony. Other notes (let us say *do* and *re*) are disharmonious. Obviously, the relations are much more complex when a plurality of notes attend this sound play. The orchestration of a musical composition is not only a problem of artistic talent, but equally one of scientific intelligence!

Mutatis mutandis, let's say again, human individuals are and behave like musical notes. By his/her genetic heritage, psychic sensibility, training and education, a human individual is a configuration of general human traits combined with idiomatical traits. By analogy with musical domain, the organizing human life is not only a problem of political science, but also one of the art of conducting.

Turning again to music, *an orchestral piece – and so much the more a choral one – are paradigms of people's working together*. At the beginning of the XXth century, the chamber music was called:

the quintessential “music of friends”, an intimate and tightly constructed dialogue among equals, at once subtle and serious, challenging to play (cf. Bashford 2005: 4).

Long before, the above suggestion was anticipated with his imaginative thought by Goethe, who had seen in a string quartet “four rational people conversing” (*ibidem*, including the endnote 6, p. 328).

At least equally suggestive is a choir and a choral performance:

Singing in a large choir is very demanding for the singer. It may seem easy, with many singers on each part, but it is essential that the individual singer's resources are fully used in order for the complete ensemble to sound well as a choir. One of the most difficult problems is controlling your own voice when you may be sitting next to some one whose voice is very different from your own. It helps to think of a kind of mutuality of sound, each voice blending together, perhaps reducing the vibrato so that you clearly hear each other's pitch. (...) Be conscious that you are a line of singers trying to act as one: breathe and articulate together, think yourself into the voice of the person next to you (Liimola 2000: 151).

Singing in a choir requires, also, to think about “how you are going to work together. Ensemble singing is a co-operative activity” (Potter 2000: 158).

A preliminary inference from all these considerations is that politicians – those persons who have in their hands the destiny of peace (among peoples, among cultures) – should be endowed with musical sensibility and intuition. This expectation could seem at least naive if history were not generous enough in examples of kings and princes who encouraged arts (in general) and music (particularly). In 1747 Frederick the Great of Prussia (himself a passionate player the flute!) invited Johann Sebastian Bach at the Palace of Potsdam and, on the occasion of a musical evening, gave him a theme of a few notes challenging the guest to improvise a composition. Helped by his genius, Bach astonished the high audience by improvising a six-part fugue; later on he developed the composition which, under the title *Musikalische Opfer / A Musical Offering*, was recognized as one of the immortal masterpieces in the history of music¹⁴. Other great composers in the epoch had comparable experiences

¹⁴ This happening – with its large (artistic and social) significations in the *Zeitgeist* of the XVIIIth century – constituted the subject of the book (extended to 336 pp.) of Gaines (2006).

under the protection of the enlightened courts of Europe: Händel at the court of the king George I of England, Haydn at the castle Esterházy, and so on¹⁵.

Unfortunately, such sequences of special life disappeared in our days. Perhaps it is not accidentally that the most devastating wars and violations of human rights occurred in the XXeth century, i.e. in the century in which musicians abandoned consonance and harmony, so that music became dominated by dissonance and disharmony. At the same time, political leaders are interested exclusively in money and power. A single hopeful syncope in this behaviour: the moment in which the decision makers chose as anthem of the European Union the choral sequence from the end of Beethoven's *Symphony IX*, based on Schiller's *Ode to Joy / An die Freude!*...

SYNOPSIS

The present discussion followed a less expected but logical course: it started from the subject matters of migration and human rights, continued to the idea of the controlled entropy of values, and led us to utopia and cultural relativism. In the context, the idea of utopia brings a realistic note. According to Mannheim,

A state of mind is utopian when it is incongruous with the state of reality within which it occurs (Mannheim 1985: 193).

Or, I insisted upon *music* just because it appears as being the domain in which, paradoxically, *utopian state can really be achieved*, namely: under the hypostasis of harmony. Indeed, in its own framework music generates ideal models in such a way that the elements of each model function as a perfectly integrated whole. In his writing *The Principle of Hope*, Ernst Bloch asserted that music is the most utopian among the cultural spectrum “by virtue of its so immediately human capacity of expression” (apud Levitas 2013: 41). Only “immediately”? Why not (by the agency of cultural memory) perpetually? – as suggested in the short but very dense poem *Duration*, by Geo Bogza:

When towers, citadels, statues, cathedrals, pyramids
 will be corroded by the iron tooth of the time,
When even mountains will be turned into sand
 by the elapsing of many thousands of millennia,
When nowhere will remain anything
 from all that is raising today under the sun,
The people of that age will still have the chance to climb the steps of a temple
 with great columns of marble and granite
By listening to Johann Sebastian Bach!...¹⁶

¹⁵ On February 14, 2019, between 20:00–21:00, under the Programme title “The Office of Oddities” (“*Cabinetul de curiozități*”), the Musical Channel of Romanian Broadcasting Society delighted its listeners with musical pieces composed by such royalties as: King Henry VIII of England (a selection from “Songbook VIII”), Prince Albert of Saxa-Coburg-Gotha (“Lieder”), Frederick II “the Great” of Prussia, just mentioned earlier (“Concerto no. 4 in D major for flute and orchestra”), and Archduke Rudolph of Habsburg (“Septet in E minor”). The programme editor was Anca Ioana Andriescu.

¹⁶ Orig., in Romanian: *Când turnuri, cetăți, statui, catedrale, piramide / vor fi roase de dintele de fier al vremii, / Când munții înșiși vor fi prefăcuți în nisip / de trecerea multor mii de milenii, / Când nicăieri nu va mai fi nimic / din tot ceea ce azi se ridică sub soare, / Oamenii aceluia timp vor mai putea urca treptele unui templu / cu mari*

Conceptually speaking, a key towards the perennial peace within the cultural networks – even if that state of things seems to be still far enough – might be the adequate understanding of the distinction between *multiculturalism* (as a diffuse ideology of a cultural conglomerate) and *cultural relativism* (as a viable working principle within a coherent social system). This distinction is both pragmatic and necessary. The risk of multiculturalism to fail consists in being adopted more as an ideology and less as a utopia. An ideology is a kind of faith the object of which has a vulnerable existence.

With the sense of understanding of (and respect for) cultural differences as parts of a functional whole, cultural relativism is a paradigm promoted by the classical anthropology. While multiculturalism in itself cannot be a principle (because of its schizoid potential), cultural relativism *is* a principle, one that calls for co-operation and synthesis; in other words, cultural relativism is a *synergic principle*.

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coloane de marmură și granit, / Ascultându-l pe Johann Sebastian Bach!... (Bogza 1966; my trans. in English – G.G.)

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ANTHROPONYMY IN HINDU INDIA, OR THE MIRRORING OF THE INDIVIDUAL'S MICROCOSM IN THE MACROCOSM OF HUMAN ONTOLOGY

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Having a name to be recognised by in public is an important element in many cultures across the world. Naming is a much more complex affair than meets the eye, reason enough for us to travel through multiple stages in order to better understand the phenomenon, as it is relevant for Indian culture. Starting our journey with setting our theoretical background with Franz Boas' *cultural relativism*, we support the idea that a culture must be approached respectfully, both for the individuals as members of that culture and for the customs and traditions one meets. We mention the difference between *biological and social birth*, and how important it is to distinguish them from one another from a cultural point of view; we underline our belief that naming is, indeed, indispensable for the physical acknowledgement of the individual – if there remains no trace of his passage through the world, one may very well consider the person never existed. We highlight the fact that humans feel the need of inclusion and interaction with peers as social beings, and that the absence of a name cannot but deepen the individual's tribulations regarding his ontology, reason enough to affirm that *the microcosm of the individual is mirrored in the macrocosm of ontology*.

Keywords: anthroponymy, Nāmakaraṇa, Hinduism, secret name, cultural studies

INTRODUCTION

The purpose of this paper is to bring to the reader's attention the fact that name and naming is a far more complex issue than one might fathom, that one should approach any phenomenon, culturally connected to ontology, with respect, care and openness and that there is no single, correct interpretation or theory that universalizes the entire existence of man – such a view is surely detrimental to thinking and knowledge, not to mention its poisonous effect on research in general. A balanced, well-argued position is the ideal we strive to achieve.

It is by no means our intention to elaborate a very concise history of psychological and philosophical ideas connected to identity, personality, meaning, names and naming or other such concepts; it would imply that the research encompassed multiple hundreds of pages, with strong theoretical evidence cross-culturally. Keeping in mind that our space is limited, we feel that the best approach for our endeavour is briefly touching upon some of the theories that have influenced human thinking and analysis, at the same time stating our position along the journey.

What defines us on a daily basis, in our interactions and activities that we perform regularly? What, besides our physical features, dressing style and language as means of communication, can identify us as individuals in the endless sea of human beings? What can be the element that singles us out even in a crowd of thousands? To complete and add value to

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our existence comes *the name*, the combination of two or more words that is capable of creating a one-of-a-kind imprint that helps us identify ourselves as *us*, and not others – making an anyone a someone.

Even before birth, parents around the world start addressing their unborn child using a certain name (excluding endearing terms, here) – usually, carefully selected, bearing in mind a positive, auspicious meaning of the word to be assigned as a name, with high hopes that the child may receive at least part of the auspiciousness that the name carries. Post-birth celebrations are a proof of just how important name and naming are, without a doubt highlighting the fact that *names shelter a socio-religious and cultural essence* that should not be ignored.

TWO TYPES OF BIRTH – BIOLOGICAL AND SOCIAL

In order to differentiate between two spheres of human existence, anthropologists thought it wise to speak about *two of kinds of birth: a biological one and a social one*¹, respectively².

In many societies, these concepts may lack altogether, but in others, they are an integral part of life and its celebrations – Hindu India being one of these. In the latter cases, social and biological birth are never simultaneous, social birth always following the biological one. As expected, social birth is imbued with ritualistic sobriety, implies the presence of religious forces and marks the end of a period of seclusion for mother and child. We shall explore social birth in Hindu India by touching upon the *Nāmakaraṇa* – a rite of passage whose purpose is the assignment of name and personhood to the newborn, thus becoming a member of the family and the community it was born in.

WHY DO WE NAME?

Let us indulge in the following exercise of imagination: we have, supposedly, read a wonderfully insightful book on naming in different cultures and we are eager to share our recently acquired knowledge on the subject with our friends, but, alas!, when asked who the author is, we are unable to pinpoint the name since naming is not an integral part of the author's culture; instead, we resort to an artificial tool of assigning a phrase that best describes those read: 'the man who wrote a wonderful book about naming in different cultures'. We can only conclude that such a practice is anything but practical.

Answering the above-raised question, *we*, firstly, *name to assign identity*. According to laws in most countries, a person not having a name is not recognized by the state and cannot, therefore, benefit from the array of rights and privileges that come with a name. A birth certificate is the first step to identity, to which are added all kinds of documents – identity card, passport, driving license etc. – that are based on the name inscribed in the birth certificate. Physical existence is now confirmed by a piece of paper that is subjected to laws

¹ By social birth, we mean not the social aspect that seconds biological birth, as man is a social being the minute he enters this world, but the event celebrated in the community one is born in by different rites and rituals – which is why we express the idea that biological and social birth never happen at the same time.

² See Tesone, Juan Eduardo. 2011. *In the Traces of Our Name – The Influence of Given Names in Life*. London: Karnac Books; also see Linda Layne's "Your Child Deserves a Name": *Possessive Individualism and the Politics of Memory in Pregnancy Loss* in *The Anthropology of Names and Naming*. 2006. Ed. Gabriele Vom Bruck and Barbara Bodenhorn. Cambridge: Cambridge University Press, pp. 32–50

and regulations considered correct by that particular society. The name becomes inseparable from its bearer, the uttering of the combination of sounds weaving, as if magic, the reality of someone. The last name is usually inherited from generation to generation – matrilineally or patrilineally, depending upon local and cultural customs – a legacy from ancestors that inscribes the new arrival in a history that becomes from then on personal. Due to this distinction, we nurture the belief that our first name is that which comprises, more than anything, the uniqueness of our ontology, containing the best wishes of our parents for us and being a power source at need. Our first name, unlike some opinions in literature³, does have meaning (proof of it being the fact that the pronunciation of a name can give rise to positive or negative emotions, based on the relationship between the hearer/utterer and the signified) and harbours our very essence, even having magical powers of protection for bearers, in certain cultures. Of course, we do not wish to indicate, in any case, that first names are primordial in individualization mainly because there may be thousands of people bearing the same first name; the saving solution, in such an event, would be the combination resulted from the first and last names of the individual – personality always following in their footsteps.

Secondly, *a name assigns a place to the person*. Having received a name, the bearer is then recognized in a social structure, can become an active citizen of his community and contribute to its well-being when he/she is old enough, as per the rules of that particular environment. As for Hindu India, the name – resulted from the combination of the first and last names – comprises *not only the uniqueness of the individual that rests, as we have already seen, mostly in the first name, but also the legacy of ancestors, his/her personal history*, that in turn, is part of a much larger social machinery: *the caste system*. More often than not, Indians can figure out a person's history by looking at the last name; many a times, last names are indicative of the caste one was born in, therefore, safeguarding the personal microcosm which gets integrated in the macrocosm of life as we know it. Let us take an example: suppose we have met someone called Mahendra Chaturvedi. If we are familiar with the Sanskrit language, our task will be greatly simplified; moreover, if we know about tradition and its regulations regarding castes, then we shall have no problems at all. Coming back to our subject, Mr. Mahendra Chaturvedi's name can be translated as follows: '*great Indra who knows all the four Vedas*'⁴. This information once corroborated, we can safely assume that this gentleman is an educated member of society, of the highest caste (*brāhmaṇa*), who in ancient times would have surely been a priest, even a teacher of religious norms; translated into today's happenings, he could very well be a person with a high position in the government/educational system or private sector, with exquisite schooling and education, well-spoken, a lover of beauty in all its forms and an upholder of morality and justice. Of course, as the saying goes, 'never judge a book by its cover', the presented example has been provided only to show how much one can find out from a name, this tool not being a guarantee that the possessor lives up to the beauty and history of his/her name –

³ We, hereby, refer to John Stuart Mill's theory, in which he postulates that names do have denotation, but no connotation, as they 'do not indicate or imply any attributes as belonging to those individuals'. (*A System of Logic*, 1843). Other scholars worth mentioning, who had expressed their opinions in favour or against Mill's ideas, are Gottlob Frege (*On Sense and Reference*, 1892), Bertrand Russell (*On Denoting*, 1905), and more recently John Searle (*Proper names*, 1958) and Saul Kripke (*Naming and Necessity*, 1980) and the list goes on. It is not our intention to summarize their opinions and the debates in literature, therefore urging the reader to consult the works for a better understanding.

⁴ Decomposing it one by one: *mahā* = great/greatest; *Indra* = Vedic god of weather and waters; *chatur* = four; *vedī* = modified from Veda, one of the most important Hindu texts.

one can only wish to meet someone well-versed in the scriptures, yet anchored in today's reality without being obnoxious.

As demonstrated, having a name includes the human in a matrix of socio-cultural practices, rules and regulations that give meaning both to his life, and to that of the people he interacts with.

IS NAMING NECESSARY?

It should be no surprise that we strongly believe in the *necessity of naming*; possessing a name means that the person can be included both in a relational system, as well as in a socio-cultural structure, on a large scale. In other words, his physical existence is acknowledged with the help of his name, otherwise being condemned to remain outside any type of order, chaos following in his every footstep. Although the last, or family, name is of undeniable importance in today's world, let us not forget that it is quite a recent invention: as mentioned by Juan Eduardo Tesone, the use of the combination of first and last name becomes prevalent in Renaissance Europe⁵. He later quotes Boucaud, from a legal perspective, who is of the opinion that names are: '(a) *immutable* (except by legal or administrative decision); (b) *imprescriptible*: its possession cannot be lost due to protracted disuse (for example, in the case of children "kidnapped-appropriated" in Argentina during the military dictatorship between 1976 and 1983 and subsequently recovered); (c) *non disposable*: only exceptionally may the holder of a name relinquish or bequeath it or authorize its use by any other person'⁶.

Come to think of language, its bounty allows us to play with words in the boundaries of grammatical mechanisms characteristic for that particular language, thus being able to replace one term with another (using synonyms), finding ways to describe a notion by paraphrasing, explaining. Can this be done with a name? Most certainly cannot. When a name belongs to one individual at a time, it does become a property – if one may say so; meaning, therefore, goes beyond the constraints of communication by language: *the bearer*, identified by this unique name, *is made irreplaceable*⁷ – this goes hand in hand with the legal frame constructed by Boucaud. As Pariente well puts it: 'The very permanence that naming grants the subject is not inscribed in the register of being, which is always mutating, but in discourse: as long as his name has not been erased from the memory of humankind, we may speak of an individual'⁸.

If we consider the fact that any born child gets introduced in a lineage and a family history even before its biological birth, then we may safely conclude that *the need of affiliation and continuity is a real one*. No doubt, the fact that its personal history has already been mapped out to a certain extent can later become slightly burdensome, even if the road has been paved, yet not inscribed into the being – the name allows the bearer to become unique in the family history as well, irreplaceable (as seen above) and unmistakable among the rest of the members. There is no easy way to say it, but *feeding one's name with new life and energy never ceases, it is a lifelong endeavour, forever incomplete*⁹.

⁵ Tesone, op. cit., p. 7

⁶ Ibidem, p. 8

⁷ Ibidem, p. 11

⁸ Apud Tesone, op. cit., p. 11

⁹ Ibidem, p. 4

ANSWERING THE ‘WHO AM I?’ QUESTION

In order to answer the question of ‘*who am I?*’, we must first explore the concept of identity. From a psychological point of view, people are in a constant search and need to know themselves – likes, dislikes, limitations and boundaries, moral values and so on. How could one embark on an introspective journey when one lacks the primary requirement that enables one to be part of a system (social, cultural, religious): *a name?*

We are of the opinion that *the absence of a name cannot but deepen the individual’s tribulations regarding his ontology*; even before trying to hold the mirror of self-discovery, one has to have the feeling of affiliation to one group or the other, to experience acceptance and the idea of sharing and having things in common with peers; otherwise, one is overcome by the feeling of abandonment, not any different from a child left on its own by parents. Indeed, we have come across numerous instances of youngsters in search of their biological parents after they had been adopted from Romanian orphanages by families across the ocean; one might say, they do have a name, so why the restlessness in finding their biological parents? As we have already underlined, they do have a name, but they lack the personal history that comes with birth and early childhood, and that does leave an imprint – *the feeling of having an inaccurate personal history*; however friendly and positive the environment may be, it cannot compensate for the lack of knowledge and the *sometimes unbearable feeling of an artificial construction of identity*, as if they had never had a say in anything, as if they had been dolls taken from one place to the other against their will.

Humans, usually, need to feel integrated, since they are social beings, which is why continuity may play a crucial role in their development and in answering the ‘*who am I?*’ question. Continuity in naming is normally achieved by the gifting of the last name, from generation to generation; the secondary participant, the one who performs the naming act (pity, one cannot name oneself at birth!), already guarantees the inclusion of the newborn in a history due to the fact that family members most commonly perform the naming. It is only natural that, if continuity is not present, the person feels lost, an outsider, as if not good enough to be recognized by any system.

To sum up, *a human being without a name and a personal history is no different from an unborn, since there is no trace of his/her passing through this world*; it is common knowledge that ancient Egyptians had a peculiar, yet very effective, way of erasing identity when confronted with persons they disliked: the obliteration of the name from public records and inscriptions – the destruction of a mummy’s mouth meant the inability to utter one’s name, resulting in unattainable afterlife. The continuity of a name may not be interrupted by physical death – as in the case of famous people like writers, actors, singers etc. – however, *if a name is erased from public memory, an entire slice of human history may be lost forever*.

NAMING – A CREATIVE ACT?

In times immemorial, the persons who gave names had an even greater responsibility in the act of naming, since, most of the times, they actually wrote history: there were no dictionaries of names, no pre-established lists to choose from, no real constraints (except, of course, local cultural and religious restrictions and indications). The entire community witnessed an *act of creation*, the creator being the one who named the child, the name resulting from an exercise of imagination, seconded by language restraints; in archaic or tribal communities, inspiration came from nature, daily activities, natural phenomena that affected

life, ancestors and religious beliefs and so on – it is impossible not to remember the suitable example of the recently departed Kofi Annan¹⁰, whose name, in the Akan language of Ghana, corresponds to Friday, due to which most television channels presented the translation of his name as ‘*born on a Friday*’ (quite accurate, judging by the fact that it was, indeed, a Friday on April 8th, 1938). As can be perceived, societies strongly connected to nature have ingenious ways of coming up with unique names, the child endowed with ‘*an originality comparable to its genetic heritage*’¹¹.

As aforementioned, humans cannot name themselves at birth, as they do not, yet, possess language and awareness of surroundings. The relationship between the giver and the receiver is dual: a well known formula is ‘I name you...’, which automatically implies the existence of an *I* that performs the naming of a *you*; plus, both actants playing an indispensable role in creation – without the giver, there is no name, whilst without the receiver, there is no creation; they depend on one another, a foreshadowing of the dependence of the child on its parents in its early childhood. Yet, it is interesting to observe how much independence a name gives to a child, even if it may not still be able to use language: a child reacts to the utterance of its name long before it masters communication via language; although dependent on parental help and attention, the sentiment of being different from the rest is present early, when called by name.

Just like the duality of the relationship of giver-receiver, we may speak of two important human acts: *gifting* (giving) and *accepting* (receiving). Ideally, the receiver shall, some day, become a giver in his turn, engaged in a chain of symbolic donation as old as time itself. In Hindu India, tradition states that the father is the giver of name (or, if anything stops him from his duty, an elderly, respected member of the family); we can trace a parallel between the act of receiving and being indebted towards the parent and the *theory of the three debts* in Hinduism: *ṛṇatraya* postulates that there are three debts every Hindu male must pay in order to be eligible for eternal bliss, one towards gods (*deva-ṛṇa*), repaid by the performance of sacrifices; then another to the ancestors (*pitṛ-ṛṇa*), repaid by begetting sons and paying respects by certain sacrifices; finally, the debt to the sages (*ṛṣi-ṛṇa*), repaid by Vedic study (living as a Vedic student for a quarter of one’s lifetime) and austerities. As such, if we were to think in a Hindu key, every child is indebted to its progenitor for being gifted a name, a debt he can repay by not letting the family line dry up.

THE POWER IN A NAME

For modern society, the power of a name lies in the association of the name with its bearer and the public recognition of its attachment to a living being endowed with knowledge and language. Only when one is confronted with such issues as stolen identity, suspended use of one’s name or other legal troubles that one realises how powerful a name can actually be. Those few words that point to an individual can easily become its forebearer, and once someone utters that name in public, people may experience feelings of joy, admiration, or, on the contrary, of fear, disgust, contempt. Stealing someone’s identity or impersonating someone is no hard task nowadays, when the internet and social-media features are so at

¹⁰ Kofi Annan (1938–2018) was an appreciated diplomat who served as Secretary-General of the United Nations during 1997–2006, who was also part of numerous foundations and human welfare organizations around the globe.

¹¹ Tesone, op. cit., p. 11; emphasis added

hand; these events, nonetheless, affect both parties, changing perspectives, ways of interaction and beliefs about boundaries and morality; the discussion about the public and the private is time and again reignited, with many joining the neverending debate, trying to find viable solutions. The power of a name can stretch as far as the horizon, under the direct influence of the possessor's professional background – as we know, famous people exert their influence far and wide, even when they are not power-thirsty.

In archaic societies, or communities based on magical and superstitious beliefs, knowing a name is synonymous with controlling its carrier; being aware of the true name of a person means that the knowledge can be used against that person, to harm, to change, to subdue. It is due to this practice that many of these communities have *the tradition of the secret name* – only the bearer, or maybe his close relatives, are familiar with this name that is to be kept secret to avoid any harm that could fall upon its possessor by the influence of other humans or spirits from another realm. As we shall soon see, Hindu India has its fair share of secret names that are meant to be used during religious practices.

Literary examples come to emphasize that there is tremendous power in a name; take, for instance, Ali Baba and the story of the forty thieves he overhears one day: '*open, Sesame!*'¹² is the formula to enter a cave full of treasures; simultaneously, an incorrect formula bringing nothing but doom. As Juan Eduardo Tesone puts it, 'when the child receives its name it becomes whatever the name expresses. The name gives him protection as well as the strength contained in the name. The mere chance pronunciation of his name *denudes the person, lifts the veils of his mysteries* and subjects him, defenceless, to evil powers'¹³.

Coming back to modernity, names are still quite accurate indicators of gender, geographical origin, ethnicity and even religion. No doubt, the power itself varies cross-culturally, but it certainly influences people in both ways: not only positively, but negatively as well. It can function both as a bridging tool between cultures and social strata, or a means to deepen boundaries, creating dissatisfaction on multiple levels – a perfect example of this situation is, indeed, India, where names carry gender, origin and religion, to which the social stratum (i.e. *the caste*) is added and which comes with its own set of consequences.

It is important to observe that *names are not fixed entities in many cultures*; most often, the change in name is reflected in marriage, which ultimately shows a shift in status. Then, a Ms. Asha Varma will be known as Mrs. Asha Kumar Bhardwaj (common Roman spelling, no IPA characters used) – in spoken language, it is common in India that wives also utter the first name of their husbands, as well as their last name – so we can add marital status to the possible (hidden) meanings that names may bear and the power that may result from it.

Before passing on, it is necessary to remember to mention the practice of not uttering names, for fear of crossing socio-cultural boundaries, becoming impolite or causing harm. The tradition of women not pronouncing their husbands' names is still as alive in India as it was many centuries ago; to the list, the father's name can be added, or even elders in the family. The solution is found in the very specific nouns used to show family relations: one knows exactly who the *māmā* (maternal uncle) in the family is, or who is whose *bhābhī* (sister-in-law, actually the elder brother's wife). As for the conservative communities, the

¹² It seems to be a fairly recent addition, probably by the first translators into European languages; nevertheless, it has become a symbol of wealth and luck, endowed with the power to command a mountain to open and close its belly for the benefit of the master of the name.

¹³ Tesone, op. cit., p. 62; emphasis added

head of the household is never addressed by name, but by his status as ‘*Sunīl ke bāpū*’¹⁴ (‘father of Sunīl’), in other words, as father to the first born son – likewise, the woman in charge of daily affairs shall be called ‘*Sunīl kī mā*’ (‘mother of Sunīl’).

Interestingly enough, the power exerted by a name is very different from society to society; since the perception of names as bearing weight varies cross-culturally, it is only natural that their influence will be connected to the interpretation of power as a concept, in general, in that community. If politics plays a crucial role in the community’s life, then, clearly, names with a weight in that system will be seen differently, their bearers treated distinctly from the masses. On the other hand, if social strata are something characteristic to the world one is born in, the name shall carry the imprint and the person will be viewed accordingly – the higher the stratum, the more powerful the name.

IDENTITY AND NAMING IN HINDU INDIA

From the legal point of view, a birth/stillbirth can be *registered within 21 days of its occurrence*, not later than 30 days from its happening¹⁵ in modern India; if the case be that the birth was not registered on time, the citizen shall pay a fine and authorities will have to investigate the accuracy of the information given by the citizen, thus prolonging the registration. Only after birth registration can a birth certificate be issued – as above, the later the registration, the longer it takes for the document to be issued. Moreover, even if there is no name inscribed in the document at first, the issue has to be dealt with afterwards – there is no legal ground for a nameless person to be recognized (see section 14, *Registration of name of child*, of the specified act).

Even from the earliest of sacred texts, naming was an important step in acquiring identity; even more so, throughout the legacy of texts, there are several places in which plurality of names is mentioned, as we shall see in a minute. The abundance of scriptural sources, to which we can add modern and local digressions from tradition, only deepen the troubles of researchers, since there is no singular common practice encompassing the entirety of the Indian subcontinent.

SCRIPTURAL EVIDENCE

Even before getting to the elaborate descriptions and rules of naming available in the *Grhyasūtras*, evidence of the importance and plurality of names comes to us from as early as the Vedas: ‘when you give us a fourth name connected with the (the performance of) a sacrifice we long for it, immediately afterwards you, our lord, take us (forward or towards glory)’³ (*Rg Veda*, VIII.80.9). Explaining this, Sāyaṇa is of the opinion that these four names

¹⁴ As Hindus consider their lives fulfilled if they father a boy, men will never be addressed by their daughters’ names; the practice has deep roots in the scriptures, where daughters do not have the same rights as sons to perform certain religious sacrifices, thus being incapable of completing all the necessary tasks for the well-being of their fathers’ souls, in case of a demise. We shall add the fact that, according to the *three debts theory* (*ṛṇatraya*), only by begetting sons and performing the proper sacrifices does a man repay the debt towards the ancestors.

¹⁵ As per *Registration of Births and Deaths Act*, 1969 – see bibliography.

³ तुरीयं नाम यज्ञियं यदाकांतदुश्मसि। आदित्यपतिर्न ओहे।

are the *nakṣatra nāma* (the name derived from the birth constellation), *gupta nāma* (a secret name), *vyavahāra nāma* (the given name, that is used publicly) and *yājñik nāma* (the one that comprises an epithet in connection to the performance of a sacrifice)⁴.

Also in the *Ṛg Veda*, we find the following verses: ‘The Speaker, unassailable Master of this hymn, the Tongue of sacrifice pours forth the pleasant meath. Within the lustrous region of the heavens the Son makes the third secret name of Mother and of Sire’ (IX.75.2)⁵ – this alludes to the three names a person may possess, a *nakṣatra nāma*, then a *vyavahāra nāma*, and finally a *gupta nāma* that seems related to the one acquired after the performance of a sacrifice, unlike the tetrapartite explanation provided above. We will discuss the secret name in more detail below.

In the *Black Yajurveda* (also known as the *Taittirīya Saṁhitā*), the following detail can be found: ‘They were deprived of the Soma drink; they besought the gods for the Soma drink; the gods said to them, «Take two names each; then shall ye gain it, or not». Then the altars became fires (also); *therefore a Brahman who has two names is likely to prosper*’ (VI.3.1.2)⁶.

Still in the Vedic period, in the *Śatapatha Brāhmaṇa*, ‘Prajāpati said to him, «My boy, why criest thou, when thou art born out of labour and trouble?» He said, «Nay, but I am not freed from (guarded against) evil; I have no name given me: give me a name!» Hence one should give a name to the boy that is born, for thereby one frees him from evil; – even a second, even a third (name), for thereby one frees him from evil time after time’ (VI.1.3.9)⁷. As we have previously mentioned, superstition was still lingering in the collective mind, a reason why people believed in the possibility of suffering from harm if they were not named or if their name was known to enemies; furthermore, this Ṛgvedic passage is insightful: ‘May Agni, yielding to our prayer, the Rakshas-slayer, drive away/The malady of evil name that hath beset thy labouring womb./Agni, concurring in the prayer, drive off the eater of thy flesh,/The malady of evil name that hath attacked thy babe and womb./That which destroys the sinking germ, the settled, moving embryo,/That which will kill the babe at birth, – even this will we drive far away’ (X.162.1–3)⁸ – we are able to see here how deeply rooted the fear of evil spirits is, how the archaic mind blamed supernatural forces for causing abortion or harm to mother and child; no wonder that these fears were transposed in the naming field, out of the same dread.

Much later, we come upon other indications regarding naming in the *Manusmṛti*, and we quote: ‘Let (the first part of) a Brāhmaṇa’s name (denote something) auspicious, a Kṣatriya’s be connected with power, and a Vaiśya’s with wealth, but a Śūdra’s (express something) contemptible.//(The second part of) a Brāhmaṇa’s (name) shall be (a word) implying happiness, of a Kṣatriya’s (a word) implying protection, of a Vaiśya’s (a term) expressive of thriving, and of a Śūdra’s (an expression) denoting service’ (II.31–32)⁹. As we can see, the social stratification had already seeped into customs imbued with religious

⁴ Kane, P. V. 1938. *Naming a child or a Person in The Indian Historical Quarterly*. Ed. Narendra Nath Law. New Delhi: Caxton Publications, vol. XIV, p. 224

⁵ *The Hymns of the Rigveda*. 1897. Trans. Ralph T. H. Griffith, Benares: E. J. Lazarus & Co., vol. II, p. 333

⁶ *The Veda of the Black Yajus School entitled Taittirīya Saṁhitā in The Harvard Oriental Series*. 1914. Ed. Charles Rockwell Lanman, trans. Arthur Berriedale Keith, Cambridge: Harvard University Press, vol. XIX, part 2, p. 514; emphasis added

⁷ *The Śatapatha Brāhmaṇa according to the Text of the Mādhyandina School in The Sacred Books of the East*. 1894. Ed. F. Max Müller, trans. Julius Eggeling, Oxford: Oxford at the Clarendon Press, vol. XLI, part III, p. 159

⁸ *The Hymns of the Rigveda*, op. cit., vol. II, p. 612

⁹ *The Laws of Manu in The Sacred Books of the East*. 1886. Ed. F. Max Müller, trans. G. Bühler, Oxford: Oxford at the Clarendon Press, vol. XXV, p. 35

undertone, being proof enough that for someone well-informed, a name can project the entire picture of a personal universe, present, as well as past.

Due to the fact that Hindu India has forever had a preference for males over females, for objective reasons¹⁰, if we come to think of it, women have always been left last or have been ignored altogether; which is why the rules for female names are less elaborate than male names; in this regard, Manu says: they ‘should be easy to pronounce, not imply anything dreadful, possess a plain meaning, be pleasing and auspicious, end in long vowels, and contain a word of benediction’ (II.33)¹¹.

NĀMAKARAṆA – THE HINDU NAMING RITE

Any society in which articulate language is used as a means of communication and in which social stratification is present, needs a more complex way of differentiating between individuals than the simple attribution of a role in one of the social strata; precisely because there is more than one individual having the same designated role in the same time interval, the necessity to individualize is more poignant, the solution being naming. In Hindu India, *the name not only singles out, but even behaves like a microcosm in which we find the history of the person’s entire lineage*: caste, ancestors (usually, patrilineal), local or household god, association with a sage or saint etc. Thus, we are confronted with a heavy religious heritage, totally unsurprising that naming is allotted a rite of passage of its own.

We shall discuss the topic from a religious point of view, since everything religiously constructed rests on a philosophical foundation; even if archaic, man’s mind was tormented by the very same ontological and gnoseological questions as modern man’s is.

Returning to our rite of passage, let us try and forward a picture as inclusive as possible, aided by the descriptions in the *Gṛhyasūtras*: Śāṅkhāyana (I.25)¹² states that both parents and child must be bodily clean (also spiritually), donning new clothes, addressing prayers and sacrificing to the god that governs over the constellation under which the child was born – therefore, with or without brāhmaṇical support, the father performs the step prior to naming itself, after which he utters the child’s name into its right ear first, making it public afterwards; Āśvalāyana discusses *Jātakarma* and *Nāmakaraṇa* in the same fragment (I.15)¹³, being unable to come across new information that may add to the ritualistic performance.

Pāraskara mentions the following: ‘(The name) of a Brāhmaṇa (should end in) *śarman* (for inst. Viṣṇuśarman), that of a Kṣatriya in *varman* (for inst. Lakṣmīvarman), that of a vaiśya in *gupta* (for inst., Candragupta)’ (I.17.4)¹⁴, without any other significant details.

Two of the most comprehensive descriptions of the rite are to be found in Khādīra (II.3.6–12)¹⁵, and Gobhila *Gṛhyasūtras* (II.8.8–20)¹⁶; thus, Khādīra and Gobhila extend the

¹⁰ We dare say objective reasons because these are rooted in tradition, namely religious customs that have been transmitted from generation to generation for centuries, thus not being the case of recent discrimination. When a practice has been part of local culture for so long, one ceases to speak about subjectivity, even if such attitudes may seem poisonous and completely inappropriate to the western mind used to equality and respecting human rights. However, the path paved by Franz Boas and his *cultural relativity theory* is the perfect solution, as he postulates that each culture should be approached baring in mind the sentiments and thought process of the members of that particular culture, never bringing one’s own preconceived ideas into discussion.

¹¹ *The Laws of Manu*, op. cit., p. 35

¹² *The Gṛhyasūtras – Rules of Vedic Domestic Ceremonies in The Sacred Books of the East*. 1886. Ed. F. Max Müller, trans. Hermann Oldenberg, Oxford: Oxford at the Clarendon Press, vol. XXIX, part I, pp. 51–52

¹³ *Ibidem*, pp. 182–183

¹⁴ *Ibidem*, pp. 297–298

period of naming from ten nights after birth up to a hundred, or even one year from the babe's arrival into the world¹⁷; ritual washing and cleansing before praying are mandatory, and so is the correct positioning towards the proper cardinal point. Gobhila maintains the phonetic and phonological rules to be observed, but we do not find anything surprising. The fee for the performance of the rite consists in a cow or a bull, the scriptures tell us.

To the fragments from the *sūtras*, we can add the following quotation from the *Manusmṛiti*: 'But let (the father perform or) cause to be performed the *Nāmadheya* (the rite of naming the child), on the tenth or twelfth (day after birth), or on a lucky lunar day, in a lucky *muhūrta*, under an auspicious constellation' (II.30)¹⁸. As for the phonetic and phonological rules present in the texts, we shall briefly state them when talking about the selection of names.

Presently, regional differences across India are numerous, however the performance by a *brāhmaṇa* priest is preferred, as Sanskrit is no more a language of communication and its knowledge and understanding has decreased considerably. In addition, people – alienated, uprooted from their communities imbued with traditionalism and caught up in the whirlpool of daily activities – are unaware of all the steps necessary for the correct performance of the rite, not to mention the fact that happily marrying local customs and astrological regulations is no task for the light-hearted. In some families, the elderly members are still closely connected with ancestral legacy, therefore being easier for the father to perform the rite, under their careful observation – they are the safekeepers of the local language, of regional and family practices, knowledgeable in childcare and lullabies that sooth a restless babe.

THE SECRET NAME IN HINDUISM

The concept of the secret name is age-old, as we were able to show under *Scriptural evidence* of the present paper (see quote from the *Ṛg Veda*, IX.75.2, p. 13). In the same text, the following is available: 'Great is that secret name and far-extending, whereby thou madest all that is and shall be./The Five Tribes whom he loveth well have entered the light he loveth that was made aforetime' (X.55.2)¹⁹.

In the *upaniṣadic era*, still in the Vedic period, we encounter a beautiful mention of the secret name thus: 'Then he gives him a name, «You are Veda (knowledge)». That is his secret name' (*Bṛhadāraṇyaka Upaniṣad*, VI.4.26)²⁰ – this happens after birth, when the father takes the little one into his laps, praying and bringing oblations, then feeding the child a mixture of honey and *ghee* (clarified butter).

During the *sūtra period*, many rules and regulations are cimented, which is why we have the most insightful descriptions of naming and the concept of the secret name in the

¹⁵ Ibidem, pp. 396–397

¹⁶ Ibidem, part. II, pp. 57–59

¹⁷ The legitimate question 'why these amounts?' arises; traditionally, the most common practice is ten days after birth in Northern India, which, we remember, marks the end of the period of impurity and seclusion of mother and child; in contrast, in Southern India, it is usually twenty-eight days after birth. We can only speculate about reasons for such discrepancies, but this may, too, rest in the archaic belief that the child should live long enough and surely be healthy to undergo naming – letting the babe get used to the external world first. During this period, the child is, normally, not called by name, but by a general nickname.

¹⁸ *The Laws of Manu*, op. cit., p. 35

¹⁹ *The Hymns of the Rigveda*, op. cit., vol. II, p. 458

²⁰ *The Bṛhadāraṇyaka Upaniṣad with the Commentary of Śankarācārya*. 1950. Trans. Swāmi Mādhavānanda, Almora: Advaita Ashrama, p. 945

Gr̥hyasūtras: ‘When the child is appearing, the sacrifice for the woman in labour (is to be performed) —//With the two verses, «She who athwart» (MB. I.5, 6 seq.),//He should give a name to the child, «N.N. ! »//That (is his) secret (name)’ (*Khādīra Gr.*, II.2.28–31)²¹. In Gobhila, the similarities with *Khādīra* are evident: ‘When the child is appearing, he strews (*Darbha* grass) round the fire and sacrifices two *Āgya* oblations with this verse, «She who athwart» (MB. I, 5, 6), and with (the verse), «*Vipaścit* has taken away» (ibid. 7).//«A male he will be born, N. N. by name» – (in this passage of the last verse) he pronounces a name.//What that (name is), is kept secret’ (II.7.14–16)²².

Hiranyakeśin is much clearer and more detailed: ‘Let the father and the mother pronounce (that name) first. For it is understood, «My name first, O *Jātavedas*.»//He should give him two names. For it is understood (Taitt. Samh. VI.3.1.3), «Therefore a *Brahmaṇa* who has two names, will have success.»//The second name should be a *Nakṣatra* name.//The one name should be secret; by the other they should call him.//He should give him the name *Somayājīn* (i. e. performer of *Soma* sacrifices) as his third name; thus it is understood’ (II.1.4.11–15)²³. *Āpastamba* is concise, mentioning the secret name after the parent greeted the newborn with sacred verses: ‘And he gives him a *Nakṣatra* name.//That is secret’ (VI.15.2–3)²⁴.

The choice of the secret name has always been motivated by religious precepts and its necessity explained by its later use in ritualistic events (also with religious undertone). Since this name is to be known by parents only until initiation, we may suppose it also has a cultural value to it, imbued with the sentiments of the archaic mind preoccupied with protecting his offspring from being harmed by supernatural forces. Even if the early Hindu mind reflected upon philosophical concepts, it was still under the spell of superstition and magical thinking; knowing the real name gave the enemy an opportunity to break the invisible shield of protection and cause much suffering.

Since the advent of modernity, many Indians endorse a more rational and pragmatic view of life; therefore, they may feel that such a tradition is outdated and highlights ideas that characterise blind believers who were unaware of scientific progress. On the other hand, there certainly are individuals who closely follow scriptures, for whom one can never do enough to block harmful energies. A democratic country, people in India shall always have the right to choose what they think is best for themselves.

SELECTION OF A NAME – RULES

D. D. Sharma proposes a threefold, historical, division of naming practices that overlap with the main eras of evolution: from *ancient*, to *medieval*, and finally *modern*. In the *Vedic period*, contrary to popular expectations, gods and goddesses’ names were nowhere to be found; instead, one could come across names derived from these. By the time *the Epics* appeared, names seemed to be selected according to the physical features and qualities of the possessor (*Kṛṣṇa* – black, dark-complexioned; *Arjuna* – white, clear, pure; *Kumbhkarṇa* – big/pot-eared).

²¹ *The Gr̥hyasūtras*, op. cit., part I, p. 395

²² *The Gr̥hyasūtras*, op. cit., part II, p. 55

²³ *Ibidem*, p. 215

²⁴ *Ibidem*, p. 281

The *sūtra period* (post-Vedic, medieval) was the one that helped establish clear rules regarding name-choosing and the actual performance of the rite of passage. Grammar development imposed formation rules that had to obey phonological, morphological and semantic indications, to which the appropriateness of caste was added in the *smṛti period*: *phonologically*, the name should sound pleasant, *morphologically* it should bear gender markers, *semantically* it should convey a positive, auspicious meaning, and be an indicator of the social stratum (caste) of its carrier, of course, *socially*.

Concisely, here are some of the rules in the *sūtras*: the name of the male child should have an even number of syllables, up to six (two if desirous of firm position, four if wanting holy luster, says Āśvalāyana, I.15.6²⁵); it should begin with a sonant, its middle containing a semi-vowel, end in a long vowel or *visarga*; it should be composed of two elements, a nominal stem and a verbal element (participle) (e.g. Brahmadatta, ‘given by Brahma’). Some texts mention a prefixation mechanism meant to convey auspiciousness (*su-* is a positive prefix), as in Sujāta (‘of good birth/origin’) or Sudarśana (‘auspicious vision’) (*Hiraṇyakeśin Gr.*, II.1.4.10²⁶; *Āpastamba Gr.*, VI.15.10²⁷), but the name should be derived only by primary suffixes (*kr̥t*) and not by secondary (*taddhita*) (*Gobhila Gr.*, II.8.14–15²⁸).

With female names, the situation is slightly different: an odd number of syllables, ending in *-dā* (*Gobhila Gr.*, II.8.16²⁹), ending in *-ā*, with a *taddhita* suffix (*Pāraskara Gr.*, I.17.3³⁰). The auspicious meaning of a name³¹ is still a very powerful influence in name choosing; in the collective mind, to some extent, there still is a reminiscence of the idea that the meaning behind the name can positively affect the destiny of the child.

CATEGORIES OF NAMES

We have already spoken about four categories names can belong to according to Vedic customs (*nakṣatra nāma*, *gupta nāma*, *vyavahāra nāma*, *yājñik nāma*; see *Scriptural evidence* of the present work). During *the sūtra and smṛti period*, as stated by D. D. Sharma³², *nakṣatra nāma*, *māsa nāma* (name derived from the month of birth), *kuladevatā nāma* (name derived from the household of family deity) and *sambodhana nāma* (equals to *vyavahāra nāma*, i.e. the given name) were the ones in use.

Curiously enough, what is available today used to be secret in the Vedic era: the *nakṣatra nāma* cannot be found in literature, since it was the one kept secret, known only to parents until *Upanayana* (initiation). As a consequence, names derived from the birth constellation started to be commonly used probably before the Christian era, as Pāṇini prescribes rules of deriving names for both males and females from a constellation

²⁵ *The Gr̥hyasūtras*, op. cit., part I, p. 183

²⁶ *The Gr̥hyasūtras* op. cit., part. II, p. 215

²⁷ *Ibidem*, p. 283

²⁸ *Ibidem*, p. 58

²⁹ *Ibidem*

³⁰ *The Gr̥hyasūtras* op. cit., part I, p. 297

³¹ As postulated above, from our experience, there are no meaningless names in Hindu India; of course, most of them have an auspicious meaning; some examples, for males first: Ajay (unconquered), Atul (incomparable), Vijay (victorious); now for females: Āśā (hope), Nirbhayā (fearless), Śakti (power), Kavītā (poem).

³² Sharma, D. D. 2005. *Panorama of Indian Anthroponymy – An Historical, Socio-Cultural and Linguistic Analysis of Indian Personal Names*, New Delhi: Mittal Publications, p. 103

(IV.3.34–37, VII.3.18)³³ (see Sharma 2005, 102). With the emergence and gain in popularity of astrological treatises, the procedure of deriving a *nakṣatra nāma* also changed: the twenty-seven constellations have each been divided into four *padas* (quarter), each *pada* having a syllable assigned to it, out of which a name should be derived for the child born under that *nakṣatra* (for instance, the third *nakṣatra*, *Kṛttikā* has the following four syllables, in order: *a*, *ī*, *u*, *e*). Currently, in very conservative families, where tradition is observed diligently, the astrologer or family priest has the final say in the naming of the child, as indicated by the horoscope and dictated by astrological rules.

Unfortunately, space is not on our side, compelling us not to delve into an in-depth analysis of categories of names; we shall, nonetheless, mention that the category of *marital name* includes not only the change of the last name, but may also involve the change of the first name, to suit the family tradition of the in-laws. The *ascetic name* is an important category as well, for one following the *āśrama system* with conviction – upon entering the final stage of earthly life as a *saṁnyāsī*, one has to relinquish the given name and adorn a new one chosen by one’s *guru*: with *-ānanda* at the end, e.g. Dayānanda (the ‘Blessed/Blissful Compassionate’). Providing a complex and extremely interesting categorization of names, D. D. Sharma’s *Panorama of Indian Anthroponymy* is a genuine jewel.

CURRENT PRACTICES

Being not only interested in the theoretical framework, we shall give some examples of current *Nāmakaraṇa* practices in Northern India; unable to master other Indian languages except Hindi explains why we have gravitated geographically upwards in our selection of subjects – language, as we know, is an essential tool for getting the taste of a culture and its people.

Let us, first, visit an *āśrama*³⁴ in one of India’s holiest cities, *Haridvār* (alternative English spelling, *Haridwar*), a religious centre sprawling on the banks of the river Ganges. The *Nāmakaraṇa* rite that will be described shortly is part of the manifold daily activities that go on in Śāntikunj; choosing an easily available recording³⁵, we are convinced that our reader can more accurately perceive procedures and even get absorbed into this fascinating realm of ritual, provided they have a good knowledge of the Hindi language, which is a must in understanding the commentary of the *pandit*. Thus, the *Nāmakaraṇa* is observed in ten steps, each of which has meaning, many a times embedded within the wishes of the parents for their child. It starts with the *abhiśeka*, the bodily cleansing, which goes beyond the purification of the physical frame, reaching the mind and spirit; the involvement of the child in this step shows how much interest is laid on purity, but also signals that the child is the prince/princess

³³ Pāṇini. 1896. *The Aṣṭādhyāyī of Pāṇini*, trans. Srisa Chandra Vasu, Benares: Sindhu Charan Bose, pp. 762–763, 1415; also see Sharma, op. cit., p. 102

³⁴ This establishment, Śāntikunj, is the headquarters of a religious movement called *Gāyatrī Parivār* (alternative English spelling, *Gayatri Pariwar*), instituted in 1971 by Pandit Śrīrām Śarmā. The movement is described as a global initiative, its main aims being the moral, cultural, intellectual and spiritual refinement and reconstruction of the world – of reviving individual, family and social values (*yug nirmāna yojnā*). To us, their objectives and practices seem similar to those of the *Mīmāṃsā* traditions (both *Pūrva* and *Uttara*, better known as *Vedānta*).

³⁵ It is an audio-video recording of the naming rite, available on a well-known online platform (link provided in the bibliography), which has been uploaded on February 4th, 2017; the commentary has been provided by Pandit Candrabhūsan Miśra and has been edited in such a way that the theoretical teachings are met with actual footage from a ritual performance.

of the heavenly Lord and that, growing up, it should behave in accordance with the Lord's actions: justly, equally towards everyone, and lovingly towards all beings. Even if Hindus do not entertain the concept of *original sin* – so present in Christian dogma –, they do believe in the karmic waste resulted from bad actions, which is washed away through *abhiśeka*, making way for the enhancement of good *karma*.

Then comes the tying of the waist thread (*mekhalā*) – used in long gone times, when people wore clothing that is currently out of fashion (like loin cloths); this is done in order to provide good health, as youngsters, in older times, were instructed to pull their waist in, to maintain an upright position, with a stiff spine and a head held up high – signs of good health and of alertness, always aware of the surrounding environment and ready to face life's surprises.

The *madhuprāsana* follows: this step reminds us of a gesture completed by the father shortly after the birth of the child (in the rite called *Jātakarma*, birth), the feeding of honey³⁶. It is exactly what happens during *madhuprāsana* in the naming rite as well: the baby is fed a little honey with a silver spoon – the instrument is of a precious metal that is believed to retain special properties, purity and the impossibility to be possessed by any malevolent spirit. Honey, one of its main qualities being sweetness, is symbolic for the wishes of a sweet life for the baby from all those present, but also for sweetness in word and deed, later in life.

Not meeting important natural elements is inconceivable, which is why *Sūrya Namaskāra* and *Bhūmī pūjana* and *sparsā* are performed. In *Sūrya Namaskāra* (salutation of the Sun), the child is introduced to the solar deity (and light) for the first time, while its parents wish for it to become a sustainer of life, eternally luminous and inspirational like the Sun. During *Bhūmī pūjana*, prayers are addressed to Mother Earth as she is everyone's mother, the child learning, therefore, that besides its own mother, it can always count on the protection of Mother Earth. Not only that, but just as it respects its human mother, so must it cherish the Earth, this being among the first ever lessons of respect and responsibility; then, the *sparsā* or touching is performed, laying the child on the ground, so that their spirits connect.

The most important step for the physical existence is next: *nāmaghoṣaṇā* (the declaration of the name); for the first time, the name of the little one is made public, being also written in a platter (*thālī*) coated with red kumkum powder, as if to make sure the child is now inscribed in the material realm. Afterwards, the child passes from one arm to the other, meeting members from the immediate and extended family in *pāraspara parivartana*; the gesture implies that, once reaching the proper age, the child shall become a support not only for the parents, but also for all the aunts, uncles and cousins, being an active member of its community.

In *loka darśana*, the child is shown the surroundings to raise its interest in all phenomena. Then follows a prayer session (*viśeṣa āhuti*) with oblations in the sacred fire, in praise of deities. Lastly, during *bāla prabodhana*, one of the pandits whispers secrets into the right ear (usually) of the baby, which turn out to be pieces of advice regarding behaviour in society and human interaction, to be used when time comes.

From all the details presented above, it is clear how complex the rite currently is in a controlled environment, in which people can afford to take time and give proper attention to detail. The sheer amount of forces and equipment needed to perform such a rite is impressive,

³⁶ This has, probably, been incorporated in the naming rite as the birth rite (*Jātakarma*) is not performed according to scriptural indications anymore; hospitals have taken over an event that used to happen naturally, more often than not, in an all-women setting, with minimal medical training and tools.

reason enough not to be surprised of the simplicity of the *Nāmakaraṇa* done at home. The examples we shall be listing to illustrate current practices are of people whom we either know personally or have been in contact with for more than five years, having discussed multiple topics in our interactions; it is why we trust their input and thank them for their valuable insight³⁷. Our first subject is a male resident of Indore, Madhya Pradesh, in his early thirties, whose name was chosen by his paternal grandfather (*dādā jī*), having consulted a pandit and the horoscope beforehand (his name means ritual ablution and is also associated the coronation ceremony – of kings, government officials). The rite was conducted at home in a simple fashion, with Vedic recitation and gifts for the child and the pandit at the end.

Similarly, our second subject (male, in his early forties, dweller of Ahmedabad, Gujarat) had his *Nāmakaraṇa* at home, surrounded by family and close friends; however, he tells us that, in his area, it is customary to have the paternal aunt (*būā*) choose the baby's name (his name means victorious); astrological recommendations were kept in mind when deciding the final one.

Hailing from Patna, Bihar, our third male subject is in his fifties, and has stated that both for him and his siblings (a sister and a brother), the parents chose the names, having the rite performed at home by a pandit. Our subject's name is an epithet of lord Kṛṣṇa, the brother's name is associated with light and knowledge, and the sister's name translates to lovely, gracious.

Yet again, our fourth subject is a male in his early thirties, hailing from Sirohi, Rajasthan, who has happily told us that his father had chosen his name (which points to lord Kṛṣṇa, once again) after the pandit had suggested the first letter of the name; the rite was also a home-performed one.

We arrive at our fifth male subject, living in the capital city, New Delhi, in his late forties, whose naming was also completed at home (related to lord Viṣṇu, the preserver), but chosen by the pandit – probably showing a more intimate connection to the religious authority.

Bearing in mind the pandit's suggestion and astrological indications that result from the horoscope, our last subject's name was decided by the paternal uncle (*cācā*), having the rite performed at home on the eleventh day – our subject is a male in his early thirties, coming from a beautifully virgin region at the bottom of the Himalayas, in the state of Uttarakhand, his name bearing the meaning 'that who cares for others' well-being'.

Finally, let us highlight a few points: it is still quite a male dominated world, not only in choosing names, but also in the willingness to share information. All our subjects stated that the rite was done at home, which really is in perfect harmony with the scriptures, as the child is introduced to the outside world during a different rite, the *Niṣkramaṇa* (the first outing). However, we have noticed that during *bhūmī sparśa*, the little one is placed on the ground to create the special bond, and that during *loka darśana* the child is shown the surroundings, which should, traditionally, take place later, through the afore-mentioned rite of the first outing – this demonstrates the evolution of things, gliding towards simplification and decrease in the numbers of rites performed by joining two or more rites into one.

³⁷ To respect their right to privacy, we have decided that the best approach would be to outline each individual with information concerning their age group, sex and birth place or current location, without mentioning their exact first names; however, we shall provide the reader with the translations of their names, to underline our statement that names have meaning.

CONCLUSION

Our journey into the depths of names and naming in Hindu India started with highlighting our conviction that there can be as many ontological perspectives connected to this topic as there are cultures in the world. A balanced and tolerant approach should be the norm in any cultural research, as judgemental positions help no one, let alone the scholar who may find him/herself in a life-threatening situation – *cultural relativism*, thus, becoming the perfect theoretical framework to achieve success in one's endeavour.

In our introduction, we have stated that *names shelter a socio-religious and cultural essence*, showing that, for us, names are never isolated, have meaning and can exert power, also comprising multiple functions – *assigning identity, assigning a place into a socio-cultural matrix* – that are dependent on local cultural practices (as cultures are, indeed, diverse); we have seen that *social and biological birth* never take place simultaneously, the latter being the social one – celebrated with great joy and customs imbued with religious undertone.

The scriptural evidence, in the form of quotations from sacred texts, aids us in bringing us closer to the origins, paving a clear path towards change and evolution; the different eras have left traces in the cultural legacy of any community, which is why one is unable to offer universal rules that encompass the entirety of the Indian subcontinent. The *Nāmakaraṇa* – the Hindu rite of naming –, as well as the practice of the secret name, are proof enough how important having a name is, how intertwined the archaic thinking and religious traditions are with the practicality and rationality of the modern mind. The selection and categories of names sections of the present work are meant to underline interesting details that accompany the naming process and awaken the reader's thirst for more. In addition, our experience has demonstrated that there are no names without a profound meaning attached to them, that contain the parents' best wishes and blessings for their newborn child (see note 10) – proven in the section of *Current Practices*.

All these steps have been taken to emphasize our strong belief that, in Hindu India, names are not only tags that bear some meaning, but that they are the forebearers of the essence of their carriers and that they house the entire history of the individual's ancestry, which is to become personal, even before actual birth – in other words, *a microcosm of the individual that gets reflected into the macrocosm of life*, as we experience it here and now. Like Tesone puts it, 'the name is not like a coat that is hung up and can be snatched away or torn to pieces; all to the contrary, it is a perfectly fitted jacket or, more precisely, it is like skin, since it cannot be ripped up or taken off without hurting the person'³⁸.

If we were to consider this from a philosophical point of view, the child, in Hindu India, is never born as a *tabula rasa*, but already carries the attributes of the social, cultural and religious tradition it is soon to be born in – of which it will, later, have to prove worthy. Whether we like to acknowledge it or not, we are the product of the environmental characteristics we grow up in, a mirror of the values and teachings of the culture we are part of; an uprooted individual shall forever be tormented by an incomplete personal history and absence of inclusion in a socio-cultural structure that creates order in chaos. Together with our names, we are *irreplaceable as we are the sum of an original combination of identity, personality and thought* – no matter how many people share the same name worldwide, it is impossible for them to share every aspect of life.

³⁸ Tesone, op. cit., p. 54

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**DIARY OF FIELD RESEARCH BY PARTICIPANT OBSERVATION ON
THE TRIP TO PONTUS (NORTHERN AND NORTH-EASTERN
TURKEY), ORGANIZED BY FOKION FUNDUKIDIS*
(THESSALONIKI, GREECE), WITH DESCENDANTS OF PONTUS
“REFUGEES” IN SEARCH OF THEIR “ROOTS”**

SEBASTIAN ȘTEFĂNUCĂ

A great part of the people in the Balkan Peninsula and Anatolia were subjected to population transfer and exchange between the states in this area in the first half of the 20th century. The largest such event, which involved approximately 2 million people, took place between Greece and Turkey, as a result of the Convention and Treaty of Lausanne (1923). The long term consequences of the Convention on both countries have only been partially studied.¹ As far as I know, this can certainly be stated also about the effects on the people who were moved; among others, *building new identities in the places where the people were moved to by having as a central marker their place of origin*. Undoubtedly, the study of these identities is done from *the ethnicity* point of view, since we are talking about large groups which consider themselves and are considered by others to be different from other similar groups, with a *cultural* objectification of these differences.² However, I am not talking here about ethnic groups in the proper sense, but I prefer to classify them as “population categories”.³ In Greece, such categories that resulted from the population exchange with Turkey are the *Pontic* and the *Minor-Asian*. One of the cultural markers of these identities is *the journey to the place of origin* of the ancestors who were forced to move three or four generation ago. Given the identity implications of these journeys – which can be fully understood only by accompanying the group of trip-goers on one of the journeys to Pontus (on the Turkish South-East side of The Black Sea) or Asia-Minor –, to label them as mere “roots-tourism”⁴ or “sentimental tourism”⁵ is inadequate. I hope that the following journal is convincing (also) for this affirmation. It is a field journal where I used the participant

* Editor of the periodical *Pontosnews* (www.pontos-news.gr).

¹ Renée Hirschon (p. 14), “Preface”, in Renée Hirschon (ed.), *Crossing the Aegean. An Appraisal of the 1923 Compulsory Population Exchange between Greece and Turkey*, New York and Oxford: Berghahn Books, 2008 [2003], pp. xiv-xvii.

² Sebastian Ștefănuță (p. 303), “Ascendența etnică sub lupa analizei genetice. Sfârșitul etnicității?”, in Andrei Kozma, Cristiana Glavce, Constantin Bălăceanu-Stolnici (eds.), *Antropologie și genetică*, București: Editura Academiei Române, 2019, pp. 301-311.

³ *Idem*, “Markers and symbols of the identity phenomenon within the Hellenic populations colonized in northern Greece”, in press at *Revue des Études Sud-Est Européennes*.

⁴ Paul Basu, “Route metaphors of 'roots-tourism' in the Scottish Highland Diaspora”, in Simon Coleman and John. Eade (eds.), *Reframing Pilgrimage. Cultures in Motions*, London and New York: Routledge, 2004, pp. 150-190.

⁵ S. Kuzik, *Theoretical Problems of Tourism: Socio-Geographic Approach [Monograph]*, Lviv, 2010.

observation method as I went along with a group of Greek trip-goers, totally or partially of Pontic descent, on a journey from Thessaloniki to Pontus, in the summer of 2018. It is possible that this was the only trip from Greece to Pontus by bus that year, because of the fear caused by declaring a state of emergency by the Turkish president Recep Tayyip Erdoğan, in 2016.

Monday, August 13th 2018
Konstantinúpoli/Istanbul**

6:40 am
Ibis Hotel

(for yesterday)

At 1:30 in the afternoon, I got on the bus at the Κήποι (Kípi) customs, border crossing point between Greece and Turkey, heading to Pontus. After a picturesque journey along Eastern Trace, following the beach line of the Sea of Marmara, we arrived in Istanbul at around eight in the evening. There was also a small incident at the customs: Φωκίων Φουντουκίδης (Fokíon Fundukídis), the organizer of the trip, had some issues with his identity card (it probably expired) and he could not continue the journey. He stayed in Greece, trying to rapidly solve the problem, and he would catch up with us this morning. There are 250 km between Kipi and Istanbul.

There are forty people on the bus, gender-balanced. As I was able to notice yesterday, some people do not have Pontic roots, and of the ones that do, not everyone has 100 % Pontic roots. What I found both interesting and impressive was the fact that there are people of an advanced age brave enough to embark on such a long and tiring journey. Judging by their built, I am sure that they have Pontic heritage on both their parents' side, and judging by the accent with which they speak Greek, I am convinced they also speak *ποντιακά* (which is the Pontic dialect). From the start, the motivation they, as well as the rest of the group members, have towards this journey becomes interesting. Of course, at first, there is only curiosity. I relate here what *Ιάννης Κιτίδης* (Iánnis Kitídis) from *Θεσσαλονίκη* (Thessaloníki), who is around fifty years old, has to say about the before mentioned motivation: his grandmother left Pontus and went to Russia first. In 1928, she came back, in order to get to Greece. On her way back, she wanted to light a candle at the graves of her ancestors (which Iannis mentions these graves span across generations for three thousand years), but she did not find them. In this context, Iannis talks about the custom according to which, on the second day of Easter, the whole family goes to the graves and they have something to eat and to drink there, like a symbolic meal together with the departed ones. I asked him if he hoped to find those graves. He said he did not and that he only wanted to set foot on that ground. Talking to him again in the parking lot from Tekirdağ, after eating at the diner – a place with an amazing view over the city of Tekirdağ and the Marmara Sea – I challenged him with a question, which I think would be relevant for a future interview or questionnaire which would be used in order to establish how much importance the birth place of the generation that was moved has on the identity of the current descendants: assuming that Pontus, through a miracle, would be given back to the Pontians, would they go back where the ones of three or four generations ago left from? Obviously, he found the question difficult to answer, but, in the end, he did not think that would happen. Not all the Pontic descendants are interested in the Pontians and their history, especially in the events before and after the population exchange, as his brother, for

** All over the text where a locality appears, the first term is its name in Greek, the second one in Turkish.

example. When I commented on the fact that identity [as ethnicity] is something that mostly interests middle-aged people, he confirmed that this was also his case; it wasn't until after he reached twenty seven, or twenty eight, that he started to like and be interested in the *ποντιακά* songs. In the parking lot, I interrupted him from a conversation with another elderly gentleman, who I am told was visiting Pontus for the eleventh time.

For *Χαράλαμπος Παπασκεβόπουλος* (Harálambos Papaskevépoulos), who is younger, probably in his thirties, it was also his grandmother who had sparked his curiosity for everything related to Pontus, through her stories. What he found remarkable, though, was that she had told her stories to *him*. An elderly lady, who I had not yet been introduced to, came to say that her grandmother (or perhaps her mother?) did not like at all to relate the events she had experienced, as if she wanted to erase the past by completely denying it. Only an intense trauma, thought the lady, can bring forth such behaviour.

The general atmosphere on the bus is that of people who are of one identity, and are not simply tourists. This is noticeable in the historical observations, in retelling the events related to the Pontus that they heard about or even experienced themselves (I heard the famous “*θάλαττα, θάλαττα!*” when they spotted the Marmara Sea), in the jokes they make (related to when the name “Byzantium” was coined and to its connection to Constantinople, the driver's aide tells over the microphone the version that he was familiar with, but someone at the back of the bus tells another version; when the former argues that it was the first time he heard it, the latter jokily replies that in his case it was the first time he said it. The conclusion: “this is how two people from Pontus get along!”; or the fact that the people from the currency exchange office or the taxi drivers in Turkey do not speak *pondiaká* is considered to be, as a joke, a sign of illiteracy).

While I was talking to Iannis Kitidis, I mentioned that the danger of travelling to Turkey was not that great, not even for the Greeks, but that it was augmented by the media, which meant that people were irrationally afraid. He replied that Fokion Fundukidis did not listen to such rumours and so he organized trips every year. We called him “*αληθινός πόντιος*” (a true Pontian). As a consequence of the events in 2016, when the so-called coup was orchestrated in Turkey, and then the state of emergency declared by the President Recep Tayyip Erdoğan, the trips to Pontus became less frequent (if I remember correctly, the trip I took part in is the only one in 2018). There are people here who said they had been through the same thing I did, and that is to sign up for a trip to Pontus which was then cancelled. What Fokion Fundukidis said, before he was detained in Greece, is also worth mentioning, that up until 2016 he used to have two bus loads of people for this trip, now he can barely fill one (the bus we are in is only two thirds full).

The most relevant clue in this context of a live connection to Pontus is the presence of elderly people, some of them who have difficulty moving, but who ignore all the risks – risks which are given by their age – that come with a long and tiring journey.

Tuesday, August 14th 2018
Samsúnda/Samsun

8 am
Yafeya Hotel

(for yesterday)

It was an exhausting journey! The incident with the trip organizer, Fokion Fundukidis, meant to leave for Samsunda from Konstantinupoli at 3:30 pm, because we waited for him to arrive by taxi from Alexandrúpoli, Greece. We had a long way ahead, of over 750 km. We arrived in Samsunda at 3 am. Eventually, F. Fundukidis joined us, with a brand new identity card!

The majority of the people are on their first trip to Pontus. Some of them have already been there. One of the elderly ladies, who I later found out, is seventy six years old, is at her fourth trip. She hopes to see again the house of one of her grandmothers. Another gentleman, past his prime, goes there for the eleventh time. The champion of the trips seems to be Γιώργος Ανδρεάδης (Íórgchos Andreádis), who died in 2016, the author of the novel *Ταμάμα, η αγνοούμενη του Πόντου* (*Tamáma, the unknown girl of Pontus*), where relatives separated in the chaos of the population transfer are reunited after a long, long time. If I am not mistaken, this novel was turned into a film. From a middle-aged lady, I learn of another novel based as well on the dramatic events of the forced uprooting, *Σέρρα. Η ψυχή του Πόντου* (*Sérra. The soul of Pontus*), written by Γιάννης Καλπούζος (Íánnis Kalpúzós). A similar event is also told by another lady, while we were talking, waiting to resume our journey, in the parking lot of a large mall where we had stopped for dinner: the woman's grandmother, while holding her son (the woman's father) – who was very young at that time – travelling into exile, did not know how to obtain some potato peels in order to feed him. The story comes with tears and profound emotions. The other women who were taking part in the discussion, and who were older than her, confirm this event by telling similar stories which they had heard from their grandparents. Such historical stories related to Pontus, as well as sharing hopes and plans once Pontus will be seen (again), are passed around the bus.

It's as if I do not fully comprehend that I am on such a trip, where I try to observe by participating in a kind of event which I do not recall to have ever been studied before in this manner. I am constantly under the impression that I am dreaming or that I am watching a television show with and about Pontians that I came across somewhere on *youtube*. I do not know if the group, which makes the *subject* of my study, does not have the same impression about me. Μιχάλης Σπυρίδης (Mihális Spirídis), the driver's aide, whose number of trips to Pontus and Cappadocia cannot be determined, says that he has never had a stranger on one of these journeys. When I mention the fact that nothing is known about Pontus in Romania, about the genocide and the population exchange, he tells me how, while taking some Polish people to the airport, he played *pondiaka* music on the car's CD player and the Polish found it interesting and they asked for details. They did not know anything about Pontus. They knew that where he told them Pontus was, in fact, Turkey. "Now, yes, but it didn't use to!", he told them. On the other hand, I do wonder what does someone who travels hundreds and thousands of kilometres through places full of mementos and reminiscences of his nation's past and of his own ancestry feel like. I'm trying to experiment these feeling myself, while the organizer and guide of this trip keeps mentioning over the bus microphone facts and events belonging to the Greek and Byzantine past which correspond to the places we pass by, stories which are received with interest by his travel companions ("συνοδοιπόροι", "travel buddies"), who, in their turn, reveal a series of stories of their own on the subject.

(in the hotel lobby)

9:50 am

Κατερίνη (Katerini), in her early sixties, is the one who was telling us a day before about her parents' and grandparents' refusal of talking about what had happened during the exchange. Everything happened violently (βία), it is about a trauma they wanted to deny. Her mother was less affected, as she was only a few months old during the exile. Her father was thirteen. Both of them, as well as their grandparents, were from Οινόη (Inói, today this city is called Ünye), which is also on our path. She will not be able to find the house (houses) where they left from as she does not have the address. An uncle of hers, who had also been on this trip, found the house, but he did not leave her the address. She only wants to get there, to take a tour of the city, and that is pretty much all.

Wednesday, August 15th 2018
Trapezúnda/Trabzon

7:10 am
Usta Park Hotel

(for yesterday)

Katerini was the first one who came to her grandparents' village, at Inoi, today a chic town, as is every town on the Southern coast of the Black Sea on our way from Samsunda to Trapezunda. Even though she had no clues (στοιχεία), she went a long way in order to find the house of one of her grandfathers. Later, when F. Fundukidis tells us about Katerini's searches over the bus microphone he uses these words: "I like this very much on these trips". And, indeed, these moments are incredibly emotional. The person who is trying to find the house, or at least the place where some of their ancestors left from, is under the effect of such feelings and hopes as if his entire existence depends on this discovery. On their turn, the person's companions, empathize fully in these feelings and hopes, which, without any previous planning, also happened to me. Katerini's attempts, which the attempts of the other lady Katerini/a are added to, the one who speaks Turkish, who is the interpreter in these situations, started by addressing questions to taxi drivers waiting at the corner of the Ünye central market. After they guided them to a street in the old part of the town, somewhere nearby, Katerini and his companions continued by asking a man who looked older, but who, however, was born in '55 as he stated himself, and who had no idea that either Greek or Armenian had lived in the neighbourhood. Our little group did not give up. F. Fundukidis's proposal was to ask at the City Hall, which was located on a side of the central market, parallel to the beach. We all entered the elegant-looking City Hall building, and we ended up in an office – as far as we could understand – which belonged to the deputy mayor. A lady clerk interrupted her activity and underwent all the efforts in order to find someone who could help us. The entire episode was marked by Katerini's tears and the speed with which everyone was moving so that we could solve our problem, as the time we had at our disposal was limited, because we were supposed to get back on the bus soon. Thus, we arrived at the offices of the newspaper *Ünye Kent Gazetesi*, a local daily paper, whose editor-in-chief was also interested in history. Obviously happy with our presence there, he invited us in his office. We find out from him that the Greek part of the town, situated in the vicinity of the beach, was torn down and now there was a park there; also, that the Byzantine or Greek monuments were taken down, but he came to truly understand their value, and from then on he would make considerable efforts so that these relics be preserved. However, the house of Katerini's grandparents was apparently in another part of the town, and it might still exist, and if, when she returned, Katerina had some clues, then he would gladly help her find it. We were not the only ones who took photographs and filmed; we were also photographed and filmed for an

article in the daily paper. Apparently, the fact that the descendants of the Greek people who left return is of great interest.

I notice the unlimited and unconditional availability to help of the ones we turn to. More than that, hospitality is always present. The man from the old street, the one born in '55, immediately offered to treat us with tea at the coffee shop (or better yet, the tea shop) he was just exiting. It looks like people actually understand the urgency and importance of the questions being asked, and they stop from what they were doing in order to make everything possible to contribute to solving the problems of the foreigners who came unexpectedly. It is the same thing in Civil-köy, where with the same feelings and hopes which could not be ignored about Katerini, Χαράλαμπος Μιχαηλίδης (Harálambos Mihailídis) addressed a young man at a gas station, while only holding a map, and asked about the Kuş-kaya village. The young man's kindness seemed never-ending, as if it matched the hopes and expectations of the one addressing him, but also of the ones who were with him. The village was somewhere behind, between Trípoli/Tirebolu and Kerasúnda/Giresun. If we shall look for it on our way back, that young man would come anywhere with us, because he knows the surroundings and he belongs to a family who have been in those parts for at least two or three hundred years.

One of F. Fundukidis's ideas, that I should say a few words about myself over the bus microphone, I believe solved, once and for all, the access issue. Thus, after we passed by Kerasunda, I told them “μία μικρή ιστορία” (“a short story”): how I came to find myself among them as an anthropologist preoccupied by the identity of the descendants of “refugees”, of the populations transplanted in the first half of the last century in the Balkans. I emphasized the fact that this phenomenon, with its history – including, of course, (especially) the one of the Pontians –, with genocide, is unknown in Romania and, through my activity, during conferences and symposiums, I unwillingly “promote” it. I rounded up by saying that with them I am also a Pontian in search of his roots (to me this is what “participant observation” means, which I did not say over the microphone). The proofs of general acceptance were obvious immediately: they applauded, and F. Fundukidis, speaking for everyone, proposed I would be baptised a Pontian in the waters of the Black Sea and be given the new name of “Sevastidis”. The gentleman who I found out about that this was his eleventh trip to Pontus offered me the copies of some pre-transfer documents from Αμάσεια (Amásia, today Amasya), birth certificates and a wedding invitation. He is willing to show me his grandfather's house when we get to Αργυρούπολη (Arghirúpoli, today Gümüşhane). Then, during a gas break, he let me know that he would put me in touch with Mihailídis from Thessaloniki, also an anthropologist, who spent three years in Pontus. I cannot recall, I shall find out today, but he might be working in America. Kateríni, the interpreter, asked me if I write down everything I see when I tag along with them in their efforts of communicating with the locals in the hope of finding out the houses or the places their grandparents left from.

Thursday, August 16th 2018
Trapezúnda/Trabzon

6:30 am
Usta Park Hotel

(for yesterday)

We took a tour of the city in order to see the Boztepé hill from a distance, the Trapezunda Seminar (“The Lighthouse of the Orient”) and to visit Κωνσταντίνος Καπαγιαννίδης's (Konstandínos Kapaiannídis) villa, locally renamed “Atatürk köşkü”. Then we went to visit the Panagía Soumelá Monastery and Límni/Uzungöl. Our hopes of finding

the monastery open to the public were in vain. A board was announcing that it was being renovated; therefore, the building could only be seen and photographed from a distance. I remarked upon everybody's frenzy at the sightseeing spot where the monastery could be seen. It was not only a frenzy of taking pictures; it could immediately be noticed that it was so much more. Panagia Soumela represents to the Pontians the central spiritual marker which moors in transcendence their entire identity. I could compare the emotion of this moment to the one when each Pontian arrives in their ancestors' home village and begins to ask around about the place and the house deserted almost one hundred years ago. I noticed that ours was the only Greek bus. On other occasions, as the second driver Mihalis Spiridis confesses, there were dozens of them. We all agree that the fear the media encourages, regarding the President Erdoğan's activity, is, in fact, pointless.

The journey to Limni/Uzungöl was, in my opinion, disappointing. Nothing seems to evoke a Pontic past, even though, as I am told by F. Fundukidis, there is still a village named Saráho inhabited by Muslim Pontians somewhere nearby. I found a lake located in a small mountainous depression, surrounded by peaks covered in forests, with numerous crowded restaurants and hotels around it; it was, in fact, a tourist resort seemingly very appreciated by the Arabs.

Although Lévi-Strauss wrote somewhere – and how right he was! – that the anthropologist must wake before the first of the locals and go to bed after the last one, I did not stay up too late at the party in Σούρμενα (Súrmena, today Sürmene), with music provided by a local Pontic musician, for fear of becoming overly tired and, therefore, being unable to continue the fieldwork in the following days. Even so, I noted a fair number of instances when the people in my group got together with the local Muslim Pontians; not only with the ones who speak Greek and are, in a way, local guides and contacts (for example, Bayram tells me that he has been a guide for ten years), but also with the ones met randomly. The term “our lost brothers” can be mentioned here, in the same way it appears at the end of the documentary *Τα χνάρια των αργοναυτών* (*On the Footsteps of the Argonauts*); which means that, on a different level, here as well the family ties must be taken into consideration in a theory of identity related to a place of origin.

At the coffee house (or better said, the tea shop) near Konstandinos Kapaiannidis's vila, I managed to obtain a recording of Iannis Kitidis telling me his grandfather's entire journey with the starting point in the village of Iámuritsa, only a few kilometres from Kerasunda. Once in Russia, he meets his wife and together they leave for Greece after ten years. The journey over the mountains, in winter, pushed from behind by the Turkish soldiers, escaping from the church in Rise where they were closed and finally arriving in Russia, looks more like a film plot. Decisions such as abandoning a younger brother seem natural in the context where survival is of utmost importance, even though his whole life was thereafter lived in remorse regarding this decision. And, Iannis adds, everyone can tell such stories heard mainly from their grandparents.

I would have liked to go with Νίκος Παλασίδης (Nikos Palasídis), of around sixty five years old, from Thessaloniki, to find his village and his grandfather's house, in Καρς (Kars). The long way of four hundred kilometres, which must be travelled by taxi in one day, without the possibility of stopping to rest, forced me to renounce. He has a few clues regarding where to find the house, the description of some streets and of certain areas, with “something high” behind the house. In any case, he will come back with a handful of earth in a bag and water in

a bottle to pour over his father's grave. When he returns, I will try to record him telling me about his entire journey. He will be accompanied by the much younger Haralambos Papaskevopoulos and Δήμητρα Λούκα (Dimitra Lúka, who, I found out, has a PhD in social anthropology in Μυτιλήνη [Mitilini]). If I remember correctly, both of them also have ties in Kars.

I hope to be able to go somewhere closer, with Χαράλαμπος Περπερίδης (Harálambos Perperídís, eighty years old) and his son, Παωαγιώτης Περπερίδης (Panaiótis Perperídís), who is filming all of this. I am not sure if there is room for me in the car they are traveling by; if there is a car for four passengers, I will not be able to go, because another "pair" with roots in Kuş-kaya will accompany them. I wish to go because Panaiotis is this trip's cameraman. It would be like a document of "participant observation", especially since the anthropologist, the one who observes, will be observed in his turn, because he will not be *the one* filming, but *the one* being filmed.

Arghirúpoli/Gümüşhane

6:20 pm
Ramada Hotel

A day filled with research. In the morning I went with Panaiotis and his father, Haralambos Perperidis, to Kuş-kaya, near the city of Τρίπολη (Trípoli/Tirebolu). Fortunately for me, the "pair" declined going; perhaps, they were too tired after the previous night's amusement (μουχαμπέτι). The journey to Kuş-kaya was filled with Haralambos's stories heard from his father, who was constantly meeting other fellow villagers to reminisce about the place back in Pontus. I recorded a few on my voice recorder. With Aristotelis's help, a Pontian who lives in Trapezunda, who speaks Greek and who is not only our guide and translator but who also drove us there, we finally managed to identify the village. The people we asked in the city, a few middle-aged men, knew that there was a dumpsite there. Obviously, our new Turkish acquaintances offered us tea and, as usual, for lack of time, we had to say no. Indeed, near the rock which was called "kuş-kaya" ("the bird's rock") by the villagers we talked to was a dumpsite. Ascending, we reached a settlement with houses set far apart from one another, which matched the description Haralambos had heard from his father. Except that they were recently built Turkish houses, with their yards full of hazelnuts set to dry in the sun (the steep slopes in the region are covered in hazelnut trees). "If they had grown hazelnuts too, our parents wouldn't have starved!", Haralambos notices. Haralambos's father was more than twenty years old when he was forced to move to Greece. After finding out a few pieces of information from the locals whose yard Aristotelis entered by chance – and we also followed – (information which was offered, as usual, most kindly) and a steep climb for the car, we decided it was impossible to find the place, even less the house, where Haralambos's father had once lived. Haralambos made the decision to go back as we would have been much too late and we would have missed the bus to Ματσούκα (Matsúka/Mačka). We were to catch up with it in Arghirupoli, which would have doubled the fee we had to pay to Aristotelis (seventy five euros, which, naturally, I also contributed to, for participant observation reasons). Before we left, Haralambos took a handful of earth in a bag, and Panaiotis filled with water a half litre bottle from a pump set in stone, which, surely, had been there during the time when his grandfather left for Greece. I am recording these moments without having had the possibility to film or photograph them, because I had left the charger at the hotel. I admit this is probably the biggest mistake I have made in my research so far; as such moments represent a sort of peak of the entire field research of this period. I asked Haralambos what he was going to do with the earth. He said he was going to sprinkle it over

his father's and brothers' graves; he is now the only remaining brother. I draw the conclusion that this is a custom, a *social fact*. Later on the bus, on our way to Arghirupoli – a road that crosses the Pontic Mountains from the direction of Trapezunda at an altitude of over two thousands metres, and which is part of the old Silk Road meandering through magnificent landscapes – I checked with Σταύρος Ασανίδης (Stávros Astanídis) asking him how it had been in Surmena a day before and if he had found the house his grandfather had left from. He said he hadn't found it, but that he had taken a bit of earth from near the buildings of what had once been the church and the school, which he would keep in a small sack that he would take to his grave. At his age of eighty years old, he does not have much time left. Returning from Kuş-kaya, I addressed another question to Haralambos, if he was content with what he had found. He would have been happier if he had found the house, or at least the site where the house had been. This was a relevant answer for my research: our identity is connected to a certain *place*. Anthropologically speaking this place has a priority to the region or the territory of the nation we belong to.

When we arrived in Arghirupoli/Gümüşhane, I accompanied Γεώργιος Χαρπαντίδης (Iórgchos Harpandídis) of sixty years old from Kavala, who, after I introduced myself on the bus microphone, on our way from Kerasunda to Trapezunda, came to tell me that, once in Arghirupoli, he would show me his grandfather's house. After a car ride to the peaks above, on narrow roads at the edge of bottomless pits, we arrived in the old village of Καρμούτ (Karmút, today Kocapinar). The village looked as old as two hundred years before, with elderly women dressed in folk costumes, carrying bundles of kindling on their backs, in the middle of a landscape of old and deserted mountains. I photographed and filmed Iorghos near his grandfather's house, which, unfortunately, we could not enter because the door had been locked by the current owners who appeared to have been away. Next, I filmed and photographed him at the church in ruins, but whose roof was still in place, lighting candles for his ancestors buried somewhere in a cemetery next to the church, whose graves cannot be distinguished anymore; then, by the old stone water pump, the βρύση (spring), built by his great-grandfather, πρόεδρος (mayor) of the village. His grandfather came back after fifty years to see these places again. I asked Iorghos how he (Iorghos) had found the house. He said that he had been brought there by one of the local people, Nurettin – the man who had also brought us there in his car. Nurettin had known his grandfather, as they eventually became close friends. Iorghos's grandfather met again, after many years, a Turkish friend and school mate. Lighting candles in the church for the ones buried in this ground was touching! In front of the camera, he started to weep when he lit the candles. Perhaps it was more of a dramatic gesture, at least when he was asked to do it again. However, the emotion he felt at first, be it dramatic or natural, touched me in turn, and I had to make considerable efforts to restrain my own tears. With these people who experience such strong and special feelings in the face of everything that reminds them of the ancestors who were here, feelings which reach a climax when they find the village their grandparents were forced to leave, or the house they lived in, I, myself, have feelings which I have never had in the field. Lighting candles and speaking in front of the camera, Iorghos makes a promise that he will return every year for as long as he is able and will give money to the local administration in order to try to restore and preserve the church, even as little as possible. Again a little too theatrically, maybe, but not less relevant, at the water pump, speaking in front of the camera, Iorghos tells us that the iron spoon he is drinking water with was placed there by his grandfather's father, and that he now drinks with the same spoon his grandfather and great-grandfather had drunk with, and only here can he quench his thirst. I think I have come to understand why he is constantly taking pictures of

everything and of himself everywhere. I am certain that he did the same in all of his ten journeys so far. It is as if he can “snatch” as much as he can from Pontus and bring it home to Greece with him. I also take notice of his friendship with Nurettin, who he refers to as his second father (even though he is not only Turkish but also a Muslim). He promises he will return the following year with more people whose grandparents left this village and to stay at least for two days so that they can all (other villagers, along with Nurettin) throw a big party. Iorghos asks Nurettin (with the assistance of Katerina, the translator) if, by sending money, the mayor will take care of the church restoration. To this Nurettin replies that the mayor is a bit lazy and that his major talent is to speak.

Friday, August 17th 2018
Arghirúpoli/ Gümüşhane

6:10 am
Ramada Hotel

(for yesterday)

Beyond the locals’ kindness, there is also the suspicion that the descendants of the Greeks who left come here for the golden coins their ancestors hid. It is mostly noticeable in the jokes (which I witnessed myself) that the Turkish people make when they are asked about a certain place, a village, a street or a house. After a discussion I had with Iorghos and Katerina in the car yesterday when we came back from Karmut, the locals also fear that the descendants would claim their ancestors’ property, because they were forced to leave, without being allowed to solve the problem of their assets. Katerina thinks this suspicion is unsupported since she would not come to live there, among the Turkish who, although they are friendly to the Greeks during daytime, after partying together and getting drunk, during the night time the former could kill the latter. Thus, she answered a question I did not address; namely, if we assumed that Pontus (which was once The Empire of Trebizond), by a miracle, would be returned to the Pontians, would they go back to live there? It was also Katerina who, when we entered the ruins of the church in Karmut, heard one of the young men there – probably workers at the building sites near the church, who came with us – telling another not to go in because he would be doomed and so she told him off fearlessly, saying that there is only one God and, irrespective of religion, there are both good people and bad people. In the end, the man who was told off also entered the church.

Saturday, August 18th 2018
Ladık (Hamamayaği)

8:25 am
Hilas Hotel

(for yesterday)

In the morning, we travelled by minibus on a dizzying road towards the high altitude villages of Ímera, Krómni and Varenú, by their Greek names, in the vicinity of Arghirupoli/ Gümüşhane (Turkish name which is an exact translation from Greek, namely ‘the city of silver’). The tall landscape is scattered by numerous ruins of churches and houses from the era when the valley we are crossing was populated by the Greeks. The local guide who is with us seems to know every detail about the location of the churches and the names of the villages which exist now or were there in the past. It appears that the village of Imera looks the same as it did when the Greek lived there. In the Kromni village we were guided to a house which is now used as a shed, full of tools and “traditional” devices, in whose basement a small church was once established, reminding us about the Crypto-Christianity age. The steep and

dangerous path to the church door did not allow access inside in order to light candles, as the group of ten people intended to do. Nothing but a few ruins were left from the Varenu village – which is the most difficult to reach, on a very steep road, narrow, winding and without any safety rails (in fact, the majority of the roads lack safety rails). The most visible of the ruins was the one of the church. I find out from the guide that there are few Islamic Pontians in the region, and that the existing population is made up of Turkish people who came after the Greeks left the region.

A few behaviours which have an identity significance: At the Saint John Monastery, near the Imera village (called in Turkish as “Imera [olucak] manastırı”), Nikos Palasidis, whose ancestor came from Kars, tasted a fruit which resembled plums and observed that it was a fruit from a tree which had been planted by the nuns who used to live in the monastery. Then, after the guide shares with us a few cucumbers brought from his own garden – which was also situated in the valley we were crossing, one of the few places beneficial for growing vegetables – Iannis Kitidis praises them using the phrase “how sweet the taste and wonderful the smell!”, no doubt hinting at the fact that the cucumbers had been grown on Pontic soil. On our way to Varenu, the home-village of Μάκης Μιχαηλίδης’s (Mákis Mihailídis) ancestors (Mákis Mihailídis is from Kozáni and this was his first such trip), in order to make a joke, Iorghos Harpandidis tells him that “it’s better that your folks left this place”. As opposed to his own village of Karmut, “in Varenu there’s no place where you can fire up a barbecue, to throw a party, to drink water, or to get together with the locals”. I notice the competition when it comes to “joking relations” regarding the aspect that the ancestors’ villages have today. I took several photographs and I filmed Makis addressing the cameraman a few words which described his impression as a man who came to the village of his roots for the first time.

On our way back, Iorghos Harpandidis shows me a few photographs of religious items from the church where he lit candles the previous day; items which now are in four churches in Greece, in Anatolikó (Ptolemaída municipality) and Kariohóri (Ptolemaída municipality) in Kozani prefecture, in Perivlepto (Dráma prefecture) and Arghirúpoli (Drama prefecture), which is also Iorghos’s mother’s village; a few icons, a chalice, the garments of the last priest in Karmut, etc. I asked him how all these objects made their way to Greece and I find out that they were taken from the church when the people left and they were carefully transported on the road of exile. He recommends me two books with complete information about Pontus, *Ανατολικός Πόντος (Eastern Pontus)* and *Δυτικός Πόντος (Western Pontus)*, both written by Σάββα Καλεντερίδης (Sávva Kalenderídis).

Dimitra Luka, 51 years old – who, due to her Ph. D in social anthropology, seems to understand the most what it is that I am doing here – approaches me, when we stop in the village on Imera, and tells me “something that would certainly interest me”: she took a handful of earth from Panaghia Soumela, a rock and a few flowers, *manusakia*, for her eighty years old uncle who, at this age, will definitely not be able to go to Pontus. “So that he can smell them a bit”. *Manusakia* are yellow flowers which we also encounter on our way – when no one was looking, I took a few flowers from the house with the makeshift church, where they were tied in bunches and hung from a pillar. I do not know exactly what they are used for. The fluffy flowers, not bigger than a centimetre in diameter, are said to have appeared in the Pontic mountains, according to Katerina the translator, when Virgin Mary shed tears when she witnessed her Son’s crucifixion. This is why these flowers are also called “Virgin Mary’s tears”.

Near the city of (Nicópolis/Şebinkarahisar), situated at an altitude of almost one thousand four hundred metres, F. Fundukidis says over the bus microphone that the road that crosses the mountains from here to Kerasunda, reaching heights of three thousands metres, was one of the roads of the extermination which began in 1919, when Mustafa Kemal Atatürk set foot on the shore of Samsunda (19 May 1919) and the revolution began; a revolution which was to bring the creation of modern Turkey, as a republic. This was a road which, travelled during the winter, was headed to an end many would not reach. In the evening, before arriving to Amásia/Amasya – where the tombs of the Mithridates are dug in stone (the Mithridates area dynasty of Persian origin with a Hellenic upbringing which founded a kingdom of Pontus more than two thousand years ago) – F. Fundukidis told us over the bus microphone a series of situations where the Islamic Pontians from Turkey, unaware of their Greek origins, discover in various situations that they are, in fact, Greek, that the language they speak is a Hellenic language.

10:16 am

In the hotel restaurant, the cameraman and F. Fundukidis are interviewing the participants of the trip. Mrs. Fotiní, the one I was saying she was seventy six years old and this was her fourth time in Pontus, wants to embroider a map of Pontus in order to put it up in her own home. On a break between interviews, the organizer of the trip tells us how, on another trip, he was asked in Trapezunda if they were there searching for the lyres; his answer was “our treasure are the earth and the rocks of Pontus”.

Sunday, August 19th 2018
Safrámboli/ Saframbolu

8:00 am
Hilton Garden Inn Hotel

(for yesterday)

This is an observation I made yesterday by accompanying Κατερίνα Ισκεντερίδου (Katerína Iskenderídu), the translator, on the last visit, or recurrent visit, of a participant on the trip to a place of origin, in the Kirlik-köyü village, near the town of Alaçam, a few kilometres East of Sinópi/Sinop. This area that was once inhabited only by Greeks is now populated by the descendants of the Turkish people who came from Dráma and Kavála, in Greece. As soon as we got out of the bus, while Katerina was negotiating the ten minutes trip to the ancestors’ village, an young Turk approached our small group, showing in his turn an interest towards his grandparents’ village of origin. Iorghos Harpandidis promised the young man that if he should decide to go to Kavala, Iorghos himself will help him to search for his ancestors’ place of origin. When we got to Katerina’s grandfather’s village, the locals welcomed us with kindness and availability to (re)identify the place where Katerina’s grandfather’s house once stood (“with a hill at the back of the house”), now an uncultivated χωράφι (field). Katerina very gladly offers explanations and she is not bothered to be filmed or photographed. On the bus, Katerina symbolically gifts everyone with a piece of cucumber bought from Alaçam. I notice Katerina’s kindness towards me these few days. Speaking of the locals’ hospitality, Nikos Palasidis was very happy to receive it in Kars. The Kurds very kindly helped him to identify his family’s house and even offered to put him up for the night. It wasn’t only the lack of time that compelled him to turn them down, but also the fact that the place would have brought back many memories of his father and of everything his father had told him, and it would have only made him sad.

As soon as we left the hotel, F. Fundukidis reminds us that the city of Χάβζα (Hávza) located nearby is one of the martyr places during the persecution underwent by Kemal Atatürk once the revolution broke out in 19 May 1919. In only a short while we would pass the village named “19 May”, near Samsunda, where Kemal Atatürk came ashore and began his campaign. Something cynical in history: for the Turkish state and its people, K. Atatürk is a founding father, and his image is honoured everywhere, in public and private places, while for the Greek people (but not for the Greek state), the same Turkish personality of an augmented proportion represents a man who committed terrible crimes against humanity! F. Fundukidis, recounting over the bus microphone a number of tales of local resistance against the Turkish persecution, tells us about a Pontic man, Βασίλης Τσαουσίδης (Vasilis Tsausidis) – who would later live in Drama – who lived all his life with the regret of not having killed Atatürk when he ran into the Turkish man as he was coming out for a walk from the hotel in Havza where he was staying in order to have a meeting with international political personalities. Iorghos Harpandidis, again over the bus microphone, having resumed the genocide issue, says that not even Greece recognizes it, and on 19 May 2019 only a requiem will be officially allowed for the victims of the population exchange. Recognizing the genocide, by both parties involved, would create great issues as far as the property rights over the land in Pontus are concerned and the claim to compensation for the descendants of the refugees.

Monday, August 20th 2018
Konstantinúpoli/ Istanbul

7:15 am
Ibis Hotel

(for yesterday)

Véra and Evthímios, both from Athens, are aged between thirty and forty years old and so, they belong to the younger generation, making this their first trip to Pontus. They think that their grandparents’ role in their decision to take the trip to the place of origin was decisive. Usually, the young people who feel emotionally connected to Pontus have had grandparents who nurtured this connection. Vera agrees that being preoccupied with one’s identity is something specific to older people, when the whirlwind of youth – the studying, the fun, the family, the job, etc. – has passed and you come to ask yourself who and what you are in this world. The grandparents of both of them are from Σάντα (Sánda), near Trapezunda, with seven villages situated at an altitude of more than two thousand metres, of which only three are inhabited to this day. Evthimios is determined to connect with – perhaps even to take a trip together – other young people whose grandparents are native of Sanda in Pontus. Both of them wish to come back, especially since the time they spent in Sanda was very short. This represents a general dissatisfaction for all the participants to the trip in whose company I find myself; namely that they would have liked to be able to spend at least a whole day in the village and the region their ancestors had deserted. I asked them if they came especially for Pontus or for Sanda, their grandparents’ village. They said that for both. But Evthimios, if he were to come back by plane to Trapezunda, he would come back for Sanda. I notice a pattern common for all my travel companions: what is of great importance is the *place*, not the entire *region* of Pontus. The place which was marked by the ancestors’ presence there is, in the order of importance, the house, the land, the church, the water pump and then other buildings. The cemetery should appear somewhere too, except that its tracks are completely erased. Once they arrive in this place, the “travellers” are no longer merely “tourists in search of their

roots” and this is something worth reflecting upon, if anyone is really simply a tourist travelling across Pontus. Furthermore, their discontent also arises about the amount of time at their disposal in the various towns or places we stopped along the journey. The need for more time is brought into question by Iorghos Harpandidis, Makis Mihailidis and Iannis Kitidis in the picturesque town of Safrámboli/ Saframbolu by saying that the place in the shade with tables and chairs where they stopped is suitable for a cup of coffee in the morning and, a bit later, towards noon, for *tsipuro*.

Vera notices that the Pontians from Northern Greece are better organized (through the activities in *σύλλογος*, “associations”, “assemblies”) than the ones in the South, around Athens.

Connecting one’s identity to a certain place seems to be more certain than connecting it to the entire region. Θοδωρής Τσιγγαρίδης (Thodoris Tsingaridis), also in his sixties, considers himself to be one of the few people who is able to discuss delicate matters without being attached to certain preconceived ideas. In this way, who does Pontus belong to, ethnically speaking? The Greek Pontians were the majority only in a few towns on the Black Sea coastline. For the most part, they lived together with the Laz people, Armenians, even Kurds in the vicinity of the Caucasus. The descendants of the Armenian refugees can also make an identity claim over this region; they can consider it, in their turn, “a lost country”. In Asia Minor, the Orthodox Greeks have a history of their majority in this region of less than a hundred years in the moments of the exchange. A history which began with the religious tolerance and economic freedom offered by the sultan in the middle of the 19th century. The majority was built on migration from a few Greek islands and from Northern Greece (regions which had another political status at that time) towards Smirni/Izmir, drawn by the possibility of economic progress in the area. I finally find the answer to an issue that has been on my mind for a long time; namely, why the Minor-Asian people do not have their own Hellenic language. Another question appears – one that I address myself –, why the descendants of the Minor-Asian “refugees” feel in their turn strongly connected to the place and region that their ancestors inhabited for a short time. It appears that the process of setting roots does not depend directly on the time spent in a certain place, a phenomenon I also noticed with the Meglen-Vlachs from Cerna, Tulcea county, with their short period of fourteen years of living in Bulgaria. I will try to resume the discussion with Thodoris, this time with the voice recorder on, as I am unsure I remember correctly what we previously discussed in order to write in the journal.

Yesterday was also the day when I exchanged e-mail addresses and phone numbers with many of the travellers on this journey. Iorghos Harpandidis recommends another book, *Όύτε το όνομα μου* (*Not even my name*), written by Thea Halo. Together with the other two volumes about Eastern and Western Pontus, I would be in the possession of a minimal and essential bibliography on Pontus. Regarding the Pontic dialect, Makis Mihailidis recommends *με Ιστορικόν λεξικόν της ποντικής διαλέκτου* (*Historic dictionary of the Pontic dialect*), written by Άνθημος Παπαδόπουλος (Anthimos Papadópuλος). The evening came to a close with a party on the hotel restaurant terrace, put together by Eleni and Kostas in order to celebrate not only fifty years of marriage, but also fifty years of living in the United States of America. Kostas’s talent at interpreting *pondiaka* songs – full of melancholy for the lost country – was remarked by everyone.

Tuesday, August 21st 2018

7:15 am

(for yesterday, the last day of field-trip)

Eleni, the one who was celebrated the previous evening: “In those times, the mother would lose her child, and the child would lose its mother.”

On our way back to Greece, I am presented with a dilemma by Mihalis Spiridis, the spare driver. Thus, Bayram, one of our local guides in Trapezunda, claimed he was Pontian because he spoke *pondiaka* but he was Muslim and Turkish. Can someone be considered Pontian because he speaks *pondiaka* and is in the same time both Muslim and Turkish? In the end, I understood that, for Mihalis, being Pontian is incompatible with being Turkish, because a Pontian person can only have Hellenic roots. The reaction of the people there – at the back of the bus – was unanimously that what mattered the most was how one felt. To put it differently, opposed to Mihalis’s *external* identity criteria, the other proposed an *internal* criterion.

In order to clarify what I was discussing with Thodoris Tsingaridis two days ago, I resumed the conversation, recording it. Indeed, the word “Pontian” was coined after the “Pontians” arrived in Greece, but it is unsure who brought it forth: the ones who came from afar or the ones who were already there? The Pontians were calling themselves ρωμιός / ρωμοί (pl.) (romiós/ romií), or ρωμαίος / ρωμαίοι (pl) (roméos/ roméi), and the Pontus region was known as Ρωμανία (Romanía). The process of setting roots of the Minor-Asians who migrated from the Greek islands and Macedonia must be understood from an economic point of view. When the population exchange took place, they were highly wealthy, thus the uprooting trauma was great. The ones who were transferred were not at all kindly welcomed by the local population. Here, he gives as an example a conversation he had with a Vlach man who owned one thousand sheep (either himself, or his ancestors, I do not remember exactly): the Vlach man’s grandfather, a shepherd in his turn, even though owned enough land, also wanted to have the land which the Turkish people/ the Muslim population abandoned and this seemed to be the same situation the ones who stayed confronted themselves with. My interlocutor believes that it is only natural, in these circumstances, not to have such claims because the newly arrived had to leave all their possessions; therefore, they should be able to, at least, get some of it back. We also resumed the discussion regarding the rights over Pontus: assuming that the region would no longer be under Turkish administration, who would it rightfully go to? As it was – and still is – simultaneously inhabited by “Pontians”, Lazi, Armenians, Turks, and more, it is difficult to decide this. “What is the solution, another population exchange?”

When I was asked to speak over the bus microphone about the results of my research and whether or not I found what I was looking for, I did so carefully, stating it was too early for final conclusions; conclusions which I am afraid I will not be reaching any time soon, nor do I want to. However, it has been confirmed again that *out of all the Balkan populations/ population categories I have researched, the Pontians are connected to the place of origin the most*. I continued by adding that something new has appeared: *the place of origin means, first and foremost, the house and the land where the house might have been, then the village/town and only after all of these comes the entire region of Pontus*.

Another element of novelty of this research is at a methodology level: I was in the situation of being in the same time both the anthropologist, the one who observes, and the one being observed; *doubly* observed, as a matter of fact: not only by the group – whose cameraman by filming and interviewing made a systematic observation himself – but also by Dímitra Lúka, fifty one years old, who holds a Ph. D in social anthropology, from Mitilini, Greece. I talked to her a few days ago and I said I had a starting point for a theory of identity with the populations who suffered a transfer and a population exchange, from the Eastern half of the Balkans, in the first half of last century; an identity connected to the place/region where they were transferred from. On a break in the journey, in a gas station from the European part of Turkey, she tells me she gave what I said a thought. However, it is very difficult, close to impossible, to reach a theory in anthropology (implying that research in the field can, at any time, completely shift the theory, no matter how well-formulated it is). I told her that I agreed with her completely: I am referring to a theory, but I do not expect it to be fully formed, and the people who are looking for, at all cost, definite theories as a result of social and cultural anthropologic research risk only to find philosophical exercises. Dimitra is leaving for Mexico, where she teaches Greek. If she had stayed in Greece, I would have invited her as a guest at a conference in Romania. Anyway, I will write to her, maybe she can put together a text about an anthropologist at work observed, in his turn, by another anthropologist.

The last recording was of Thomás (sixty eight) from Athens, with a grandmother who came from Trapezunda. He was completely dissatisfied with the trip: “I searched for roots, but I did not find any.” Thus, he hinted at the fact that this search cannot be done unprepared, with an ineffective organization of the trip. The time spent in Trapezunda was so short that he did not even have the chance to see the city. The same as all the others, he wishes to come back to Pontus (to his grandmother’s town, Trapezunda), but under different circumstances.

« L'ANTHROPOLOGIE BIO-MÉDICALE ROUMAINE ET SA CONTRIBUTION À L'ÉTUDE DE LA VIE HUMAINE DANS SON INTEGRALITÉ. TRADITION ET ALIGNEMENT AUX EXIGEANCES ACTUELLES »

UN INTERVIEW AVEC MME DR. CRISTIANA SUSANA GLAVCE,
DIRECTRICE DE L'INSTITUT D'ANTHROPOLOGIE « FRANCISC I. RAINER »
DE L'ACADEMIE ROUMAINE ENTRE 1997-2016

Intervieweurs:

Dr. Eleonora Luca et Dr. Richard David-Rus

Il y a huit décennies dès le XVIIème Congrès d'Anthropologie et Archéologie préhistorique qui a eu lieu au Bucarest (1-8 septembre 1937). À cette occasion, Professeur Francisc Rainer (1874-1944) présentait les résultats des *Enquêtes anthropologiques dans trois villages roumains des Carpathes*, travail scientifique encore de référence pour l'anthropologie physique roumaine. En même temps, Rainer a présenté sa valeureuse collection des crânes et préparations anatomiques etc. exposée dans le prochain édifice de l'Institut d'Anthropologie. Le premier et l'unique Institut d'Anthropologie en Roumanie a été inauguré officiellement en 1940 (Décret-loi de 18 novembre 1942, M. O. № 266). Certainement, l'histoire de l'anthropologie roumaine ne commence pas avec le Professeur Rainer, mais, grâce à lui, en 1940 s'établissait, en Roumanie, le caractère institutionnel à l'anthropologie.

Eleonora Luca, Richard David-Rus – Vous, Mme Dr. Cristiana Glavce, vous vous avez dédié à l'étude de l'anthropologie à un âge très jeune, étant considéré « un enfant de l'anthropologie ». Vous inscrivez, métaphoriquement, un cercle magique: dès l'éminent Professeur anthropologue suisse Eugène Pittard à votre mère, Dr. Susana Grințescu-Pop, l'étudiante et doctorante du Professeur et à vous, une continuatrice méritante de leur travail. On sait que vous avez des contributions importantes au développement de l'anthropologie roumaine par une activité riche et variée de recherche, de management, organisatrice et coordinatrice de nombreuses actions scientifiques, de doctorats, post-doctorats, contrats externes, activité éditoriale (auteur et coauteur de nombreux travaux scientifiques). Vous avez fonctionné comme directrice de l'Institut d'Anthropologie « Fr. Rainer » pendant les années 1997-2016, vingt ans et, auparavant, comme secrétaire scientifique de l'institut. Nous vous en prions de nous présenter une image de l'anthropologie roumaine, de l'anthropologie biologique comme votre spécialité, dans une perspective (vision) historique et politique, en appréciant son lieu parmi les anthropologies européennes et mondiales.

Cristiana Glavce - *En Roumanie on trouve des préoccupations anthropologiques même depuis le XIXe siècle, notamment chez les médecins. La fin du siècle XIX et le début du siècle XX se caractérisent par une ouverture et un alignement aux événements scientifiques européennes. On peut affirmer, sans commettre aucune erreur, qu'entre 1900-1938 l'anthropologie roumaine se trouvait au niveau atteint d'anthropologie en Europe et en plan international.*

ANN. ROUM. D'ANTHROP. 56, pp. 153-159, BUCAREST, 2019

Le XVIIe Congrès International d'Anthropologie et Archéologie tenu à Bucarest soutient entièrement la reconnaissance du lieu occupé par l'anthropologie roumaine en contexte international. Beaucoup de médecins et naturalistes roumains ont soutenu des thèses de doctorat en anthropologie en France, Allemagne et ont participé à la vie scientifique de ces pays. En commençant du troisième décennie du XXe siècle en Roumanie ont été créées trois écoles d'anthropologie : l'école de Cluj sous la coordination du Professeur V. Papilian, supprimée sous le régime communiste, l'école de Bucarest, conduite par le Professeur Fr. I. Rainer et l'école de Jassy sous la coordination du Professeur I. G. Botez, les dernières en continuant l'activité jusqu'au présent. L'idée que l'homme est un être bio - culturel dont la compréhension et la recherche doit être réalisées dans son intégrité a été et reste une caractéristique de l'anthropologie roumaine. Si pendant la période communiste les échanges avec l'étranger étaient réduits, simultanément avec l'ouverture d'après 1989 nous avons réussi leur rétablissement. En 1998 et 1999 ont eu lieu, à Bucarest et à Sinaia, deux réunions scientifiques avec une large participation internationale. Et aussi par les échanges inter-académiques et les bourses de spécialisation nous avons repris les liaisons avec les instituts anthropologiques de France, Allemagne, Italie, Angleterre et autres pays européennes, avec des pays africains et américains (par échanges d'expérience et participation aux manifestations scientifiques). Les rencontres avec les chercheurs étrangers ont confirmé l'importance et l'intérêt pour les études roumaines d'anthropologie.

EL, RD-R – Un thème majeur de l'anthropologie roumaine a été la caractérisation de la structure anthropologique des Roumains et des autres ethnies de Roumanie. Entre 1950-1989, les anthropologues de Bucarest et Jassy ont effectué des amples enquêtes dans le pays dont les résultats ont été mis en valeur par beaucoup d'articles, thèses de doctorat, quelques monographies et l'Atlas de l'Olténie. Après 1989, ces résultats ont été synthétisés dans les Atlas sur les provinces et dans l'Atlas Anthropologique de la Roumanie, trois d'entre eux recevant des prix de l'Académie Roumaine. Comment appréciez-vous la valeur scientifique, théorique et applicative des Atlas et leur impact dans divers domaines?

CG – *Les Atlas Anthropologiques sont pratiquement une matérialisation testamentaire du Professeur Rainer, qui a créé aussi leur prototype dans le travail « Enquêtes anthropologiques dans trois villages roumains des Carpathes ». Les Atlas représentent une description anthropométrique et typologique des populations de Roumanie en surprenant leur spécifique historique tant en milieu rural que urbain. En ce qui concerne le milieu rural, ici ont été choisis des villages avec une attestation documentaire plus ancienne les (siècles XIV – XVI) et les sujets étudiés, de la même ethnie et l'autochtonie de leurs parents et grands-parents. Dans ces conditions on peut parler de populations autochtones qui ont conservé des caractéristiques d'un group de populations avec un fond génétique commun (en anglais « genetic pool ». En outre de l'importance documentaire historique concernant les caractéristiques anthropologiques de la population à un moment donné, dans les Atlas sont présentées des informations historiques et géographiques du chaque village étudié et aussi des unes données démographiques. Telles recherches mettent en évidence aussi des caractéristiques liées à l'étape ontogénétique, genre, statut socio- professionnel, l'influence des facteurs géographiques, tous ceux-ci en soutenant la valeur scientifique des recherches. La valeur des applications pratiques de ces recherches se traduit, par exemple, par la mise en évidence de l'état de santé des groupes des populations cherchées, des prédispositions pour certaines pathologies (ex. celles-là qui sont la conséquence du surpoids ou de sous- poids).*

Ainsi, les Atlas sont une source d'information biologique et sociale avec des applications en médecine, industrie, pour les constructions, pour des équipements spéciaux etc. Les données anthropométriques ont été utilisées à la réalisation des contrats avec l'industrie légère, à la fabrication de meubles etc., ou comme données de références dans les recherches paléoanthropologiques et de la santé des populations.

EL, RD-R – Les études d'anthropologie auxologique ont occupé un lieu important dans la recherche anthropologique roumaine. Ont été élaborés des travaux remarquables concernant la croissance et le développement des enfants et adolescents, l'accélération de la croissance, le développement comparative selon le milieu de vie, la maturation sexuelle, l'état et le comportement nutritionnel, le développement comparative des enfants des catégories spéciales etc. Les instituts de santé publique et O.M.S. suivent aussi (parmi d'autres) la croissance des enfants et des adolescents. Est-ce qu'il existe des différences entre leurs recherches et les études anthropologiques?

CG – *Les instituts de santé publique de notre pays organisaient des campagnes de collection des données anthropométriques sur des échantillons très grands (environ de cents de milliers sujets) résumées, en général, aux quatre dimensions selon l'âge et le genre, sans une corrélations avec des informations socio- économiques et géographiques. Dans nos études nous avons conservé la caractéristique de l'anthropologie roumaine, celle-là de corrélér les données anthropométriques avec les données socio- économiques et géographiques, au niveau individuel et, puis, ces données sont soumises aux différentes opérations bio-mathématiques et interprétées selon l'âge et le genre, en résultant des études interdisciplinaires sur des échantillons statistiquement représentatifs. Ainsi on met en évidence l'influence des conditions mésologiques au cours des différentes étapes ontogénétiques et en fonction de genre, en pouvant d'expliquer les rythmes différents de croissance et développement, en nuancant tant les limites de normalité ou les déviations par rapport aux celle-là que tant le degré et le moment d'intervention qui s'impose dans le cas des unes corrections ou des déviations.*

EL, RD-R – Vous avez commencé l'activité scientifique (en approfondissant et élargissant) avec la recherche en anthropologie auxologique: thèse de licence (l'étude du nouveau-né), de doctorat (étude des enfants 5-8 ans), de nombreuses recherches sur les différentes étapes ontogéniques (même le développement intra-utérin). Pourquoi avez-vous choisi spécialement l'auxologie? Quels sont les objectifs principaux dont vous avez désiré d'atteindre et quels résultats avez-vous obtenu par ces études?

CG – *J'aime beaucoup les enfants et j'ai suit aussi le développement de mon propre enfant. J'ai été influencée aussi par les préoccupations de ma mère, Dr. Suzana Grințescu-Pop, en ce domaine (les premiers travaux qui mettent en évidence le dimorphisme sexuel et de conformation du nouveau-né et les influences des conditions mésologiques sur la réalisation dimensionnelle du nouveau-né). Au choix du sujet de la thèse de doctorat a contribué l'Académicien Professeur Olga Necrasov, ma coordinatrice du doctorat, qui voyait cette thèse comme un travail qui venait de compléter la thèse de Dr. Maria Cristescu concernant les adolescents. La période des années '60-'70 était dominée par la compréhension de la croissance et développement en vision interdisciplinaire tant chez nous qu'au niveau international. Après l'obtention la qualité de coordinatrice de doctorats, en 1994, j'ai porté*

plus loin des thèmes de croissance et développement (ex. quand les uns d'entre doctorants choisissait un tel sujet). En ce qui concerne les résultats obtenus, voilà, par exemple, ceux-là concernant les conséquences de l'interdiction de l'avortement sur la qualité biologique du nouveau-né : l'augmentation des nombres des immatures et prématurés (avec le plus grand risque de survivance) et la diminution de la qualité biologique surtout par la réduction du poids à la naissance. Chez le petit enfant et l'écolier on met en évidence la relation entre la qualité des conditions de vie et le processus de croissance et développement. Pendant les années '70-'80 les enfants de milieu rural avec des conditions géographiques spéciales (ex. villages montagneux situés à une altitude de plus 900m) avaient un retard de 1-2 ans par rapport aux enfants de milieu urbain avec des meilleures conditions sociales et culturelles. Les recherches ont suivi tant la plasticité des conditions du milieu que l'empreinte héréditaire selon les différentes phases de la croissance. C'est l'accélération (secular-trend) qui représente un problème d'intérêt spécial dont nous avons des données de référence de 1927 (Dr. Roşca) et entre 1952-1999 les données de l'Institut National de Santé Publique qui suivent périodiquement la hauteur, le poids, la circonférence céphalique et thoracique des enfants et adolescents (0-18 ans) de tout le pays. Pendant les dernières années nos préoccupations se sont axées sur la compréhension des causes qui mènent à l'obésité et aux conséquences de celles-ci sur la santé physique et psychique.

EL, RD-R – Vous, Mme la Dr. Glavce, conduisez des doctorats en sciences médicales, spécialité anthropologie médicale, il y a presque 25 ans. Beaucoup de chercheurs de l'institut ont obtenu leur diplôme sous votre coordination. En même temps, vous avez dirigé beaucoup de doctorants d'en dehors de l'institut de diverses spécialités. Mais un petit nombre d'entre ceux-ci, pendant le stage doctoral, ont compris vraiment l'anthropologie et n'ont pas été guidés de connaître les recherches de l'anthropologie roumaine (surtout liées de son sujet de thèse), de lire nos revues, les Atlas. Finalement, la plupart de ceux-ci ne portent plus loin, dans leurs domaines d'activité, au moins un brin d'anthropologie roumaine. Est-ce que vous considérez que l'activité de coordination des doctorats, ayant un rôle important dans la promotion de l'anthropologie, doit continuer dans une routine avec ses insuffisances ou celle-ci demande un enrichissement et une responsabilité plus grande?

CG – *C'est possible d'exister en dehors une telle perception concernant la préparation des doctorants. C'est vraiment que les thèmes des thèses sont très variés en étant accordés avec les domaines scientifiques des doctorants. L'anthropologie c'est la science qui étudie l'homme dans son intégrité bio-sociale et elle trouve des explications quel qu'il soit le domaine de la vie et ceci c'est la raison pourquoi est difficile d'encadrer ces préoccupations dans une activité de routine. Dans l'enseignement universitaire roumain l'anthropologie bio-médicale est rarement une discipline d'étude. Je considère qu'il est nécessaire à la première fois que le doctorant doit de se familiariser avec l'anthropologie et le cadre de placement de la recherche. Nos études d'anthropologie sont de stricte spécialité et le doctorant se réfère aux celles-ci dans le contexte d'une liaison avec le thème de recherche. Les sujets ont été conçus si bien que ceux-ci fassent une comparaison ou développer des préoccupations abordées déjà dans l'anthropologie roumaine. Les doctorants reçoivent une spécialisation en anthropologie médicale reprenant des informations liées de leur domaine de formation. Dans toutes les thèses de croissance et développement sont des références amples concernant les recherches roumaines. On fait beaucoup de références aussi dans les thèses d'anthropologie historique, même aux populations adultes de notre pays. En délimitant l'anthropologie*

roumaine comme quelque chose totalement éloignée par rapport à l'anthropologie internationale c'est un fait que pour moi c'est difficile de comprendre. Même le fait que la recherche de l'homme concerne non seulement les aspects bio- médicaux mais aussi le contexte de vie socio- culturelle est encore une caractéristique d'anthropologie roumaine qui constitue un argument de sa spécificité. En tenant compte de la variété des domaines de recherche, le qualificatif de « routine » et pauvreté du contenu ne paraît pas soutenu et l'augmentation de la responsabilité c'est une question dont la réponse est « on peut mieux toujours ».

EL, RD-R – Par rapport à l'anthropologie roumaine sociale et culturelle, l'anthropologie physique est moins visible dans le pays et à l'étranger. Dans l'enseignement universitaire roumain il y a peu de facultés dont comprennent l'anthropologie physique (biologique) comme discipline obligatoire ou optionnelle. Le personnel didactique est rarement représenté par des anthropologues de l'institut (et en ce cas on ne se vérifie toujours la probité de ceux-ci). Vous, Mme la Dr. Glavce, vous avez aussi tenu des cours d'anthropologie dans quelques Universités du pays. Quelle importance a pour vous la présence de l'anthropologie comme discipline universitaire et quels sont les thèmes principaux qu'un cours d'anthropologie physique devrait comprendre? Est-ce que vous considérez qu'il est nécessaire une sélection objective et une préparation spéciale des ceux qui tiennent des leçons d'anthropologie dans l'enseignement universitaire roumain? Selon votre opinion, pour la promotion de notre discipline, les thèses de licence en anthropologie sont-elles importantes?

CG – *Quelle opinion je pourrai avoir concernant les diplômes de licence en anthropologie quand au niveau universitaire dans notre c'est n'est pas seulement l'anthropologie socio-culturelle qui est enseignée et dans le cadre d'Académie Roumaine existe seulement la spécialisation au niveau doctoral? L'éducation n'est pas une option mais elle est une nécessité de survivre.*

EL, RD-R – Après 1990, beaucoup de jeunes bien instruits, les plus avec des bourses d'enseignement et même des doctorats à l'étranger sont venus à l'institut (biologistes, médecins, historiens, sociologues, philosophes, philologues etc.) en se rapprochant aux vieux chercheurs pour créer un impulse et « moderniser » la recherche anthropologique roumaine. Avec une soutenance et une stimulation discutables et parfois inégales, ceux-ci restent encore enthousiasts. Comment appréciez-vous la contribution de ces jeunes dans la recherche anthropologique roumaine et quelles suggestions avez-vous concernant une coopération harmonieuse entre les générations et l'assurance (garantie) de la continuité et le développement de l'anthropologie roumaine?

CG – *La science ne se fait pas sans enthousiasme et dévotion. Et comme en chaque domaine il existe la tendance de s'enthousiasmer et embrasser les idées nouvelles, ce chose-là c'est réalisable dans une thèse de doctorat. Et, concernant l'Institut d'Anthropologie, ici tous les collègues sont docteurs. Comme je ne suis pas d'accord avec une anthropologie roumaine complètement distincte, aussi je ne sens pas une différenciation entre les générations. Il existe plutôt une compatibilité dans le mode de penser entre certaines personnes mais sans divergences d'opinions il serait monotone et non- profitable pour vérifier les propres opinions. Tout cet ensemble constitue la notre vie et les résultats totalisés ne permettent ni la stagnation ni un retour en temps.*

EL, RD-R – Dès sa création, l'Institut a situé l'anthropologie physique (spécialement sous l'influence franco-allemande) sur le premier lieu, suivi par les recherches paléoanthropologiques. L'année 1964 a représenté l'année de l'apparition d'une nouvelle « paradigme » (Gheorghiuță Geană, 2005) ... concernant les aspects culturels de l'existence humaine, quand s'est concrétisée « la vision intégrative » – la création du département d'anthropologie sociale et culturelle. Simultanément on a commencé l'apparition des revues roumaines *Studii și Cercetări de Antropologie* (Études et Recherches d'Anthropologie – en roumain) et *Annuaire Roumain d'Anthropologie* (principalement en français et anglais). À l'heure actuelle, sur le plan mondial, on saisit une réorientation vers l'anthropologie comme « une science qui recherche l'humain sous tous ses aspects » (Richard David-Rus, 2013). Comment caractériser aujourd'hui l'activité de l'Institut, les thèmes de recherche en ce qui concerne la connexion entre le biologique et le culturel, la réalisation de l'unité et cohérence de la recherche anthropologique roumaine?

CG – Il ne peut pas exister « culturel » sans « sa base biologique » et l'interaction entre ces deux éléments humains doit être comprise par la vérité qu'en chaque science existent des domaines temporairement prioritaires selon les données et les intérêts du moment historique pour arriver à un équilibre et après ceci la compétition est née, en générant des nouveaux niveaux de compréhension qui. Après mon avis, nous, les anthropologues bio- médicaux, sommes conscients en ce qui concerne l'importance de la part socio- culturelle et les nos recherches la prouvent. L'anthropologie socio- culturelle est devenue le domaine dominant du siècle XX et du début du siècle XXI et alors que celle-ci ne reconnaît plus « le bagage biologique » du comportement humain mais les neurosciences et la génétique moléculaire apportent des preuves incontestables et les activités de l'Institut reflète ces échanges dans la coexistence entre le biologique et culturel.

EL, RD-R – Entre 1974-1990 l'anthropologie roumaine a fonctionné institutionnellement comme Laboratoire de l'Institut « Victor Babeș ». En 1990 ceci redevenait Centre de Recherches Anthropologiques et en 2006 l'Institut d'Anthropologie „Fr. Rainer”. La Conférence *Défis de l'Anthropologie au XXI-e siècle* (en 1998) et le 24ème Colloque GALF *Anthropologie du XXI-e siècle. Projets et perspectives* (en 1999) ont été des événements scientifiques exceptionnels avec un impact positif chez les anthropologues roumains. C'est vous qui a été l'organisateur et coordinateur principal. Ce sont des événements qui prouvent votre effort et préoccupations pour le développement de l'anthropologie roumaine et l'accroissement de son prestige au niveau national et à l'étranger. Comment voyez-vous l'avenir de l'anthropologie roumaine (avec « l'institut vivant » temporairement transféré de son « nid-parental ») ? Le Professeur Geană disait en 2005 concernant l'anthropologie culturelle roumaine « qu'elle continue son existence et les recherches comme *anthropologia perennis*, avec le calme de la conscience réconciliée de se savoir bienvenue au l'empire sans fin de l'esprit ». Est-ce que cette opinion est valable aussi pour l'anthropologie physique?

CG – Moi, je suis par la nature une personne inquiète et passionnée mais, en même temps, optimiste et une adepte des échanges et des défis qui poussent le monde en avant. Selon les fréquences des publications scientifiques avec des ouvertures vers le grand public (mais avec une instruction bien consolidée) qui contiennent des informations anthropologiques, je crois

qu'il sera à nouveau une période d'intérêt en ce domaine dans tout le monde et, implicitement, en Roumanie.

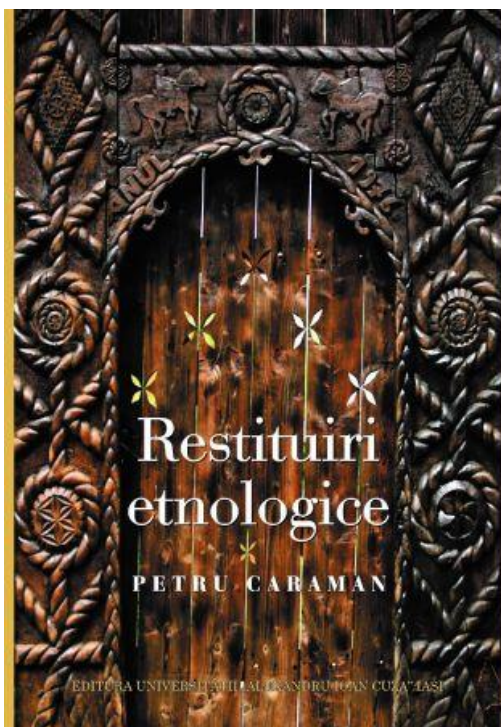


Madame Dr. Cristiana Glavce à une séance publique de la soutenance d'une thèse de doctorat dans la bibliothèque de l'Institut d'Anthropologie « Francisc I. Rainer » de l'Académie Roumaine (2011)

Petru Caraman, *Restituiri etnologice* [Restitutions ethnologiques], Edition sous la préparation de, Introduction et Note sur l'édition par Ion H. Ciubotaru, Maison d'édition « Alexandru Ioan Cuza », Iași, 2018, 689 pp.

Compte rendue par Marin Constantin

Au fil de ses 689 pages, ce tome grandiose offre au lecteur le privilège rare de connaître non pas seulement la profondeur d'une œuvre certaine, mais aussi l'abondance presque inépuisable des directions poursuivies par la pensée de son auteur. En effet, l'ouvrage *Restituiri etnologice* fait achever une véritable récupération de plusieurs études et compte-rendus ethnologiques par l'éminent folkloriste et slaviste roumain Petru Caraman (1898-1980). Il s'agit d'un très exigeant travail de rédaction par un autre ethnologue roumain distingué – le Professeur Ion H. Ciubotaru – dont l'engagement à cet égard fut inauguré il y a quatre décennies, en tant qu'une « mission » de la part de Petru Caraman lui-même (p. 7). C'est grâce au support généreux de toute une série de collaborateurs (Iordan Datcu, Viorica Săvulescu, Gheorghe Drăgan, Ovidiu Bârlea, Livia Cotorcea, Silvia Ciubotaru...) que la matérialisation de ce projet éditorial d'envergure fut possible pendant les années. Une reconnaissance similaire est aussi exprimée à l'adresse de la Maison d'Édition Minerva et la Maison d'Édition de l'Académie Roumaine (Bucarest), de même que pour la Maison d'Édition Junimea, la Maison d'Édition Trinitas de Iași, la Maison d'Édition de l'Université „Alexandru Ioan Cuza” (toutes les quatre de Jassy) (*Note sur l'édition*, pp. 31-35).



La première étude c'est un texte de l'adolescence de P. Caraman, qu'il écrit à l'âge de 18 ans, sur *l'Importance des moulins d'eau dans le passé du peuple roumain* (pp. 39-49). Selon les évocations d'un vieux du village de Vârlezii Covluiuului, l'auteur décrit l'ambiance sociale et culturelle d'autour de ces dispositifs paysans archaïques, vues comme des « carrefours » centrés sur la figure entrepreneuriale de meunier, mais encore des places de jonction sociale pour des villageois de provenance différente et particulièrement pour les jeunes. Les moulins d'eau sont également responsables pour la diffusion de la culture traditionnelle orale (par exemple, les chansons et les contes populaires) entre les régions roumaines.

Dans un ample article - *Des motifs roumains dans la littérature semi-populaire tchèque. Le théâtre de marionnettes « Horia et Cloșca »*, P. Caraman se réfère à l'impact que la Révolte paysanne roumaine de Transylvanie, en 1784, a porté sur la littérature dramatique tchèque du XIXème siècle. Ce qui initialement fut peut-être rédigé en tant qu'une narration à des origines allemands sur les héros authentiques du soulèvement des paysans – Horia et Cloșca – allait être ensuite modifiée dans une version qui fait de ceux-ci simplement des brigands (sous l'influence des textes populaires sur les haïdouks). L'analyse du folkloriste roumain essaie d'établir la version première et les voies de diffusion de telle littérature, à partir du drame écrit par un acteur ambulant, Matěj Kopecký' (pp. 50-66).

ANN. ROUM. D'ANTHROP. 56, pp. 160-164, BUCAREST, 2019

L'étude « *Hoja, Lero, Dolerije – Haileroi, d'aileroi!* » *Un important document folklorique de la littérature de Raguse, sur l'expansion des Roumains à la côté de Dalmatie, la fin du Moyen Âge* fait examiner de telles « exclamations énigmatiques » chez plusieurs écrivains serbo-croates, depuis le Moyen Âge (Dinko Zlatarić, au XVIème siècle), Divo Grundulić et Junije Palmotić (les XVIIème-XVIIIème siècles) jusqu'au XIXème siècle (Ivan Kukuljević Sakcinski, 1858). Alors que les expressions de *Hoja, Lero, Dolerije* sont ainsi associées à des divinités classiques (comme *Pomona, Segesta* et *Pan*), P. Caraman relève leur origine roumaine, en pleine résonance avec le refrain *Haileroi, d'aileroi Doamne* selon les textes de cinq chansons de Noël que l'ethnologue moldave cueillit dans les régions de Ialomița și Dâmbovița, pendant la période d'entre-guerres (pp. 67-89).

En ce qui concerne *La xilogenèse et la lithogenèse de l'homme. Essai sur l'origine et l'évolution des croyances en Europe Orientale*, le folkloriste roumain poursuit le mythe de la métamorphose des êtres humains au bois, selon des légendes et des coutumes et fois roumaines, houtsules, russes et biélorusses pp. 90-123. C'est ainsi que la personnification des arbres apparaît non seulement comme des *survivances*, mais aussi comme la continuation des anciennes croyances sous des formes nouvelles (p. 91). P. Caraman fait distinguer, dans tel contexte, la « xilogenèse », en tant que naissance humaine d'un bois mort, de la « dendrogenèse », vue comme une naissance du bois vivant, par rapport au conte *Tilleul balancé* dans des variantes de Munténie, de Moldavie, de Transylvanie, de même que d'Ukraine, de Russie, et de Biélorussie. « L'hypothèse la plus sûre », suivant Caraman, serait que « le thème de xilogenèse appartient à un ancien patrimoine autochtone, pré-roumain en Roumanie et pré-slave dans les régions slaves » (p. 107).

C'est par l'intermédiaire de *La Roumanité de Bessarabie selon la science officielle soviétique* (pp. 124-145) que P. Caraman exprime son proteste contre à l'occupation abusive de la province roumaine par l'Union Soviétique, en 1940. À l'appui de sa démarche, l'ethnologue roumain utilise les données d'une étude... de l'Académie de Leningrad, signée par L.S. Berg (en 1923) sur *La Population de Bessarabie - composition ethnographique et numéro de personnes*. Après avoir distingué la Région de Hotin (avec une population prédominante ukrainienne), la Région moyenne de la province (où il y a une majorité moldave) et la Région méridionale (avec sa mixture ethnique), P. Caraman compare, dans le contexte, les données d'un recensement de 1897 (cité par Berg) en Bessarabie avec les chiffres du recensement de la Roumanie, en 1930. Le résultat c'est que les Roumains / les Moldaves restent majoritaires dans les deux documents officielles (47,58% en 1897 et 56,2% en 1930), par rapport aux autres groupes ethniques (19,62% les Ukrainiens, 11,71 % les Juifs, 8,05% les Russes, 5,33% les Bulgares, etc., dans le recensement de 1897). Ces réalités démographique sont ainsi considérées par P. Caraman : « Nous pensons qu'en Bessarabie, la dénationalisation de l'élément ukrainien [un fait que Berg soutient] par celui roumain est explicable [...] dans le caractère autochtone et compact de l'élément roumain [dans la région]. » (p. 133). La conclusion du savant roumain est implacable : « Le contraste d'entre le migration – spontanée ou dirigée – de toutes les autres peuples [en Bessarabie] et l'ancienne et la durable présence roumaine dans cette province moldave y apparaît [...] très clairement. » (p. 141).

Une autre étude est dédiée par P. Caraman aux *Portes monumentales de Roumanie* (pp. 146-193), à la recherche des anciens symboles (associés à une « fonction mystique et rituelle ») des portes paysannes en bois de plusieurs régions roumaines. Le folkloriste roumain constate d'abord le caractère de « vestige de la civilisation du bois » que, en Maramureș et en d'autres zones ethnographique du pays « dépasse [en ancienneté] du loin les époques des métaux » (p. 146). P. Caraman dirige son enquête sur deux registres analytiques, voire « L'aspect architectonique » des portes (en six types selon leur symétrie, nombre et hauteur des piliers, le remplacement du bois avec d'autre matériaux, etc.) et « L'ornementation des portes » (avec des symboles apotropaïques engravée, comme les serpents, la croix, l'oiseau de l'âme, etc.) Alors que l'aspect architectural des portes relève une « grande ressemblance avec l'arc de triomphe romain », ce qui aurait conservé éléments de l'ancien sarcophage sur les piliers (p 151), la distribution ethnographique des éléments décoratifs (dans les Montagnes de l'Olténie et de Munténie, le sud de Transylvanie et surtout Maramureș) coïncide avec la cartographie de la colonisation romaine de la Dacie. Dans les mots de Caraman, ce dernier serait un

argument « supplémentaire » quant aux « adhérences originaires des portes monumentales roumaines à l'arc roman de triomphe. » (p. 178).

Le texte suivant – *Sur les modalités de rechercher la ballade populaire. La méthode esthétisante* (pp. 194-203) – comporte une investigation du substrat ethnologique de la chanson populaire roumaine *Meșterul Manole* (en guise d'un commentaire sur un ouvrage que le folkloriste Dumitru Caracostea avait écrit au même égard). P. Caraman soutient dès le début de son article que « Le produit folklorique [...] doit être intégré au milieu rural qui lui a donné naissance. » (p. 194). Dans une perspective comparée, l'ethnologue roumain met en évidence la particularité de la version roumaine par rapport aux variantes sud-danubiennes de la ballade (concentrées sur le sacrifice du personnage féminine Ana), en observant que « La personnalité héroïque du Maître Manole [...] projette son ombre sur toute la ballade. » Un motif comme la recherche de la place appropriée pour la construction du monastère (le thème inaugurale de la ballade), de même que le motif serbe du sacrifice des frères Stoja et Stojan, font relever (selon P. Caraman) le « fond mystique » de la ballade (p. 200).

La malédiction comme expression folklorique d'un complexe affect négatif (pp. 203-253) constitue une exploration d'un vaste domaine folklorique au long de toute l'aire sud-est européenne, dans ses expressions ou variantes connues chez les Roumains, les Bulgares, les Grecs, les Serbo-croates, les Polonais, etc. Selon P. Caraman, « Dans sa forme primaire, la malédiction a apparu en tant que l'émanation la plus pure de la magie de la parole, dans son sens négatif. » (p. 203). Telles « imprécations magiques » peuvent prédire des malheurs ou des épreuves comme « la pauvreté et la misère », « les maladies », « les morts difficiles », « les punitions publiques », à des images-symboles comiques et satiriques, dotées d'un humour grotesque... En saisissant comment les malédictions maintiennent au sein de la Christianité une « ancienne adhésion des éléments religieux », le folkloriste roumain fait remarquer (p. 246) la manière dont « À l'égard des imprécations d'auteur du diable, l'entière Europe nous apparaît comme une zone folklorique unitaire » ; une différence importante c'est ici « la barrière infranchissable d'entre le bien et le mal », propre aux religions monothéistes par rapport à celles polythéistes (p. 247). À la fin de son écrit, P. Caraman se réfère à l'« expression [de type] blasphème » de *haram* (une formule plutôt ambivalente de l'interdiction religieuse et d'un caractère sacré similaire à la notion de *tabou*), diffusée chez les peuples chrétiens sud-est européens à la suite de leur contact avec les Turques.

Quant à l'étude *L'Identification de l'épisode sur « Cupidon et Psyché » dans le roman « Métamorphoses » d'Apuleius* (pp. 254-314), l'ethnologue roumain apporte sa contribution à la recherche de la genèse du conte, en montrant comment le thème de l'époux-dragon - rencontrée chez Apulée (le deuxième siècle chrétienne), de même que dans les contes modernes - « appartiennent à un très ancien strate folklorique ». À la différence des cas communs où les mythes devancent les contes (auxquelles ils sont le « prototype »), cette fois la narration populaire est mythologisée par l'auteur latin. Selon P. Caraman, il serait question d'un type folklorique « plus large », celui de l'époux-animal (un type répertorié par Lazăr Șăineanu, en 1895), relevant d'un « substrat totémique » (conformément à l'interprétation de J.G. Frazer, en 1890) qui fait perpétuer « un phénomène bizarre de psychologie primitive » (p. 279). Peut-être « un écho d'un mode de regarder le monde par un prisme religieux, un mode disparu de l'Europe depuis longtemps » (p. 274), ce thème aurait été transmis grâce à la « migration folklorique » de l'Inde à travers la Perse, le monde arabe et la Grèce (p. 289).

Une étude d'une ouverture particulière, vers la culture traditionnelle arabe, c'est *Les mille et une nuits : chef-d'œuvre de la littérature universelle* (pp. 315-345). Cette fois, le folkloriste roumain s'inscrit dans un effort de reconstituer le trajet éditorial des contes du fameux cycle narratif, avec des origines Indiennes, puis diffusé chez les Persans et les Arabes. Après avoir précisé que *Les mille et une nuits* ne représente pas du tout « une littérature pour les enfants », mais « un monument de littérature raffinée, culte et populaire à la fois » (p. 315), P. Caraman en fait évoquer les premières éditions en langues européennes. Parmi les éditeurs-traducteurs et les exégètes de cet ouvrage classique, du XVIIIème aux XXème siècles, sont des orientalistes comme Antoine Galland (première traduction, en 1704), Joseph Von Hammer-Purgstall, Isaac Silvestre de Sacy, August Müller, Victor Chauvin, Emmanuel Cosquin, etc. Une édition très appréciée pour sa valeur littéraire fut celle de

Joseph-Charles Mardrus (1899), avant des éditions allemande (1921) et russe (1929-1939) du même ouvrage épique.

À l'égard du *Reflexe des arts populaires et du commerce dans le folklore et l'ethnographie chez les Roumains*, P. Caraman rédige une introduction à l'étude dans les métiers traditionnels vus dans leur répertoire en Roumanie (pp. 346-383). C'est ainsi qu'une distinction est saisie entre des métiers habituellement pratiqués par les Roumains (comme le labourage de la terre, la meunerie, la pelleterie, la briqueterie, le taillage de la pierre, etc.), en comparaison avec des métiers rencontrés souvent chez les groupes ethniques minoritaires dans le pays (la ferronnerie chez les Tsiganes, le jardinage chez les Bulgares, la confiserie et la pâtisserie chez les Turques ou les Grecs, etc.) Le folkloriste roumain relève l'agriculture en tant que « le substrat technique originaire » pour beaucoup de métiers pareils (comme, par exemple, la meunerie, la boulangerie, la viticulture, etc.) (pp. 349-350), de même que le rôle de l'urbanisation dans la différenciation technique des occupations comme la confiserie, la pelleterie, etc. En ce qui concerne « l'attitude du peuple roumain envers les métiers traditionnels », P. Caraman propose (p. 357) la définition suivante : « [un métier] c'est l'occupation dans laquelle le paysanne utilise une technique plus compliquée et inhabituelle, l'une qui exige un apprentissage persévérant et étendue chez un artisan consacré ». Il aussi remarque « la réflexion des arts populaires » dans le folklore rituel, le folklore poétique et musical, dans la musique populaire et la prose folklorique, dans la parémiologie, dans les devinettes, dans les enjeux des enfants, dans les croyances et les superstitions, et dans l'anthroponomie. Selon le folklore roumain, les métiers traditionnels représentent un « idéal pédagogique », étant donné leur potentiel de soutenir « le statut d'un homme libre », ainsi que leur présence dans les rituels qui prévoient le destin d'un nouveau-né (pp. 371-378). Enfin, l'ingéniosité des arts populaires fait suggérer leurs « origine surnaturelle », avec des « secrets professionnels » appropriés des êtres fantastiques du monde terrestre ou souterrain (pp. 380-382).

Une contribution ample de P. Caraman vise la dimension ethnographique de Dimitrie Cantemir, particulièrement sur le folklore oriental (*L'ethnologue Cantemir et le folklore de l'Orient asiatique*, pp. 384-450), selon l'ouvrage classique de celui-ci *Historia incrementorum atque decrementorum Aulæ Othomanicæ*. Tel que le fait montrer l'éditeur de ce tome, D. Cantemir prouve une « préoccupation prééminente d'ethnologue, dans le sens le plus large et toutefois moderne du mot » (p. 384), sur des espèces folkloriques très variées (coutumes, croyances, métiers archaïques, mythes, légendes, anecdotes, proverbes, etc.), grâce à ses connaissances érudites des langues turque, tatare et persane. C'est ainsi que D. Cantemir décrit les instruments musicaux turques (la flûte ; un instrument à cordes...), les croyances populaires turques (par exemple, l'astrologie), des coutumes turques (les fêtes publiques, l'usage des dînes publiques ou les *bakchichs*), le folklore juridique (en spécial, les punitions) des turques, les rites de passage et la mythologie démonologique chez les Turques, l'institution militaire turque des *Janissaires*, et des détails sur l'éducation et l'héroïsme militaire des Circassiens de Caucase. Un sous-chapitre important de l'étude se réfère à une « Coutume juridique asiatique ou eurasiatique ? » (pp. 415-435), à savoir le soi-disant « supplice infamant » de la portée publique de quelqu'un coupable sur un âne, avant son exécution (que D. Cantemir cite à l'égard de la punition appliquée au sultan Mustafa le Premier, en 1622). P. Caraman fournit ici plusieurs exemples de la littérature grecque antique (Plutarque, Suidas) puis byzantine (Jean Kinamos, Niketas Choniates), jusqu'à chroniqueur moldave Ioan Neculce, au XVII^e siècle, et à l'écrivain moldave Ion Creangă, deux siècles après. La conclusion de P. Caraman c'est qu'il s'agit d'une « coutume immémoriale, à des origines rurales, puis adoptée par les villes et les états de la région eurasiatique, y compris les Turques. Le folkloriste moldave finit son excursus sur D. Cantemir par considérant celui-ci, à juste titre, en tant que « le patriarche de l'ethnographie roumaine » (p. 450).

La dernière étude signale *Une influence roumaine sur les langues slovaque et tchèque*, en ce qui concerne la présence du « terme éminemment folklorique » de *drak / draci* (au pluriel) aux voies des anciennes migrations pastorales roumaines vers la Slovaquie montagnarde et la Moravie (pp. 451-459). Selon P. Caraman, ce serait une évolution sémantique du sens de « dragon » que la notion de *dracu* eut durant le premier millénaire chrétien, à la connotation de « diable » ou « démon malfaisant », attribuée au même terme à la fin du Moyen Âge. Or, suivant le folkloriste roumain,

« l'emprunt slovaque représente l'influence des bergers roumain migrants dans le monde slave » (pp. 456-457). En fait, ces Roumains furent « graduellement dénationalisés en tant que Tchèque, des Polonais et des Slovaques, jusqu'au leur disparition complète comme nation distincte [...] » (p. 459).

Le volume est couronné par une série de textes compte-rendu (dont quelques-uns ont l'extension de véritables études) que P. Caraman écrivit sur les travaux référentiels dans la littérature ethnologique (pp. 463-630). Il en est question des ouvrages suivants : Pierre Bogatyrev, *Actes magiques, rites et croyances en Russie subcarpathique*, Paris, 1929; Marcu Beza, *Paganism in Roumanian folklore*, London, 1928; Petru Iroaie, *Cântece populare istroromâne* [Chansons populaires istro-roumaines], Cernăuți, 1936; Stanislaw Vincenz, *Pe culmile plaiului. Icoane, gânduri și taifasuri din munții huțului* [Aux sommets des montagnes : des icônes, des pensées et des entretiens dans les Montagnes Houtsules], Varsovie, 1936; Milovan Gavazzi, *Ciclul anual al obiceiurilor populare croate* [Le cycle annuel des coutumes populaires croates], Zagreb, 1939; Ion Mușlea, *Anuarul Arhivei de Folclor* [Annuaire de l'Archive de Folklore], Bucarest, 1942; Ion Diaconu [ed.], *Ethnos. Revistă de grai, studiu și creație românească* [Ethnos. Revue de langue, études et création roumaine], Focșani, 1941-1942; Ion Chelcea, *Rudarii. Contribuție la o „enigmă” etnografică* [Les Rudars. Contribution à une « énigme » ethnographique], Bucarest, 1944; C. Bobulescu, *Lăutari și hori în pictura bisericilor noastre* [Des musiciens populaires et des danses rondes dans la peinture de nos églises], Bucarest, 1940; Antonín Václavík, *Obiceiurile anuale și arta populară* [Les coutumes annuelles et l'art populaire], Praga, 1959; Lutz Röhrich, *Lexicon de locuțiuni proverbiale* [Lexicon de locutions populaires], Freiburg, Basel, Vien, 1977.

Sous le titre de « Arrêts existentiels », le volume se finit par une suite d'illustrations biographiques de la vie, la famille et le travail académique de Petru Caraman (pp. pp. 633-670).

Tel que le Professeur Ciubotaru le relève dans son *Introduction* (pp. 7-29), le livre que nous venons de parcourir c'est le seizième volume (!) d'une riche série qui compose l'œuvre posthume de Petru Caraman, c'est-à-dire une contribution référentielle pour la littérature ethno-folklorique roumaine, dans tous ses domaines de spécialisation (p. 10). Il s'agit d'une ouverture thématique généreuse, absolument nécessaire à tout étudiant roumain en ethnologie, dont la diversité est pleinement prouvée par le tome en notre discussion. Sans aucune intention d'analyser la structure des textes mentionnés ci-dessus, on ne pourrait omettre comment la curiosité constamment vivante du folkloriste est accompagnée par ses connaissances philologiques remarquables au domaine des langues slaves, par son compétence également important à l'égard de l'histoire des peuples de la région, si différents sous le rapport de leur ethnicité, et enfin (quoique non pas moins significatif, surtout au niveau épistémologique), par l'amplitude interprétative de son regard ethnologique.