ACTA UNIVERSITATIS PALACKIANAE OLOMUCENSIS
FAKULTAS PHILOSOPHICA MUSICOLOGICA OLOMUCENSIA IX

REFLEXIONS AND THEIR ACTULIZATION: MUSICAL MANIFESTATIONS ON THE BRINK OF THEIR DEVELOPMENT

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Although we are living in a digital era, our thinking constantly returns to the distant past. From this point of view, this study takes a positive approach to such returns to the past and presupposes that newer elements of activation help to deepen our knowledge about the development of man and society in their relation to manifestations of early music. Such links help to explain the most recent activation elements. We presume that these help to deepen our knowledge about the evolution of man and of society in connection to manifestations of early music. Research into them is complicated not only by the obscurity and complication of historical phenomena in individual parts of the world, moments of relativity that can be found in processes reconstructing thoughts, but above all by the deficit or absence of sources leading directly to a satisfactory knowledge of their origin, creation and development.

Attempts to remedy this deficit can be traced back to the second half of the 19th century. Several hypothetical theories were gradually deepened through gathering information from the process of human evolution as well as from experimental research in different sciences. Sciences in such cases not only exchange knowledge, but also conceptions and methodological stimuli to help clarify the problem.

The process of human evolution is not easy to outline, especially since findings from the Early and Middle Stone Age are fragmentary and patchy (and also by the fact that these ancient ancestors of modern man were most probably not buried). The beginning of this process is connected to the end of the Tertiary (the age of the pleistocene-diluvium 1.8 million – 10.000 B.C.) when the development of higher hominid forms *(Dryopithecus, Pliopithetus)*[1] began. This is attested also by archeological findings of the English anthro-

[1] Hominids belong to the class of primates to which we assign semi-monkeys, monkeys and apes. They are two-legged creatures, a feature which enables them to walk upright. Two families of hominids are recognized, Australopithecus and Homo. From the parentage of Australopithecus the Homo branch separated about 2.5 million years ago, coexisting with Australopithecus for another

pologist Louis Leakey.[2] According to him, the first humans did not appear 800 000 years ago, but already 1 800 000 years ago *(in the early pleistocene).* Leakey, in the Olduvai ravine in northern Tanzania, found fossils of a being which he named Homo habilis, "handy man" (because of his long hands).[3] This creature lived before the well-known Homo sinanthropus, which lived in Africa approximately 1 750 000 years ago, and which is believed to have died out by the year 800 000 B.C. Homo habilis was more mobile, and used tools, as verified by findings in the early layers at Olduvai. These findings have made it possible to trace the development of tools made of pebbles. Homo habilis is nowadays believed to be a direct ancestor of modern man. Fossils of hominids (ancestors of modern man, not of modern species of monkeys) have been found also in Soane in India, in Tschou-kchou-tien, close to Beijing, and on the island of Java.

The evolution of modern man (i.e. of his ancestors from the class of hominids) was closely related to his acclimatization and adaptation to the changing conditions of fauna and flora (a severe decrease of temperature, when part of the rain forest was replaced by a landscape without forests), the way of obtaining and keeping food (transition from collecting of bark, roots and grass into hunting) and positional changes of the body (motion began to be connected primarily to the ground). The development of the physiological functions of primaeval man did not happen in supposed isolation, or aimlessly, but in cooperation with his life practice, psychological sphere, and a process of adaptation which mutually stimulated the development of higher neural and cerebral activity (in basic cognitive relations, primaeval man began gradually to orientate himself from subconscious reception of stimuli, to distinguish between identity and difference, and to apply ingenuity to performed activities – e.g., when hunting animals, he began building traps such as pits, which inevitably required organizational capacities).

The oldest texts concerning music are often connected with different divinities, which are found in myths, legends, tales etc. Musical performances are described in these as things finished or added. For historical cognition of phenomena these are insufficient, for they do not solve the puzzle of music's origin (however, they may have a certain foundation as stimuli for understanding the beginnings of man's process of cognition). Further, we can mention attempts to explain the birth of music by primaeval man attempting to copy the sounds of nature that surrounded him (animals, birds etc.), and supplement them with the following explanations.

We assume that primaeval man himself made sounds before he began to imitate them. In the first stages he was enabled to do so with his larynx, a simple respiratory organ (he emitted so-called distinct sounds). The palette of sounds he heard was probably wider than the group of sounds which we most often take to be the stimuli he was led to imitate. He must have heard the rustle of the forest, the murmuring of the wind and streams,

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1.5 million years. The most evident differences lie in Homo's larger brain, more delicate jaw, and his differently located vocal cords that permitted the birth of language.

[2] See: Mary Leakey's Works (1979), including Olduvai Gorge: *My Search For Early Man*.

[3] Fossils are absent from the period between 10 million and 5 million years ago.

waterfalls and the splashing of waves on the seashore. The sounds of nature activated an instinctual increase of his auditive impressions, enabling individuals to gain new acoustic experiences of life, and their "storage" gradually became an ever more vital source of hearing activation, enabling him to make distinctions of intensity, dynamics, colour and motion. This helped to form his signal and audial palette in general.

After all, the human auditory organ is not different in principle from the same organ which we find in so called higher animals. However, compared to man, these often have a far finer auditive sensitivity at their disposal, which serves their survival. This was manifested e.g. in the Indonesian tsunami cataclysm of 2004, when the majority of animals fled to security (though 300 000 people died). Neither should we omit the fact that the beginnings of auditive manifestations are most often observed in the male population (this can be linked with the role of primaeval man making his living by surviving the pitfalls of life, and by the former important role they played in ancient communities-which still can be seen in some current cultures), although the newborn infant communicates through his cry with his mother, and she replies with communication and care.

It is a known fact that some current cultures and tribes (e.g. Tierra del Fuego, Vedds) living in primitive conditions have no musical instruments though music exists amidst them. This fact, although in a different transformation and context, is reflected also in "Stomps" – a current music-dance-performance group, having been taken up through its performance in many of the world's musical centers.[4] The musical instruments of this group are represented mainly by everyday items: at their performances the group uses brooms, shovels, different kinds of PVC bottles, lighters, foldaway chairs, pot-lids, newspaper, sand and rubber hoses, as well as their own bodies. Their programmes are built on the rhythmic component of music and on features of theatre performance. Their stimulating rhythms, creativity in motion, and the joy of the performers of the group in presenting these rhythms on simple instruments diffuse a pleasant "opium" from the stage which immediately affects the audience, even though they do not use any sound system.

Man has not reached his current place in evolution through his physical capacities, but through his sociability. The only way for him to survive and be protected against the attacks of carnivores was to live in community and in cooperation within this community. During the stages of evolution, man was obviously not only a hunter but also a hunted prey. Robert W. Sussman, an anthropologist at the University of Washington, arrived at this theory at the beginning of the 21 century. He claimed that this theory is supported by many fossils which scientists have not been able to make correspond with the theory of man as hunter. Sussman and his team studied 7-million-year-old fossilized deposits, comparing these to modern theories of the evolutionary progress. For their more detailed research they chose Australopithecus afarensis, a predecessor of man living 5–5.5 million years ago. Australopithecus afarensis was a so-called border specimen, able to live in trees as well as on the ground. This was also the first argument of Sussman, since primates which are border specimens are prey, not predators. Another argument which supports

[4] On 12 May 2005 they appeared also in Bratislava at the Istropolis theatre.

the hypothesis that man was once a prey and not a predator – a hunter – are the teeth of Australopithecus. They were not suited to the consumption of meat (herbivores have more robust grinding teeth enabling them to grind herbs effectively). Ancient humans were simply unable to eat meat. Ancestors of modern man were not able to eat meat in larger quantities until they explored the possibilities of fire and cookery. In the times of A. afarensis there were many more predators living on the planet than today. People protected themselves only by their wits, their nimbleness and their life in groups (in communication they used simple visual mimics, gestures, sound signals: it was the time of the origins of abstract thinking). This is supported by the research of Jamas Rilling of Emory University (Atlanta), who by observing cerebral activity came to the conclusion that people consider cooperation to be beneficial, and react negatively to reluctant cooperation. In this lies the difference when comparing to the chimpanzee – when in need of help, chimpanzees do not seek it among their group.[5]

One of the goals of genetics is to find those DNA sequences which are specific to homo sapiens, or at least those sequences that are very different from the corresponding sequences among other primates and mammals – in other words, the sequence which makes man the most intelligent of the primates. Scientists at the University of California at Santa Cruz have been very successful in demonstrating these differences. An international scientific team (USA, Belgium, France) under the leadership of David Haussler has successfully sequenced the DNA of a chimpanzee, and compared it with the corresponding sequence in the human gene. The researchers found a DNA sequence in which we differ from chimpanzees (and other primates) in the rate of changes, which occurred after the separation of our evolutionary stems. The identified area in human DNA develops unusually quickly when compared to that in other primates, where it has remained the same. This gene has been labeled HAR *(human accelerated regions).* The function of this sequence obviously contributes to the development of the human brain in embryos between the 7th and 9th week of pregnancy. The scientists have also discovered that HAR is a part of a larger DNA sequence which is transcribed into RNA in the brain. According to the scientists this protein helps in the development of the embryo to found the architecture of the brain, which basically indicates that these dramatic changes do not occur only with the above-mentioned gene but also with the cerebral cortex. The cerebral cortex controls some complex functions of the brain such as language or information processing.[6]

Some of the theories mentioned above are connected with the imitation of sounds from nature (especially of birdcalls and birdsong). Since the 1960s these reflections have to a certain extent been supplemented by the results of the research performed by the Hungarian ornithologist P. Szőke, who has studied the acoustic communication system of animals and man. In his experiments he has focused on the acoustic communicational manifestation of birds (as well as on other sound sources), and has recorded them on

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5 See: Rilling, J. K: *Algometric departures for the human brain provide insights into hominid brain evolution*. In: Behavioral and Brain Sciences 2001, 24: 292–93.

6 Haussler, D.: *Har 1: brain gene that evolved rapidly in humans*. In: Nature, Aug. 16, 2006.

specially designed devices. He has further recoded the recordings via sound techniques as sound signals at a pitch audible to the human ear. This has enabled him to differentiate the sounds in more detail and code them as notes. Szőke's experimental results can be viewed as a certain proof of a non/differentiation of the interval movements in the acoustic performance of birds by the human ear (our hearing organ is not fine-tuned to perceive and differentiate between all acoustic signals). However, these findings do not render invalid ideas connected with the notion of imitating birdsong (questions linked to the origin of music were not the principal interest of the researcher).[7] This problem is from time to time deepened by new stimuli and new predictors, strengthening the view that birdcalls might in some individuals have activated unconscious "protoaestethic" impetuses. The instinctive hearing of sound signals and a peculiar "self-observation" may obviously have stimulated the increase of impulses and impressions in a human subject, particularly when an individual was unable to imitate the given sound model. We encounter similar phenomena in some individuals nowadays who cannot imitate even simple melodies they hear, despite the fact that these attract their attention.

The English amateur musician, poet and priest John Frederic Rowbotham[8] found inspiration in the music of the aboriginal inhabitants of Tierra del Fuego, and the songs of the Samoancou, which still remained in a monotonal and bitonal period. He held the opinion that music is based on rhythmical sound "the one who as the first ever beat two pieces of wood penetrated the greatest mystery of nature. He discovered rhythmical sound, a mighty mystery, the root of the whole art of music."[9] The ideas of this English thinker strongly influenced the music pedagogy of the late 19th century, and were introduced into teaching mainly by Satis N. Coleman, Robert W. Claiborne and Fannie R. Buchanan.[10]

Presenting these problems leads us to presume that so-called short repeated signals continuously developed into so-called "shout" parlandi, recitation or declamation, and were one of the important milestones on the way to the origins of music (we cannot pinpoint their place of origin, even today). Such sounds were probably emitted with strengthened exhalation through an open mouth, or through wailing, shouting etc. To such crucial signs, there were later added accented sounds, changes of time interval, excited expression, improved pitching etc. Repeated acoustic performance may also have helped to create stimuli for group semantic meaning in the subconscious of human beings in distant antiquity. This was deepened by miming, by gestures, etc. This helped to express more effectively desires, emotions, in efforts that were probably made even before the establishment of language (experiences from motoric activities – from performed working

[7] See: works of P. Szöke.

[8] Rowbotham, J. F.: A *History of Music to the Time of the Troubadours*. 3. vol. London 1885–7, 2. edition. New York 1893.

[9] Ibidem, p. 26.

[10] Works by the authors here cited: Coloman, Satis, N.: *Creative music for children: a plan of training based in the natural evolution of music, including the making and playing of instruments*. New York 1922, 1928. Claiborne, Robert, W.: *The way man learned music. I*. New York 1927. Buchanan, Fannie, R.: *How man made music.* Chicago 1936.

acts, from life practice and dance were projected; but also those from reflective activity and heart rate). Among other things, their manifestation brought to the fore human playfulness,[11] which was applied more distinctively in different magic rituals often connected with motion, dance etc. From the point of view of processes of communication, one can observe more distinctively the reality in which acoustic and motion performances are perceived not only as supporting means of expression, but also as representing signs and gestures, mediating information which finds its final and perfect form in language.[12]

Short acoustic expressions obviously also became impulses for contemplating more powerful sound sources. In ancient times these were not only different types of pipes, but also drums acoustically capable of transmitting agreed meanings over larger distances (approx. 90 minutes on foot). As drum signals we can also categorize drum tonal languages, created by opposing two sounds of distinguishably different pitch (for example high, medium, low, combined from high and low etc.). These express the difference in pitch between syllables (presumably known if a mutual comprehension of tone signals is to occur). Tone drum language is more colourful in expression than simple drum sound signals, and when transmitting semantic meaning, it requires at least 2 instruments of different tonal pitches. The distinguishing feature is the tonal pitch (and not temporal durations; we can find analogies also in languages that exploit different tonal pitches of vowels, e.g. among African tribes, in the languages of Native Americans, etc.), which becomes the vehicle of semantic information in an acoustic form. Drum tone language is basically a stylized musical sound, which can be seen as a parallel to stylized paintings in the Magdalenian era. Drum signals mediate certain messages to the addressee, manifestations of intergroup communication. In ancient times they also served the whole society as communication, being accessible to all members of the community, a society which we nowadays call its medium. This stage of development can be also termed a "prototonal communication", which was used along with protomusical signals and prearticulational ways of mediating information.

Inchoate manifestations of music at the same time importantly indicate a certain level of relational thinking where identity and difference coexist. The fact that we can speak about elements of contradiction already at this stage of the evolution of human society, in the process of distinguishing musical signs and meanings, is by no means exceptional, because man recognized the signaling functions of sounds from the early prehistoric levels of his evolution. However, rational awareness of this, and its cultivation, most probably intensified in later periods – more distinctively in the time of the onset of clan-based societies. In these, people strived to emphasize their typical sound attributes, melodies, musical instruments, tone colour, etc. They greatly treasured their accepted musical attributes

[11] Defenders of game theory included H. Home, A. Pope, Plato, F. Schiller, W. Wundt and others.

[12] Scientists assume that language and thinking developed mutually. Language originated about 100 000 years ago when Homo sapiens left Africa. The first written evidence of language dates from 5000 B.C. The oldest graphically recorded messages took the form of pictures. These gave birth to pictograms – systems of picture writing – abstract illustrations of objects.

against "foreign" musical sound values,[13] which they considered not only strange but even hostile, owing to the collective consciousness of clan-based societies and their avoidance of secondary characteristics. Examples are offered by the well known names of scales in antiquity, named after particular Greek tribes (*Dorian, Phrygian, Lydian etc*).

Although nowadays we consider music to be a universal means of communication, one should perceive music in the context of the conditions at particular levels of evolution, within coordinates (so as a diachronic-synchronic continuum and discontinuum) showing the development of customs, and their relative simplicity. Nor should we omit the fact that musical activities were not perceived as activities different from any other human activity, but formed an integral part of them. Primitive music obviously had certain social functions, but it served primeval man not solely for amusement, nor was it something elite, especially when he had to battle for everyday survival, merely to live. It is also true that when overcoming some problems of everyday life, and in satisfying the inevitable needs of the people of those ancient communities, miming was dominant, but evolving forms of observation and thought were also inseparably united with it, as were ways of passing on acquired skills, which are manifestations verified through the practical experience of a member of the community.

This finding is supported also by investigations into the cave paintings made by primeval man, which reached their peak about 12.000 B.C., as well as by archeological findings. They provide evidence of our ancestors and their symbols as well as of basic conceptions of human evolution. Understanding of their importance increased only after the middle of the 19th century when the first scientific researches were made into man, his origins, etc. The results of this research are represented especially in museums, where a great many collections are filled with ancient manifestations and signs, reflecting the work of people from primitive cultures and from the primitive tribes of the whole modern world.

To compare the level of cave paintings with sound signals of the people from remote antiquity is obviously unrealistic, even nowadays. We can only make assumptions about the sounds actually made by people in antiquity (as we have mentioned above) since there were no means available then to record sounds. The dissemination of sound was passed on only by auditive and visual "observation" (the coding of music into more permanent signs progressed via a long and intricate evolution: the oldest notation was probably created by the Chinese and Indians, and for us it is the notation of ancient Greece that has practical importance). At this level of human communication one obviously cannot speak about the existence of autonomous artistic creation, about aesthetic consciousness, or about specific artistic experiences and educated reflection, etc. But a certain justification can more or less result from the passing on of acquired skills from generation to generation, which is most probably reflected in representations of "devotions" or of observed activities, etc. To judge by the cave paintings that have been found – caves were, more or less, the dwellings of these ancient communities – but also to judge by the level of

[13] Szabolcsi calls them "national coats of arms". See Szabolcsi, B.: *Dejiny hudby*. Bratislava 1962, p. 9.

their artistry (although it is not easy for contemporary man to understand the mentality of primeval man and his rock paintings), we can to a certain extent speak of a specific "aesthetic consciousness" and perhaps even "experience" (also due to the fact that we know nothing about their thought or their attitude to their creations). They mainly reveal illusion mingled with observation, and miming with an awareness of the magic powers that enriched the world of human ideas.[14] In the last analysis, humans have an innate desire for gaining knowledge. In the evolutionary process in which modern man observes and listens to the sounds of his environment, miming and so on has played an important role. We might even say that the ability to distinguish sounds must have played a vital role in the life of primeval man, and thus had existential value. We know today that sound arises through vibrations in matter, and is subordinated to the laws of physics. Music is primarily a phenomenon of sound, a sound shape that is generated and then ceases to exist. Its track in our memory remains incomplete, because perception of sound is determined by the subjective ability of each individual as well as by different perceptual dispositions. Its perception is thus not only unreliable but also short-term, especially if it is not stored in the memory of the interpreter or the recipient. To overcome this problem, men in antiquity were seeing different forms of notation (almost since the time of birth of literature: the oldest notation was most probably created by the Chinese and Indians) for recording and thus preserving sound shapes which is, even today, recognized as only partial, and not wholly equivalent to sounding music. But despite this admitted deficiency, there is an important point of difference from oral tribal culture (characterized by perception via hearing, described as the world of the ear) and the material fixation of creation (in which acoustic perception is broadened by visual perception). This new actuality gradually stimulated both the invention of printing and the creation of musical notation. Step by step, this reality has changed the world completely in which now there is available for use the long efforts of very many human beings in antiquity, communities seeking to pass on their experiences, knowledge and values via gestures, miming, signs and acoustic signals, up to their modern permanent form. They represent an important line in the history of interhuman communication, in seeking ways of mediating information, and developing them further via multiple modern sources.

[14] Andres Lommel in his work (*Prehistorické primitívne umenie*. Bratislava, Pallas, 1972, p. 19) stated: "Nobody denies that cave paintings are great, unique works of art and yet very many of us do not want to admit that those who created them were people of outstanding intellectual capacities, that they were great artists comparable to artists of historical times."

DIE REFLEXIONEN UND IHRE AKTUALISIERUNG: ANBRÜCHE DER ENTWICKLUNG DER MUSIKKULTUR

Zusammenfassung

In den ausgewählten Zusammenhängen werden die neueren Aktivationsfaktoren dargestellt, die uns helfen, die Erkenntnisse über die Entwicklung des Menschen und über die Entwicklung der Gesellschaft in Bezug auf die anfänglichen musikalischen Ausdrücke zu vertiefen. Die Reflexion orientiert sich auf die alte Kultur in der Entwicklungsbeziehung Mensch, Musik und gesellschaftlicher Fortschritt.

REFLEXIE A ICH AKTUALIZÁCIE: POČIATKY VÝVOJA HUDOBNEJ KULTÚRY

Zhrnutie

Vo vybraných súvislostiach sú vykladané novšie aktivačné činitele, ktoré napomáhajú prehlbovať poznatky o vývine človeka, vývoji spoločnosti vo vzťahu k prvopočiatočným hudobným prejavom. Reflexia je orientovaná na dávnu kultúru vo vývojovom vzťahu človek, hudba a spoločenský rozvoj.