

Ukraine/УКРАЇНА

Inna Potekhina

Introduction: a history and current state of physical anthropology in Ukraine

As in many European countries, the history of physical anthropology in Ukraine began in the second half of the 18th century when the first works about the physical features of the local population were published. From the very beginning, physical anthropology was integrated with palaeoanthropology and ethno-historical anthropology. The earliest pages of the history of Ukrainian anthropology were connected with Professor M. Maksymovych, the first Rector of Kiev University, who published a paper on the question of human origin in 1831. Further contribution to physical anthropology in Ukraine was made by P. Chubynsky, who was awarded the golden medal in Paris after he published, between 1872 and 1879, seven volumes on the different local groups including physical anthropological data.

An important scholar in the foundation and development of Ukrainian physical and ethnic anthropology was Hvedir Vovk (Fedor Volkov, 1847–1918), a prominent representative of European science who emigrated from Ukraine to France because of his political democratic views. Vovk successfully defended his dissertation, ‘The skeletal changes of the foot in primates and human races’, at the University of Sorbonne in 1905 and was awarded the great medal of P. Broca and the annual prize of E. Goddard. While in France, Vovk, with the support of his French colleagues, managed to organize anthropological research with Ukrainian material. He continued his researches at St Petersburg University, and his analyses resulted in his fundamental works on the physical characteristic of different groups among the Ukrainian population (Vovk 1908; Volkov 1916). In Soviet time his works were forbidden, but in the post-Soviet period they received their due recognition.

In the 1920s and 1930s, followers of Vovk’s ideas (O. Alesho, M. Rudnitsky, I. Rakivsky and S. Rudenko) founded anthropological scientific societies at the universities of Kiev, Kharkiv, Odessa, Dnipropetrovsk and Lviv. These universities began to accumulate skeletal collections. At this time Ukrainian anthropology made progress, but its normal development was restricted by Stalin’s purges with regard to anthropological research. After the Second World War, no anthropological centres remained in Ukraine, since some scholars were killed during the war or died in Stalin’s camps, some ceased their research in order to avoid prosecution, and others emigrated to the West.

A new phase began in the mid-1950s when the Anthropology Group was established in Kiev at the Institute of Art, Folklore and Ethnography at the Academy of Sciences of the USSR. From this time onwards, regular expeditions collected anthropological materials, including skeletal collections from archaeological excavations. The first volume of the journal *Anthropological Materials of Ukraine* (Матеріали з антропології України) was published in 1955. A new generation of Ukrainian anthropologists with both historical and biological backgrounds (E.I. Danilova, V.D. Dyachenko, G.P. Zinevich, S.I. Kruts, R.A. Starovoitova, S.P. Segeda and I.D. Potekhina) worked in collaboration with the best representatives of the Russian anthropological school and colleagues from Latvia, Lithuania, Georgia and other Republics. Their research on the origin, evolution and physical characteristics of the ancient and contemporary populations of Ukraine resulted in numerous articles and monographs (Danilova 1965; Dyachenko 1965; Gokhman 1966; Konduktorova 1973; Kruts 1972; Starovoitova 1979; Zinevich 1967).

In the 1970s the *Матеріали з антропології України* Anthropology Group moved to the Institute of Archaeology, Academy of Sciences of the USSR, where it was transformed into the Palaeoanthropology Section. The participation of anthropologists in archaeological excavations in the steppes of Ukraine resulted in the analysis of numerous skeletal remains from isolated burials, cemeteries and burial mounds (kurgans) of different historical periods dating from the Palaeolithic to the Late Mediaeval period (Danilova 1979; Dyachenko 1986; Kruts 1984; Pokas 1987; Potekhina 1983, 1990; Telegin and Potekhina 1987).

After the collapse of the Soviet Union the situation in East European anthropology, including Ukrainian anthropology, significantly changed. Important new processes took place in the scientific community, and in particular among those studying the prehistoric populations of Eastern Europe. Scholars from Ukraine and other former Soviet Republics took the opportunity to discuss the problems of Eastern European prehistory freely without ideological limitations. Foreign scholars received easy access to anthropological collections from the territory of south-eastern Europe, including Ukraine, and started to undertake analysis of skeletal materials. Researchers all over the world were able to discuss their problems not only at international conferences, but also by participating in joint research projects. Scholars today are invited to undertake research on Ukrainian archaeological and anthropological collections from the different historic periods, which are among the richest in Europe. A good examples of such collaboration is the participation of Ukraine in the 'Global History of Health' Project, an international research programme aiming to reconstruct and interpret human health based on the study of ancient skeletons from around the Globe (Figure 41.1). Another example of collaboration is the work undertaken abroad regarding radiocarbon dating and stable isotope analysis providing, respectively, new chronologies and dietary reconstruction of prehistoric populations and cultures (Haeussler and Potekhina 2001; Lillie and Richards 2000; Lillie *et al.* 2009; Potekhina and Telegin 1995).

Logically, all these circumstances in combination have enabled substantial progress in our understanding of the ethnic-cultural processes, bio-cultural adaptation and other aspects of human history. Although the number of publications has increased in recent years, the general results differ much from those that were expected. Many of the recent publications seriously contradict the established pillars of previous studies conducted ten or twenty years ago. Very often the reason for such disagreement lies in the underestimation of the complicated processes of historical development, such as cultural interactions and mass migrations of the populations of Eastern Europe. The success of future collaboration may be guaranteed if researchers specializing in European and regional archaeological, cultural, historical and physical anthropology work together to avoid the misfortunes of some of the projects carried out in the post-Soviet period.

Currently all Ukrainian anthropologists are concentrated in Kiev at the Department of Bioarchaeology of the Institute of Archaeology, National Academy of Sciences of Ukraine. Besides physical anthropology, scholars are working on the problems of the origin of the population, population genetics, genetic relations, palaeopathology, palaeodemography, and bioarchaeological reconstructions of the ancient populations of the Mesolithic and Bronze Age (Potekhina 1998a, 1998b, 1999), the Iron Age and the Early Mediaeval period (Nazarova 2006; Litvinova 2000; Rudich 1999), and of the time of the Ancient Russ (Kozak 2000, 2005; Kozak and Potekhina 2002; Potekhina and Kozak 1999; Rudich 2002). Currently, theoretical and practical classes in physical anthropology are taught by I.D. Potekhina and O.D. Kozak in the National University 'Kiev-Mohyla Academy'.

Ukrainian skeletal collections

Skeletal collections are housed in the anthropological stores of the Department of Bioarchaeology, Institute of Archaeology, Kiev. They comprise skulls and post-cranial bones from approximately 20,000 burials. Different periods and cultures from East Europe dating from the Epipaleolithic through to the Late Mediaeval period are represented by these collections. The populations that comprise the collections derive from a variety of ecological environments and different socio-economic status. The skeletons have rather good preservation, they have been fully documented archaeologically, and have been analysed for age-at-death and sex determination.

The Late Mesolithic and Neolithic periods are represented by over 320 crania and many more post-cranial elements. The remains were obtained from 12 Late Mesolithic-Neolithic cemeteries from the East European Steppe zone, in the Dnieper River Basin region, and belong to the Dnepr-Donets cultural community. Collections from seven Neolithic cemeteries, Yasynovatka, Dereivka, Nikol'sky, Osipovka, Vasil'evka V, Mar'evka and Kapulovka, are stored in Kiev, at the Institute of Archaeology of Ukraine, and another five (Vilnyanka, Vovnigi 1 and 2, Vasil'evka 2, Hospitalny Hill) in Moscow and St Petersburg. According to the recent radiocarbon dates from the Oxford and Kiev laboratories, these cemeteries date from the seventh through to the fifth millennia BC. The Neolithic skeletons from the Dnieper Rapids region belong to the massive, hypermorphic, proto-Europeans (Potekhina 1998b). Their economy was based upon the exploitation of a hunter-gatherer regime, where fish was an important component of the economy. According to the results of recent stable isotope analyses, these populations consumed protein-dominated diets (Potekhina 2000; Lillie and Richards 2000).

Radiocarbon dating of human, faunal and fish skeletal remains from a number of the Dnieper Rapids cemeteries has demonstrated the presence of a radiocarbon reservoir effect during the Neolithic-Enolithic periods. The data suggests that the radiocarbon reservoir effect is only evident during these periods, and not in the earlier Epipalaeolithic-Mesolithic periods, prompting the suggestion that the effect is associated with elevated fish consumption, and possibly even linked to shifting hydrological regimes in the Black Sea region (Lillie *et al.* 2009).

These Early Neolithic collections are today very important in the current discussion of the question of the Neolithization of Eastern Europe. Recently, a suggestion was made that the populations of the Dnieper-Donets culture may have been focusing on a cereal/grain-intensive subsistence economy as early as the seventh century BC (Jakobs 1994). The arguments were based on stable isotopes, palaeopathological evidence and comparative analysis of skeletal populations of the Mesolithic and Early Neolithic populations. The results are interesting, although this new model contradicts the generally accepted notion about the time and place of agricultural dispersions in the Old World, especially taking into account that the first cultivated cereals were first brought by representatives of the Bug-Dniester and Linear Pottery cultures who appeared in the North Pontic region no earlier than the fifth millennium BC (Potekhina and Telegin 1995).

The Ukrainian Eneolithic period is represented in our collections by human skeletal remains from the Trypillia and Usatovo cultures as well as from the cemeteries of Igren and Dereivka II, which belong to the Sredny Stog culture (Telegin *et al.* 2001). The collections are not numerous, but they are rather interesting because they represent the first farmers and steppe cattle-breeders in Eastern Europe. Besides, the bearers of Sredny Stog culture made an important impact into the development of the world civilization by domesticating and saddling a horse as early as the fourth millennium BC. The steppe of the north-western Black Sea Littoral is represented by the collection from the Eneolithic cemetery of Mayaki that is attributed to the Usatovo culture. It is characterized by the expansion of cattle-breeding at the beginning of the third millennium BC. In general, the Eneolithic collections include both the massive proto-European and more gracile Mediterranean anthropological groups (Potekhina 1983, 1990).

Bronze Age populations are represented in the collections by the burial-mounds of the Pit Grave, Catacomb, Srubnaya and Poly-shafted Ware cultures. The collections of the Pit Grave culture represent the heterogeneous population of the second half of the third millennium BC. They originate from the steppe zone and a partially wooded steppe in Ukraine. People of the Pit Grave culture had a cattle-breeding economy and belonged to the robust East Mediterraneans with very narrow and high faces (Kruts 1972). The mixed type of economy – both pastoral and farming – characterizes the Catacomb culture. Materials from about 100 burials are available from Catacomb steppe zone cemeteries, dated to the first half of the second millennium BC. The skulls are very robust and broad-faced. Besides, there is the combined collection of 50 skeletons from the steppe burial-mounds, or kurgans, of the Srubnaya culture (Kruts 1972). People buried in these kurgans were pastorals and lived in the 18th to 16th centuries BC. A total of 90 skeletons of the half-sedentary and half-nomadic tribes of the Poly-shafted Ware culture represent the Late Bronze Age and also come from the Dnieper Basin region. It is worth mentioning also that there are 60 skeletons of the Tshinetskaya culture from a partially wooded steppe and wooded area from the Middle Dnieper region, Kiev district (16th to 12th centuries BC).

In the Iron Age, the Scythians, a stock-breeding tribe, populated the steppe zone north of the Black Sea. The general number of Scythian skeletons from the different regions of Ukraine is about 700. The Scythian remains that are stored may be classified into three large groups. The first group includes 100 burials from the left bank of the Dnieper River (Zaporozh'e and Kherson districts). The second group includes 50 skeletons from the territory on the right bank of the Dnieper; and the third group of 30 skeletons originates from the north-west Black Sea Littoral. In addition, 300 skeletons of the Scythian culture are available and derive from the Mamaj-Gora kurgan in the Lower Dnieper region (Litvinova 2007). There are also two collections of this time period from the Crimean peninsula. They represent the rural population of Zolotoye and Ak-Tash and comprise a total of approximately 70 skeletons.

The Antique Period is represented with numerous skeletal remains from towns once colonized by the Greeks in the territory of the north Black Sea Littoral and the Crimean peninsula. The material dating from the first to the fourth centuries from Olviya, Berezan', Khersones and other sites demonstrate the heterogeneity of the population (Nazarova 2006). Skeletons of the Chernyakhov culture, also present in the collection, represent agriculturalists from the third to fifth centuries from different regions in Ukraine (Rudich 1999).

The mediaeval collections are the most numerous and representative. They originate from the steppe and wooded zones, as well as from Crimea, and represent both rural and urban populations dating between the tenth and 17th centuries AD (Kozak 2000; Litvinova 2000; Pokas 1987; Rudich 2002). In addition, the stores contain skeletal material from Late Mediaeval nomads from the territory of the Dnieper Basin steppe, the Azov Sea Littoral and the north Crimea.

ARCHAEOLOGICAL HUMAN REMAINS AND LEGISLATION

Archaeological legislation

As an emerging country, Ukraine did not have a national legal framework until 1991. Legislation effective on the territory of Ukraine before 1991 consisted in a limited number of legislative acts from the USSR. Thus, the Ukrainian legislative framework regulating aspects related to physical anthropology is very young, and after more than 15 years of independence we are still in the process of lawmaking.

The requirements determined by the laws 'On the Protection of Cultural Heritage' and 'On the Protection of Archaeological Heritage' (hereinafter referred to as the 'Law') and other regulations are explained below.

The law 'On the Protection of Cultural Heritage' is focused on legal, social and economic measures of cultural heritage protection. It determines the state organs (government, central and local executive) responsible for the protection of archaeological materials. The law declares that the cultural heritage located in the territory of Ukraine is protected by the state. Its protection is considered to be priority for the government. Until now this provision, however, has been no more than a simple declaration since there is no mechanism to enforce it. At the same time there were some attempts to envisage a legal framework required to enforce the law by adoption of several legislative acts.

According to Article 10 of the Law, only archaeologists with relevant practical experience are entitled to conduct scientific investigations of the archaeological heritage. Archaeological excavations and research of human remains may be carried out provided that there is authorization from the executive organ for the protection of cultural heritage. In order to get this permit it is required that an official document (an 'open letter') is issued by the Institute of Archaeology of the National Academy of Sciences of Ukraine (hereinafter, 'Institute of Archaeology'). Archaeological research conducted without an 'open letter' and permit of the authorized organ is deemed illegal. The 'Criminal Code of Ukraine' sets forth sanctions for conducting illegal archaeological excavations. According to the Institute's regulations, archaeologists conducting fieldwork must submit a scientific report to the Institute of Archaeology after the excavation has been completed and before the following excavating season. Archaeological and anthropological reports are archived at the Institute of Archaeology.

The archaeologist to whom the 'open letter' has been granted and who therefore has authorization must direct the archaeological excavation. The archaeological project must be undertaken, however, by the Institute of Archaeology, scientific institutions of the National Academy of Sciences of Ukraine, departments of archaeology, state universities or museums that have archaeologists among their staff.

It is the Institute of Archaeology that is the only scientific institution in Ukraine to issue permits for archaeological and anthropological research on national territory. It organizes and arranges all kinds of scientific research of the 'archaeological heritage', and develops, approves and introduces scientific methodology for anthropological research, providing expertise, issuing reports and ensures the appropriate storage facilities for the human remains.

HUMAN REMAINS AND LEGISLATION

It was not until 2000 that Ukraine adopted the first law determining general principles for the treatment of human remains. This law was the first step on the way to create a framework in

this area. Although the law contains no direct reference to human remains, the definition of the term 'cultural heritage' includes burial mounds, cemeteries, kurgans and other places of burial. Therefore, it would be logical to assume that under this law, skeletal remains (found in such 'burial mounds, cemeteries, kurgans ... ') are subject to legal protection.

The first direct reference to human skeletal remains as an object of legal protection is given by the law 'On the Protection of Archaeological Heritage' which was adopted by parliament in 2004. What does the term 'archaeological heritage' mean? Its definition is quite vague, but it includes sites, buildings, complexes and territories created by Man that have archaeological, anthropological and ethnographical significance. 'Archaeological heritage' would cover skeletal remains as an object of legal protection. The law determines the principles and requirements of scientific research of the archaeological heritage, sets requirements for reporting and establishes other responsibilities for those undertaking the research.

Provisions of the law 'On the Protection of Archaeological Heritage' are further developed in the legal act of the local legal force: 'Regulations on methodology of archaeological research and the reporting procedure' (hereinafter referred to as 'Regulations') approved in 2008 by the Scientific Council of the Institute of Archaeology, National Academy of Sciences of Ukraine. This document was an attempt to fulfil the existing gaps in legislation regarding the procedure following the discovery of human remains, any research undertaken on them and their protection. It is worth highlighting, however, that some provisions of the Regulations which establish responsibilities for those conducting research can hardly be enforced in conditions of an imperfect legal environment. Regulations refer mostly to the procedure of archaeological research, expertise and reporting, while details of anthropological research are not given much attention.

Scientific information obtained during research on human skeletal remains is subject to intellectual property law protection. The 'Civil Code of Ukraine' adopted in 2003 and the laws 'On Scientific and Technical Information' and 'On Copyright and Related Rights' determine the protection of such information as an object of intellectual property.

Excavation, recovery, research and storage

If human skeletal remains are discovered during excavations, the presence of an anthropologist is required. Human skeletal remains are collected from the site according to the anthropologist's recommendations. The recovery of human skeletal remains is subject to the remains being recorded by drawings, plans, photography and video. Burial information such as the position of the skeleton and any grave goods should be recorded. The results of anthropological analysis should be attached to the scientific archaeological report.

Human skeletal remains recovered during archaeological excavations are state property. They are subject to registration according to the methodology approved by the authorized central executive organ on the protection of the cultural heritage (in Ukraine this organ is represented by the Ministry of Culture). Human skeletons shall be preliminary preserved, transferred and stored at the Institute of Archaeology, museums, universities or other state institutions that have adequate conditions for their storage. Such institutions need to be mentioned in the 'open letter' and the respective permit.

To summarize, therefore the main responsibilities of the scientists conducting archaeological research and dealing with anthropological materials, according to the law and regulations are: to record the remains *in situ* by means of drawings, plans, photography and video recording; to ensure appropriate storage of the remains after excavation; to submit a report on the results of the research; and to transfer all the material (including human skeletal remains) to an authorized institution.

Ethical considerations

Legislation does not cover the procedure of reburial of human skeletal remains collected during archaeological excavations. It is required that such a procedure is developed and included in the national legislation. This recommendation would help to avoid reburial claims of certain communities; in our experience we have received such claims from Tatars in Crimea, and from a church community during analysis of the skeletons from the Kyiv Uspensky cathedral. In these cases the anthropological study was conducted and, after samples obtained for dating and stable isotope analysis had been collected, members of these communities were able to rebury the skeletons.

Transfer of human skeletal remains across the customs border of Ukraine

Issues related to transfer of human skeletal remains abroad are determined by the 'Customs Code of Ukraine' dated 2002 and the Ukrainian law 'On the Transfer of Cultural Values Across the Border'.

The law 'On Transfer of Cultural Values across the Borders of Ukraine' determines the procedure of how the cultural values may be moved across the Ukrainian customs border. Are human skeletal remains covered by the definition of 'cultural values'? Are they subject to regulation by such a law? In order to understand whether any specific customs restrictions exist regarding human skeletal remains it is necessary to find answers to the abovementioned questions.

Cultural values are objects of tangible and intangible culture having artistic, historical, ethnographical and scientific meaning and subject to storage, replication and protection under Ukrainian legislation; they include objects related to scientific events and the development of society, rare collections and samples of flora and fauna, mineralogy, anatomy and anthropology, etc. In the exhaustive list of cultural values, anthropological samples are missing. At the same time the language of the law seems to contradict its spirit. The spirit of the law proves that anthropological samples must be recognized as a cultural value. Therefore, this inconsistency creates a legislative gap in this area.

What happens at the border in reality? Human skeletal remains may be subject to customs control. They are subject to compulsory state expertise based on which the respective organ within one month decides whether cultural values may be transferred abroad or not. If the decision is positive, an authorization is issued supporting the transfer of human skeletal remains across the customs border. Without such a certificate, human skeletal remains may not be transferred abroad. In order to obtain a certificate the applicant must submit to the respective authority a copy of agreement with the receiving party.

Scientific information and intellectual property

Scientific information obtained during archaeological research is considered to be intellectual property and thus subject to intellectual property law protection. Information is considered to be subject to protection of intellectual property law if it was received as a result of archaeological research, created as a result of an effort or is subject to such protection under the contract. The law states that the scientist who has conducted the research has an exclusive right to publish scientific information during five years after the date when the research was completed.

METHODS OF ANTHROPOLOGICAL ANALYSIS

In their research, Ukrainian anthropologists use the internationally recognized standards (Bach 1965; Breitinger 1938; Dupertius and Hadden 1951; Martin and Saller 1957; Ortner 2003; Trotter

and Gleser 1958; etc.) as well as those commonly accepted nationally (Alekseev and Debets 1964; Alekseev 1966). Textbooks on anthropology have been published by S.P. Segeda (1995, 2001).

CONCLUSION

The definitions of the terms ‘cultural heritage’ and ‘archaeological heritage’ do not directly indicate that they cover human skeletal remains. These definitions are too vague and unclear. Human skeletal remains must be protected under the Laws of Ukraine ‘On the Protection of Cultural Heritage’ and ‘On the Protection of Archaeological Heritage’.

It is unclear whether human skeletal remains are covered by the definition of ‘cultural values’. This is important in order to understand if they are subject to any customs restrictions under the Law of Ukraine ‘On Transfer of Cultural Values across the Borders of Ukraine’. It is questionable whether human remains may be freely transferred abroad without any formalities (obtaining a certificate, etc.). Thus, it would be recommended to amend the law with consideration of the abovementioned.

Most legislative provisions of the Regulations setting forth the responsibilities of archaeologists conducting archaeological research and anthropologists dealing with human remains can hardly be enforced. There is no enforcement mechanism that mentions that archaeologists must invite anthropologists in case human remains are discovered. In order to make this and some other provisions legally enforceable (and not just declarative norms) it is necessary that the respective local legal acts are developed and adopted by the Institute of Archaeology.

Finally, ethical aspects for the treatment of human skeletal remains are not covered by the Ukrainian legislation either. It would be highly required that they become a part of our legislation.

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Ukrainian Academy of Sciences. Website: www.nas.gov.ua/Pages/default.aspx/

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