

ЛЕКЦИИ / LECTURES

AN OUTLINE OF THE HISTORY OF ARCHAEOLOGY

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ABSTRACT. In this lecture, one can find an abbreviated historical trajectory of the appearance and development of archaeology as a science. The aim is to demonstrate the perceptions and biases, which have influenced and still influence the archaeological theory and practice in negative or positive ways. The lecture was prepared for the participants of the program on “Classics and Philosophy” of Novosibirsk State University (October 2018).

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Introductory remarks

The discipline of Archaeology has to do with the study of the human being, its life and activities. Through surface survey, excavation, study and laboratory analysis archaeology recovers and analyses the indicators of material culture, more specifically artifacts, architectural remains, ecofacts, anthropogenic landscapes, etc. Archaeology belongs to the broader area of humanities as well as to social sciences, this is why in the USA it is a sub-field of anthropology, while in Europe it is a discipline in its own right or a sub-field of other disciplines. The epicenter of the research is always the human being from prehistory until the recent decades. This is why archaeology must not be confused with the field of paleontology, that studies extinct animals and fossil remains. Among the goals of the archeologist

are the understanding of our cultural history, the reconstruction of past life ways, the evolution of human societies in space and time, etc.

Archaeology is by nature a large cross-disciplinary research area, having to do with anthropology, history, art history, classics, philosophy, ethnology, geography, literary history, paleography, linguistics, semiology, geology physics, information sciences, chemistry, statistics, paleoecology, paleontology, paleozoology, paleobotany, etc. Archaeology has been used and misused by nation-states to create their own political visions of the past. Nowadays a great number of sub-disciplines of archaeology have developed, such as maritime archaeology, feminist archaeology, archaeoastronomy, while numerous different scientific techniques assist the archaeological investigation and research.

The science of archaeology is firmly located in the 19th century. However, the interest for the past is much older; it begins from the classic antiquity, revives at Renaissance and reveals itself more clearly with the first explorations of the 16th century. The growth of the systematic science of archaeology has to do with a complex intellectual trajectory through aesthetics, exoticism, local past achievements and the development of new scientific fields related to the environment and the human being, that is to say the new interest in discovering Classic and Eastern Antiquities, in the discovery of the European past via the monuments and the ancient objects and in the study of the human origin, as a result of the developing sciences of geology and biology.

The term "History of Archaeology" means for the broader scientific environment a scientific field having to do mainly with excavations and the history of impressive discoveries of monuments and aesthetically "unique and beautiful" objects. It means, however, something much more than this. There is a philosophy, an ideology behind the excavations, the applied methodology and the techniques. The modern scientists have accomplished a much deeper infiltration in the past, much more than a researcher of the past century. This is certainly achieved by the new discoveries, the new technical methods and a lot of hard work. However nowadays there is more behind all this, not only the new knowledge but also the fact that the archaeologists can formulate the correct questions for the residues of the past. This leads them to find new ways to develop more correct and precise methods in order to find the answers, which are most close to reality.

Hence, the history of archaeology is in the first place a history of ideas, theories and ways of confrontation of the past (Renfrew, Bahn 1991). Through this trajectory, one can detect the tendency of the researchers to try to explain the past events based on the ideas, the convictions and the limitations of their own living space and time.

The interest to the past of nature and civilization from Antiquity to Early Modern Time

The human beings have always been curious about their past. This has to do with the innate existential need of every human. Most cultures have created their own fundamental mythology in order to interpret the beginnings of life and the birth of the first communal units.

In Greek literature Hesiod (around 700 BC) in his important “Works and Days”, presented the first written evidence related to the quarry of the past, pointing on the feelings, the behavior and the everyday life of people. He described the developments of his own time as a decline, being himself disappointed by the society of his era. He conceived the human history divided in four genders: the “GOLD” gender, when the people were “blessed”, “SILVER” when they became nobler, “BRONZE”, the age of “the heroes” and finally the “IRON”, his own era, when the people suffered from exhaustive work and pain. According to Hesiod, it is obvious that the past was better than the present.

Another Greek, the father of history, Herodotus, gives an interesting story having to do with this quarry of the past. He describes the plan of the Egyptian Pharaoh Psammetichus, to search for the most ancient population on earth (*History* 2.2). For this reason, he made a kind of experiment: he took two babies, gave them to a shepherd with the command to close the two of them all alone in a hut. The shepherd’s duty was to nourish them only with milk and not to say even a single word to them. The aim of Psammitichos was to find out which would be the first word of the children beyond the infantile inarticulate cries. According to Herodotus, after two years the children shouted “bekos”, that in Phrygian meant “bread,” from which the Pharaoh concluded that the Phrygians and their language were the most ancient people.

In the 6th century BC the last Babylonian king Nabonidus, showed a big interest for the existing antiquities and organized, probably, the first excavations in human history: he ordered to dig up to founding an important temple dating 2,200 before his reign and placed a great number of his discoveries in a kind of museum that was especially erected for this purpose in Babylon (Renftew, Bahn 1991).

A Presocratic philosopher Xenophanes (fl. 540–537 BC) famously believed that “the earth is becoming mixed with the sea and that it will eventually be dissolved by the moist”, having based, according to our doxographer, his opinion on the following observations:

“Shells are found in land and in the mountains; in the quarries at Syracuse the impression of a fish and seaweeds has been found; on Paros the impression of a bay-leaf has been found buried in stone; and on Malta there are slabs of rock made up of all kinds of sea-creatures. He says that these came about a long time ago, when every-

thing was covered with mud, and that the impression became dried in the mud. He claims that the human race is wiped out whenever the earth is carried down into the sea and becomes mud, that then there is a fresh creation, and that this is how all the worlds have their beginning" (Hippolytus, *Refutation of All Heresies* 1.14.5–6; 21 A 33 DK; tr. R. Waterfield).

Somewhat later Aristotle has also noticed that everything in nature undergo changes, but since all the processes take place gradually and in periods of time immense in comparison with human life, these changes are not observed and "before their course can be recorded from beginning to end whole nations perish and are destroyed" (*Meteorology* I 14, 351b10–12, tr. E. Webster). For instance, the land in Egypt is continuously getting drier, and the whole country is in fact "a deposit of the river Nile", but this had not been universally acknowledged, because people settled in the land gradually and did not record the beginning of this process. Similar changes are going on in the area of Argos and Mycenae: "In the time of the Trojan wars the Argive land was marshy and could only support a small population, whereas the land of Mycenae was in good condition. But now the opposite is the case..." (352a10–15) and so on. Later in the text he observes that the earth suffers from periodic global climatic changes (an example of which is the flood in the time of Deucalion, etc.). Still, concludes Aristotle, these relatively small changes do not prove that the whole universe is in the process of becoming. Quite on the contrary, "it is absurd to make the universe to be in process because of small and rifling changes, when the bulk and size of the earth are surely as nothing in comparison with the whole world" (352a26–30).

The Hellenistic philosophers, especially the Peripatetics, had greatly elaborated on this theory, pointing out that "human life must have come down by steps from the earliest history until our time, and the earliest stage was natural, when humans lived from those things that the inviolate earth bore spontaneously. From this mode of life they must have descended to the second, pastoral mode... finally, in the third stage, they arrived from the pastoral life to agricultural" (Varro, *On farming* 2.1.3–9, with a reference to the Peripatetic Dicaearchus of Messana, tr. D. Mirhady; cf. also Porphyry, *On abstinence* 4.2.1–9, where this theory is described in still greater details).

These and other examples show how old is the human search of the past.

Although the intellectual and wealthy elite of Late Hellenistic and Roman period appreciated the classical works of art and eagerly collected antiquities, transporting to their residences the best ancient specimens (so some of them are presently exhibited in the Italian museums), this activity was never substantiated by any systematic observations on the nature of the object collected.

During the Middle Ages the collection of antiquities continued, although the political and religious ideology still did not give a specific interest to the individual. According to the political system of that time, the individual was simply a member belonging to a feudal system or to an empire, which did not allow a person to appreciate his or her uniqueness. Aristotle thought that the world as a whole is everlasting and changeless, while some small changes do occur in the sublunary area. Quite on the contrary, the Christians vision of the past and the future was eschatological: the god created this world in a specific date in the past and will destroy it in the future, but this did not alter the overall idea, according to which the life on earth had been created exactly as it is in the present, with no alterations.

During the age of Renaissance and Early Modern Time it became fashionable among some wealthy Europeans to acquire “unusual objects”. Their collections were organized in what was called the cabinets of curiosities, in which they exposed ancient artifacts with strange rocks and objects of generally indicative “natural history” interest (Renftew, Bahn 1991).

During this period, in the frames of a kind of intellectual awakening, the by then intellectuals rediscovered the Classical Antiquity through ancient achievements and through it a new view of life with an individual being placed in the centre of the world. The main theoretical frame was based on finding a scientific answer to the main questions concerning the human being and the Great Chain of Being, Essentialism and the Grand Design.

Old and new research topics evolved together with the interest of people not simply to know but also to possess exotic and aesthetically beautiful objects. They also wanted to identify the real places and the localities where important events, described in ancient history, actually took place. The history started to revive and actual study begun. For instance, between 1550s and 1590s Vincenzo Tomai and Paolo Armileo created the first depictions of the Roman Adriatic ports of Ravenna and Rimini (Ugolini 2018), while early modern travelers and lovers of antiquity produced various travelogues (for instance, this by Thomas Hoby, 1547–64), which reflect the story of early travelers’ appreciation of the most symbolic places associated with antiquity and full of nostalgia for vanished Greek glory, for instance, the strait between Calabria and Sicily (the Strait of Messina), widely identified with the marine passage between Scylla and Charybdis (Carbone 2018).

From the 15th century on, rich and important people begun to make collections of coins, jewels and statues, as for example did Cosimo Medici in Firenze and Pope Sixtus IV in Rome. Contemporary art and applied arts started to receive an inspiration from the past monuments and artworks. From the 16th century and afterwards architects studied the ruins of Roman buildings in order to draw

new ideas about buildings and they transported statues to embellish the new palaces, the same as Romans did, when they occupied Greece many centuries ago.

This new interest to the Greco-Roman past has also spread to the northern European regions where the intellectuals have gradually turned up to the study of their proper ancestors. The so-called concept of 'national conscience' had already been born, so people started to look at their past in search for their present identity. The attention in these countries was first naturally directed to such big monuments as, for instance, the prehistoric Stonehenge complex. John Leland (1533), named "archaeologist" (antiquary) of the king, had to tour England and the Wales, finding and cataloguing ancient monuments. William Camden continued this task in 1586, having included historic buildings in his work "Britannia". William Stukeley (1687–1765) pursued this research in a more systematic way adding drawing as an important parameter of this study. In Denmark, Ole Worm published a report (1643) in which he included the oldest monuments of Denmark. In Sweden, the king Gustavus Adolphus II (1611–1632) founded a local archaeological service. In France, the discovery in 1653 of the grave of a 5th century Franc king Childerich also immediately kindled a strong archaeological interest.

The Enlightenment: Evolutionary Theories

The following period, known as the Age of Enlightenment or the Age of Reason, is the great philosophical movement in Europe during the 18th century, that focused more on the human being and on reason, and therefore on the right on liberty, progress, separation of church and state etc. People started in this time to free spirit and research, and gave a new start to scientific methodology.

During both the Renaissance and the Enlightenment, a scientific rebirth took place, as shown by the interest to man and nature, by the development of natural history. But it was only in the second half of the 18th century, when science began to be separated from the theories imposed by the strict doctrines of the church authorities. At this time renewed theories about biology and evolution in a more mechanical, materialistic way have been formulated.

Evolution was the key subject in the scientific debate. The term evolution comes from the Latin verb 'evolutio.' The meaning has to do with the parallelism of a scroll, i.e. to unroll like the scroll and it has to do with the sequence of events from a start point to the day.

Later on the evolutionary theories has offered a basic instrument to the science of Archaeology in the interpretation of human life and culture. According to this approach, the process of evolution gives the explanation of how nature, animals and humans evolved, changed over time, from a common ancestor. The natural world, its formations and beings as already described by Aristotle and the

other ancient philosophers gave a solid basis to the scientists of this period. The scientists observed, studied, named and classified the living beings. John Ray (1627–1705) was the first to identify the species, Carolus Linneaus (1707–1778) in his famous “Systema Naturae” classified animals. New ideas about the change observed on species were formulated by le Comte de Buffon (1707–1788), who developed the theory of “degeneration”. The grandfather of Charles Darwin, Erasmus Darwin (1731–1802) attempted a primary approach to the ideas of natural selection and evolution. Jean-Baptiste Lamarck (1744–1829) and Thomas Malthus (1766–1834) argued about species and their way of existence, but the development of the science of geology has been crucial for archaeology.

Founding the science of archaeology

The science of archaeology was established in the middle of the 19th century. In the organization of archaeology, as a specific scientific field, have helped the achievements of the applications of the newly organized science of geology and the natural sciences in general, the three age system and the collaboration with the quickly developing science of ethnography.

Geology and the Natural sciences. The geologist James Hutton, in his book “The Theory of the Earth” (1784) dared to propose that earth was formed entirely by natural processes. He studied the stratigraphy of rocks and gathered important information leading to decisive conclusions for the archaeological excavation, such as the importance of the stratigraphic sequence. The stratigraphy is conditioned by a basic rule: the superior layer is newer than the layers underneath. This remains one of the basic perceptions of modern archaeology (Renfrew, Bahn 1991). He, also, proved that the processes that create the stratification of rocks do not stop, but continue still their action in the seas, in the rivers, in the lakes, formulating thus the beginning of homeomorphism/ uniformitarianism. Later on Charles Lyell (1830) in his book “The Beginnings of Geology” argues that the ancient geological conditions present in their substance “uniformity” with those of our living times. He renewed the theory of uniformitarianism/gradualism, i.e. that natural processes never stop and slowly change the environment, as is the case with erosion resulted in new geological structures. George Cuvier (1769–1832), in his effort to explain the disappearance of some species and the sudden appearance of new ones, has formulated the theory of catastrophism. Catastrophism was the theory that the Earth had largely been formed by sudden, violent events, mainly floods, which transported new life forms from one area to another. These new approaches finally opened the path to the view that geologic events have developed both ways: extreme catastrophic events in the geologic past could be decisive for the landscape and life and really happened, however the slow but

steadily natural process is also a major factor to be accounted for in any description of the present conditions.

Darwinism. At this stage of research Russell Wallace (1830) and Edward Darwin pushed the main questions furthermore to the theory of life evolution based on natural selection. Darwinism is the main theory of biological evolution. It was firstly presented by Charles Darwin (1809–1882) in his book “On the Origin of Species” (1859). Russell Wallace (1830) worked also at the same subject and at the same time with Darwin. Darwinism proposes that every living organism comes and develops through natural selection of small, inherited variations, suitable to the individual's ability to survive, and reproduce. Therefore, from successful variations will derive new species after a very long period of time. No individual of a species is exactly alike to another and in the process of universal struggle for existence favorable characteristics survive and pass on.

The Three Age system. This theoretical and methodological approach helped a lot in the foundation of the scientific archaeological field, as it has to do with the fundamental problem of dating sites, objects and monuments. The need to organize, classify and date has resulted from the new interest in the past and the constantly augmented collection of antiquities. It was obvious that the discoveries did not belong all in the same chronological period. It was, however, difficult to find a reasonable criterion for a comprehensive and realistic chronological classification. This problem was particularly intense in north-west Europe, where the oldest testimonies for the past did not date before the Middle Ages.

Rasmus Nyerup (1759–1829), as the Director of the National Museum of Denmark and of the Royal Committee for the Preservation and Collection of National Antiquities, tried to organize the large collection of artifacts. Christian Jurgensen Thomsen (1788–1865) published in Copenhagen a guide for the museum entitled “A Guide to Northern Antiquities” (1848). In this book he firstly classified the exposed findings, using as a basic criterion their material of manufacture: stone, copper or iron. He proposed, therefore, the organization of the collections in categories and subgroups corresponding with three chronological periods: the period of Stone the period of Copper and the period of Iron (Renfrew, Bahn 1991). This novel methodological tool was clearly influenced by the Renaissance philosophy, namely the idea of the linear development of human societies. Importantly that this dating system also indicated that the archaeological material was based on a relatively unilinear development.

It is logical that the application of this system was not possible everywhere in the world, as these three materials were not universally available. In any case the “System of the three periods” has established the doctrine that, studying and categorizing prehistoric objects, one can shape a chronological classification and be

led by this to realistic conclusions (Renfrew, Bahn 1991). The “Three Periods” were at an early date used by researchers all over Europe.

Ethnography. J.J.A. Warsaae (1821–1885) played an important role in the advance of the science of archaeology. He used a much more detailed methodology and also introduced stratigraphy in his excavations. He marked the exact location of the discovered objects, recording the layers and other useful characteristics, in order to prove C. J. Thomsen's sequence of the Three-Age system: i.e. the major chronological periods of stone, bronze and iron ages. He was also a pioneer in the development of the field of paleobotany. In his excavations in Jutland in the peat bogs, he observed a constant sequence in the types of vegetation.

The above researchers succeeded in a detailed study of the archaeological data, and linked it to the historical environment and to the human adaptability. The correlation of the archaeological sites with their vegetation, began to dominate in north-west Europe, thus leading to the birth of an ecological-distributional approach.

Cultural/ Social/ Historical Archaeology. Further elaboration of the “Three Age system” can be found in the work of Sir John Lubbock, a close friend of Charles Darwin and one of the most influential archaeologists of the nineteenth century. In his book, entitled “Pre-Historic Times, as Illustrated by Ancient Remains, and the Manners and Customs of Modern Savages” (1865), he integrated the evolutionary theory in archaeology, based on prehistoric material remains as evidence that human cultures evolve over time. He reviewed the chronological subdivisions, creating a broader cultural periods, that of Prehistory, which included the Stone Age, further subdivided in Palaeolithic and Neolithic (according to the techniques used in the manufacturing of the stone tools). His theory about cultural evolution, has been a new social theoretical approach and has helped a lot to the development of the field of archaeology. However for the dating of the archaeological layers, a number of archaeologists still ignored a big part of the findings and continued to look only for specific artifacts, thought as “indicators-fossils” (index fossils) for the chronological recording of the excavated area.

Also based on the three-age system, Oscar Montelius (1843–1921) sub-divided it further, by using a relative chronological dating method that relied on the classification of the artifacts in a chronological sequence, thus having introduced the new concept of typology.

Typology is the procedure of arranging the material remains of an excavation, that are related to a specific cultural tradition based on the most consistent presence of common cultural characteristics, and thus resulting to similar or different groups and finally to a relative chronology. Montelius' method had as a result to create for each area a dating (different or similar), based on the recovered mate-

rial remains. Later, when combined with written historical references, absolute dates could be given to the artifacts. Through cross-dating based on typologies and the relative finds Montelius tried to apply absolute dates for the European past civilizations.

From the methodology of typology resulted the method of seriation, a technique developed by Sir William Flinders Petrie, famous for his excavations in Egypt. The Neolithic and Bronze Age periods of Central Europe were discovered thanks to the extreme climatic conditions of the mid-nineteenth century: because of a very dry winter of 1853/1854 the level of lake Constance lowered so considerably that some prehistoric settlements next to lakes become visible, which allowed to the researchers to discover more than two hundred prehistoric sites on the lake shores, where a considerable amount of ecological residues, such as wood, leather, etc. have also been well preserved.

Another major discovery, which has been very important for the comprehension of the European past, and for establishing its chronology and continuity, was that of Hallstat in Austrian Alps. This cemetery of the Iron Age was excavated by J. G. Ramsauer, who linked the site to the Celtic cultural groups of the Early Iron Age (c.800–450 BC). The Copper and the Iron periods of Central Europe were further established by Paul Reinecke (1872–1958).

These new developments were based on the main idea of diffusion. However, the diffusion theories were later gradually replaced by a more complex theoretical approach having to do with the cultural interaction.

At the same period researchers realized that the systematic study of people and cultures of actual societies in various parts of the world that presented similarities in thinking, acting and creating could lead to understanding of the primitive societies. This gave birth to the new discipline of ethnography, a field study aiming at the collection of empirical data of the culture of a given human group.

This approach is linked to the theory of the linear development, according to which populations, not advanced technologically, constitute the first cultural stages from which the advanced populations pass. Daniel Wilson and John Lubbock used systematically the ethnographic approach in the study of prehistoric societies (Renfrew, Bahn 1991). The theories of cultural or socio-cultural evolution were developed in the 19th century by anthropologists and, at the same time, influenced by Darwinism to the effect that archaeologists thought that social change resulted from biological adaptations. The general Augustus Henry Pitt Rivers (1827–1900) applied the idea of development based on archaeological, eco-facts and ethnographic artifacts, and in this respect justly considered the father of Environmental Archaeology.

Unilinear Cultural Evolution/ Classical social evolution. The unilinear evolution has to do with the evolution of societies and cultures. It is based on the belief that Western culture is the center of social evolution aligned in a single line, starting from various stages of primitive life to the most civilized ones. This concept about the timeline of human social evolution has been the basis for the development of the social theory. H. Spencer (1820–1903), Edward B. Tylor (1832–1917) and L. H. Morgan (1818–1881) understood progress as the result of the development from a simple to a more complex form and concluded that each culture passes through the same phases. This is the theory of the Unilinear Cultural Evolution (from the “savage” stage / hunters and gathers, to the “barbaric” stage / farming and to the “civilized” stage / modern western culture). The theory is not unlike the one proposed by Aristotle and his followers, as we have seen.

Sv. Nilson, further subdivided and redistinguished socio-economic stages in cultural history: the wild life and the hunting (savagery), the nomadic-nomadic pastoral (nomadic pastoralism), the permanent agricultural installation (settled agriculture) and the culture (civilization) stages. The last one is characterized by the most important achievements such as writing, money and work distribution.

A number of approaches to cultural evolution, advanced as a consequence of this theory, include dual inheritance theory, socio-cultural evolution, memetics, cultural evolutionism, cultural selection theory, etc. The approaches differ in their development, in their discipline of origin, in the theory of the process of cultural evolution they propose as well as in their methodological approach.

Cultural Particularism, Multilinear and Social theories. In the late 19th century a reaction followed. The anthropologist F. Boas introduced a multilinear approach to cultural evolution. So cultures were not compared, but studied separately, so that instead of generalizing, emphasis was given on collecting empirical evidence of how individual cultures change and develop.

After the first half of the 20th century American anthropologists (L. A. White, J. H. Steward, M. D. Sahlins, E. R. Service) introduced the idea of multilinear cultural evolution. According to it, there are no fixed stages for the cultural development, but a not fixed variety of stages and societies tend to develop and move forward. Steward argued (like Darwin) that culture adapts to its surroundings. Now it was commonly accepted that social changes arose in consequence of a combination of social, evolutionary and biological influences.

These theories and mainly the conviction that the people lived before in a kind of primitive equality, sharing the resources of existence, influenced Karl Marx (1818–1883) and Friedrich Engels (1820–1895) and the archaeological theory, thus resulting to Marxist archaeology.

Historicism. Thus gradually developed a new tendency, known as historicism, focused on the study of independent cultural elements, and analyzing specific values and facts. In Greece Heinrich Schliemann, motivated by the epic poems of Homer, excavated Troy and discovered Mycenae, Orchomenos and Tirynth. Schliemann has been accused for the methods he followed, however at his times the excavational techniques were not developed. His error was that he transported the very important and impressive treasure of Troy in Germany, where it was finally lost during the Second World War. He is considered the father of archaeology in Greece. After him a number of Greek and foreign archaeologists began excavating all over Greece.

The discovery of the Mycenaean civilization constituted a new big question to be answered related to the origins of the West European civilization. Migration by an Indo-European people was first hypothesized in the late 18th century, following the discovery of the Indo-European language family, when similarities between western and Indian languages had been noted. Given these similarities, a single source or origin was proposed. The German archaeologists considered that Mycenaeans were related to the Aryan North, while other European scientists considered the Mycenaean civilization as a reflection of Eastern civilizations.

Archaeological research has been expanded in Asia and Africa. In India in 1863 the Archaeological Inspection was founded. In China the prehistoric periods have been revealed and studied by J.G. Andersson (1874–1960) and, particularly, brought in light the Neolithic settlement of Yang-Shao. Sir A. Stein explored the Central Asia and he supplemented the information of the Russian archaeologists. In Australia the archaeological research has followed the anthropological study and has been able to prove the long history of the Aborigines. In Africa a variety of cultures have been recognized, classified as “simple Bushman” or as “complex Bushman”. The oldest anthropological remains of the first humans have been discovered here. Africa seems to be the cradle of human life and evolution and this discovery still attracting the universal interest.

Typology and Stratigraphy. By the end of the 19th century and the early 20th century “the hunting of treasures” was gradually transformed into systematic excavations, using typology and based on the detailed parallel examination of geographic areas and sites.

At the end of the 19th century, the general Pitt-Rivers applied the technique of modern excavation in the site Cranborne Chase, England (1887–1898) (Renfrew, Bahn 1991 fig. p. 29). He did not simply collected objects but recorded in detail the findings based on their stratigraphical position. He assembled any kind of information that concerned the earth such as land snails shells, animal bones, etc. Another pioneer was Sir Mortimer Wheeler (1890–1976), who introduced the meth-

od of the excavational square. He studied such important sites as Harappa, Taxila, Mohenjo-Daro and Arikamedu.

In the beginnings of the 20th century archaeologists have shown interest for many distant cultures; excavations took place all around the world. In Meso-America A. Mandslay (1850–1931) has founded the archaeology of Maya. In South America M. Uhle (1856–1944) established the archaeology of Peru. Fl. Petrie (1853–1942), H. Carter and Lord Carnavon made spectacular discoveries in Egypt. Sir A. Evans (1851–1941) discovered Knossos and founded the field of Minoan Archaeology in Greece. In the Middle East L. Woolley (1880–1960) discovered the city Ur, and the Sumerian civilization. In the USA, anthropologists and archaeologists studied the natives, etc.

The intensification of the nationalistic feeling in Europe led to a dispute about the origin of the first European cultures. Some supported a native development of European societies (G. Kossinna, 1858–1931) while others supported a process of distribution (diffusion) of cultural elements from the big centres of higher cultures of the East (C. Schuchhart, 1859–1943).

Evolutionary / Cultural Archaeology. Populations, less developed technologically, were considered wild, biologically inferior and incompetent, such as the coloured people, women, children and the mental invalids. In the spirit of this ideology, each cultural development in primitive culture was attributed to migration or transmission of information and not to autonomous discovery. Schuchhart in 1919 published the work “Alt Europa”, where he developed the theory that a continuously repeated collection (“assemblage”) of artifacts, that he called culture (“culture”), could be considered as the material equipment, which was characteristic of a particular group of persons. As a result of this it was considered that in Greece, for example, the cultural differences, obvious in the artifacts, were due to different racial groups, that acquired geographic or mythical names (the Myceneans, the Minoans, the Cycladians, etc.), according to the north European trend, usual at this time.

The first scientific period in archaeology has recently been called the Cultural / Historical Archaeology, because the researchers were trying to catalogue, describe, and create timelines based solely on the artifacts. The renewal of the Marxist theory stressed the scientific conflict. Gordon Childe in his classic book “Man Makes Himself” (1936) adopted a moderate view of the theory of diffusion, supporting that the prehistory of Europe is mostly imported from the Near Eastern civilizations. He proposed that the European civilizations had a certain local development but of much smaller scale. He furthermore suggested that successive new cultural advances belong to the last big period of the New Stone Age, the technological achievements of which he characterized as defining the “Neolithic

Revolution” that meant the beginning of agriculture and animal breeding. This period ended with what he called the “Urban Revolution” that led to the shaping of the first cities, which appeared at the Bronze Age period around the 3rd millennium BC. Childe tried to detect the basic reasons of the big changes in human prehistory, while most researchers were dealing with dating and morphology. His ideas have influenced the entire archaeological thought up to 1960. A natural deterministic frame has thus been established.

At the same period O.G.S Crawford. (1886–1957) has proposed a more concrete geographic approach to the study of the past, having laid the basis of the geophysical methodology. He was compiling the charts of archaeological regions, being assisted by the pictures taken from the sky, by balloon, thus creating a photomap, very helpful in the research and the exact location of monuments.

After the Second World War, new theoretical and methodological tools were developed, resulting in big changes in the archaeological practice and interpretation. Looking for the cultural change, J. Steward (1902–1972) studied the interaction among human societies and the immediate environment, using archaeological and historical data. Any adaptation in the environment that leads to cultural change he named “cultural ecology”. He stated that under similar conditions a similar social development can follow. His theory was reinforced by L. White, who suggested that for social structures the general improvement of the control of the basic sources of energy always plays a decisive role.

At the same time, K. Polanyi introduced the economic anthropology, which gave birth to a new research field, studying the production, distribution and consumption of products among primitive societies, taken in a historico-archaeological perspective. He examined in depth the importance of an item given as a gift in primitive societies. Gr. Clark (“Prehistoric Europe: the Economic Basis”, 1952) developed an ecological-economic approach closely related to the excavation and based on a detailed environmental analysis with emphasis on the collection of the organic residues. More specifically, he stressed the importance of collaboration with various specialists from other scientific domains for the recognition of the animal bones and the plant residues, aiming at the reconstitution of the prehistoric natural environment. He revealed the variety of human adaptation in European Prehistory. This first ecological research became the starting line of the environmental and dietetic reconstitution.

New Archaeology

From the middle of the 20th century, a great number of new scientific methods have been introduced to the archaeological research with a result of a quick growth of scientific archaeology. W. Libby (1908–1980) invented the method of

dating with Radioactive carbon-14 (C^{14}) thus making, for the first time, the independent absolute dating possible. Simultaneously, a great number of new innovative methodologies came from the domains of physics and chemistry, mostly due to the development of computer-based digital techniques. D. Brothwell and E. Higgs ("Science in Archaeology", 1963) assembled the work of 55 experts, who presented a number of techniques for the study and analysis of archaeological situations, items and cases and showed how to identify, date and interpret plants, animals, human residues and artifacts, etc. Aim of this collective work was to show precisely the way, in which the different branches of techniques of the natural sciences contribute to the comprehension of the past.

The application of the new scientific approaches gave to the archaeologist the possibility to go much deeper in his research and to deal with more essential questions about the beginnings of human activity in the past. These new achievements gave a definitive new direction to archaeology and resulted in a renovation of the discipline, the birth of a New / Processual Archaeology.

In the 1960s archaeological theory was oriented towards a more effective way in interpreting the research results and reaching the conclusions. W. W. Taylor, G. Willey and P. Phillips focused on the social side of the processes in the history of culture. In America according to the traditional approach, every big change had to do with the migration of populations and the cultural import from the East. L. Binford and a team of young archaeologists proposed a new approach to the problem of interpretation of the social and economic development of past, called "New Archaeology" (Binford L.R., "New Perspectives in Archaeology", 1968). Thus the archaeological way of thought should be based only on an explicit and reasonable skeleton of arguments. Also influenced from the spirit of "dialectic archaeology", they wanted to interpret rather than simply describe. In order to achieve their objective they analyzed the culture as a system constituted by sub-systems. They began, therefore, to study diet, technology, social organization, ideology, trade, demography, environment and other remaining factors, paying less attention to typology and classification.

Parallel developments took place in this period in the Great Britain. They are represented by the work of D. L. Clarke ("Analytical Archaeology", 1968). New archaeologists are asked to apply methods of the positive sciences, quantitative technical issues from other specialties, such as the organization of space based on geography, etc. D. L. Clarke ("Models in Archaeology", 1972) also showed that the new tendencies could be applied to the restudying of the old excavations. New archaeologists considered the environment as a dynamic system in interaction with culture and formulated the opinion that any environmental change is closely connected to a cultural change and vice versa. This urged archaeologists to the

study wider regions and their environment. They also began to investigate demographic and dietetic parameters and to elaborate new methods for collecting plant and animal residues, using sieving and the flotation. Higgs again, in collaboration with the geographer Claudio Vita-Finzi, developed the method of analysis of “economic hinterland” (site-catchment analysis), which consists in a detailed examination of the economic resources of the wider area. Finally, Colin Renfrew made important advances in his treatment of the data of trade. So the field of “World archaeology” is created including geographically the entire globe from the beginnings of human existence to the modern world.

Nowadays one important question concerns the appearance of complex societies. The couple L. and M. Leakey produced the most valuable study on our most distant ancestors (Leakey M., “Olduvai Gorge – My search for Early Man”, 1979). Africa henceforth attracted much attention of the scholars looking at the precocious phases of humanity. Up to 1970 the archaeological knowledge had advanced so much, what J. Desmond Clark writes “The prehistory of Africa”.

New Archaeology emphasizes the importance of interpretation. The work of R. Gould, for example, dedicated to the natives residents of Australia, gave birth to a new branch, ethnoarchaeology. According to him, a more effective way to answer questions appeared to be the study of the culture and the behavior of the living societies. The ethnographic observation was not really new, but its objectives were renewed. Pioneering knowledge offered also the new field of “Experimental Archaeology” with the reconstruction of ancient buildings, artifacts etc. as well as the application of ancient methods of practices and techniques.

The economic growth of the after war period has led to huge construction works and population expansion. This resulted in many cases in the destruction of areas of archaeological interest. A new branch of archaeology, called the “Salvage Archaeology”, aims to rescue as much as possible of the fragments of the past.

Post-processual archaeology. During the 1980's a new movement emerged in the United Kingdom regarding archaeological theory, questioning the objectivity of interpretation and focusing on its subjectivity. The main representatives of this tendency in Europe and the United States (M. Shanks, Ch. Tilley, D. Miller, P. Ucko and I. Hodder) were influenced by French Marxist anthropology, postmodernism and similar trends in sociocultural anthropology. Initially post-processualism appeared as a reaction, a severe critique of processualism, more specifically of its claim that, if the scientific method was applied, the archaeologist was supposed to reach an objective conclusion. Quite on the contrary, they claimed, the archaeologist can never be completely objective in his scientific approach. In fact, every researcher is prejudiced by his personal experience and cul-

tural context and therefore the actual scientific archaeological work becomes very complex and difficult.

The post-processualist archaeologists have adopted a relativistic stanza, stating that diverse approaches to the interpretation of archaeological evidence may create different reconstructions of the past for each researcher. They proposed at first to analyze the archaeological findings and afterwards to dig deep on the researcher's personal views and beliefs.

Within the post-processualist movement, a variety of new theoretical viewpoints have been mixed, including structuralism and Neo-Marxism, phenomenology, etc. (Trigger 2007, 451–452). In the United States post-processualism is actually conceived as complementing processualism, while in the Great Britain it is seen as a theoretical movement, opposing to the processualism, while in other parts of the world it did not influence the archaeological thought (Trigger 2007, 477–478).

Conclusive remarks

Nowadays many new archaeological subfields appear. The tendencies and the theories are many and various, and their review constitutes a big autonomous work. On this occasion, however, the objective was different. We have briefly presented the major archaeological tendencies in conjunction to the main philosophical and ideological trends of the relevant periods, when they firstly appeared.

The historical trajectory in the scientific field of archaeology, as presented above, aimed at a better understanding of the great impact of each historical period in the development of the anthropological sciences and the archaeological research most specifically. The interscientific aspects of collaboration and influence from one discipline to the other and mainly of philosophy to other sciences have been accentuated.

Regarding research, knowledge is shaped and continually renewed through a new view. In the course of time, readjustments in opinions, theories and ideas always appear. Readjustment and/or reaction towards fixed models that have been supposed as immovable are repeatedly reproduced. Human societies and natural environment change and lead to new trends and developments.

The archaeologist is now the coordinator of the composite work of the interpretation of past artifacts, ecofacts, monuments and events, where he will collaborate with many specialties of scientists. The problem is henceforth clear: rapid and not balanced growth, big changes in short space and time. The present essay constitutes a contribution in the effort of a more comprehensive presentation of the tendencies, which have influenced more or less the standardization of this

discipline and established a kind of common acceptable methodology and terminology.

The human past still keeps a great number of secrets to be revealed and problems to be solved. Every new generation looks at the world from another point of view, and therefore new philosophical and theoretical questions arise. The discipline of archaeology is always attractive to the public. The reason is that it is more than a puzzle to solve or an adventure, or a treasure hunt; it is a dive deep within the very essence of the human being.

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