

they do not exist (as Platonic forms do) separately from individuals. And they are at the same time integrating principles of composite individuals; they are responsible for goals of individual developments and their functionality. Aristotle believed that essences could be and had to be recognized by his scientific approach, and then finally described in words as definitions. Definitions are combinations of *genus proximum* and *differentia specifica*, and in this way, they reflect a real internal and eternal structure of the world, built up from natural kinds and relationships between them.

Human Nature

According to Aristotle (*Politics*, Book 1), the “human (*anthrôpos*) is by its nature a sociopolitical (*politikon*) animal (*zôion*).” The Greek word *politikos* is usually translated as a political and sometimes as a social, but it is neither of these terms as we understand them today, and therefore it is better to render it by the sociopolitical. Aristotle pointed out that it is human nature to become an integral part of a community, and he believed that the Greek city-state (*polis*) was such a community. Polis is not an artificial structure, set up by human individuals for some pragmatic reasons, but a natural entity like a colony of bees, wasps, ants, or cranes. But Aristotle was quick to stress that the “human is a social animal in a sense in which a bee is not, or any other gregarious animal,” because the human is “alone among the animals, rational” (literally, animals “which have *logos*”). Humans alone have an ethical perception of what is good and what is bad, what is just and what is unjust, and thanks to logic, humans can communicate and share a common view on these and similar matters. The human is a fully realized being, a citizen (*polites*), which means participation in judicial functions and in political offices of a city-state (unfortunately, according to Aristotle, women and slaves were naturally excluded from this). A city-state is a final stage of natural social development, which starts from pair-bonding and household, then goes further, to a larger community of village, and finally ends with the city-state. In Aristotle’s view, human sociality is continually turning to politics as its natural goal.

— Peter Sykora

See also **Scientific Method**

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ARSUAGA, J. L. (1954–)

At present, the codirector of the Atapuerca project, Juan Luis Arsuaga Ferreras (1954–) is one of the two most outstanding Spanish paleoanthropologists. Full professor of human paleontology at University Complutense of Madrid, he has been a member of the research team of Atapuerca site since 1982, when Emiliano Aguirre organized a multidisciplinary group to study this hominid site. In 1991, he became codirector of the Atapuerca research team, which was awarded in 1997 with the Principe of Asturias prize, the most important scientific research award in the Hispanic world. Furthermore, Arsuaga became a member of the National Academy of Sciences of the United States.

Arsuaga is famous worldwide for his finding at Sima de los Huesos, which is a small cavity at the end of a ramp, accessed by a 13-meter vertical shaft, at Cueva Mayor, Atapuerca. The Sima de los Huesos is one of the most productive paleoanthropological sites in the world, because at least 28 different individuals had been identified. Several very well-preserved and almost complete craniums, mandibles, pelvis, femurs, hands, and feet have a mixture of ancient and modern characteristics. Some are similar to their Neandertal descendants and others to their ancestors, the first Europeans. These findings allowed Arsuaga and his colleagues to publish many papers in the most prestigious scientific journals.

In the field of anthropology, Arsuaga is specialist in human skeletal morphology, biomechanics, sexual dimorphism, taphonomy, paleoecology, paleopathology and phylogeny of hominids. His discoveries of several skeletons of *Homo heidelbergensis* in Sima de los Huesos allowed him to propose a new phylogeny for the *Homo sapiens* lineage. Apart from his main research in Atapuerca, he has participated in the

excavations of other hominids sites in Spain and in the Early Pliocene Middle Awash site in Ethiopia.

Several of Arsuaga's books are best sellers in Spain and have been translated to other languages, including English, for example, *The Neanderthal's Necklace: In Search of the First Thinkers* (2002) and *The Chosen Species: The Long March of Human Evolution* (2005). Nevertheless, his most notable book is *El Enigma de la Esfinge* (2001), which is a metaphor to explain the mechanisms and the enigma of the purpose of evolution. His writings are excellent popularizations of his findings in the Atapuerca site, explaining very clearly and rigorously his evolutionary theories regarding the origin of humankind.

—Eustoquio Molina

See also Atapuerca; Bermúdez de Castro, J. M.; Creationism Versus Geology; Homo Antecessor; Orce

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ART, UNIVERSALS IN

From a strict anthropological point of view, informed by the recent self-critical turn of the research, it is a debatable issue whether we should admit universals in art. It is equally an open question as to whether art is indeed a universal form of expression and communication. In what follows, we will attempt to lay down the conditions of the possibility of admission of universals in art as well as of considering art itself as one of these universals.

Anthropology has been formed as a social science in the course of 19th century and in the context of the great European colonial states. The European need to understand the non-Western world was concomitant

with the desire to maximize the benefits acquired by the exploitation of the colonies. As a result, for a very long time, anthropology was based on empirical data and fieldwork, without really being concerned for its epistemological status as a science or with questioning its approaches to other cultures. This situation has radically changed in the course of the last 50 years, and anthropologists have systematically criticized the colonial, ethnocentric approach to other cultures as well as the epistemological basis and object of anthropology as a science. The term *reflexive anthropology* indicates that a scientific approach to non-Western societies is difficult and complex and, furthermore, requires both relentless critique and uncompromising alertness as far as questions of method are concerned. There is an increased awareness today of the perils and problems associated with central concepts like *primitive art* for example, which manifest a derogatory attitude to creative aspects of the material culture of non-Western societies, even when accompanied by the best intentions, as in the case of Franz Boas. This is the reason why the adjective *primitive* has almost unanimously been replaced by the term *non-Western* or *small-scale*. Apart from carefully scrutinizing terminology, anthropologists have recently turned their attention to their own society. In cooperation with the rest of human sciences and by implementing in their own society the approach reserved for non-Western societies, anthropologists have often generated impressive results of acute, hermeneutic analysis of Western institutions, customs, attitudes, and modes of behavior. One may here indicatively mention the pioneering work of Mary Douglas, or more recently of Jonathan Culler. If anthropologists tend to criticize the most intimate conventions of their own cultures, it is likely that they will be reluctant to accept unconditionally universals, which are conventions with cross-cultural application.

Art is a universal term that has been employed in the anthropological study of other cultures as an extension of its conventional use in the Western world. There are two interrelated problems concerning this employment: First, there is a serious problem of definition of art, even within European aesthetics, let alone in cultures that lack terms that even approximately translate as art, and second, the notion of art is an instrument of value if it remains undistinguished from *fine art*, a pervasive term in European culture with relatively recent origins in the 18th century, as Goehr indicates. To render a concept of art