

1. The Occidental Conception of an Epochal Change with the Advent of Agriculture, Husbandry and a Sedentary Life

The transformation from the hunter-gather to agricultural mode of life found its expression in Western myths like none other. The cultural memory of this transition appears to be so deeply rooted within those societies which have undergone such a development that, according to their myths of creation, no other avenue of development is conceivable. Jan Assmann coined the notion that the past does not emerge by itself but is rather the result of a cultural construction and representation, impelled by specific motives, expectations and hopes, and formed within the present's frame of reference (ASSMANN 1992, 88, with reference to Maurice Halbwachs). Myths from agrarian societies are particularly vital to the emergence of the notion of a historical epoch founded upon agriculture and animal husbandry. These regularly esteem the surmounting of an errant hunting-based mode of life as an achievement. Within these, the mode of life present at the time is retrospectively accentuated by emphasising the departure from the former lifestyle. From the perspective of an agrarian society, sedentarisation and the accompanying socio-technical alterations in human relations are portrayed as the decisive step towards a civilisation of one's own. This process was presumably appreciated entirely differently by hunter-gatherer societies. Regardless, early appraisals of this process stem only from one side, namely from the communities which had already completed the shift to an agricultural-sedimentary society and lorded over hunter-gatherer and non-sedentary societies (as befitted their status). While the statement from Edith Ennen and Walter Janssen that until 1800 CE the farmer was generally a man unable to read and write (ENNEN, JANSSEN 1979, 1) remains apt, only a society based upon agricultural production can provide the preconditions

for certain members of society to create a space to textualise their intellectual and conceptual world.

1.1. The Epic of Gilgameš

The irreconcilable conflict between hunter and farmer societies respectively may already be encountered in the earliest literary textual evidence. For the urban societies of the ancient Near East, delineation from the still quotidian hunters in their immediate surroundings was of great significance. Their self-conception as 'civilisation' was thus derived from a mode of subsistence largely founded upon pastoralism and cultivation of fields and gardens. This perspective becomes apparent in the *Epic of Gilgameš*, which, in not recounting in any detail normal life among the gardens and fields surrounding a fortified city, only serves to heighten the description of Enkidu hailing from the steppe:

He wanders over the hills [*all day*,]
constantly with the herd [*he feeds on grass*.]
Constantly his feet [*are found*] by the water-[hole,]
(*Epic of Gilgameš*, tablet 1. – GEORGE 2003, 547)

and also Enkidu himself, whose birthplace was the hills.
Feeding on grass with the very gazelles,
jostling at the water-hole with the herd,
he enjoyed the water with the animals.
(Then) Šamḥat saw him, the man-savage,
a murderous fellow from the midst of the wild.
(*Epic of Gilgameš*, tablet 1. – GEORGE 2003, 549)

This fellow – how similar to Gilgameš he is in build,
he is tall in stature, *majestic* as a battlement.

For sure he was born in the hills.
(*Epic of Gilgamesh*, tablet 2. – GEORGE 2003, 561)

They put bread before [him,]
they put ale before him.
Enkidu did not eat the bread, he *looked intently* as he
viewed (it):
[*how to eat bread he had never*] *even [been taught,]*
(*Epic of Gilgamesh*, tablet 2. – GEORGE 2003, 561)

Enkidu does not have [*a mother or father*]
Loose-hanging hair ... [*was never cut*]
he was born in the wild and nobody [*raised him*]
(*Epic of Gilgamesh*, tablet 2. – GEORGE 2003, 565, with
additions)

Moreover, Humbaba, the guardian of the Cedar Forest, insults him:

Come, Enkidu, (you) spawn of a fish, who knew not
his father,
hatchling of terrapin and turtle, who sucked not the
milk of his mother!
(*Epic of Gilgamesh*, tablet 5. – GEORGE 2003, 607)

After all of the adventures partaken together, Gilgamesh speaks to his dying companion as follows:

“O Enkidu, [whom] your mother, a gazelle,
and your father, a wild donkey, [created,]
whom the wild [asses] reared with their milk,
and the animals [of the wild taught] all the pastures!”
(*Epic of Gilgamesh*, tablet 8. – GEORGE 2003, 651)

Enkidu, who lives outside of the agrarian community, is described as someone who eats wild plants and drinks the milk of undomesticated animals. As he does not know his ancestry, anyone might assume that he had originated among the animals of the wild or even the fishes of the sea. Due to his life in the great outdoors, he possesses great physical strength. Yet, he does not care for his appearance, is ill-bred and must constantly roam about with the wildlife from which he subsists. As the polar opposite of the fortified city, steppe and highland are his home. Culturally typical dishes such as bread baked from grains or alcoholic drinks are unknown to him. Even after his long sojourn spent among ‘civilisation’, he still does not belong to the community of the city state, which subsists from garden agriculture and domesticated animals. It is only when one might invoke ancestors themselves raised within the cultivated environs that

one might claim to belong. Already in the early 3rd millennium BCE, the period back to which the earliest version of the *Epic of Gilgamesh* extends, the dichotomy between hunting and gathering and cultivation and livestock husbandry played a decisive role in the self-characterisation of the sedentary agrarian population (at the very least).

1.2. Genesis

In the Bible, a novel dichotomy appears which plays primarily upon the newly developed rivalry between pastoralists and agriculturalists. Following the expulsion from Paradise, and thereby the end of a mythically transfigured mode of life bereft of effort and toil in the acquisition of nutrition (which might retrospectively be equated with a state of affairs prior to sedentarism and the introduction of agriculture), clashes between foragers and farmers form one of the most significant themes within the first of the five Mosaic books. It already becomes evident within the Pentateuch that the emergence of agriculture is marked as an achievement, and was not present from the very outset:

In the day that the Lord God made the earth and the heavens, and every plant of the field before it was in the earth, and every herb of the field before it grew: for the Lord God had not caused it to rain upon the earth, and there was not a man to till the ground [...]. (*Genesis* 2:4–5)

In contrast to primeval life within Paradise, where no effort must be made to cultivate plants, but rather necessary sustenance may simply be collected, the hardships of agricultural activity are central to the narrative as related within *Genesis*:

Cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life; thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field; in the sweat of thy face shalt thou eat bread, till thou return unto the ground; for out of it wast thou taken (*Genesis* 3:17–19)

The opposition between hunting and cultivation depicted in the *Epic of Gilgamesh* is now superseded by the conflict between agriculture and livestock rearing, which immediately occurs following the banishment from Paradise and the initiation thereby of an agro-pastoral lifestyle. This is clearly demonstrated by the story of Adam’s sons, Cain and Abel: while envy of God’s acknowledgement of the farmer’s offering is initially given as the motivation for the murder, the strife seems, nevertheless, to possess deeper roots – underpinning Cain’s murder of his brother Abel is evidently the natural

disharmony between cultivator and the pastor; indeed, what greater danger might constantly present itself to seeds than pasturing livestock? Written from the standpoint of an early agrarian society, *Genesis* also names another threat to its subsistence: drought brought on by lack of precipitation. Even the cultivator can be coerced back into a transient lifestyle by means of extreme climatic events within the ecologically highly sensitive zone of Palestine and its neighbouring regions. It becomes swiftly apparent that agriculture is initially far more sensitive to even the slightest of environmental alterations than pastoralism (which is capable of reacting flexibly to brief climatic changes on grounds of its mobility). By means of consequence, then, the abandonment of sedentary life is here presented as a solution – the temporary departure from agriculture in favour of an intensification of animal husbandry and thereby a transient lifestyle:

The voice of thy brother's blood crieth unto me from the ground. And now art thou cursed from the earth, which hath opened her mouth to receive thy brother's blood from thy hand; when thou tillest the ground, it shall not henceforth yield unto thee her strength; a fugitive and a vagabond shalt thou be in the earth. (*Genesis* 4:10–12)

The other extreme, precipitation to the extent of flooding, is also discussed. While far less frequent, such events threaten agriculturalists and pastoralists alike. Initially, however, the return of rain is welcomed, as is announced already with the birth of Noah:

This same shall comfort us concerning our work and toil of our hands, because of the ground which the Lord hath cursed. (*Genesis* 5:29)

Yet, thereafter comes the existential threat of the Great Deluge which submerges the entire land under water. Livestock and seeds must be hoarded, so that life might begin anew with the receding of the waters.

Not only are clashes between groups with competing economic models such as farmers and herders thematised over the further course of the narrative but also those within groups with comparable subsistence strategies. Even with sufficient available land, competition over what precious few expanses might be employed for livestock herding can provoke conflict:

And Abraham said unto Lot, Let there be no strife, I pray thee, between me and thee, and between my herdmen and thy herdmen; for we be brethren. Is not the whole land before thee? Separate thyself, I pray thee,

from me: if thou wilt take the left hand, then I will go to the right; or if thou depart to the right hand, then I will go to the left. (*Genesis* 13:8–9)

Scarcity of land and suboptimal environmental conditions are thus the factors limiting growth within the landscape wherein the biblical narrative plays out. Sedentarism and the production of alimentation favour population growth. Yet, this engendered new problems which were not only expressed in internal conflicts, but also gave rise to expansion into new terrains and outlying regions, and thereby to the enlargement of the settled area. In contrast to Mesopotamia, a departure (at the very least temporarily) from sedentarism by a population specialised in farming appears possible within Palestine. An incessant conflict between sedentary farmers and roaming pastoralists is, nevertheless, presented as “normal”. From a historical perspective, here might be encountered, for the first time, the fundamental differentiation between a life in Paradise based upon foraging and that mode of life evidently already understood within the ancient world as more recent comprising of agriculture, husbandry, and also the hunt. There is certainly no other economic upheaval in the history of human culture so deeply etched into Western tradition.

1.3. The Sequence of Ages within Classical Antiquity

With the antique tradition, the tales of a paradisiacal primordial age of perpetual peace, eternal youth, and effortless provisioning of nutrition attested among many populations found “their literarily solidified expression, defining tradition within the occidental cultural sphere” (MÄHL 1994, 12). The five-part division of the ages within Hesiod at the turn of the 8th to 7th centuries BCE may be considered to be the first literary attempt at a historical partition of the history of human culture:

Golden was the race of speech-endowed human beings which the immortals, who have their mansions on Olympus, made first of all. They lived at the time of Cronus, when he was king in the sky; just like gods they spent their lives, with a spirit free from care, entirely apart from toil and distress. Worthless old age did not oppress them, but they were always the same in their feet and hands, and delighted in festivities, lacking in all evils; and they died as if overpowered by sleep. They had all good things: the grain-giving field bore crops of its own accord, much and unstinting, and they themselves, willing, mild-mannered, shared out the fruits of their labors together with many good things, wealthy in sheep, dear to the blessed gods. (HESIOD, *Works and Days*, 109–120. – MOST 2006, 97)

The opposition between foragers and early farmers is no longer of interest to the society of the city-states in the Anatolian-Aegean sphere of the Archaic period. The past is glorified in contrast to the present: the earth provides all that is necessary without toil, and work in the fields serves merely as a pastime. A more precise notion of the acquisition of food during this mystical first age is provided by Ovid, who reiterates the fundamental Hesiodic articulation of ages at the advent of the Common era in his *Metamorphoses*:

The earth herself, without compulsion, untouched by hoe or ploughshare, of herself gave all things needful. And men, content with food which came with no man's seeking, gathered the arbut fruit, strawberries from the mountain-sides, cornel-cherries, berries hanging thick upon the prickly bramble, and acorns fallen from the spreading tree of Jove. (OVID, *Metamorphoses* I, 101–106. – MILLER, GOOLD 1977, 9)

For Ovid, this is clearly an age prior to the introduction of agriculture, in which humanity feeds itself by means of the collection of the fruits of the forest and field:

Afterwards those who have their mansions on Olympus made a second race, much worse, of silver, like the golden one neither in body nor in mind. A boy would be nurtured for a hundred years at the side of his cherished mother, playing in his own house, a great fool. But when they reached adolescence and arrived at the full measure of puberty, they would live for a short time only, suffering pains because of their acts of folly. For they could not restrain themselves from wicked outrage against each other, nor were they willing to honor the immortals or to sacrifice upon the holy altars of the blessed ones, as is established right for human beings in each community. (HESIOD, *Works and Days*, 127–137. – MOST 2006, 97–99)

An eternal childhood, hence, but also the age of the first martial confrontations, which explains how weapons and fixed settlements came into the world. Ovid's later text is again more illustrative with regard to the manner of housing and the foundations of acquiring food:

In this age men first sought the shelter of houses. Their homes had heretofore been caves, dense thickets, and branches bound together with bark. Then first the seeds of grain were planted in long furrows, and bullocks groaned beneath the heavy yoke. (OVID, *Metamorphoses* I, 121–124. – MILLER, GOOLD 1977, 11)

It can hardly be stated with any greater clarity. All three essential elements of the Neolithic are already mentioned here: a sedentary lifestyle, agriculture and animal husbandry!

Zeus the father made another race of speech-endowed human beings, a third one, of bronze, not similar to the silver one at all, out of ash trees – terrible and strong they were, and they cared only for the painful works of Ares and for acts of violence. They did not eat bread, but had a strong-hearted spirit of adamant – unapproachable they were, (...). Their weapons were of bronze, bronze were their houses, with bronze they worked; there was not any black iron. (HESIOD, *Works and Days*, 143–148, 150–151. – MOST 2006, 99)

In this, Hesiod's third race of men, a vague memory of the period before the introduction of agriculture can possibly be recognised. They used weapons of metal; here perhaps genuinely of copper or bronze (*χαλκῷ δ' εἰργάζοντο*) as iron was not yet employed, and lived in settlements built of sturdy materials. In the antique tradition, this age does not yet represent the Bronze Age in the modern sense, as historical references indicate that the following first 'Iron' Age is meant according to Hesiod:

When the earth covered up this race too, Zeus, Cronus' son, made another one in turn upon the bounteous earth, a fourth one, more just and superior, the godly race of men-heroes, who are called demigods, the generation before our own upon the boundless earth. Evil war and dread battle destroyed these, some under seven-gated Thebes in the land of Cadmus while they fought for the sake of Oedipus' sheep, others brought in boats over the great gulf of the sea to Troy for the sake of fair-haired Helen. (HESIOD, *Works and Days*, 156–165. – MOST 2006, 101)

Finally, the author bewails his own forlorn present, in the fifth age:

If only then I did not have to live among the fifth men, but could have either died first or been born afterwards! For now the race is indeed one of iron. And they will not cease from toil and distress by day, nor from being worn out by suffering at night, and the gods will give them grievous cares. (HESIOD, *Works and Days*, 175–180. – MOST 2006, 101–103)

Robert von Ranke-Graves even specifically identifies the brazen race with the society of Bronze Age Greece. For

him, the epoch of heroes is equivalent to Mycenaean culture and Hesiod's final age begins with the immigration of the Dorians, an event still historically identifiable for von Ranke-Graves (VON RANKE-GRAVES 1960, 5). This notwithstanding, the strict chronological character of the antique notion of the five ages may also be subjected to doubt as underpinning Hesiod's historical conception is no transcendent or immanent necessity leading to some predetermined end goal; the present is not embedded in a meaningful passage of time – it is not a transition, a necessary intermediary between past and future. Rather, it dwells isolated in itself and bears the seeds of its own fall, fulfilling itself in nothing other than the prior ages (MÄHL 1994, 17).

In Ovid, any differentiation between a heroic and a contemporary "Age of Iron" is no longer tangible, thus a mere four ages appear in his work: 'Golden', 'Silver', 'Brazen' (*aenea proles*) and 'Iron'. Once more, nevertheless, more precise explanations are presented regarding which technical innovations appear for the first time in this final "Age of Iron", which might, indeed, be interpreted as intimating a historically-understood progress of time:

Men now spread sails to the winds, though the sailor as yet scarce knew them; and keels of pine which long had stood upon high mountain-sides, now leaped insolently over unknown waves. And the ground, which had hitherto been a common possession like the sunlight and the air, the careful surveyor now marked out with long-drawn boundary-line. Not only did men demand of the bounteous fields the crops and sustenance they owed, but they delved as well into the very bowels of the earth; and the wealth which the creator had hidden away and buried deep among the very Stygian shades, was brought to light, wealth that pricks men to crime. And now baneful iron had come, and gold more baneful than iron. (OVID, *Metamorphoses* I, 132–142. – MILLER, GOOLD 1977, 11–13)

What is submitted to scrutiny here is nothing other than the development of sailing, of private property on estates, and the advent of mining. The consequences thereof are the acquisition of new littoral territories by means of now far-reaching maritime travel, the development of precise methods of surveying land and further new technical innovations offered by intensified use of metals. As Hans-Joachim Mähl was able to demonstrate, it was Ovid's *Metamorphoses* more than anything else that contributed to the transfer of the myths of Antiquity via the Middle Ages and Renaissance into the Romantic era (MÄHL 1994, 50–58).

The foundations of the canonical notion of an articulation of the history of human culture into ages of metal were already laid in Archaic Greece: a "Golden Age" marked by a gatherer-based subsistence, a "Silver Age" in which agriculture and pastoralism predominate, a "Brazen Age" in which copper or bronze come first into use as a metal and, finally, two subsequent "Iron Ages", of which the latter should be understood as the actual present. Differing decisively from the later constructed view of a directed course of history, the Greek conception determining history relationships is rather the cyclical return of an age fixed once for all eternity. The course of history does not thrust against some unknown future but rather moves in a cyclical motion rendered comprehensible by means of understanding the past (MÄHL 1994, 18–19). The Archaic Greeks within the Anatolian-Aegean sphere also did not possess any conception of a fundamental upheaval accompanying the transition from hunter-gatherer to agricultural-pastoral lifestyles, as this change was of little consequence to the Archaic population, which stands very much in striking contrast to the authors of *Genesis* who inhabited an ecologically sensitive zone. The notion of the cyclical return of an age also possesses a didactic character, exaggeration of the heroic past and of the present perceived as tiresome, oppressive demanding the striving for a better life in a new epoch. The propagandistic revelation of a "Golden Age" by Vergil at the beginning of the reign of Octavian/Augustus (VERGIL, 4th *Eclogue*), which more or less coincidentally fell within Jesus of Nazareth's period of worldly activity, is obvious against this backdrop.

The prophesy of the new age by Vergil as Christologically interpreted in the Middle Ages probably substantially contributed to the maintenance of this ancient tradition which would otherwise have been lost.

In contrast to ancient Greece, a historical consciousness developed itself within Judaism which led rather linearly from the remotest past by means of many stages to one's own present day, comprehending these stations as necessary steps towards a promised future (MÄHL 1994, 189–190). It was likely only by means of oriental influence that the notion of the return of the Golden Age could penetrate Greece and later be expanded upon in Roman verse (MÄHL 1994, 19). Of significance here to the development of the notion of a Neolithic is less the cultural memory of the transition from hunter-gatherer to agrarian lifestyles in the Ancient World, but rather more the efforts demonstrable from Classical Antiquity onwards of partitioning the history of civilisations into discrete epochs and, moreover, of respectively naming these after metals. Yet, most prominently bound together by the notion of the "return of the Golden

Age” were the idea of a cyclical sequence of ages and the eschatological concept of the advent of a new world respectively. More so than the symbolism of metals, this cyclical-ity may be evidenced in all those occidental conceptions of history’s course which postulate a fundamental regularity in its motions. This important aspect must be examined more precisely later.

Characteristically, even contributions to an Enlightenment-esque portrayal of history, which are already somewhat to be found in the Prometheus myth during Antiquity (unfolding as it does quite without the concept of a “Golden Age”), could not impact in the long term upon the notion of a course of ages defined by metal. This critical-rational stance against all mysticism was most radically adopted by the Sophists. On the other hand, the naive notion of the paradisiacal life in the Golden Age was also satirically modified and even made the subject of derision by the comic poets (MÄHL 1994, 30–34). The image of the ages of metal did not resultantly disappear, but was merely partially deconstructed and filled with rational content. At the end of this multifaceted development (cf. somewhat the images of history within Herodotus, Thucydides, and Dicaearchus) stands a pragmatic-historical cultural history well removed from myth. Already in Plato, a mingling of the Golden Age with the Prometheus myth may be found (MÄHL 1994, 35–41). At the advent of the Common Era, a historical perspective as to the doctrine of world ages appears with utter clarity in Lucretius’ didactic poem *De rerum natura*:

The ancient weapons were hands, nails, and teeth, and stones and branches also broken from forest trees, flames and fire as soon as they were known. Later was discovered the power of iron and of bronze. The use of bronze was known before iron, because it is more easily worked and there is greater store. With bronze men tilled the soil of the earth, with bronze they stirred up the waves of war, and sowed devastating wounds, and seized cattle and lands; for when some were armed, all that was naked and unarmed readily gave way to them. Then by small degrees the sword of iron gained ground, and the fashion of the bronze sickle became a thing of contempt, then with iron they began to break the soil of the earth, and the struggles of war now become doubtful were made equal. (LUCRETIUS, *De rerum natura* V 1283–1296. – ROUSE, SMITH 1992, 477–479)

For Lucretius, stone tools and weapons made from organic materials were initially used, this being the epoch during which fire had just been tamed. Thereafter, ore came to be employed (*aes*, here likely once more in the sense of copper

or bronze), from which not only more effective weapons, but also agricultural tools could be fashioned; this is an age in which agriculture and animal husbandry also appear. The gradual replacement of bronze knives with iron swords ushered in the age of ploughed fields. By Lucretius at the very latest, the notion had taken the form of a cultural-historical sequence within the world corresponding to a system of three periods: a succession of Stone, Bronze and Iron ages. Furthermore, important technical innovations are also ascribed to these epochs: the use of fire from the Stone Age onwards; pastoralism and agriculture from the Bronze Age onwards; and the advent of the construction of ploughs in the Iron Age.

In the ancient Near East, metal symbolism was also common in the characterisation of the various ages. In the prophesy of Bahman Yašt, composed in Middle Persian, Zarathustra sees in a dream a tree with four branches formed of metal in descending quality (golden, silver, brazen, and iron) which is interpreted by Ahura Mazda as an allegory for the four historical epochs (GATZ 1967, 7–8). This text, transmitted from the Sassanid period, draws upon earlier sources which might be traced back to at least the 4th century CE.

Comparable in structure is an account of Nebuchadnezzar’s (i.e. Nabû-kudurri-ušur II’s) dream of the world empires. The unequivocal reference within the biblical narrative to this Neo-Babylonian ruler fixes the tale within the 7th century BCE. In this story, a giant statue appears before Nebuchadnezzar in a dream:

This image’s head was of fine gold, his breast and his arms of silver, his belly and his thighs of brass, his legs of iron, his feet part of iron and part of clay. (*Daniel* 2:32–33)

A stone dislodged from a mountain which destroys the statue is interpreted by *Daniel* as the Final Judgement which seals the fate of the four monarchies symbolised by the four metals (GATZ 1967, 7, 9). Nevertheless, in *Daniel*’s reading, the golden head of the statue only represents the contemporary rule of Nebuchadnezzar, after which the other ages will then follow (*Daniel* 2:37–40). The concept of an eschaton is once more encountered here, after which the ages will renew. Yet, the narrative interestingly also does not present any retrospective organisation of the progress of history until the point in time in which it would have been composed, but rather presents an outlook upon the future from the standpoint of the Neo-Babylonian period. Implicit therein would seem to be a cyclical conception of history. The identification of metals, on the one hand, with colours and, on the other, with heavenly bodies (Gold – Sun, Silver – Moon,

(Copper-)Ore – Jupiter/Venus, and Iron – Mercury/Mars) also reveals the cosmological dimension of the notion of the ever-constant change of the ages. According to this, every epoch stood under the dominion of planetary gods, the appearance and disappearance of whom harmonise with the astronomically observable changes in the stars (GATZ 1967, 11–14).

1.4. Reception of the Antique Notion of the Ages of Metal in the Middle Ages and Renaissance

Although the topos of the “Golden Age” is not found verbatim within the poetry of the German Middle Ages, the notion of the cyclical progress of temporal stages and, most prominently, that of the return of a ‘good’ age do, in fact, occur as may be seen, namely, initially in Wolfram von Eschenbach’s *Parzival* at the beginning of the 13th century CE, and, at the turn of the 14th century, somewhat less clearly in the mystical compositions of Meister Eckhart (VEIT 1960, 103–123).

A vague echo of the antique tradition of the “Golden Age” may even be discerned in Snorri’s *Prose Edda* from the year 1300 (SNORRI, *Prose Edda*, chap. 14). Interestingly enough, the appearance of women is therein held as provoking the end of the “Golden Age”, which Gottfried Lorenz considers a blending of Ovid’s concept of a “Golden Age” with the biblical account of Paradise and the Fall (LORENZ 1984, 214–215). The antique notion of the outline of the ages was already so widespread in Europe in the Middle Ages that it was even comprehended in distant Iceland in the 14th century.

Roughly simultaneously in Italy during the Renaissance, Classical texts received new attention and came to form the foundation of a poetry which exploited antique notions to the full. In his *Commedia*, Dante Alighieri makes Vergil, the ancient herald of the “Golden Age”, his guide through the first two of the three realms of a transcendent world. The journey of the narrator through the spheres of “Inferno”, “Purgatorio” and “Paradiso” may be read as retrospective from the standpoint of the historical present of the poet back to the beginning of creation by way of Antiquity (VEIT 1960, 124–127).

At the beginning of the 16th century, Thomas More’s work *Utopia* directly engaged with the antique tradition and, more specifically, on the outline of an idealised polity in Plato (*Atlantis*). In the notes to the German translation of *Utopia* by Curt Woyte, the ideal state as suggested by More is characterised as “communist” (WOYTE 1951, 183–184, fn. 3), which draws parallel to conceptions of the course of history at the end of the 19th century. It must first be acknowledged, however, that the term itself experienced

a shift in the Renaissance from its original meaning of ‘nowhere-land’ and a new notion of “utopia” as the fiction of an ideal state would become prevalent, proving decisive thereafter most prominently within the intellectual history of the 19th century (MÄHL 1994, 2). A strand connecting to antique notions of a “Golden Age” may possibly already be seen in Augustine’s *De civitate Dei*. Clear references to the ancient topos of the Golden Age might also be encountered in the works of Erasmus of Rotterdam and William Shakespeare (VEIT 1960, 128–136), to mention only a few best-known, pertinent authors. Benedict Anderson, nevertheless, has pointed to the location of these not always seriously-meant “utopias” within their respective contemporary societies (ANDERSON 2005, 74). At the end of the 19th century, the meaning of the term “utopia” was expanded upon to relate not only to the genre of writings and novels on the state, but also to all illusionary and unfulfillable ideals, receiving thereby a negative, disparaging appreciation for the first time (MÄHL 1994, 2). Within the intellectual conceptual sphere of the Renaissance, a notion of ages housing a chronological dimension might still initially serve as a point of departure regardless. At the same time, the hope for or wishful thinking about the return of a particular age serves as a canvas upon which certain theories of state might be illustrated.

The periodisation of history into Antiquity, the Middle Ages, and the Modern era still employed today was the product of the adoption by Christoph Cellarius of the principle founded upon the antique tradition of segmentation into three (or four) “world empires” within his 1702 work *Historia universalis*, through which the mythological conception of the antique ages had materialised into a chronological framework at the very latest. Indeed, published in 1688, the name of his *Historia tripartita* already exemplifies the epochal system he fashioned (GOETZ 1999, 36).

While no original outline as to the articulation of the history of civilisation may be evidenced for the Middle Ages, at the very latest with the Renaissance’s reorientation towards Antiquity it may be presumed that the notion of a historical succession of Stone, (Gold, Silver,) Bronze, and Iron ages respectively (as established around the advent of the Common Era) belonged to the heritage of an intellectual elite and the clergy in Europe at the very least. The demonstrable references to the topos of the “Golden Age” within the aforementioned Renaissance authors certainly suggest this. Intellectual engagement with the Bible presented the medieval individual with the account within *Genesis* of the transition from “free” life in Paradise to a new lifestyle founded upon farming and herding. With the translation of the Bible by Martin Luther, this notion entered the general populace’s collective imagination from 16th century onwards.

1.5. The Notion of Epochal Change from the Enlightenment to the Romantic Period

Clearer forays into a resolution of the mythical-cosmological conception of the succession of ages may be noted from the Enlightenment onwards. Yet, an intensive engagement with classical texts initially also formed the basis of this. Taking Lucretius as his point of departure, Giambattista Vico developed markedly original notions of “cultural” achievements over the course of time at the turn of the 17th to 18th centuries:

Thus, since the forests came first, then the hovels, next the fields, flocks and herds, followed by the cities, the nations and, finally, the philosophers. (VICO, *The New Science*, trans. by POMPA 2002, 216)

This notwithstanding, it is not the transformations in modes of subsistence which brought about the four stages of society for VICO, but rather changes in human thought (BURKE 1990, 73).

Within Johann Gottfried Herder’s 18th-century conception of history, a juxtaposition of cultural development and human life-stages may be encountered. Inasmuch as therein, for example, the cultural development of ancient Egypt corresponds to childhood, that of Classical Greece to adolescence, and that of the Roman Empire to adulthood, the end of such a historical cycle presents the foundation for the development of a new civilisation which underpins, in turn, a development analogous to the human lifespan. Simultaneously, Herder emphasises clearly (and very much in the spirit of the Enlightenment) the geographically and environmentally determined causes for the transformations of human societies (MAURER 2014).

Universally known are the stylistic periods coined by Johann Joachim Winckelmann and the subdivision of the art history of Antiquity into Archaic, Classical, and Hellenistic derived from these, which ultimately present the concept of a living organism which buds, blossoms, and withers (LANG 2002, 44). The significance of Winckelmann for the reception of Antiquity has been much discussed, his influence already showing markedly in the title of Johann Wolfgang Goethe’s 1805 text *Winckelmann und sein Jahrhundert* (‘Winckelmann and his Century’). Thereafter, a tripartite division appears in Adam Ferguson’s 1767 work *An Essay on the History of Civil Society* which characterised the successive states of society as “savagery”, “barbarism” and “civilisation” (GRÜNERT et al. 1989, 28).

Taking an ethnographic analysis of different Native American tribes (most notably the Iroquois) as his starting point, Lewis Henry Morgan succeeded in later defining

these epochs more closely. In 1877, he outlined a system of cultural development composed of seven stages within his work *Ancient Society* which would come to be fundamental to the early 19th century’s conception of history (MORGAN 1921). Morgan also explicitly has recourse to an image of history transmitted from Classical Antiquity, and also somewhat in his prefacing of his work with verses from Horace’s *Satires*.

It might therefore be deduced that until the mid-18th century, practically the entire corpus of antique literature still extant had been accessed and made available to a broader public in printed form (ANDERSON 2005, 76–77). Beyond the remarkable inroads made by scientific observations into conceptualisations of history, it is most prominently the artistic engagement with Antiquity which contributed to the passing on of the ancient conception of the succession of Stone, (Gold, Silver,) Bronze and Iron ages within the European intellectual sphere. The poem *Die vier Weltalter* (“The Four Ages of the World”) by Friedrich Schiller and Friedrich Hölderlin’s *Natur und Kunst oder Saturn und Jupiter* (“Nature and Art, or Saturn and Jupiter”) are examples of this.

A stream of transmission such as this beginning with Classical Antiquity was thus of equal standing to those fantastical views regarding creation of prehistoric monuments and finds propounded in the medieval and early modern eras which are so often remarked upon in introductory literature on ancient history and prehistory (cf. EGGERS 1986, 25–29). With the constant addition of prehistoric finds to collections and cabinets of curiosities alike, the need for the integration of the prehistoric epochs into the pre-existing scheme also increased. Moreover, during the Romantic era, many European countries also experienced strengthened interest in the antiquities on their own doorstep, which, after all, were readier to hand than the epochal divisions of, on the one hand, the Bible and, on the other, the antique tradition.

It is only in the second half of the 18th century that a pronounced turn towards the economic aspects of the development of history might be evidenced. Adam Smith embedded once more a three-stage succession of hunter to pastoralist to finally agriculturalist within his studies of civic economy (GRÜNERT et al. 1989, 28). At the same time, travellers’ accounts from expeditions overseas confronted a European public with societies which had not yet accomplished the transition from a hunter-gather mode of life to an agrarian-pastoral example or were in the early stages of an agricultural lifestyle. Despite an increasing scientificisation of perspectives of history up to the end of the 18th century, the entrenchment of a tripartite, cyclically recurrent

progression of epochs is noteworthy. While academic interest shifted ever more to the economic preconditions for historical development, these new aspects were still completely shoehorned into the antique tripartite worldview. The most remarkable interpretation of historical processes during the Enlightenment is the comparison with the cycle of life in its constant succession of budding, blossoming, and withering. Even the ancient metal symbolism was not done away with by Enlightenment-era intellectual movements, but rather the economic and social underpinnings of its use over the course of epochs further sought.

1.6. Developments in the Perception of History in the 19th Century

The notion of a cyclical progression of history also occurs with the worldview of Karl Marx and Friedrich Engels. The foundation of their conception of the course of cultural development is the thesis posited by Ferguson and Morgan of a progression from “savagery” to “civilisation” via “barbarism”. In his work *The Origin of the Family, Private Property and the State*, Engels explicitly refers to Morgan and further develops his sequence of prehistoric cultural stages. Morgan’s initial sub-stage of “savagery” is viewed by him as the “childhood of the human race”. As people were still living partially in trees, the foundations of their sustenance would have been fruits, nuts, and roots. The salient achievement of this elementary sub-stage is seen by him as having been the emergence of articulated speech (ENGELS 1969, 29). At the beginning of the subsequent intermediate sub-stage, the exploitation of fish and further maritime food sources would prevail. The precondition of this was mastery of simple waterborne travel. This would have been accompanied by the use of fire. Hunting (but also cannibalism) would only then have emerged (ENGELS 1969, 30). The final stage of “savagery” is characterised by specialised hunting by means of bow and arrow. The first settlement in villages would have occurred in this period. The material culture is distinguished by wooden vessels and tools, finger weaving, still without a loom, and also the emergence of polished stone tools (ENGELS 1969, 30–31). Together with the domestication of animals and the cultivation of crops, Engels considers the introduction of pottery to have been a crucial criterion for the transition from “savagery” to “barbarism”. These achievements mark the initial stage of “barbarism”. Here, already, the transition from a mode of life based upon hunting and gathering to one formed from agriculture and husbandry may be identified.

At the advent of the intermediate stage, Engels sees a bifurcation in the development of the eastern and western hemispheres. While, on the grounds of the great potential

presented by its domesticable large mammals, the eastern of these concentrated on the taming and breeding of these species, in the western hemisphere the focus was more the development of vital cultivars and earth building techniques. Yet, Engels also posited within this stage a division of peoples into Semites and Aryans (ENGELS 1969, 31–32). At the beginning of the final sub-stage of “barbarism”, he imagines the smelting of iron and the discovery of the alphabet. For Engels, an advance in the division of labour is a total novelty at the outset of “civilisation” (ENGELS 1969, 185). The lowest sub-stage of “civilisation” is nevertheless marked by production for personal use. It is only in the intermediate sub-stage that a surplus of property is noted, for example among pastoral populations. At the same time, a division of labour between the pastoral peoples and the “backward nations without herds” should become apparent (ENGELS 1902, 200). All of the preconditions for a regular exchange between these two groups should thus have been achieved. The upper sub-tier of “civilisation” finally demonstrates a division of labour between agriculture and manual labour. Increasingly, the production of a proportion of the fruits of labour directly for exchange should result in the development of a social class of merchants which enables an exchange which is now vital to survival between the individual producers of society.

Also arising from this excellent analysis and synthesis of historical theory was the critique of social conditions articulated by Marx and Engels which would prove to engender a political program of titanic and wide-ranging consequences. The characterisation of the social elite during the third stage of “civilisation” in Engels’ *Origin* already delivers a seemingly timeless political statement:

But here a class appears for the first time that captures the control of production in general and subjugates the producers to its rule, without talking [sic] the least part in production. A class that makes itself the indispensable mediator between two producers and exploits them both under the pretext of saving them the trouble and risk of exchange, of extending the markets for their products to distant regions, and of thus becoming the most useful class in society; a class of parasites, genuine social ichneumons, that skim the cream off production at home and abroad as a reward for very insignificant services; that rapidly amass enormous wealth and gain social influence accordingly; that for this reason reap ever new honors and ever greater control of production during the period of civilization, until they at last bring to light a product of their own periodical crises in industry. (ENGELS 1902, 201)

The last stage of “civilisation” presents states as its organisational form, the cycles of exchange of which are driven with the aid of metal coinage (ENGELS 1969, 186).

Proceeding from the premise of a “primitive society” without social differentiation, the course of history from a Marxist perspective is determined by class oppositions. The escalation of the clashes between ruler and ruled should culminate in revolutionary changes within society, at the end of which communism as a classless society stands anew (MARX, ENGELS 1971, 26–37. – On the reception of these theses within the study of prehistory, see HERRMANN 1982. – GRÜNERT 1989, 52–59). As both a point of departure and return for this trajectory, a society is envisioned wherein its members live in equality according to their needs and abilities, without differences in status or private property, at the least in terms of the means of production. In the attempts to implement practically these ideas within the socialist nations of the 20th century, the striving for communism did, indeed, assume a similar significance to the notion in Antiquity of the return of the ‘Golden Age’. The foundations of the concept of a development beginning with a pre-state, classless society can already be recognised in the historical system of Immanuel Kant at the turn of the 18th to 19th centuries, according to which humans were supposed to have lived first as hunters and gatherers and then as agriculturalists and pastoralists (GRÜNERT et al. 1989, 28–29). A differentiation between acquisitive (hunter-gatherer) and productive (agricultural-pastoral) modes of life also probably appears here in this context at the very latest, this having its basis in a purely economic depiction of this historical transition at the beginning of the Neolithic.

Thereafter, the 19th century was marked most noticeably by the pursuit of scientific discovery on an empirical basis, leading to a fundamental criticism of the image of history informed by the Bible and the antique sources. Conscious of the actually far greater age of humanity, a necessity emerged to subdivide the now markedly longer history of culture. The starting points for this articulation were provided by discoveries within geological research, on the one hand, and by typological and context-analytical observations of the archaeological finds themselves, on the other. Accordingly, the contribution of the work of Christian Jürgensen Thomsen is quite rightly to be recognised in the development of an academically-grounded three-period system (HANSEN 2001). This notwithstanding, it hardly surprises that Thomsen came to a tripartite system of displaying the finds in the Copenhagen Museum and, in 1839, also published his division of the history of human culture according to tools of stone, bronze, and iron (EGGERS 1986, 32–40). It would be far stranger were he to have come to any other division of

prehistory on the strength of his observations. Taking into account the development of Antiquity’s notion of division of human history up to the 19th century, Thomsen’s tripartition of prehistory can certainly only be deemed consequent in nature. Regardless, he may be credited with establishing the traditional division inherent to European intellectual history into Stone, Bronze, and Iron ages by means of scholarly arguments based upon find contexts and typological observation. Should the development here portrayed of the notions of the ages’ course prior to Thomsen be considered, then the fashioning of the three-period system is most certainly not to be understood as an “intellectual revolution” (contra HANSEN 2001, 11). The initial point of departure for Thomsen’s engagement with Antiquity was numismatics, an academic field requiring a classical education like none other. The degree to which Thomsen employed the antique sources in the development of his organisation of the Copenhagen Museum’s displays and later also his historical classificatory system is apparent in reading the first page of his *Guide to Northern Archaeology* (THOMSEN 1848), this being concerned with the “Extent and Importance of Ancient Northern Literature”. Firstly, the influence of Classical literature upon Nordic literature is for him undoubted and, secondly, the praise lavished by him upon the antique sources demonstrates how well acquainted he was with them:

This development of humanity has been mainly pursued through two channels: this unrest of the mind, so beneficial in its operations, we owe first and most signally to the ancient classical literature, that of Greece and Rome; by this it has been awakened, by this it has been nourished, by this Christianity itself has been urged forwards. The study of the Greek and Latin languages has given birth to the modern philology. By the example of the classical historians modern history has attained its eminence, of which fact there can be but one opinion among men of scientific acquirement; none but the uninstructed and superficial observer would ascribe the movement of a machine to the great external and visible wheels without taking into account the inner principle of motion. But with the remains of the old classical literature the moderns have moreover combined a new spirit of intellectual activity, sprung indeed from an ancient root, but which by degrees has expanded into a new tree with another stem and bearing other fruit. The knowledge of the old time embraced man, that of our time nature at large. The special subjects of the labours of antiquity were mythology, language, history, as also philosophy, or in other words the history of man; what in modern times has been added to these is

the knowledge of the world in all its departments, or in general terms the history of nature. The latter could not have sprung into existence without the former, *no La Place¹ without an Euclid*, but the later development of knowledge has placed such a distance between the two, that they may be considered as independent of each other. Both together complete the culture of the human intellect. (THOMSEN 1848, 2–3; my italics)

Thomsen acknowledges thereby to have altered an existing system by means of supplementing it with his own observations from the material record. “No Thomsen without Lucretius” might be stated in very much in the same vein!

Regardless, the criticism from the opponents of the three-period system are also to be encountered at such junctures, for example when Ludwig Lindenschmit expresses disapproval of Thomsen that his “cultural-historical fantasies” have “as a reflex of the poetic twilight of yore much to attract” but might never be brought into accord with the “natural division of things” (LINDENSCHMIT 1860, 184). This oft-cited remark is nevertheless completely overblown, when it is considered that Lindenschmit himself presented the “antiquities” from the Roman-Germanic Central Museum according to a comparable division into Stone, Brazen, and Iron periods (along with a Frankish-Alemannic period) in his catalogue already published in 1858:

Inasmuch as we apportion a certain designation only to those groups *to which a character or chronological allocation may be ascertained without doubt* [...] we adhere on the whole to the celebrated central division presenting three large periods according to the chief employment of stone, copper, and iron for tools and weapons. This designates in the correct general outline the developmental trajectory of the entirety of human culture in a succession about which no difference of opinion might prevail, and encompasses simultaneously all of the transitional stages which, as the object of archaeological investigation, must be identified from the factual findings of the grave inventories. (LINDENSCHMIT 1858, 5; my italics, trans. by A. Edmonds)

While he might eschew larger subdivisions (so as to avoid misapprehensions in the categorisation of the find corpus), Lindenschmit nevertheless evidently maintains the general

tripartite division of the history of human culture and, indeed, its derivation from antique tradition. Admittedly, his published views, particularly in respect to the question as to whether or not a Bronze Age occurred within Northern Europe, remain contradictory and not always clear. From correspondence with Thomsen, it might be deduced that here Lindenschmit is the student, and indeed all too keen to learn from his older colleague in Copenhagen. It might incidentally be noted that it does not seem that Lindenschmit could ever truly rid himself entirely of the tripartite division of the ages and, perhaps more so than Thomsen, in the antique sense. Even his work on Sigmaringen’s antiquities is marked by the classical terminology and operates quite evidently according to the terms Stone, Brazen, and Iron ages. Moreover, the chapter on “the so-called Brazen Age” can by no means be understood as a fundamental criticism of Thomsen’s three-period system as portrayed by Eggers (EGGERS 1986, 50). While Lindenschmit certainly dismissed the independent development of bronze tools in the north (LINDENSCHMIT 1860, 157–158), he nevertheless leaves scarce doubt as to their chronological anteriority in contrast to iron tools, at the very least in the case of Southern Europe. Not even the periods of martial confrontation between the German Confederation and the Kingdom of Denmark over Schleswig-Holstein between 1848 and 1852 and again in 1864 had any bearing on the bonds of scholarship and friendship between Thomsen and Lindenschmit. Throughout these years, amicable letters journeyed back and forth between Copenhagen and Mainz; from these, it is apparent that not only plaster casts of valuable finds were traded, but also that a varied and mutually fruitful academic exchange prevailed (STREET-JENSEN 1985, 49–143).

Initially independent of Thomsen, Johann Friedrich Danneil in the Altmark and Friedrich Lisch in Mecklenburg came to a similar division of prehistory by means of the contents of graves (EGGERS 1986, 43–49). In 1865, Lisch had already documented how once again the heated clashes over the three-period system came to be increasingly dominated by nationalistic voices in the wake of the events of the war of 1864. Even Lisch confessed to having already articulated the system in a publication from 1837 so as to dismiss the charge that the division of prehistory into Stone, Bronze, and Iron ages was a system of categorisation imposed by Danish academia. The details of this famed debate have already been sufficiently explained by Eggers (EGGERS 1986, 50–52), and need not be recapitulated here, inasmuch as they are of little importance to the pertinent question as to the perception of the transition from hunting and gathering to farming and herding. The dispute over the partitioning of prehistory had relocated entirely to the realms of the artefacts themselves,

1. Meant here is Jean Baptiste Marie Charles Meusnier de la Place, the inventor of electrolysis and pioneer of lighter-than-air travel.

and it seemed as if the economic perspective regarding epochal change which had emerged at the beginning of the century would increasingly fade into relative unimportance.

1.7. The Invention of the 'Neolithic'

Regardless of whether the three-period system was common to Antiquity and the 19th century or not, the crucial transition from a way of life rooted in foraging to one organised around sedentism and agriculture is not described by this paradigm. It remains unclear as to when Thomsen envisions this historical transformation, his descriptions being concentrated entirely upon the material culture and ignoring for the most part the economic scope of the accompanying changes. That the shift from hunting and gathering to an agrarian lifestyle hardly proved to be of any central interest to Thomsen may well be as this transition occurred comparatively late within Scandinavia and therefore was less tangibly rich in consequences than in many other quarters of the ancient world.

Decisive progress towards dispelling the antique doctrine of the three ages and the recognition of a significant cultural historical segment still within the Stone Age was first achieved in the second half of the 19th century. In 1865, John Lubbock, close confidant, and research assistant of Charles Darwin, published *Pre-Historic Times*, his debut work as an academic author. The subdivision of the Stone Age into epochs of knapped and of polished stones and the coining of the terms Palaeolithic ('Old Stone Age') and Neolithic ('New Stone Age') may be traced back to him (LUBBOCK 1865, 60–82). It is these discoveries, novel at the time, which would find reception within the works of Marx and Engels (cf. ENGELS 1969, 29–35). In this case, the inspiration for this also came from Denmark, where Lubbock not only visited the National Museum, but was also able to view a few *Køkkenmøddinger* ('kitchen middens'). At the time, the famous debate between Jens Jacob Asmussen Worsaae and Johann Japetus Smith Steenstrup over the development of these shell heaps was at full tilt, the result of which was a commission for the study of the *Køkkenmøddinger* presenting its first results in 1851 (FISCHER 2002, 34. – KRISTIANSEN 2002, 11–14).

Once Jacques Boucher de Perthes and Charles Lyell had demonstrated the "antediluvian" age of humanity (EGGERS 1986, 56–59), the way had been cleared for the Stone Age's detailed, stratigraphically-oriented subdivision over the remaining half of the 19th century. The salient academic figure during this period was Gabriel de Mortillet, who had already published a comprehensive system for the division of the Stone Age within his *Classification chronologique* of 1869. The basis of this classification was formed by artefact

types which, similarly to Edouard Lartet within Palaeontology, he considered to be "index fossils" for a particular epoch. Pioneering in this respect were his observations in light of stratigraphic information, according to which initially core tools appear, followed by flake tools and then finally blade tools. Mortillet named the pertinent inventories after the sites at which they respectively occurred, drawing on the excavations of Lartet at Abri Le Moustier, the caves at Aurignac and at La Madeleine. In his last academic work, he discussed the "greatest known social revolution" in connection with the Neolithic (MORTILLET 1897, 326). His thoughts as to the transition from the Palaeolithic to the Neolithic are also otherwise remarkable, and are very much modern in comparison to all of his predecessors within the study of the distant past. This modernity reveals itself in a radical dispelling of all developed models of the stages of human cultural history, inasmuch as he introduced a perspective purely grounded in empirically derived facts into the historical disciplines. Initially, he recognised that the gradual transition in the climate of the Pleistocene culminating in the conditions prevalent today had first formed the precondition for the emergence of a new intellectual and material culture (MORTILLET 1897, 326). As an expression of these profound intellectual and also social and religious transformations, he pointed to the respectful treatment of the dead, which should offer intimations as to a fundamental shift in thought among human communities. Simultaneously, the burial of the dead should also indicate a deeper understanding of hygiene (MORTILLET 1897, 326). The terminology employed by Mortillet might be understood as reflecting his ideological convictions, only becoming entirely intelligible in the context of his political activities during the February Revolution of 1848 (JUNGHANS 1987, 23–45). He actively participated in events by (among other things) expressing himself in political writings on social questions. He sided with the circle of *Democrates-Socialistes* which had formed about Louis Charles Delescluze, and assisted in the flight into exile of Alexandre-Auguste Ledru-Rollin, initially one of the strident opponents of the regime of Louis Philippe and thereafter the defeated electoral adversary of Napoléon III (JUNGHANS 1987, 25–33). So as to evade his own imprisonment for "incitement to sedition through writing" he stayed in Switzerland and the liberal Duchy of Savoy from 1849 until amnesty in 1863 (JUNGHANS 1987, 35–45). Against such a political backdrop, Mortillet scrutinised humanity and its societal development with entirely new eyes; for him, the question as to the cultural development of humanity was of fundamental political significance. Mortillet not only recognised the appearance of polished stone tools as a characteristic element of

the Neolithic, but also flint arrowheads with barbs, pearls, and slices from mussel shells and stones, the introduction of pottery (“still crude and handmade and poorly fired”), the installation of burial pits, artificial caves and dolmens, the first pile dwelling settlements, and the first appearance of domesticated species (MORTILLET 1897, 250–251. – See also Mortillet’s *Tableau Archéologique* photographically reproduced by JUNGHANS 1987, folding plate). He had thus identified all of the essential innovations appearing with neolithisation, at least for Central Europe. These transformations extend well beyond purely the sphere of artefacts, and also impact upon the social behaviours of human communities. For Mortillet, this innovation was prompted by the arrival of a new population group and he even held multiple waves of immigration to be possible, these, however, leading not to an expulsion of the autochthonous population, but merely to a cultural dominance over it (MORTILLET 1897, 251–252). Mortillet entirely correctly localised the origins of this development in the East, although with a rather weak argumentation for one of such otherwise unerring judgement. As the establishment of the Neolithic economic model was accompanied by a fundamental shift in the sphere of intellectual perception, the impulse for this must then have originated from the oriental cradle of all great world religions, such as Brahmanism, Buddhism, Judaism, Christianity, and Islam alike, namely from the expanse between Asia Minor, the Caucasus, northern Persia, and Tartary (MORTILLET 1897, 252). Yet, even here, for all its intuitiveness, his postulation was not entirely incorrect.

1.8. “Ex oriente lux” – on the Localisation of the Earliest Neolithic

Thus, by the close of the 19th century, all innovative elements of the Neolithic had already been identified. By means of the Køkkenmøddinger Commission, the idea of a Mesolithic period as an intermediate stage between the end of the Ice Age and the beginning of the establishment of agriculture and husbandry in Europe gradually began to break fresh ground. All that remained vague for the time being was the localisation of the origin of this novel economic mode and, moreover, the direction in which it had spread, this being on account of archaeological research’s confinement to Europe’s core territories. The great disadvantage of Mortillet’s quasi-stratigraphically-situated system of chronology was, incidentally, the notion of epochs successively replacing one another and overlapping one another like firm chronological segments. Similarly to all other cultural epochs, the Neolithic was viewed as a chronological interval, the absolute beginning and end points of which simply could not yet be isolated any more precisely.

At the onset of the 20th century, the Neolithic was depicted as a chronological block which, considered from the perspective of prehistory, would have come about in a manner analogous to those almost sudden disseminations of technical innovations or religious beliefs as found within historical periods and which, once established, would have enjoyed a static existence until its replacement by the Bronze Age. It was only first with a clear conceptualisation of the enormous chronological depth to the process of neolithisation that grasping the successive waves by which this new economic model was disseminated could gradually begin in earnest. Initially, however, this did not alter the static character of the Neolithic chronological segment, which was regarded somewhat as a fixed interval between the end of the foraging lifestyle and the coming of metal technology. It was only with the partial deconstruction of this epochal model in the 20th century that the dynamic character of the neolithisation process was revealed; it was recognised that this need neither strictly follow the hunter-gatherer economic mode, nor uniformly occur globally, but is rather highly flexible. Indeed, this process could even be reversible. There are many examples of societies which eschewed individual elements such as sedentarisation or agriculture so as to adapt to shifting environmental conditions, and transitioned back from a completely neolithised lifestyle to an existence as nomadising shepherds. Even an intensification of hunting and gathering can occur without further ado.

Excavations initiated at the end of the 19th century and the beginning of the 20th century at many sites in the Near East yielded new advances in the study of the earliest manifestation of the Neolithic, its localisation, and ultimately its trajectory of dissemination towards Europe. At the turn of the century, the Egyptologist James Henry Breasted had already coined the term “Fertile Crescent”:

The earliest home of men in this great arena of Western Asia is a borderland between the desert and the mountains, a kind of cultivable fringe of the desert, a fertile crescent having the mountains on the one side and the desert on the other. This fertile crescent is approximately a semicircle, with the open side toward the south, having the west end at the southeast corner of the Mediterranean, the center directly north of Arabia, and the east end at the north end of the Persian Gulf. The end of the western wing is Palestine; Assyria makes up a large part of the center; while the end of the eastern wing is Babylonia. This great semicircle, for lack of a name, may be called the Fertile Crescent. (BREASTED 1916, 100–101)

This geographical region is distinguished by its frequent winter rains and offers advantageous conditions for the growth of the wild grains first cultivated by humans. Breasted was convinced that “civilisation” began in the East, and had first spread from the Near East to Europe (BREASTED 1916, 33–34).

Vere Gordon Childe thereafter succeeded in bridging the void between the early agrarian cultures of the Near East and Europe, surmising thereby the key position of the eastern Mediterranean, Asia Minor, and the region of the Balkans in the transmission of the Neolithic innovations northwards and westwards. He confirmed the view of Breasted according to which the Neolithic development emerged in the East, spreading from there to Europe by means of the Mediterranean and Asia Minor (CHILDE 1928, 14–30). Consciously or not, he further developed Mortillet’s notion of a “greatest known social revolution” during the neolithisation, so that the very nomenclature of the “Neolithic Revolution” seems to have been Childe’s own creation even today. Despite this, the social shifts tied to neolithisation are formulated more clearly by Childe than by Mortillet, the former employing for this purpose the economic terminology of Marx, Engels, and their intellectual predecessors:

The greatest moments – that revolution whereby man ceased to be purely parasitic and, with the adoption of agriculture and stock-raising, became a creator emancipated from the whims of his environment, and then the discovery of metal and the realization of its properties – have indeed been passed before the curtain rises. (CHILDE 1928, 1–2)

The actual advance in Childe’s thought is nevertheless the discovery of a technical, social, and economic development occurring worldwide at differing speeds. While a similar succession of Palaeolithic, Mesolithic, Neolithic, Bronze and Iron ages may be evidenced in diverse places within the Old World, it can hardly be presumed that these stages were synchronised in their occurrence. This knowledge must certainly have been common to many researchers by the close of the 19th century; nevertheless, by means of Childe, these notions were corroborated by the absolute dates available at the time and, above all, formulated brilliantly:

But, though everywhere homotaxial (occupying the same position), none of these Stages need be everywhere contemporary: for instance, the Neolithic Stage ended before 3000 B.C. in Egypt, in New Zealand only after A.D. 1800! The Ages or Stages are accordingly again only guides to relative chronology. (CHILDE 1958, 11)

The dynamic character of these processes had thus already become evident, even if the perspective of study remained largely confined to certain regions and their diachronic cultural development, lending themselves to expression in chronological scales or columns. Childe’s innovation was that these columns not only developed at differing paces in different places, but also that phases of quickened and slowed growth were identifiable in each of their own respective trajectories.

From the 1920s onwards, Childe articulated his Oasis Theory, according to which the increasing dryness at the end of the last Ice Age had forcibly brought about sedentarisation through the concentration of populations at the oases developing as a result of this (CHILDE 1928, 31–49). The high density of settlement would thus also form the basis of technical innovations such as husbandry, development of land, and hydraulic economy, which would have become of crucial necessity to the feeding of humans. While the Oasis Theory would soon already be criticised (inasmuch as regionally differing transformations in the environment led to the emergence of elements of the Neolithic), Childe’s ecologically determined perspective would regardless remain pioneering for the coming decades of research into the Neolithic. He was also the first to identify the close ties of the earliest Neolithic groups in Europe to certain resources such as some deposits of salt, copper, and gold in the Carpathian Basin, and the foundation of the first settlements in Central Europe upon loess soils (CHILDE 1929, map 1).

A clear counterargument was presented by the “Hilly Flanks” theory of Robert John Braidwood, according to which the preconditions for early agriculture would primarily be found in upland areas with sufficient precipitation, so that irrigation would not be an initial necessity (BRAIDWOOD 1952, 9–13). Here, he meant most notably the highlands of the Zagros Mountains, which simultaneously also offered a habitat for the wild variants of the earliest livestock, sheep, and goat. The “hilly flanks” of the “Fertile Crescent” would accordingly have presented the ideal basis for the development of this novel economic system, which then first reached Egypt in a developed state. Moreover, Braidwood sees the sedentarisation of humans as a flexible reaction by means of which to adapt to changing environmental requirements within this ecologically highly sensitive area (BRAIDWOOD 1957. – BRAIDWOOD 1962). From a present-day perspective, the northern periphery of the “Fertile Crescent” does, indeed, present a region within which the most important early crop cultures such as einkorn, emmer, and barley naturally occur in their wild forms. This area also covers the presumably somewhat broader region of distribution for wild forms of sheep and goat (WATKINS

2007, 43–47). The soubriquet of the “Golden Triangle” was coined by Olivier Aurenche for this overlapping zone (AURENCHE, KOZŁOWSKI 1999. – AURENCHE 2007). At the very least, for the world of the ancient Near East and the European heartland, this region represents in a certain way the core zone for a Neolithic lifestyle consisting of a bundle of innovations transmitted more or less in its entirety into the neighbouring regions. Decisive elements of this “Neolithic package” are the domestication of animals and the breeding of cultivates, the development of grindstone technology, a production of polished stone tools and the production of ceramic vessels, whereby the conscious manufacture of products from burnt clay might feature as the development of the earliest artificial material in cultural history.

1.9. Affluent Hunter-gatherers

The study of recent hunter-gatherer groups permitted new and extensive insights into the life-worlds of societies prior to the introduction of agriculture and husbandry, which is not without repercussions for perspectives on the neolithisation process. Inasmuch, the essays compiled by Marshall Sahlins under the title *Stone Age Economics* are significant here. He imagines a Stone Age society living under Zen-like rules, the requirements of which are minimal and could be covered without high productivity (SAHLINS 1972, 2). The assumption that hunters and gathers are in a permanent struggle for survival in a marginal environment are accordingly based on the ethnocentric criteria of a capitalist industrial society. With closer examination of tribal groups, it can, in fact, be concluded that these live in a veritable surplus as they are content with little. They had no concept of property as too many goods literally become a burden in light of their constant movement. Private property and mobility would thus seem to be at odds with each other, and represent a certain contradiction. Hunters and gatherers can also obtain a high yield within fertile regions with little work. This perspective was confirmed by Brian Hayden, according to whom generalised hunter-gatherer societies can develop into complex hunters and gatherers within rich biotopes. Independent of the potential for domestication among plants and animals, farming and herding could develop under certain circumstances (HAYDEN 1990). This argumentation was significant for the proponents of the thesis of the development of a Neolithic specifically in Middle Europe from local Mesolithic roots, without a migration from the south-east (cf. TILLMANN 1993. – KIND 1998). By means of human genetic studies, this perspective seems to have been conclusively disproven for (at least) the diffusion of Linearbandkeramik (LBK) along the Danube towards Middle Europe (HAAK et al. 2015. – HOFMANOVÁ

et al. 2016. – MATHIESON et al. 2018). This stance was confirmed by the discovery of a very low density among the local Mesolithic population (RICHTER 2017). These solitary hunters and gatherers would have scattered without any problem before the newly arrived Neolithic groups from the Carpathian Basin since they could make use of diverse habitats while the Neolithic communities would have been confined to the fertile loess soils. This would explain why isolated Mesolithic groups could survive into the 4th millennium BCE (BOLLONGINO et al. 2013). Relationships of exchange between Mesolithic and Neolithic groups are, at the very least, evident at the level of stone tools (GRONENBORN 1994). In recent years, the considerable economic potential of the pre-Neolithic societies has become more apparent. By means of so-called “low-level food production”, mobile hunter and gatherer societies would have been capable (to a certain degree) of making sustainable interventions within the environment which would have contributed to its transformation by humans in terms of economic use (SMITH 2001). Examples would be the contraction of dense forest by means of burning, as a result of which useful plants could proliferate through conscious or unconscious dispersal of their fruits. An extensive dispersal of the hazelnut, for example, into Middle Europe over the course of the Mesolithic could accordingly be explained (HEIDGEN et al. 2020). On the fringes of the LBK, the alternating relationship between the last hunters and gatherers, on the one hand, and the newly arrived farmers and pastoralists, on the other, remains of vital relevance. A particularly attractive description of the staggered process of adaptation of initially individual ideological concepts and later the entire productive economic mode by Mesolithic groups was the model developed by Marek Zvelebil with the example of the neolithisation in the Baltic which is supposed to have occurred in three phases, namely availability, substitution, and consolidation (ZVELEBIL 1986. – ZVELEBIL 1989. – ZVELEBIL 2001). This so-called Availability Model is applicable to other geographical regions on the fringe of the Neolithic oikumene, although the Mesolithic is poorly attested almost everywhere outside of the areas north of the LBK. From the diffusion of human genetic haplotypes and the ¹⁴C dates then available, Albert Jay Ammerman and Luigi Luca Cavalli-Sforza presumed a radial expansion of the Neolithic in the sense of a Wave of Advance Model as coined by them (AMMERMAN, CAVALLI-SFORZA 1971. – AMMERMAN, CAVALLI-SFORZA 1984). This model functions akin to the principle of a stone thrown into water spreading concentric ripples. Interesting and of need of explanation, nevertheless, were those regions in which a hastened or delayed expansion of the neolithisation process could be evidenced,

which have markedly contributed to discussion of the dynamics of dispersal in Europe as a result (see, e.g., LÜNING 1988). Moreover, some colleagues have described this process of distribution's specific dynamic as arhythmic (GUILAINE 2007. – SCHIER 2009). An explanation for the stadial dispersion of Neolithic in leaps and bounds from the Near East via Anatolia initially into the Aegean, and from there into the Balkans, the Carpathian Basin, and Middle Europe is ultimately presented by the climate fluctuations over the course of the Holocene and their influence upon the Neolithic lifestyle in the different bio-geographical zones. A large role in this was most prominently played by the 8.2 ka event, a sudden decrease in global temperatures which has its peak at approximately 6200 calBC, and, to some degree, aids understanding of why the dispersal of the Neolithic remained confined to the eastern Mediterranean for such a long period of time (WENINGER et al. 2005. – WENINGER et al. 2009. – WENINGER et al. 2014).

1.10. A Summary of the Prior History of Research

The construction of the Neolithic as a historical epoch appears as a product of the 19th century, presenting itself as the consequence of a conception of history extending back into Antiquity, of ages progressing in stages. Nevertheless, this perspective stands in opposition to the Neolithic's actual character. This does not comprise a single, easily delineated period, but rather several dynamic processes of dispersal on the part of diverse innovations. Within this, the most important element to note is the economic mode of production; at the beginning of neolithisation, this remained confined to those regions particularly suited to cultivation, serving the purposes of land reclamation and irrigation without any additional investment of effort. Other elements such as, for example, production of ceramics and grindstone technology came to be dispersed well beyond regions primarily suited to agriculture. Viewed globally, the production of ceramics had already occurred at various locations before the introduction of farming and herding, without altering the economy of the respective societies. That pottery production and an agrarian lifestyle need not necessarily be connected is evidenced by the early pottery-producing groups of the Baltic region and eastern Europe, the economic models of which would long remain founded in hunting, fishing, and gathering. It should thus be apparent that some innovative aspects of the process of neolithisation might occur within the realms of a similarly unfolding societal development as contemporary phenomena, or indeed in a chronologically staggered manner quite without recourse to one another. It might even be supposed that the chronologically shifting appearance of certain innovations

is simply a characteristic of neolithisation, which primarily describes merely the transition from a hunter-gatherer economic mode to differentiated manners of economic activity on the basis of agriculture and livestock keeping. Thus, the breeding of plant cultures and the domestication of animals need not always occur in tandem, although both developments might alternately stimulate each other, and, as a result, frequently appear in conjunction. The tying of human groups to a place in order to nourish and protect cultivars drove further technological advances, such as pottery and metallurgy. The actual trajectory of cultural development nevertheless teaches that both innovations might also emerge entirely independently from agriculture and pastoralism, or even a sedentary existence.

One of the aims of the discipline of history is the classification of past events. The demarcation of historical epochs results from the use of chronological units, the contents of which permit delineation from one another. Nevertheless, it poses considerable difficulties to move about the period completely independently of these received systems, as a result of which privileged, already established chronological systems are most frequently used. Most striking within western intellectual history is the notion of a tripartite division of history's course, this ultimately hailing from the vegetal metaphor of growing, blooming, and perishing. In and of itself, however, the processes of neolithisation were synopated in their progress when considered against these historical units as defined through classification. The innovations subsumed under the heading of the Neolithic package seem thereby rather less suited to defining an epoch in their entirety. Rather, the Neolithic depicts far more an experimental phase for a mode of living which is estimated at least in the Western world as a civilisational achievement.² Nevertheless, history can take an entirely different course and, indeed, did so in various regions of the world. The dynamic processes of neolithisation began in differing places in the world at different times and, in some areas, still continue.

1.11. The Perception of the Balkan-Carpathian Region

An aim of this book is to write the history of the spread of the Neolithic for a single region in Europe. At the same time, however, this is not a single story, but the story of the diversity of this process in its various facets as it spread. This work deals with the specific region of Europe closest

2. On the multifaceted nature of the term "civilisation", see ELIAS 1997, 1–42.

to the zone in which the neolithisation process of the Old World began.

The term “Balkan” entered South-eastern Europe by means of Turkish and denotes a wooded hill landscape; in the Slavic languages, the region is by contrast *Стара планина* or ‘Old Mountain’. In Antiquity, this mountainous region was known under the name *Αἴμος* or *Haemus*. In a tighter sense, this refers only to the terrain traversed by the mountain range spanning from eastern Serbia in the west to the Bulgarian coast of the Black Sea. In a more expansive sense, it also describes all of the countries ranged between the Adriatic and the Black Sea respectively, including the Julian Alps, the northern Aegean and the North Pontic steppes and, beyond Bulgaria and the nations formerly composing Yugoslavia, Romania, Moldavia, Albania, mainland Greece, and even the European regions of Turkey.

Were it to be asked in Kiel where the Balkans begin, one might hear “in East Berlin”. By contrast, the quip that the Balkans begin on Rennweg in Vienna’s 3rd district is popularly attributed to Prince Metternich.³ While archaeologists also tend to append the entire Carpathian Basin to the Balkans, this is not the belief of the majority of Hungarians. A positive image of the Balkans also does not generally abound among the South-eastern European nations. This perception is marked by the military confrontations of the last centuries and the near present, which prompted the coining of the byword “Balkanisation”. Meant by this is the territorial fragmentation of once-larger political entities such as the Ottoman Empire and, in the most recent past, the fracturing of Yugoslavia. It is only in Bulgaria that there is a tendency towards a positive connotation of the term “Balkan” and its use even in branding (Balkan Airlines, Balkantourist) and tourism (Balkan folklore, Balkan cuisine, etc.). The approach to this term is thus problematic and shifts depending upon the standpoint adopted. In describing the manner in which landscapes, places, and people are perceived by outsiders, and thereby their own respective concepts, interests, and power relationships introduced,

probably the most useful notion to summarising this is that of “Imaginative Geography” as coined by Edward Saïd (SAÏD 1978). Much as in the case for the term ‘Orientalism’, the word ‘Balkan’ is a blank canvas upon which wildly varying perceptions of a geographical space might be projected. These differing perceptions of the Balkans may be reduced *cum grano salis* to three images named in an article by Ruth Tringham: *Bridge, buffer zone, and mosaic* (TRINGHAM 2000). The ‘bridge’ paradigm can ultimately be traced back to Childe, who emphasised the geographical position of the Balkans between Continental Europe and the Near East in the dispersal of the Neolithic lifestyle from the latter to the former (CHILDE 1928. – CHILDE 1956). Since then, the neolithisation has been perceived as the most significant revolution in European cultural history and the earliest European Neolithic localised on the Balkan Peninsula. While the eastern Mediterranean was understood to be the origin point for the diffusion of the Neolithic to Europe, other regions of the world have more recently been considered. Ceramic production, grindstone technology, and polished stone tools were evidently known in Eastern Asia long before the development of agriculture and husbandry, and could expand westwards into cultural areas with a purely Mesolithic economic mode. Prior to this, the route from the Middle East via Anatolia, the Aegean, and the Balkans had served as the most important and, indeed, only path of dispersion for the Neolithic to Europe. However, with the thesis of the spread of the Neolithic via the Balkans to Continental Europe, Childe had also consciously or unconsciously introduced into the discussion a very traditional conception of the Balkans as a ‘buffer zone’, somewhat in the manner of that between the Islamic states in the East and the Christian lands of the West (TRINGHAM 2000). In the periods prior to the neolithisation, this space also served as the main corridor of communication for the dissemination of important innovations such as copper metallurgy over the course of the 6th and 7th millennia BCE and iron smelting which spread as a new technology from the eastern Mediterranean to Continental Europe at the end of the 2nd and the beginning of 1st millennium BCE. The ‘bridge’ paradigm swiftly won popularity among prehistorians and, indeed, not only on account of Childe’s force of argumentation but also because spectacular finds were unearthed in the Balkans such as those originating from the Chalcolithic burial ground at Varna. When the reasons for the popularity of the ‘bridge’ paradigm are sought, then Saïd’s thesis regarding the impact of fascination about the Orient upon the West can hardly be avoided. The ‘bridge’ paradigm is accordingly acclaimed among local researchers within the Balkans as they wish their region to be considered as significant as

3. These lines go back to a very fruitful discussion with Bogdan Athanassov during preparation of a joint manuscript for the conference “Die Donau-Balkan-Region als Kontaktzone zwischen Ost-West und Nord-Süd”. Nonetheless, the text printed in the proceedings hardly contains any of the original ideas for this article (cf. ATHANASSOV, KRAUSS 2015). At this point, however, I have to appreciate how much Bogdan contributed to this. Like no other, he understands the perception and meaning of the Balkans in Europe from the perspective of Sofia and Brussels alike.

possible, encouraging comparison with other, less politically fragmented regions of Europe. This notwithstanding, the disadvantages of the 'bridge' paradigm are very much evident. First and foremost, the perception of the Balkans as a bridge leads to the simplification and neglect of local processes. A consequence of this is that processes of migration and diffusion are the central source of societal and political transformations within prehistory for many South-eastern European researchers, a thesis which may be subjected to doubt. The aforementioned work by Tringham directly demonstrates that the Neolithic already features processes marked by regional variability and different patterns of interaction. While a transfer of knowledge and even a migration of people and domesticated animals from the south-east into the Balkan region is assumed by the vast majority of researchers due to the striking lack of knowledge of the pre-Neolithic settlement in South-eastern Europe (CHILDE 1958. – On this, in summary, SCHARL 2004, 91–105), paradigms of 'bridge' and 'buffer zone' are too simple to describe this. The conception of the South-eastern European Neolithic as a 'mosaic' ultimately necessarily results from research being heavily confined to individual states, which

has provoked a division along present-day national borders of cultural expanses actually belonging to one another (cf. KRAUSS 2010).

Within scholarly discourses on the dissemination of agriculture, husbandry, and sedentary lifestyles to Europe, the Balkan-Carpathian sphere accordingly plays a vital role. Tellingly, nevertheless, the observation often one-sidedly proceeds from the neolithisation process without according the local hunting, gathering, and fishing populations any shrift in these transformations in subsistence forms and transitions in material culture. Earnest attempts to reverse this perspective require comparison with areas beyond the Balkan-Carpathian region (cf. FIEDEL, ANTHONY 2003). For a very protracted period, the only evidence for a coexistence of Mesolithic populations and early farmers remained sites at the Danube Gorges. It is only now as the find situation densifies for those periods directly prior to the beginning of the Neolithic in South-eastern Europe and the realisations about the continuation of Mesolithic traditions generally within percussive lithic technology and subsistence forms multiply that the process of neolithisation might be regarded from both perspectives.