

SEDENTARISM, AGGREGATION, AND AGRICULTURE IN ANATOLIA, ÇATALHÖYÜK

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ABSTRACT

The first question is about the language or languages spoken in Anatolia before the arrival of the Indo-Europeans who will only come and mostly go through two or three millennia later when Çatalhöyük will no longer be an active center. Agriculture and herding are very important if not dominant in this period when the population stops roaming around and when it establishes sedentary dense agglomerate cities. All the more so with the spiritual center of Gobekli Tepe which is about one millennium older. What came first? Spirituality and spiritual centers, or sedentarism and agriculture? But this sedentarism and agriculture developed in Anatolia long before the arrival of the Indo-Europeans. We need to see that the 8 or 10 millennia of the peak of the Ice Age were a long period when Homo Sapiens had to learn how to exploit nature intensively to survive the harsh conditions of that time. The second problem is the status of women in a society where the birth of 10 to 12 or even 13 children per woman is essential for the community, hence the species, to survive and survival was a central instinct in Paleolithic and Neolithic Hominin communities deeply impressed by the death rate of children from birth to six years of age. How was this possible and how these children were taken care of during the 18 months of breastfeeding and the subsequent 3-4 years of dependency? And that brought up an average of three children per woman able to live a full 29-year-long procreative life. What was the training and education the 6-13-year-old young pre-puberty children received and from whom? Can we seriously consider that a community then was a simple collection if not a juxtaposition of autonomous households? Who and what regulated the distribution of fields, the management of herds, the management of resources, the production of tools, weapons, cloth, and clothing, the construction of houses, and the providing of fuel, not to mention the management of hunting that can only be collective?

Keywords: linguistic phylogeny; demographic development; agriculture; herding; history; social rights; spirituality;

INTRODUCTION

Ian Hodder and his book *The Leopard's Tale* represent an important step or stage in the field of archaeology and anthropology. It studies the city of Çatalhöyük in Anatolia which flourished from 7,400 to 6,000 BCE in what he calls the Pre-Pottery Neolithic.

Pre-Pottery Neolithic Chronology

PPNA (ca 8,500 to 7,500 BCE) Jericho, Netiv Hagdud, Nahul Oren, Gesher, Dhar', Jerf al Ahmar, Abu Hureyra, Göbekli Tepe, Chogha Golan, Beidha.

PPNB (ca 7,500 to 6,200 BCE) Abu Hureyra, Ain Ghazal, **Çatalhöyük**, Cayönü Tepesi, Jericho, Shillourokambos, Chogha Golan, Göbekli Tepe.

PPNC (ca 6,200 to 5,500 BCE) Hagoshrim, Ain Ghazal.1

This book is essential since it studies a city that flourished some 2000 years after Gobekli Tepe was built, or at least had reached a certain level of achievement, exactly when

in this region of the world the transition from hunting and gathering to agriculture and herding was taking place. In fact, at this time the two developments were arriving from the Fertile Crescent, according to the standard approach. This development goes along with sedentarism and agglomeration for the populations concerned. The question is to know whether the first constructions were ritualistic, religious, or spiritual centers like Gobekli Tepe, and the residential cities developed later, as Ian Hodder states, or if agriculture came first and caused sedentarism and then agglomeration which would state the spiritual development is simultaneous or even posterior. The third solution would be a simultaneous and reciprocal transition from hunting-gathering to agriculture-herding, the former going down and the latter going up over a long period. Ian Hodder does not solve the problem, but he leans towards spiritual development and buildings first, sedentarism and agglomeration second. This debate is fundamental, and we must keep in mind this case of the Fertile Crescent is only one case in the world in the same period, after the peak of the Ice Age (19,000 BCE for the peak itself and the whole top period of this Ice Age covers about 8,000 or 10,000 years from at most 24,000 BCE to at most 14,000 BCE. I agree with Ian Hodder on one essential element. Dates have to be given from one fictitious year ZERO, and it is the beginning of our present era, most often known as the Christian Era. Hence older dates have to be given in BCE terms and in the proper orientation of the timeline, so moving towards the present time. In BCE date the year 3 BCE comes after the year 4 BCE, or vice versa the year 4 BCE comes before the year 3 BCE. Some authors very systematically follow the numbers from smaller to bigger, which is absurd in prehistory and archaeology. Ian Hodder acknowledges that on page 44, he should have used BCE years rather than years ago or YA in illustrations 18 and 19.

But this transition from hunting-gathering to agriculture-herding is essential. I will defend the idea that during the ten thousand years or so of extreme cold, human beings, Homo Sapiens since all other Hominins had become extinct then, had had to regroup south or north according to the hemisphere to resist the cold, and had had to intensify their exploitation of natural resources to simply survive. This intensification of taking care of the natural garden led them to observations and reflections that made the emergence of agriculture possible. We must also understand that before that peak of the ice age, the Gravettians for instance in Europe had developed seasonal permanent residential constructions with wooden skeletons carrying earth packed on top. This back base was for the winter, whereas during the summer they followed the wild herds that went north or south according to the hemispheres. That is to say, the observations and the data collected by Ian Hodder is here essential for a wider approach and I am thinking of the Middle East of course, but also of Asia and the three rivers in Yunnan and Southeast Asia, the Yangtze (Jinsha), Mekong and Salween, or the Indian subcontinent and the Indus and Ganges. But we must also think of the Nile in Egypt, the Congo in central Africa, and some others north or south of the Congo River, plus the lakes and rivers in Eastern Africa. We have to think of the Amazon river in South America (it is not the only one) and the Mississippi and Missouri rivers in North America, and these are not the only ones. Specific forms of agriculture developed autonomously in those various zones at about the same time, between, 14,000 BCE and 3,000 BCE. I choose 14,000 BCE because that's the real beginning of climate change with the thawing of the ice, and then 3,000 BCE because it corresponds to the period when writing is being developed all over the world. Between 14,000 BCE and the year 1 CE, the water went up 120 meters. We do not cope with this phenomenon properly, and the water had to come

down the rivers and probably caused a lot of flooding, and repetitive floods before finally getting more or less regular at the beginning of the Christian Era.

So, this book is crucial. I am going to get into it and my reading will be critical not so much on the data collected, but on what I think is missing, and this limits what could and can be said about this transition.

1. THE LANGUAGE OF ANATOLIA AROUND 8-7,000 BCE

The author never wonders about who the people were and what language they spoke. It is though very simple to determine. Homo Sapiens in Anatolia arrived from Black Africa via Djibouti, Aden, the Southern Arabic corridor, Hormuz, and then they moved into the Middle East where they met the Neanderthals around 75,000 BCE, then they moved west to Anatolia and Europe; north through the Caucasus and to northern Europe up to Finland and Saami country; and northeast then north around the southern and eastern coast of the Caspian Sea and up through Central Asia to Siberia and the Urals. That was the third migration out of Black Africa, the first wave of it, before the second wave that followed the same route from Black Africa and stopped to stay for a long time on the Iranian Plateau around 50,000 BCE. Let me recall the first migration was from Black Africa to North Africa and the Sahara around 300,000-250,000 BCE. The second migration was from Black Africa, via Djibouti, Aden, the Southern Arabic Corridor, Hormuz, and then to the whole of Eastern Asia (from Tibet to the Pacific and Siberia) and Southeast Asia around 150,000 BCE where they met with the Denisovans, apparently with more intensity in Southeast Asia and Melanesia.

Then we know exactly what language the people in Anatolia spoke in 7,400-6,000 BCE. The first migration out of Black Africa was speaking what will become the Semitic languages. The second migration out of Black Africa spoke what will become the isolating languages. The first wave of the third migration spoke what will become the Turkic languages. The second wave of the third migration spoke what will become the Indo-European and the Indo-Aryan languages, which we could unify as the Indo-Iranian languages. The Indo-European branch came down from the Iranian Plateau around 12,000 BCE and they will start to develop agriculture and herding in Mesopotamia, and they will move west and will go to Europe via two routes. They will leave behind in the Middle East what will become Farsi, Kurdish, Armenian, and the dead language Hittite. The Hittites established a powerful empire in Anatolia and northern Syria in the 2nd millennium BCE. We may think the influence was older than the actual Hittite Empire, especially because it is thought not to have been a mainly violent conquest but a rather complex embedding of one culture, the Hattian culture, particularly the religion, into the agricultural and herding Indo-European culture of the Hittites who for example integrated Hatti words but made them sound Hittite or Indo-European. Hattic was an ergative, agglutinative language with weakly developed suffixation but heavy prefixation. The capital of the Hattians was Hattush, and the Hittite added an Indo-European suffix to it to make it their capital Hattusa, But anyway, we are far from the 8th and 7th millennia BCE of Çatalhöyük. Then they crossed Anatolia to Greece and the Mediterranean northern coastal area, including Italy, half of France, and the Iberic peninsula. Some of these migrated to the Danube valley and moved West to what still is the Germanic territory, both southern (Austria, Germany, the Netherlands) and northern Germanic languages (Scandinavian languages except Finnish, Saami, and Estonian). It is this route that must have brought the Celts and the Celtic languages since the ogham alphabet they used was devised from the initial letters of 20 different trees and these twenty trees only

grew at the time all of them in one area: the Rhine valley where Stuttgart and Frankfurt can nowadays be found. These Celts moved on south as far as the Iberic peninsula and west as far as Ireland. The Germanic tribes were probably rejoined by some of those who crossed the Caucasus, left Armenian and Ossetic behind, and then moved into the plains today known as Russia, Belarus, Ukraine, but also Poland, Czechia, Slovakia, and other destinations where Slav languages developed, particularly the southern Slav languages of ex-Yugoslavia. The Indo-Aryan branch moved East to the South Indian subcontinent.

Anatolia was crossed and occupied by Turkic-speaking people, and then mostly crossed by Indo-European people. That's our choice. Regrettably, Ian Hodder did not try to identify the proper language concerned here. But which was the one concerned by Çatalhöyük? When were Indo-European languages asserted in Anatolia? Ian Hodder says, "the site is pre-Turk and pre-Islamic." (page 33) "Islamic" is absurd, pre-Islamic is just anachronistic since Islam will only develop about 9,000 years later. Pre-Turk, as we are going to see, is purely political and it refers to the country Turkey, hence absurd and anachronistic. The Greeks came through or from (Troy) Anatolia, but they only developed around 3,000 BCE and might have crossed Anatolia a few hundred years earlier.

Armenian is the next candidate.

"The Armenian language thus comprises three major layers:

(1) Indo-European heritage: 5th-4th millennia BCE.

(2) late Indo-European and Mediterranean/European substrate: 3rd-2nd millennia BCE.

(3) loanwords from neighboring languages, such as Caucasian [See map above. Britannica says, "Caucasian languages, also called Paleo-Caucasian, or Ibero-Caucasian, group of languages indigenous to Transcaucasia and adjacent areas of the Caucasus region, between the Black and Caspian seas. As used in this article, the term excludes the Indo-European (Armenian, Ossetic, Talysh, Kurdish, Tat) and Turkic languages (Azerbaijani, Kumyk, Noghay, Karachay, Balkar) and some other languages of the area, all of which were introduced to the Caucasus in historical times. The Caucasian languages are found in the territory north and south of the Greater Caucasus range; their number varies, according to different classifications, from 30 to 40. The concentration of so many languages in such a small territory is indeed remarkable. [...] The Caucasian languages fall into three typologically well-defined language families: the Northwest Caucasian, or Abkhazo-Adyghian, languages; the Northeast Caucasian, or Nakho-Dagestanian, languages; and the South Caucasian, or Kartvelian, languages (also called Iberian). [...] The theories relating Caucasian with such languages as Basque and the non-Indo-European and non-Semitic languages of the ancient Middle East also lack sufficient evidence and must be considered inconclusive." Personal note. The Non-Indo-European, non-Semitic, older population of the Middle East, hence agglutinative and Turkic. Basque is an agglutinative Turkic language. We know that the Middle East was being conquered by the Neanderthals when the agglutinative Turkic migration arrived, whereas the Denisovans were present in Asia from the Urals to Southeast Asia, and probably Melanesia in the same period, and we seem to consider the Neanderthals and the Denisovans met somewhere west of the Urals, and the Caucasus could have been the place or part of the geographical zone where the meeting took place. Note archaeologists always forget languages, and in this case, what was or were the language or languages spoken by Neanderthals and Denisovans. We know both hominin species mixed and exchanged genes via procreation with Homo Sapiens when they arrived before the comeback to Asia Minor of the Semitic people around 30,000 BCE but around the same time as

the arrival of Neanderthals in the Middle East around 50,000 BCE or somewhat earlier. I hypothesize that the language or languages of Neanderthals and Denisovans mixed with those of the agglutinative Turkic migration arriving in the Middle East with the first wave of the third migrations out of Black Africa, the agglutinative wave. We can say Neanderthals' and Denisovans' languages had not reached the three articulations of modern human language reached by Turkic, Indo-European and Indo-Aryan languages, but they had probably reached a limited level of rotation of vowels and consonants (first articulation) both limited in number due to their articulatory and laryngeal-glottal apparatus. That makes me suggest that these Caucasian languages are of the vast agglutinative type but with elements from both or either Neanderthals and/or Denisovans that we have not yet identified. Comparative linguistics is the only solution to compare standard Turkic agglutinative languages and Georgian first, Chechen second, and a few other Caucasian languages to identify the differences that we could attribute to Neanderthals and Denisovan influence.], Anatolian [This is not one language but a family of languages. Britannica says, "Anatolian languages, Branch of the Indo-European language family spoken in Anatolia from the 3rd millennium BCE to the early centuries CE. The attested Anatolian languages are Hittite, Palaic, Cuneiform Luwian (Luvian), Hieroglyphic Luwian, Lycian, Lydian, Carian, and possibly Pisidian and Sidetic.], Hurrian [non-Indo-European, non-Semitic, hence can only be agglutinative, hence Turkic, 3rd millennium BCE], Urartian [non-Indo-European, language of Urartu, 9th-6th centuries BCE, probably non-Semitic since Semitic is set aside; connected to Hurrian, descending from Hurrian, hence agglutinative and Turkic], Semitic [That is not a language per se but a family of languages. There are several Semitic languages in the region in the three or four millennia BCE, the best-known being Phoenician going back to at most the 6th millennia BCE, the Phoenicians being a people residing in what is today Lebanon. They are mariners, sailors and they navigated the whole Mediterranean Sea and beyond, including full circum-navigation around Africa for the Egyptian Pharaohs, and it is hypothesized they may have crossed the Atlantic to Brazil or Mesoamerica and the West Indies.], and especially Iranian [Indo-European or Indo-Aryan since Iran was the starting point of the two migrations to the west and reached Anatolia somewhere around at most the 6th millennium. They arrived in Iran somewhere around 45,000 BCE from Black Africa, shortly after the agglutinative-Turkic-speaking people who spread straight away to the whole of Europe, the Middle East, the Caucasus, Central Asia, and then the Urals, and Scandinavia, at least Estonia, Finland, Saami country.]: 2nd-1st millennia BCE to the present. The first two layers belong to prehistoric times, whereas the third belongs to the most recent period and is partially elucidated by historical records."3 Here is a map of Caucasian languages from the Encyclopedia Britannica (© 1997)

Once again, this possibility of the Armenian language being present when Çatalhöyük was developing, is too late, since Armenian is asserted to be present from 5,000 BCE at the most. Then we can consider Hittite. It is asserted in Anatolia between 1,700 and 1,200 BCE. The conclusion that has to be considered then is that Çatalhöyük spoke a Turkic language or dialect, or several Turkic languages or dialects. In other words, at that time, Anatolia was like the whole of Europe and a fair share of the Middle East, the Caucasus, Central Asia, Siberia, and the Urals speaking Turkic languages, and that had been the language or languages spoken from the Middle East to the Atlantic and one or several languages that were spoken from the Middle East to Siberia. This means that during the whole time Çatalhöyük was flourishing the whole of Anatolia spoke Turkic languages. Colin Renfrew is not much better

than the ignorance of Ian Hodder. Without entering the contemporary political debate brought up by Renfrew that “originally Turkey was part of Europe,” let me say this position is anachronistic. At the time, the whole of Europe, Anatolia, the Caucasus, Central Asia, the Urals, and all Scandinavia and Baltic coastal areas were speaking Turkic languages because they were the original Homo Sapiens who conquered these territories, from actually no one, only from nature and the weather, and one result was the extinction of Neanderthals and Denisovans, and probably a few other older Hominin Human species, with which they interbred and hence probably borrowed some linguistic elements, definitely lexical elements but probably too some discursive elements that could be integrated into the syntax of the Turkic languages spoken by these Old Europeans, and other peoples.

This is capital. Turkic languages are agglutinative. The whole syntactic and semantic construction or architecture is centered on the verb that carries marks that represent all the functional nominal phrases it needs to build a sentence. Hence in such a language, the noun phrases, including the agent, have no autonomy as for agency and are attached to the verb, all of them, by marks carried by the verb itself that, in one way or another, mirror the marks carried by the functional nominal elements. They are all on a leash. Turkic languages are “eventuating” languages. The full sentence creates the event and is its own agent, whereas Indo-European languages start with an architecture that considers the various noun phrases as being autonomous, and it sets the agent apart by making the verb agree in number and person with that agent only.

My idea is that the syntax of a language was phylogenetically produced by the confrontation of an already developed or acquired language with an environment that imposes some situations that may become hefty enough for one syntactic element to develop, emerge, regress, or even disappear. You can think of the impact of meeting other hominin groups, like Neanderthals and Denisovans, speaking languages less developed than theirs, and yet able to communicate with them. A modern example of this phylogenetic impact is the development of the French past tense “*imparfait*” and its compound tense “*plus-que-parfait*” that occurred at the end of the 17th century with the development of written literature and particularly prose literature that needed a past tense able to express an action that was in development, that was being processed or performed, that had already started with a part of the action already performed, at the timepoint of the story, and another part not yet performed, still in the future at this timepoint of the story, a future that is in the past as for the present of the reading or the telling of the story, of the writing of it by the author. It has become, since then, a fundamental pair of tenses in French literature. Such tenses do not exist in English where the simple and compound preterits are used with the “*progressive*” aspect when necessary to have the discursive effect we are speaking of here.

“Jean-Marie Duchelieu n’avait pas encore signé [*plus que parfait*] son acte de naissance. Non. Il n’était pas [*imparfait*] malveillant. Juste négligeant. À l’arrivée de Johann à Paris, il l’avait confié [*plus que parfait*] aux bons soins de sa femme et de ses filles. Et puis il était parti [*plus que parfait*] explorer et commercer au Gabon.”⁴

Note the first two verbs cannot be replaced by any other past tenses, whereas the last two verbs could in some older prose be replaced by “*passé simple*” forms: “... il le confia ... il partit ...”

On the other hand, in the 20th century, after the Second World War, the French tense “*passé simple*” and its compound tense “*passé antérieur*” have progressively regressed in oral use and were replaced by “*passé composé*” for the “*passé simple*” and “*passé surcomposé*”

for the “passé antérieur.” “Il dansa [passé simple] toute la journée et quand il eut dansé [passé antérieur], il se mit [passé simple] au lit sans attendre,” would become: “Il a dansé [passé composé] toute la journée et quand il a eu dansé [passé surcomposé] [quand il a eu fini [passé surcomposé] de danser], il s’est mis [passé composé] au lit sans attendre.”⁵

This fact of the syntax of a language being confronted with an experiential world that may enable some syntactic form to emerge in the language should have brought Ian Hodder to the idea that each house is the container of a household and the whole city is the container of all the houses, no matter how much separate they might be from one another since they all have four separate walls, and thus the container of all the households. And in a Turkic culture, you do not need to reinforce such a fact with an institutional building or blueprint urbanistic map because all separate Noun Phrases are automatically attached to the verb, hence to the sentence, and it ensues, in the same way, that all independent houses and households are automatically attached to the higher level, the community or the city. The connection could only be oral rules or traditions, some kind of compact that is of course not written since writing does not exist yet. Archaeologically then there may be no trace of it, except the fact that, as Ian Hodder asserts, some houses seem to be bigger and have richer decoration inside. He draws the proper conclusion that these households might be those of some people who were playing a special role in this society. By saying the population is speaking a Turkic language, we connect them directly to the Old Europeans, an improper name here, to all the Turkic populations in both Europe and Asia, and though I do not have any element here to go beyond an assertion, I will insist on the fact that in all periods before and during the Ice Age, the communities seemed not to have any formal leadership, though some individuals were buried with more goods, weapons, beads, or distinctive elements (and some might not have been buried at all). Ian Hodder says again the same thing. Some burials are richer than others. We are in an unwritten civilization, meaning they have no way to record rules, laws, and the past in writ on any medium, durable or not, so everything is committed to the memory of some people who become the memory-men or memory-women of the community. Such people are called “griots” in Black Africa, and they were called “Rsi” in Indo-European. Why should Turkic-speaking people be different? It is obvious they are not, but we will have to come back to the fact, that as soon as we are speaking of agriculture and herding, we have to ask the following questions:

- 1- Who owns the land?
- 2- Who controls the use of the land, and the harvests?
- 3- Who owns the herds?
- 4- Who takes care of the herds?
- 5- Who organizes and distributes work in the fields and with the herds?

It can be on a household basis, but who has distributed the land first? It can be a collective decision, but anyway, in one way or the other, the “community” level is essential, even if it is not instated in the buildings, with crowns, thrones, and other paraphernalia of this type. They did not deem it necessary to have such a power seat, but they had Gobekli Tepe, not so far away for some ritualistic and spiritual, maybe/probably even religious enlightenment or even organization. Note that some have suggested Gobekli Tepe might have been a platform for the trading and distribution of the harvests. Note Gobekli Tepe could not have been built if an important community did not exist to provide the builders and other workers with what they needed, and to produce the food needed for the survival of these workers. The typical and fake question, “Which comes first, the hen or the egg?” is absurd:

both agriculture and herding on one hand, and the construction of Gobekli Tepe and other cities or aggregated communities on the other hand, developed phylogenetically and simultaneously, each one causing the other, and even vice versa if you want to make sure it is a perpetual and sustainable fact and phenomenon.

2. “LEAD[ING] TO POPULATION INCREASE.”

This question is essential. I have already dealt with it in a book on Palaeolithic Women⁶, but I am going to be a lot more specific now because it is not enough to say the population is growing. How can it grow? We should know about it since we have been living for maybe 100 years in a first demographic crisis on Earth with what had become up to recently a galloping increase, and what is becoming in more and more countries a tremendous slow-down that some consider will last long enough to bring the population down by half around 2,100.

It all has to do with three factors:

- 1- Birth rate.
- 2- Infantile and childhood (mainly) death rate.
- 3- Life expectancy.

Life expectancy is simple. It had been 29 years up to the 19th century, at least for the majority of the laborious population, which meant the whole population before, during, and after (for at least several thousand years) the Ice Age Peak. Within this topic, we must consider the human species as a mammal species and inbreeding is deadly and degenerative with mammals, hence with human beings too. We have to keep this in mind. If Çatalhöyük were to accept in-breeding for the length of their history or existence, they would have become derelict and degenerate in a lot less than 1,000 years. To avoid in-breeding, which is an instinct among mammals, you have to bring new genes into each “family” or “household” absolutely all the time. That meant boys when they reached puberty, their procreative age at 13 or so, had to be mated with women from outside the household and even outside the close-by households (as for reproductive relationships) around their households. Note we, can probably accept the idea of stable households as for reproductive relationships, and we can also accept the idea that the main objective of sexual intercourse was procreation. I am going to show why soon. But in a household when girls reached their fertility age around 13, they had to be mated to men from outside their households and the close-by households around their own households. We can assume the boys remained in their households and the girls moved to the households of their future mates. It does not change much if it is the reverse or if it is a mixed procedure. Women are fertile from 13 to 29, or about. Men are fertile between 13 and 29, the same way, except that women are only fertile for about three to five days in every menstrual cycle, and a menstrual cycle is comparable to a moon cycle, and both are about 28 days long. This similitude explains why Alexander Marshack recognized moon cycles in the artifacts he was considering. I explain why in length in my aforementioned book. Then women are infertile for the length of the pregnancy plus about one month, so about ten months. This has not changed at all over the centuries and millennia. But what did it mean in those ancient days? For the population to expand the community needs to raise at least three children per woman to a full 29-year-long life. How can a community like Çatalhöyük reach that level of procreation? Note two would not be enough for expansion. It would only regenerate the population. They needed to go beyond two, which meant women

had to produce an average of more than two and less than three children, let's say three, who would have a full life of 29 years at least.

That's when the death rate is essential, the death rate of women during their pregnancies (because of miscarriages for example) or in childbirth; the infantile death rate (all sorts of diseases, plus accidents, plus predators, plus other diseases). Note infantile diseases are best taken care of if the children are breastfed, which means they are breastfed for at least 18 months as Ian Hodder says on page 217 (which is very late in the book for a basic element to understand the kind of life you could find in a household, and the city): "Several different types of evidence converge to suggest late weaning for children. Certainly, the stable isotope evidence suggests that weaning started as late as 18 months of age." This means that there must be eighteen months between one birth and the next, hence between one impregnation and the next. Let's show this cycle.

If this cycle is correct, it should produce the number of children needed. This young woman is thence pregnant at the age of 13 for the first time, and then again at the age of 14½. We will refine this cycle below. We are now going to project this on the whole length of her life and adjust it to get the proper number of children. But first, we have to specify the number of children.

We target 3 children having a full life-expectancy-long life. We consider as standard the two following death rates. First 50% of the born children will die before the age of 6 in childbirth, from infantile diseases and general childhood diseases and accidents, including predators, snakes, and other hostile animals or circumstances. Second another 50% death rate from 6 to 29, mostly from 6 to 13, let's say two-thirds. If we want three children to live a full 29-year-long procreating life we need to bring 6 children to the age of 6, and if we want to bring six children to the age of 6, we need to give birth to 12 children. We will consider still-born children, children dying within the delivery procedure, and the possible mother dying from pregnancy complications, like miscarriages, or dying when delivering the baby can be overlooked because it is difficult to predict such facts, but they altogether reduce the chances of getting these 3 adults with a full procreative life. We must not forget some of the males or females might be sterile, and some males or females might not accept to mate with an individual of the opposite sex or gender, at least if this is accepted in this particular community, which we do not know. It might bring down the number of possible procreators, and hence require more productivity from the actual procreators, knowing that a male can be replaced by any male though a female cannot be replaced by any female since the pregnancy has to be carried by the female partner. I will not integrate these elements in the calculation, and these elements might be the security buffer zone in our calculation whose infantile death rate might be slightly too heavy per se.

If we work first on the weaning age of the children, meaning that the second birth is the trigger to wean the previous child, hence 18 months after the birth of the previous child, we get the following calculation:

13 years → 29 years = 16 years = 192 months / 18 months = 10.66 births and pregnancies.

That is not enough. Then we can do the reverse calculation and see how many months between the two impregnations or births there must be for the necessary 12 births to be reached. We then get the following calculation:

13 years → 29 years = 16 years = 192 months / 12 births = 16 months.

This means we have to work on a distance between impregnations and births of 1 year 4 months, or 16 months. Let's build a table to show what it means in real terms. I will set the first impregnation at the age of 13 and I will calculate based on 1 year 3 months, hence 15 months between two impregnations or two births.

This shows that what I have already discussed in my book *Paleolithic Women, For Gendered Linguistic Analysis* is probably true in this case. Since women are constantly pregnant, they have milk continuously and thus a child can easily be weaned three months after the birth of his or her brother or sister. A mother can easily breastfeed two children in such conditions, and even the breastfeeding can be rotated over several mothers for each one to have some time free for other activities. In this possible situation, a woman would have something like fifteen months between two births, hence six months after each birth to recuperate for the next impregnation. We can also see that the schedule has to be very strict, and this means each impregnation happens within a limited few days of the woman's real fertility. This requires a lot of observation and a certain level of ritualization to make it important enough for the survival of the community and its expansion to get the best possible results. We know after analyzing Alexander Marshack's data as representing the observation of the women's fertility cycle that humanity had been thinking of that for a long time, if not for the whole length of the emergence of human Hominins, hence for 300,000 years at least. And before the pill and other contraceptives, most women had access to books and information about this menstrual cycle to make sure they did not have unwanted pregnancies and thus avoid using illegal abortions and abortionists. I do remember the book on the subject that my mother had, and I accessed it several times, officially in full clandestine discretion. Pregnancies, deliveries, and kid-raising are the basic social and genetic responsibilities of women in this Neolithic period. If the six-month delay between one birth and the next impregnation is lengthened to 7 months that would probably reduce the number of births to eleven. The death rate I consider can also be seen as slightly excessive. Ian Hodder's book is highly deficient at this level: women are not considered enough in real, concrete, and material terms and the illustrations given here and there in the book reduce these women to a vague outlook essentially seen, under the influence of feminine activists in today's world, as some kind of Goddesses, or even Mother Goddesses. The point is that Anatolia in the 8th millennium BCE is within a cultural zone that developed very early the concept of Triple Goddess. This concept is not even mentioned in this book. A last remark on Table 2 is necessary. If we could have some accurate numbers about the number of children in each household, we could refine the life-long cycle, and maybe put more distance between the births and the impregnations. But without more elements from archaeology, we can only think in general terms.

But so far, we have not tried to evaluate the size of a household and particularly the number of children. Ian Hodder acknowledges the number of children and buried young children. On page 106, he says, "the large proportions of young people found buried in the buildings on site [is ...] a trace of the off-site processing of the adult dead..." We have to say that the great proportion of young people buried in the houses, as compared to adults is also an obvious sign that the proportion of young people in these households is by far larger than the number of adults who are only survivors of all sorts of infantile and childhood diseases and hazards. And these deaths are so important that they bury these young children on the thresholds of rooms and houses, as the author mentions on page 117.

“[...] initial construction of houses was carefully planned and ritually sanctioned. [...] The construction was also embedded in ritual. For example, There were three infant interments at the threshold into the main room, placed there in the construction phase of Building 1. [...] The Burial of four neonates during the construction of Building 1 is of particular interest, as no neonates were buried during its occupation [...]”

The author does not draw the simple conclusion that there must have been many neonates, hence many children born in this community, and he satisfies himself with the idea that these neonates buried under thresholds are protection against spirits, bad intruders, or bad luck, hence a case of apotropaim (page 226 for one example of the frequent use of this word). It is obvious it has to be a ritual, and hence it has to be collective with chants and formulas that have to be sanctioned by some spiritual leader or intercessor who enables spirits and forces from beyond reality to hear the demands of the people, listen to them, and then satisfy the needs of the people, at least of course in these people's mental behaviors and beliefs. But now we have to envisage the size of the household and the author says that the children are educated within the house by just being formatted or informed by their constant commerce with the spatial disposition of many objects and things. He does not envisage any education or training, formal or behavioral, outside the house, and little formal instruction, if any at all, inside the house.

If we want to understand the size of the household, we have to consider several parameters. It has to contain three generations, at least, maybe four. I will envisage here three generations, grandparents, parents, and children that I will call Generation 1, Generation 2, and Generation 3. And I will consider the 12 potential children of the 12 impregnations. The Generation-1 couple had their first child at the age of 13 years and 9 months. When this child, if he had survived, would be ready for entering a procreative partnership, if he is a boy, he would bring a woman from outside, but his Generation-1 parents will be around 26-27 and will have one more impregnation to perform and bring to delivery. But when they reach 29, two of the twelve potential children would be in procreative partnerships. If both are men, they will have to bring two women from outside. But let's consider the death rates. At thirteen the twelve children would have been reduced to three or four, with one more death pending. They are Generation-2 children and soon parents. The maximum number of couples remaining in the household is four or three if the children from the household are all boys, which would be surprising. But then the maximum population would be, for these let's say three couples, thirty-six potential children that the death rates would have progressively reduced to nine or twelve. But we have the other extreme case of only having surviving girls or daughters. They will move out to other households to partner with men. Then this household will come to a dead end if there was only one Generation-1 grandparent couple. If there are two or three Generation-1 couples because of two or three surviving boys as children of the previous Generation-0, the evaluation of the population has to be multiplied by two or three. I will only go on examining the situation with one Generation-1 couple. When the oldest Generation-3 child reaches the age of 13, the Generation-1 grandparents will be dead, and the Generation-4 children will soon start coming in. We can then see that, for only one Generation-1 couple, but there might be two or even maybe three depending on the sex of the Generation-1 surviving individuals, at any time in this household, there might be at the very least thirty people, most of them underage (under 13) children. Ian Hodder does not take this into account. It is then obvious they cannot live in the house permanently. They have to live outside. Adults over 13, both men and women on tricky schedules, are taking

care of the fields for their food, and the men are also hunting at a distance that might be great enough to keep them out one full day or even more, never alone, always at least in pairs, one covering the other and vice versa. The economic activities inside the house that Ian Hodder envisages will keep some people, both men, and women, inside but then we have to envisage the work of children, both learning the trades and producing as soon as the age of five or six, maybe even earlier for other activities like preparing the food. But you will not be able to keep fifteen or twenty children occupied inside the house. They must be able to go out, to play for sure, to discover the city and beyond for sure again, but also to take part in various productive activities like looking after the various domesticated animals or herds, collecting vegetables and fruit from the fields, and cultivating them before picking them, etc. Ian Hodder envisages this city to be several-thousand-people large and this means that two-thirds of these inhabitants are underage under-thirteen children. Can we imagine what it could be if the population were three thousand people but two thousand are underage, under thirteen?

And here I will disagree with Ian Hodder who says children get educated by only negotiating their movements and activities within the house, like on pages 138-139, “The strong social control based on socialization of individuals within houses (as well as other processes such as collective feasting [...]) allows far-flung resources to be coordinated and exploited [...] Most (if not all) things had to be brought in and given meaning connected with the house.” First, it is absurd to reduce them to inside the house, except for collective feasting which seems to be the only ritualistic activity put forward by Ian Hodder, a ritualistic activity that is necessarily outside the households, but where, when, and how is not really made explicit. But what’s more, it is absolutely UN-human to reduce them to learning rules and behaviors only through such physical and material activities. In all these activities, language is always present to teach the rules, for sure, but also to teach them the skills of the household’s trades or crafts, and first of all, which seems to be minimized by Ian Hodder, to teach them the stories, myths and other beliefs about the supernatural, the world of spirits, the dangers of this world, and not only predators or accidents, but also the haunting of the living by the dead, which is ever present with the burying of dead individuals under the floor of the houses.

There is a lot to learn if you may walk on a grave, meaning on the person in the grave, at every single step of yours in the house. You have to learn and understand you must not step on the graves, or maybe you may but with a special formula or gesture to get “permission” from the dead and to “excuse yourself” for your action that would be profanity if not accompanied by the proper ritualistic formula. You do not learn all this by just moving around in the house. Verbal oral education is necessary to tell the children, the younger ones I mean, where the tombs are, who is buried in each one of them, who they were and what they have done, and the personalized formula to address them if you have to step on them. It is a myth to believe that you can learn a language just by listening. You have to speak of course, and that means to speak to someone who is listening and will respond, be it only to correct what you just said, or to widen your knowledge of what has to be said, can be said. All that is absent from Ian Hodder’s book and imagine someone who is producing what they need tomorrow for the hunting party or the working session in the fields, man or woman, is surrounded by fifteen or twenty children, doing nothing except setting up disturbing antics that require an immediate intervention to prevent or correct them. The children must be taken out daily and accompanied or taken care of by adults from various households for their education and for their work, because working starts early, be it in the fields, with the herds,

or simply cleaning up the city. Since there are middens for “garbage” some people must collect the garbage in the various houses and dump it on the closest midden. Children were probably those doing this, increasing, by the way, their potential death rate, especially if they are dealing with human waste. Maybe nothing has been found to process such activities archaeologically, but it is not because it has not been found that it did not exist or happen, and had such elements been looked for in the first place? One does not find what one is not looking for, except on very rare occasions. Ian Hodder in his Epilogue gives an example of a leopard bone found by one of his assistants or colleagues, a small leopard bone for sure, but a leopard bone nevertheless, despite the fact the author had repeatedly said that it was a basic rule not to bring leopard bones on the site, in the houses, in the city even.

Let’s summarize what we have said so far. What must a household take care of for its own survival?

We must make these activities more explicit.

Cooking is an enormous task since it is for more than ten people, probably even for more than twenty people. It is probably reduced to one meal a day, but even so, the main questions are who does it, when is it done, how is it done, and with what tools and procedures?

Occupying children is also a full-time activity. The children must receive every morning the assignments of what they are supposed to do. They must be explained how to do them. They have to be checked regularly so that the work is done properly, and no mistake goes uncorrected. You cannot have up to twenty children roaming around free, doing nothing except antics and pranks, locked up in a dark, smoky house.

Educating children is a lot more complicated than it may look. Who can educate them? The mothers of course, up to the age of 18 months when they wean a first child and start breastfeeding the next one. If women are organized collectively within a household or several neighboring households, they can be free on some rotating basis for other activities for a few hours or one day. They cannot be enslaved to breastfeeding 24/7. Then they have to take care of them up to the age of 5-6 when they will become autonomous, but even before they can perform many assignments and the mothers are going to be on the frontline of this activity, and once again, some rotating schedule will enable some of them to be free for other activities than taking care of the kids. After six and up to 13, if the kids are girls, they will be within reach of the women who will be able to use them fully in the house, or the garden, or collecting wild fruit or plants. The mothers will also initiate them about impregnation, pregnancy, delivery, and taking care of the newborns. Probably less than we might think because, in these very crammed houses, they must have witnessed many episodes of sexual intercourse. If they are boys they will probably go out with the fathers, the men, to work in the gardens and fields, perform heavy work there, go hunting and fishing to feed their community and their households or take part in other activities including initiation to all the rituals that must be attached to procreating, celebrating ancestors, preparing for the major rite of passage they will have to go through at age twelve or thirteen. These rites are extremely hard and endurance within extreme suffering is often part of them. Check the 1970 film *A Man Called Horse*⁷ to have an idea of the hardships a boy before his puberty has to suffer, isolation, starvation, and physical ordeals, to just become a man, to have the right to integrate the ritualistic activity of procreating, meaning expanding, or at least helping with the survival of their communities. The film deals with Sioux Native Americans, and the fact that they are socially organized in rather stable couples does not prevent all ritualistic activities from being

collective, at the level of the community. Mandela has also written about the circumcision rites in his Black African ethnic group, and it is rather harsh. I remember seeing pictures of the circumcision practices in West Africa in 1965 and the cut element was a lot more than just the foreskin. And circumcision is more or less necessary because of the sexual deformation called phimosis that would prevent proper ejaculation or would lead to very dangerous accidents implying gangrene. Circumcision is not to cut something off, but to permit an essential activity for the survival of the community, procreating as many children as possible.

To produce is complex for the household but Ian Hodder's book gives a lot of elements: building the house, plastering the floors and the walls, taking care of the oven and hearth, painting some geometric designs on the walls away from the oven, embedding animal trophies in the walls, burying the dead and bringing them out of their first grave to eventually remove the head and then rebury them in a second grave and keeping the head apart, cleaning up the house of course. What can be done is easy to imagine. But who can do all that is complicated, particularly taking care of the dead, first and second burying, hiding the severed head after its being plastered for later revelation, bringing it out for remembrance, and probably spiritual rituals.

To produce in the fields, take care of the herds and hunt are more complex than it looks. Questions like who owns the land, who distributes the land, and what the ownership status of those cultivating a field is, are not even mentioned by Ian Hodder. One point is essential: are there slaves in this society? It is in no way natural to believe each family has a piece of land, is the collective owner of this land, and that the harvest is exclusively for the needs of this family, or household. The case of pre-colonization Incas and pre-Inca groups in the Andes is a case of collective ownership, distribution of the land temporarily, and collective control and distribution of the harvests. Nothing is said about this problem by Ian Hodder. The same question can be brought up about the ownership of the herds and how their resources are taken care of. Who are the shepherds? How is the fodder necessary for the herds to prosper produced, and where? Ian Hodder is dealing with agriculture a lot but how are the seeds selected and distributed, how are the crops taken care of, harvested, and then distributed? What about fishing? Who owns and takes care of the equipment? What happens with the fish? Distributed or not? Hunting is even more complex since it has to be for any rather large animal, particularly the bulls Ian Hodder is speaking about all the time as being attached to collective feasting, the main ritualistic collective event, collective and very well organized since they do not have very effective weapons for such hunting objectives. No precision if they use dogs for hunting and what kind of traps they use for smaller animals. And what about fowls and birds?

The final economic activity is the production of some artifacts, based on some specialization of the various households. But who decides the craft or crafts of a household? Does it have to be permanent for one thousand years? How are the members of this household trained and educated in that craft? The main question remains about the exchanges that go along with such economic activities because the households are not and cannot be autarkic. They are working with some market practices: they exchange their goods, hence the specialization of each household. But we have to see beyond one city because the most important exchange remains the exchange of thirteen-year-old boys and girls between two communities as distant as possible genetically, hence geographically. That is not explored. The artifacts produced by each household might be the "dowry" of the boy or the girl thus

exchanged for their “sexual and other prowess” (page 245), as Ian Hodder says many times. He assumes, and we are led into assuming that sexuality is necessarily and only straight, but some reflection is necessary here and it might be interesting to know what kind of initiation the boys in their exclusively male environment for this initiation can practice and if what looks normal in such an environment with such an objective is accepted in other circumstances. Is this community gay-friendly?

It is interesting here to follow the various classifications proposed by Ian Hodder in what he proposes as the “four spheres” in the house, at first at least. I would like to specify the frames of the various columns of the table below.

Pages 53-56. “It seems possible to identify [...] four spheres (domestic production, ancestry, exchange, and the community) of activity which had some degree of separation, but which also interweaved and intersected each other.”

3. “THE AGRICULTURAL REVOLUTION”

Ian Hodder uses the wrong word when speaking of the emergence of agriculture as being a revolution. It is not. It is an evolution, an emergence of agriculture all over the planet by both domesticating local plants and local animals in each zone. It was a long phylogenetic process that had roots long before the peak of the Ice Age. If we consider the harshest period of this Ice Age around its peak at 19,000 BCE, a long period of 8 to 10,000 years with 4 or 5,000 years before and after, hence the maximum period from 24,000 to 14,000 BCE.

All migrations out of Black Africa had come to an end around 50,000 BCE with the second wave of the third and last migration, which stayed on the Iranian plateau. They will only move down from it, west and east, around precisely 15-14,000 BCE. But the Turkic populations that had moved after arriving in the Middle East around 75,000 BCE where they met Neanderthals for the first time, but not the Semitic peoples that had come there around 80,000 BCE but had gone back to North Africa and were only to come to the Middle East again after 30,000 BCE. To only speak of these Turkic populations in Europe, we know the Gravettians were not living in caves but in man-made semi-permanent structures made of wooden supportive branches and poles covered with animal skins and earth on top. These “permanent” structures were, in fact, occupied periodically in the winter when the cold pushed the animals down south. But in the summer, the Gravettians followed the animals that moved north again. Some archaeologists consider that they had probably tamed some wolves that would become dogs, and that they may have tamed some members of the goat family. That was in 35,000 BCE.

I have explained in another book of mine (Jacques COULARDEAU et Ivan EVE, Cro-Magnon's Language: Emergence of Homo Sapiens, Invention of Articulated Language, Migrations out of Africa, Edition in English, July 31, 2017) that we can consider Homo Sapiens had taken care of the natural garden long before the Ice Age itself. During the Ice Age, the 8 to 10,000 years around the year 19,000 BCE, they regrouped in some southern areas, like the Basque country seen as a lot bigger than what it is today (toponyms and the names of rivers prove the geographical influence, hence the presence of the Basque people at least up to the Garonne), and they must have suffered a lot, been depleted in number by this harsh period, and yet they survived, meaning they must have developed ways to exploit nature intensively.

It would be interesting to consider what Theo Vennemann genannt Nierfeld and his approach to Europe in Palaeolithic times before the Peak of the Ice Age. Theo Vennemann genannt Nierfeld (May 27, 1937-) is a German linguist known best for his work on historical linguistics, especially for his disputed theories of a Vasconic substratum and an Atlantic superstratum of European languages. Two books should be consulted. Theo Vennemann genannt Nierfeld, Editor Patrizia Noel Aziz Hanna, *Europa Vasconica – Europa Semitica*, Mouton de Gruyter, Trends in Linguistics, Studies and Monographs 138, Berlin New York, 2003. And Theo Vennemann genannt Nierfeld, *Germania Semitica*, German Edition, Mouton de Gruyter, Trends in Linguistics. Studies and Monographs, 259, Berlin New York, 2012.

Agriculture came out of these skills developed by hunters and gatherers to survive the situation that was assaulting them. It is thus not a revolution but a very slow and long evolution. If it happened around the same period, all over the world, it is clear it shows that Homo Sapiens had the same adaptable reaction to the situation: exploit nature by taking care of it since it is a vast natural garden entrusted to these resourceful mammals that humans are. If you do not speak like that about it, you cannot explain why the basic plant or plants in each zone is or are different and some are particularly tricky to domesticate. I will cite maize in Mesoamerica, the cultivated plant being extremely different from the wild ones (and there are several wild ones) growing in Mexico, and we still don't know for sure how genetically it happened and whether it was the result of man-managed experimentation or only a rather haphazard event for the plant that Homo Sapiens noticed and exploited, maybe even accidentally, maybe even both. We are back to the Brownian motion we have already quoted: a random haphazard event or the result of some observation and experiment of the concerned humans

We have a similar phenomenon with animal domestication. Some animals were attracted by Homo Sapiens because of what they rejected on their middens, and on those middens, some bones from the goat family were found with no trace of having been manhandled or butchered. They seem to have died a natural death. Those signs are visible with the Gravettians, and I am sure could be found in other areas, in this approach in Europe, but also of course, other areas in the world. At times, some archaeologists reduce the phenomenon to one cereal in each zone. This is false. Quite often there is more than one cereal, which is the case in the Middle East and Europe, and there are always other plants like roots (beetroots, turnips, parsnips, radishes of many different types) and a lot of vegetables that we, in Europe, will only get in the 15th or 16th centuries, or later, from America, including potatoes, tomatoes, beans, pumpkins or various squashes, tobacco, cocoa, etc. In Africa agriculture was based on a root, manioc, or cassava. Some of these plants were difficult to domesticate and then grow, but what's more, they had to be cooked in a certain way because they are toxic without this cooking technique, and that means cooking fire and cooking pots were necessary, and the pots were only developed after the Ice Age. Maize has to be cooked in ashes and manioc has to be boiled in certain conditions, to make both edible. And think of cocoa and the very complex process the beans have to go through to become some kind of luxury product for the time since it was mostly limited to elite people, and the beans were also used as some kind of currency by the Mayas and the Aztecs, blowing up the idea that commerce and "money" did not exist long before our Christian Era, and we know that, up the Amazon river, in what is today Bolivia, they had devised this processing of cocoa something like 3,000 years before the Mayas who did it, with a different species of cocoa, around 1,000 BCE. A devised or imported know-how and procedure?

The concept of entanglement prevents Ian Hodder from understanding that it is not in any way some messy crisscrossing and superimposition of different elements and phenomena upon one another. Every single element in a set, at times a palette, of elements is connected to all the others in some kind of logic if we capture them as phylogenetically connected. His vision of Anatolia in this post-Ice Age time is warped by his not taking into account the Ice Age and its peak, and what was before. His approach can be summarized as follows.

- 1- scattered hunters and gatherers. Scattered individuals? Really?
- 2- the emergence of ritual centers like Gobekli Tepe. Erected in what conditions?
- 3- agglomeration, public ceremony + sense of human agency. What is human agency?
- 4- sedentism, early farming. That late?

After the Ice Age, Homo Sapiens are no longer simple hunters and gatherers. They learned a lot during these ten thousand years that were the real hard period of the Ice Age. To set Gobekli Tepe before the emergence of agriculture, and a long time before it, makes Gobekli Tepe impossible. It required probably a few hundred workers dedicated to that work. So, they had to have some kind of background production of what they needed to survive while working. That implied a community somewhere, sedentary and able to produce a lot of food and other goods, including the tools to cut and carve the pillars and other stones. Hunter-gatherers cannot provide for a great number of people who are not hunting or gathering. That kind of division of labor is only possible if some intensive production of food, tools, and other goods can be possible. Ian Hodder's model is not that intensive, and anyway for him is coming after Gobekli Tepe has been built. By leaving such questions unasked and unanswered, we leave the door open to the intervention of outside and supernatural entities like of course extraterrestrials and their Unidentified Flying Objects.

Ian Hodder is interesting when he refers to Colin Renfrew on page 240, and his idea that "in the Upper Palaeolithic and earlier, objects had symbolic power." (Page 241) Right enough since Renfrew goes back to 50,000 BCE and then up to 15,000 BCE. But Ian Hodder does not consider what it means to have symbolic power. In fact, it does not come from the objects, but it is invested by Homo Sapiens into the objects that did not have but were endowed with a symbolic value by Homo Sapiens, by the human mind. We can even consider that all Hominin species before Homo Sapiens, many of them not directly connected to Homo Sapiens himself as ascendants, could go through this mental process since they did produce tools and weapons. What made this process more effective and productive was that Homo Sapiens had the language we know that enabled them to communicate, discuss, and confront their projects with other people. So, Homo Sapiens had to devise the utilitarian value that had to be satisfied by one particular still non-existent object that had to be designed mentally, then Homo Sapiens had to produce the object, then the symbolism had to be invested in the object and its material use that must have been envisaged even before starting producing the object, and a final level of utilitarian and materialistic symbolic valuation had to be invested in some ritualistic consecration for the particular use attached to this object. Then and only then, the object had a full symbolic value. But to do all that, a collective construction was necessary with communication, experimentation, confrontation, conceptualization, and all that can only be achieved with language, and that's precisely what is missing here, human articulated language that started being devised 300,000 years ago and that was fully developed in Turkic languages that had reached the third and last articulation of human language, the first wave of it, i.e. agglutination. The division of labor – an indispensable concept to be considered and used in those old prehistoric times because it is

basically human and not attached to any type of capitalistic approach to the market economy of humanity – was necessary to build Gobekli Tepe and it required an intensive economy behind the project, hence agriculture that could not be the result of the ritualistic evolution that justified the construction of a ritual center because it has to be seen as the condition enabling this construction. And it must have started long before the beginning of the construction, so that the community could keep one hundred people or more, and eventually their families and households, off the daily productive action of the community that had to survive before being able to provide these workers with what they needed. This lack of awareness – maybe even knowledge – of the material needs for the survival of the community is surprising in our time as if we believed that a big proportion of the population could survive and even prosper without taking part in the everyday productive action of the community. The author seems to project our welfare state, and even an excessive conception of it, onto the past, and it prevents Ian Hodder from thinking about the concrete necessities of the construction of Gobekli Tepe.

But the worst consequences of first, this centering of the life of the inhabitants of the city on the houses in which they live and the households in the midst of which they live; second, without wondering about the genetic necessity to exchange boys and girls around the age of thirteen, exchanges that have to be from one household to another as far away as possible from each other, and one another, genetically, within the city and beyond the city; and third, the necessary division of labor to enable such a community to simply be able to survive, is the fact that Ian Hodder did not ask any question about such simple social exchanges and organizing principles that require some level of respected and clear power, hence political, architecture. But the most obvious consequence is that he did not capture the management of agriculture properly, as an essential activity along with herding, an economic activity that meant survival or death. When he hints at such problems, it is a hint and nothing else, with no real answer that leads me to question the management of the archaeological site. One of these hints is on page 95. My commentaries are in red in square brackets.

“Explanations of the degree of packing in terms of defense have little evidential basis. [We mentioned the absence of any defensive infrastructure, but it is, always so far, in what has been found.] Whatever the reasons for this local tradition, the sense of the collective is both enhanced and contradicted by the daily problems of habitation that result (Figure 39 [the reconstructed vision of a section of the city given at the end of the previous section]). I refer here to problems of sanitation, water supply, movement, access to resources, and crowding [Note here the crowding is absent from Figure 39, especially with the absence of children] that would both need collective action and create tensions between cohabitants. What then was the relationship between the individual house and the larger collective of Çatalhöyük [and vice versa between the collective of the city and individual houses]? [...] We have not found public spaces, administrative buildings, elite quarters, or really any specialized functional spaces except those on the edge of the mound.”

He does allude to many activities that have to be performed somewhere in the city beyond what he has already said about “sanitation, water supply, movement, access to resources, and crowding.” And here he remains evasive on pages 104-106.

“... A wide range of productive activities took place on site – from grease processing to bead manufacture, obsidian knapping, and woodworking. [...] The location of many activities at the edge of the site was presumably determined by very basic concerns about safety. For example [...] lime burning. [...] Another example of activities taking place at the

edge of the site is animal penning. [...] A possible spatial difference between off-site, edge-of-site, and full-on-site locations had been noted by Nerissa Russell and Louis Martin as regards sheep and goat bones. There is some evidence from the off-site KOPAL Area [“In the KOPAL Area to the north of the East Mound there are many marl extraction pits [...] the underlying lime-rich marls [...] used for a variety of purposes including the making of bricks and especially plaster.” (page 79)] that sheep and goat feet and heads were sometimes discarded at slaughter locations on the edge of the site. [...] KOPAL is the only area where sheep and goats are in the minority. Cattle predominate, but also there are more deer and pigs than on the mound. Apart from equids, therefore, wild animals are much more common in the KOPAL Area.”

What is said in these two quotations is first that domesticated animals can be penned outside, in fact on the very edge of the city that has no defensive wall, hence the house walls are what limit the pens in which the animals will be kept. But if animals are penned up, they have to be fed with some fodder that has to be produced. Be it hay or other vegetal fodder, it implies agriculture to at least grow and reap some hay or harvest other vegetal fodder. The question then is to know where this hay is kept. If the penned animals are at least taken out for several hours a day, or longer periods, to some pasture, these pastures are supposed to be grown and taken care of, and the animals have either to be fenced in that pasture or taken care of by some shepherd, which implies the use of dogs.

If we widen the picture and consider the agriculture that is going to produce the food necessary for the humans living in the city to survive, we have to find out where the fields are with some water close by. This water element is also needed for cattle or other domesticated animals. All that is basic, even if we consider it to be the beginning of agriculture. Note we have to be cautious with the idea that agriculture was invented in the Levant, the Fertile Crescent, and was transported, in one way or another, by migrating humans. It is difficult to keep that simple idea because the possible migrating people can only be the Indo-Europeans after they left the Iranian Plateau. We have seen that they are not certified to have reached Anatolia between 7,400 and 6,000 BCE. As I have said some form of agriculture is needed to make the building of Gobekli Tepe possible around 9,500 BCE. It is difficult to imagine simple hunter-gatherers were able to put aside the number of builders necessary to do the building. As I have said, humans after the Ice Age inherited from the 8,000 to 10,000 years of the peak of the Ice Age a lot of know-how and plain knowledge about producing vegetal produce, which is slightly more than plain gathering, even more than taking care of the natural garden. In fact, this peak of the Ice Age is generally reduced to a blank period, and no one seems to wonder how Homo Sapiens managed to survive in such harsh conditions, so much so that for several decades the Americans considered no one could cross the Bering Straight for about 10,000 years until we finally discovered in Alaska human bones and traces proving they had crossed from Siberia to northern Canada around 25,000 BCE. Humans, and remember Homo Sapiens were humans, can only survive in a drastic situation by developing means that can compensate for the hardship with which they are confronted.

We can find such a narrow vision that does not take into account the creative reactivity of Homo Sapiens in the history of the first humans migrating to northern America. I will keep South America for some other study. The best summary of it comes from the Smithsonian Magazine (<https://www.smithsonianmag.com/science-nature/how-humans-came-to-americas-180973739/>) and I think the people of this Smithsonian Magazine remain conservative (in red and square brackets, my commentary).

For more than half a century, the prevailing story of how the first humans came to the Americas went like this: Some 13,000 years ago, small bands of Stone Age hunters walked across a land bridge between eastern Siberia and western Alaska, eventually making their way down an ice-free inland corridor into the heart of North America. [Clovis theory states this was the only option and that the Clovis culture existed from c. 11,500 to 10,800 BP (Before Present) which should be, in my terms, from 9,400 to 8,700 BCE.] Chasing steppe bison, woolly mammoths and other large mammals, these ancestors of today's Native Americans established a thriving culture that eventually spread across two continents to the tip of South America. [This is becoming a myth nowadays with cultural elements moving from the south to the north, from Bolivia and even deeper south to Mesoamerica like cocoa asserted in Bolivia around 3,500 BCE and in Mesoamerica with the Mayas no sooner than 1,000 BCE.]

In recent years, however, that version of events has taken a beating, not least because of the discovery of archaeological sites in North and South America showing that humans had been on the continent 1,000 or even 2,000 years before the supposed first migration. A subsequent theory, known as the “Kelp Highway,” came closer to the mark: As the massive ice sheets covering western North America retreated, the first humans arrived on the continent not only by foot but by boat, traveling down the Pacific shore and subsisting on abundant coastal resources. Supporting that idea are archaeological sites along the West Coast of North America that date back 14,000 to 15,000 years [Confused dating: it seems to mean from 12,900 to 11,900 BCE].

Now our understanding of when people reached the Americas—and where they came from—is expanding dramatically. The emerging picture suggests that humans may have arrived in North America at least 20,000 years ago—some 5,000 years earlier than has been commonly believed [meaning 17,900 BCE]. And new research raises the possibility of an intermediate settlement of hundreds or thousands of people who spread out over the wild lands stretching between North America and Asia.

The heart of that territory has long since been submerged by the Pacific Ocean, forming the present-day Bering Strait. But some 25,000 to 15,000 years ago [meaning 22,900 to 12,900 BCE], the strait itself and a continent-size expanse flanking it were high and dry. That vanished world is called Beringia, and the developing theory about its pivotal role in the populating of North America is known as the Beringian Standstill hypothesis—“standstill” because generations of people migrating from the East might have settled there before moving on to North America [it seems it should be “migrating from the West... before moving on to North America.”].

But now we can ask the questions concerning this agriculture and this herding, and they are numerous.

1. Where did it develop? Outside the city at a certain distance where water is available. Let's identify that area.

2. Where were the pastures and the herds?
3. Who worked in the fields?
4. Who worked with the herds?
5. Who were the shepherds?
6. How were the people transported to the field?
7. If on foot, how long did it take?

8. How were the herds moved to the pastures and how were they kept there (fencing or shepherd)?

9. What was the division of labor among the inhabitants, in sex and age?

10. Was it the same division of labor for plowing (How?), sowing and planting, taking care of the plants, harvesting, processing the harvests, storing them after, and curing them if necessary? All these actions require a lot of workers, and these workers have to be highly qualified, not with informatics but with a lot of knowledge about the growth of the plants and the care needed for them to produce abundant harvests.

11. How can the harvests be stored in good condition and how long did they keep?

12. This implies we know what crops they were growing. What are they?

13. By whom was all that managed?

14. Was it collective or household-contained management?

15. Who decided the division of labor and the schedule of each laborer, and each action?

16. The question of the ownership of the land, tools, herds, seeds, etc., is of course crucial since it may then determine the distribution of the harvests.

17. Who managed the distribution of the harvests if they were collective, and the consumption of the harvest within each household?

18. Finally, what were the tools?

19. Celts several thousand years later invented the metal plowshare in a society with no or very few slaves. The metal plowshare was dropped by the Romans since they had plenty of slaves. In the same way, the water mill was invented in the first century BCE in several places in the Roman Empire, among others Marseille, and yet it was never used because they had plenty of slaves. They only became widely built and used starting in the 9th-10th century in Europe after Charlemagne's religious reform at the beginning of the 9th century that imposed 52 Sundays and three one-week-long-each religious festivities (Nativity, Passion, Assumption), altogether with some punctual other festivities, all of them, more than 70 such work-free days without any kind of protoindustrial and even agricultural work. The watermills enabled the medieval feudal society of that time to save a lot of workers and work to compensate for the holidays, meaning holy-hence-work-free days.

20. The final question is important. Were there slaves and in what proportion in this society?

21. All societies in the Middle East had slaves as soon as or at the latest when agriculture developed. Was Çatalhöyük following the trend?

22. Can we say slavery was invented to manage labor in nascent agriculture?

None of these questions are answered by Ian Hodder, or at least most of them are not, a restriction that could imply I missed a few elements in the book, especially because the questions I am asking here are following a logic that is not Ian Hodder's. I am following a phylogenetic method and everything in Çatalhöyük is the result of a movement that started at least 300,000 years ago in Black Africa. My logic is to identify the various migrations, and archaeologists provide a lot of data that lead to the number of three migrations founded on the three articulations necessary to move from animal calls to human articulated languages. The very first one, the rotation of vowels and consonants, was the result of mutations that were naturally selected for the bipedal primordial Hominin, in this case, let's say, Homo

Erectus, to become a long distance, fast, and resilient runner. This implied the restructuring of the respiratory system, the subglottal and glottal apparatus, the larynx, the

articulatory apparatus (mouth, tongue, jaws, teeth), and the sinus cavities to be redesigned under the pumping device of the diaphragm and the cerebral control from Broca's zone in the brain, plus thousands of sensors in the whole body all connected to one another and the brain, and what's more, the running itself was and still is controlled by the various senses of ours, particularly eyesight and hearing. The heart and the lungs developed along with the change under the influence of the rhythmic action of long-distance running.

More precisely the basic questions are the following, and at this level of abstraction, five questions are quite enough, a pentad or a pentacle.

1. Who are the people in this city?
2. What language do they speak?
3. Where do they come from?
4. What have they done and experienced since they left Black Africa?
5. What had they done before they left Black Africa?

When this first articulation was completed, the linguistic journey to human intelligence could start: conceptualization; technology and science; poetry and literature; arts, religion, philosophy, and spirituality are within reach in just a few millennia. And the way linguists speak today, and have spoken since the Saussurean epiphany, a language is a system of systems, not entangled one into the others, but all articulated one onto the others via a few simple patterns that each system has embedded in their architectures, and that are still evolving in coordination onto one another using the subductive power of the human brain that can constantly conceptualize the more or less big data the brain, and in it, the virtual reality of the mind collect and consider by subduction, both power and action, in which one linguistic operation forces itself under or over another causing a transformational tremor that brings up in time a transformation of the system when some mutation in the discourse of some people is adopted by a mass of people because it simplifies the language and it makes sense, in agreement and phase with the changing material world around us. The very same human intelligence which is both natural since it is the result of a phylogenetic evolution, and artificial because it does not exist all by itself in nature, and because it is the result of an abstract constructive procedure in the mind that enables men and women to analyze the surrounding natural world, and to construct an artificial intelligence that can develop all sorts of artificial systems, theories, models that try to explain the natural world and the spiritual, artificial, intellectual world that men and women have created with the power of their minds. The very same human intelligence that is captured differently by people from different languages and cultures, particularly because human intelligence is a subductive development of millennia of human thought to formalize the multiple and infinite vision humans get through their senses, and with the help of their languages they use in exploratory, if not speculative, communication in a multilingual world and a plurilingual experience..

4. "THE INVENTION OF HISTORY"

This chapter is the strangest chapter you can imagine. The very concept of "history" is very recent in our Indo-European languages with the meaning of relating the past to understand the possible evolution, the causes of past events, and the effects on the following moments and what happened next. This meaning only developed in the late 15th century in English (this date is given by the Online Etymology Dictionary in the text of the "history" entry and is contradicted by the chart given below where the dating is the 14th century even if we consider it is not yet the modern meaning). Before this the word had a different meaning

that implied the speaker had seen things, hence had been a witness, but not necessarily of historical events, hence the “stories” could be entirely mythical like in mythology, or spiritual like in most religions, and they could also be entirely creative, hence fiction, poetry, tales. The modern meaning of recording the past and its evolution is very recent. The phrase “to make history” was first found in 1862 and it can only be seen as the result of the philosophical movement after the American and French Revolutions. See the figure below.

This being said, a dictionary entry is not a scientific discussion. It is obvious here that Ian Hodder retrospectively projects a modern concept onto a very old civilization. But he finds it difficult to get to “stories,” particularly “history” since this civilization in Çatalhöyük has no writing system and left no record of their stories, histories, and myths. The only elements he can work on have to do with the representations or artifacts he found in the archaeological sites, in the houses, painted or carved on or in the walls, and this includes elements embedded in the wall, jutting out such as horns or skulls, and small figurines. But his saying these people were starting to build the concept of history is by far anachronistic. If he had considered the language, he could have understood better what had been happening since Homo Sapiens evolved out of Homo Erectus or Homo Ergaster in Black Africa. It has to do with the power of language. As soon as Homo Sapiens was able to rotate his vowels (more than five) and his consonants (more than twenty, including clicks) to produce several thousand words with some referential connection to objects or entities, including abstract and spiritual or even emotional entities, the road to conceptualization was open. That’s the necessary mental power to lead the enormous migrations Homo Sapiens launched for himself. Note Homo Erectus was also a migrating Hominin, and he was our ancestor. Migrating was thus some kind of heritage.

This language gave Homo Sapiens the possibility to tell what they felt, what they had witnessed, and what they remembered, and to interpret it all. Some in their communities “specialized” in memory to remember, hence, to record, rules, laws, rituals, formulas, and knowledge. Without this memory and conceptualizing power, there would have been no paintings in the caves, and probably no evolution to this representational phase of humanity. But that was long before Çatalhöyük, in fact, 30-40,000 years before. Is memory enough to reach a level of knowledge that could be considered history? In an oral civilization, it is obvious that’s the case: memory records all sorts of things, some essential for the community like rules and laws, but some just as important dealing with the record of what every single member of the community owns, and what duties or rights every member of this community is endowed with. Can we call that history? Why not, but do we have these oral records of what the people in this community recorded in their memory? We do not have recordings of what they orally communicated and transmitted to other people. We only have the paintings, the engravings, the embeddings on or in the walls, and some movable figurines and objects.

Strangely enough, the author alludes to another approach, but he cannot go very far.

“There are many symbolic themes at Çatalhöyük that occur widely across large swathes of Anatolia, the Levant, and into the Zagros Mountains. These generalized themes such as the bull, the vulture, and the big cat could just be seen as depictions of real animals that had important symbolic significance. But I wish to argue that some symbolic themes were also often parts of myths. At least some of the symbolic images used in the Neolithic of Anatolia were fantastic. For example, some of the creatures represented at Göbekli are not real and include some sort of lizard or frog with bared teeth. At Çatalhöyük itself, the splayed figure (e.g., Plate 18, [see above]) is best interpreted as some sort of human-bear hybrid. Some of

Mellaart's interpretations of the wall paintings include fantastic animals. In addition, some of the art at Çatalhöyük has a narrative dimension suggesting a story or fable. [...] When I suggest that there was a mythic component to the symbolism of Anatolia and the Middle East in the early Neolithic, I mean the symbolism had both fantastic and narrative components." (pages 141-142)

If we take into account the existence of language in this society, it is absolutely universal that such pictures, representations, and artifacts are accompanied by some linguistic component: a story telling how this artifact came to this wall; a ritualistic expression that could be a prayer, an address to the spirit represented by the artifact; or even some magical curse-casting incantation to fall upon some rival, enemy, opponent, or whatever. Our lives are full of such ritualistic gestures and declarations, like kneeling and crossing oneself when coming up to the choir of a Catholic church; shaking hands with someone you meet; "kissing" the people you meet, cheek to cheek, once, twice or even three times; greeting people when you come into a store or shop; saying "good evening," "good afternoon," or even "good morning," when entering or leaving a store or shop; all students getting up when someone enters a class that is in session, like the principal of the school, or just any person who is not a member of this class, even if it is only the janitor coming in for any reason at all.

Then, we have to enter another science, best represented in France by Julien d'Huy (Cosmogonies, La préhistoire des mythes, La Découverte, October 1, 2020) who works on a vast database of all sorts of tales, stories, myths collected from nearly all oral civilizations that have most of them become literate and have transcribed or recorded these tales. Julien d'Huy uses a complex method to reconstruct some past forms of the stories though he can hardly go beyond the peak of the Ice Age, and hardly more than 10,000 years in the past. Then, he would have run into a linguistic problem because in the Middle East around 8,000 BCE you have vast Turkic populations (the language(s) I believe was (were) spoken in Çatalhöyük was (were) a Turkic language(s)) but also Semitic languages like Phoenician and Akkadian, and some others, and arriving from the Iranian Plateau, the first Indo-Europeans, particularly the Sumerians and their oldest writing system known in this region. It might be possible to sort out this crisscrossing linguistic situation. But that is a completely different can of worms than archaeology. The work remains to be done. But I doubt it would confirm that history was already in the making there. A mythologized vision of the past, or the spiritual world, or of the fantastic world beyond the surface of this human world would be captured. One problem that, from my point of view as a linguist, limits Julien d'Huy's approach, just like it limited Claude Lévi-Strauss's approach, is the fact that both do not take the stories, tales, or myths in their original languages but in some "Indo-European" translation. To identify a mytheme with one word, a few words, or a sentence in English, French, or Russian (Julien d'Huy's database is the property of one of Saint-Petersburg's university departments), like "leopard" for instance in our case, reduces the mytheme to the morphological, paradigmatic and syntagmatic connections of this word, these several words, or this sentence in the Indo-European language concerned, and not with those in the original language.

CONCLUSION

I don't have much more to say, in fact, I do but I consider I have said enough right now. In a way, it is or was an important book, but it has tremendously aged because of its never taking into account the fact that we have here a community that speaks a language and uses this language to produce many different discourses from a plain informative discourse to

an educational discourse, to reflective and poetic discourses (in the plural this time), and to a ritualistic discourse. When you set these five levels of discourse within one Turkic agglutinative language, it creates at once a hierarchy in this society because if the first two discourses can be common to all, the next three are definitely controlled by people who have special abilities, and have gone through special experiences, if not training, like “altered state of consciousness suggested by David Lewis-Williams” (page 196) These altered states can be produced by a long total isolation, often in total darkness, in an enclosed space or volume that will lead to reduced oxygen available after a few hours or one day, without anything to eat or drink, with or without special drugs or preparations to induce in your brain some visions, and all that within an ideology that states the existence of spirits, both human and animal, and monsters of all sorts in that other world you can reach in such a situation. Add to that, before, during, and/or after the experience, some physical pain created artificially by some violent action on the candidate to shaman-ness and you can imagine what it might produce, like fear, traumatic fear even, in the young people submitted to this initiating ordeal before puberty defined as a trip to the other worlds, subterranean and upper worlds. But I found nothing really explicit on such beliefs and practices in this book, except here and there a reference to some people who have done some research in the field, including Ian Holler himself who refers several times to the Tikopia people. “Tikopia is a high island in the southwestern Pacific Ocean. It forms a part of the Melanesian nation-state of Solomon Islands but is culturally Polynesian. The first Europeans arrived on April 22, 1606, as part of the Spanish expedition of Pedro Fernandes de Queirós.” (<https://en.wikipedia.org/wiki/Tikopia>)

But it is worth reading this book because it is challenging what we may consider standard and what is only scientifically circumstantial. There is no revelation of any knowledge, only a mental construction of such knowledge within given circumstances.

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