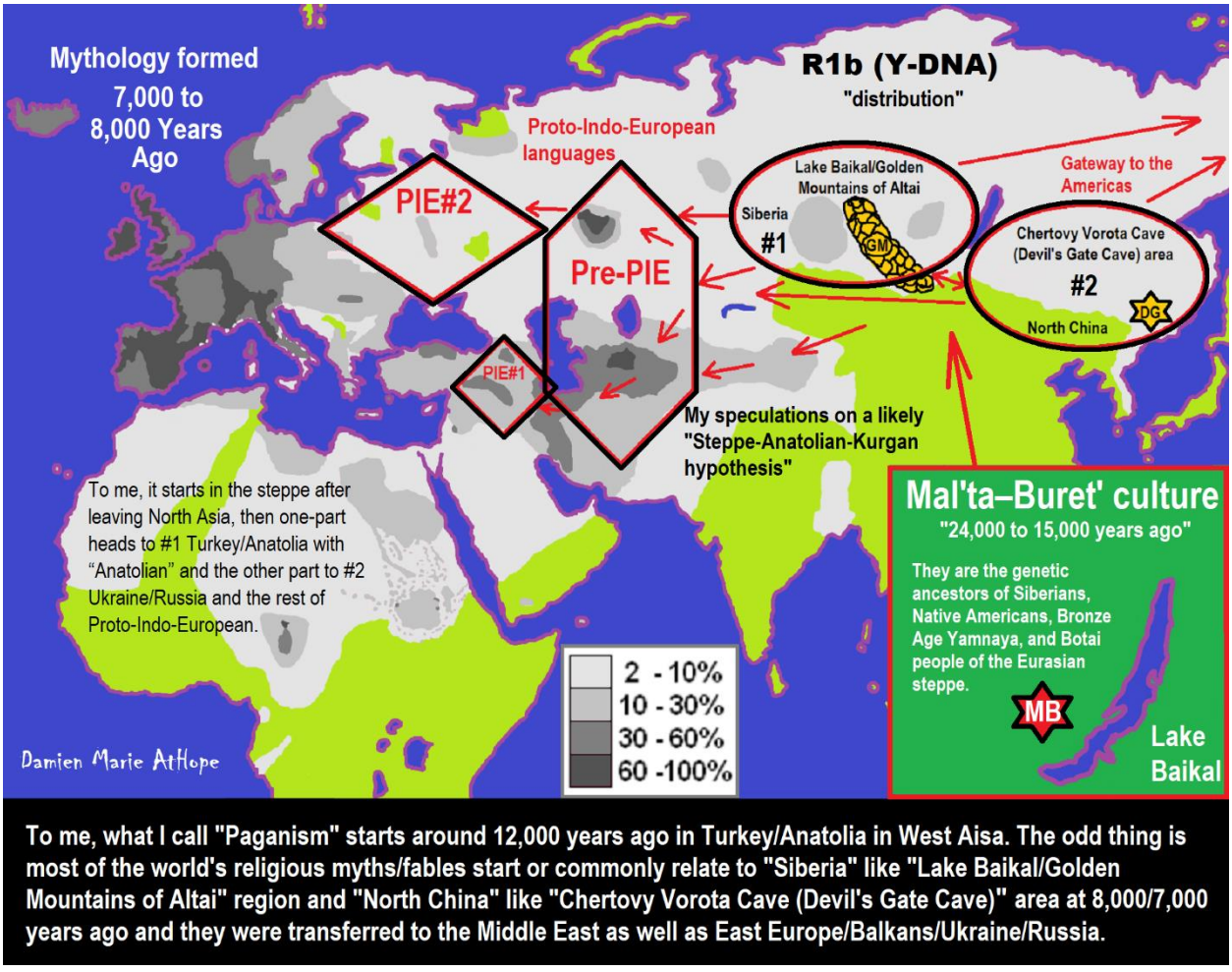
Proto-Indo-European (PIE), ancestor of Indo-European languages: DNA, Society, Language, and Mythology

By Damien Marie AtHope



Damien Marie AtHope's Art

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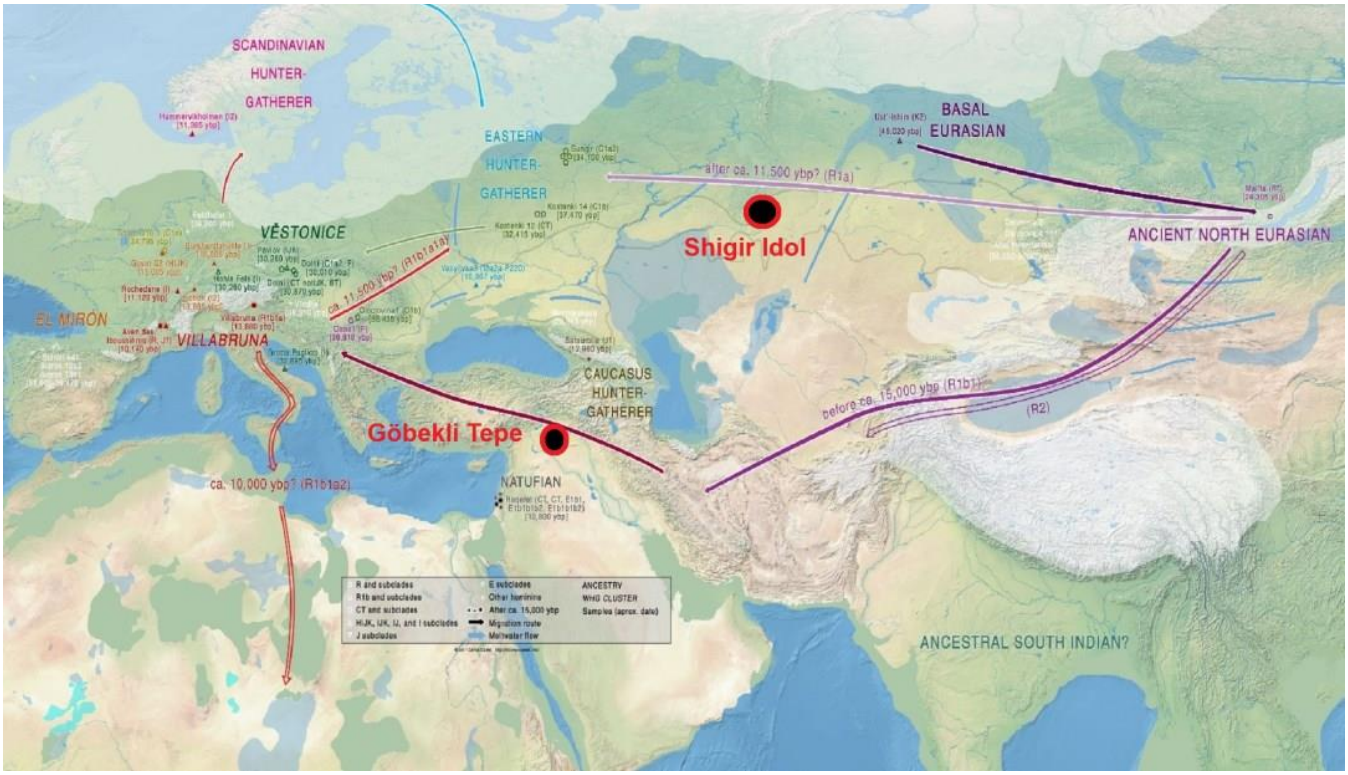
- My Thoughts on Possible Migrations of "R" DNA and Proto-Indo-European?

- **Migrations and Changing Europeans Beginning around 8,000 Years Ago**
- **My “Steppe-Anatolian-Kurgan hypothesis” 8,000/7,000 years ago**
- **The Dnieper–Donets culture and Asian varieties of Millet from China to the Black Sea region of Europe by 7,022 years ago**
- **Kurgan 6,000 years ago/dolmens 7,000 years ago: funeral, ritual, and other?**
- **7,020 to 6,020-year-old Proto-Indo-European Homeland of Urheimat or proposed home of their Language and Religion**



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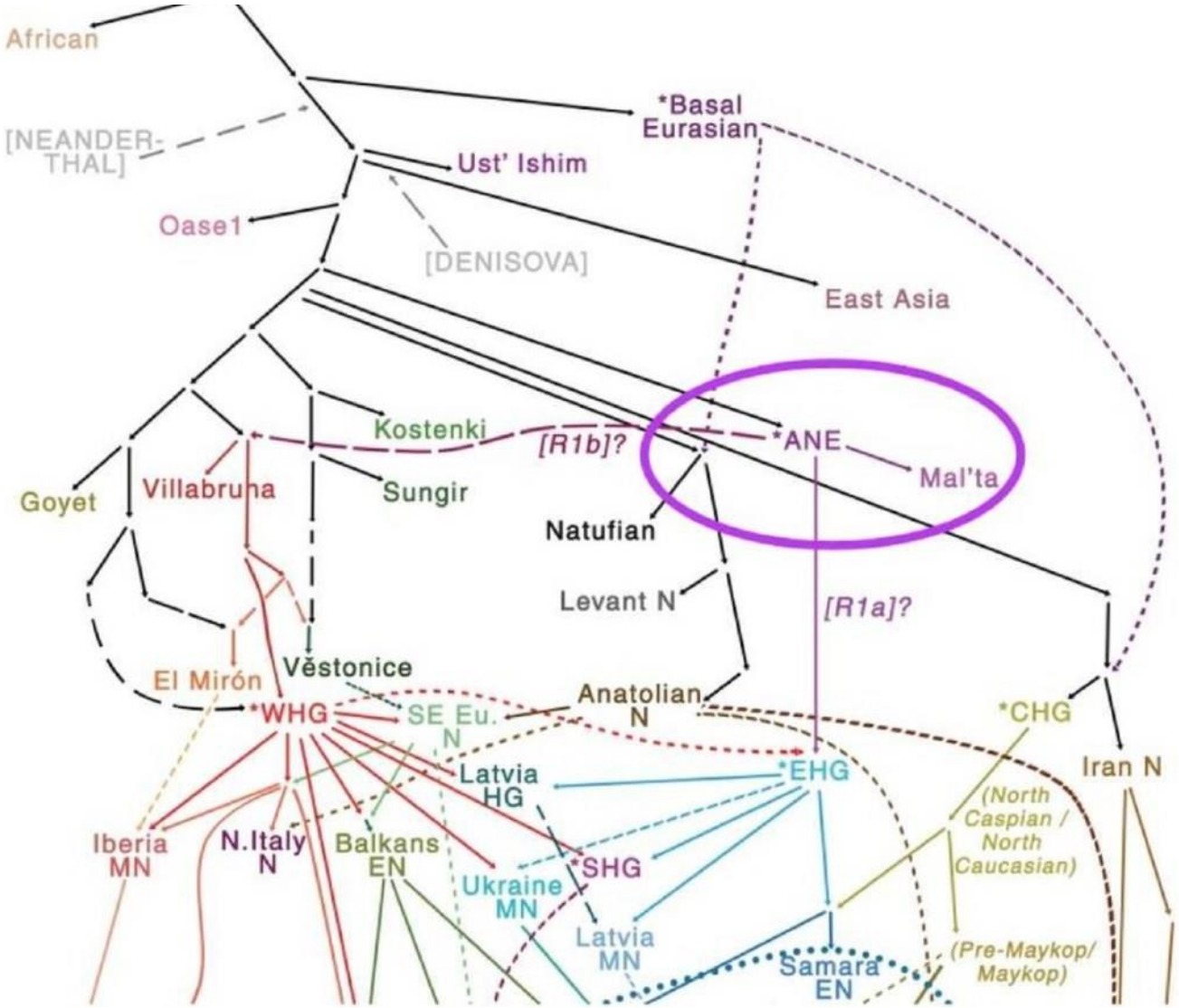

African
[NEANDER-THAL]
*Basal Eurasian
Ust' Ishim
Oase1
[DENISOVA]
East Asia
Kostenki
[R1b]?
*ANE
Mal'ta
Goyet
Villabruna
Sungir
Natufian
Levant N
[R1a]?
El Mirón
Věstonice
*WHG
SE Eu. N
Anatolian N
*CHG
Iran N
Latvia HG
*EHG
(North Caspian / North Caucasian)
Iberia MN
N.Italy N
Balkans EN
*SHG
Ukraine MN
Latvia MN
Samara EN
(Pre-Maykop/ Maykop)

Damien's thoughts/speculations on where he believes is the possible origin of shamanism, which may have begun sometime around 35,000 to 30,000 years ago seen in the emergence of the Gravettian culture.

25,000–30,000 years ago

23,000/ 25,000 years old

Shamanism Origins?

Sungir

Dolni Vestonice

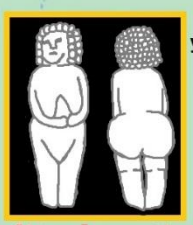
Kostenki

25,000 to 20,000 years ago

Head Covering?

25,000 years old

23,000 years ago



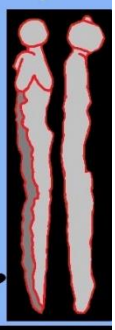
Mal'ta–buret' culture

Lake Baikal

Mongolia

China

Totem pole figurines?



Totem pole figurines?

Sungir

Dolni Vestonice

Half Blind

Did a half blind Shaman inspire, Gravettian Shaman bead caps?

I speculate that possibly the Totem pole figurines seen first at Kostenki, next went to Mal'ta in Siberia as seen in their figurines that also seem "Totem-pole-like", and then with the migrations of R1a it may have inspired the Shigir idol in Russia and the migrations of R1b may have inspired Göbekli Tepe.

"R1a" after 11,500 years ago?

Lake Baikal

Mal'ta–Buret'

"R"

14,160/13,820 years ago

Villabruna

"R1b"

Shigir Idol

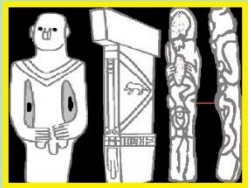
11,500 years ago

Ancient North Eurasians

"R1b" before 15,000 years ago

Göbekli Tepe

11,500 to 10,000years ago



Damien Marie AtHope

Damien Marie AtHope's Art

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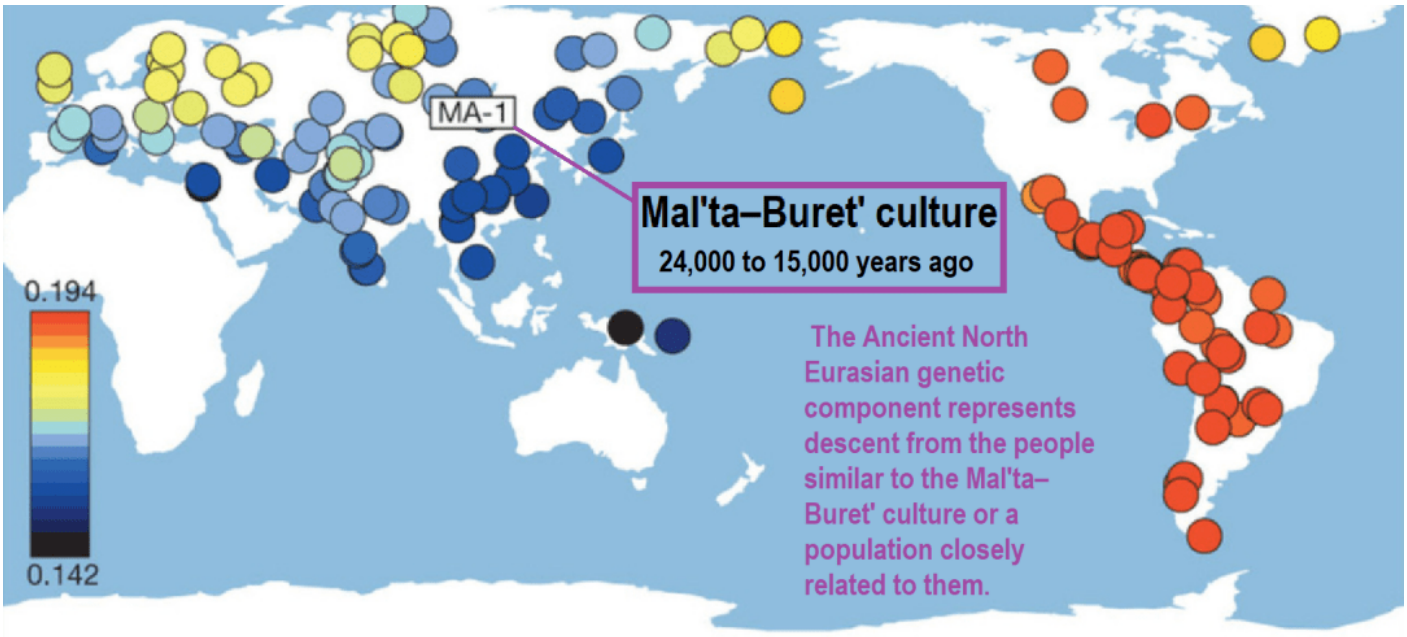
Here are my thoughts/speculations on where I believe is the possible origin of shamanism, which may have begun sometime around 35,000 to 30,000 years ago seen in the emergence of the Gravettian culture, just to outline his thinking, on what thousands of years later led to evolved Asian shamanism, in general, and thus WU shamanism as well. In both Europe-related "shamanism-possible burials" and in Gravettian mitochondrial DNA is a seeming connection to Haplogroup U. And the first believed Shaman proposed burial belonged to Eastern Gravettians/Pavlovian culture at Dolní Věstonice in southern Moravia in the Czech Republic, which is the oldest permanent human settlement that has ever been found. It is at Dolní Věstonice where approximately 27,000-25,000 years ago a seeming female shaman was buried and also there was an ivory totem portrait figure, seemingly of her.

And my thoughts on how cultural/ritual aspects were influenced in the area of Göbekli Tepe. I think it relates to a few different cultures starting in the area before the Neolithic. Two different groups of Siberians first from northwest Siberia with U6 haplogroup 40,000 to 30,000 or so. Then R Haplogroup (mainly haplogroup R1b but also some possible R1a both related to the Ancient North Eurasians). This second group added its "R1b" DNA of around 50% to the two cultures Natufian and Trialetian. To me, it is likely both of these cultures helped create Göbekli Tepe. Then I think the female art or graffiti seen at Göbekli Tepe to me possibly relates to the Epigravettians that made it into Turkey and have similar art in North Italy. I speculate that possibly the Totem pole figurines seen first at Kostenki, next went to Mal'ta in Siberia as seen in their figurines that also seem "Totem-pole-like", and then with the migrations of R1a it may have inspired the Shigir idol in Russia and the migrations of R1b may have inspired Göbekli Tepe.

Seeming Connections: Totem poles, Ceremonial poles, Spirit poles, Sacred poles, Deity poles, Deities with poles, Pole star, Axis Mundi, Sacred trees, World tree, Maypole, Sun Dance with poles, etc.



MA-1 belonged to a population related to the genetic ancestors of Siberians, American Indians, and Bronze Age Yamnaya and Botai people of the Eurasian steppe. In particular, modern-day Native Americans, Kets, Mansi, and Selkup have been found to harbour a significant amount of ancestry related to MA-1.

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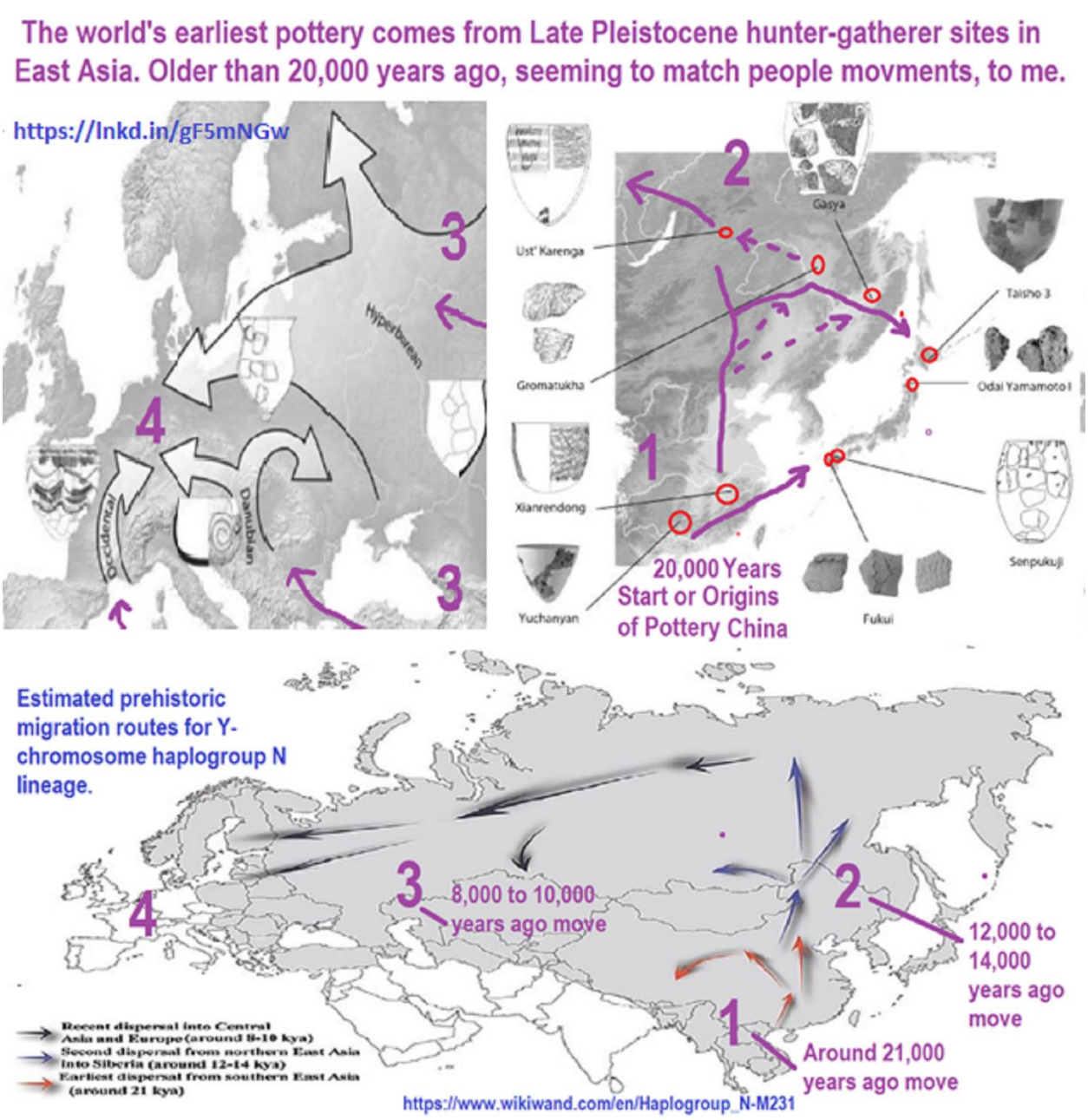

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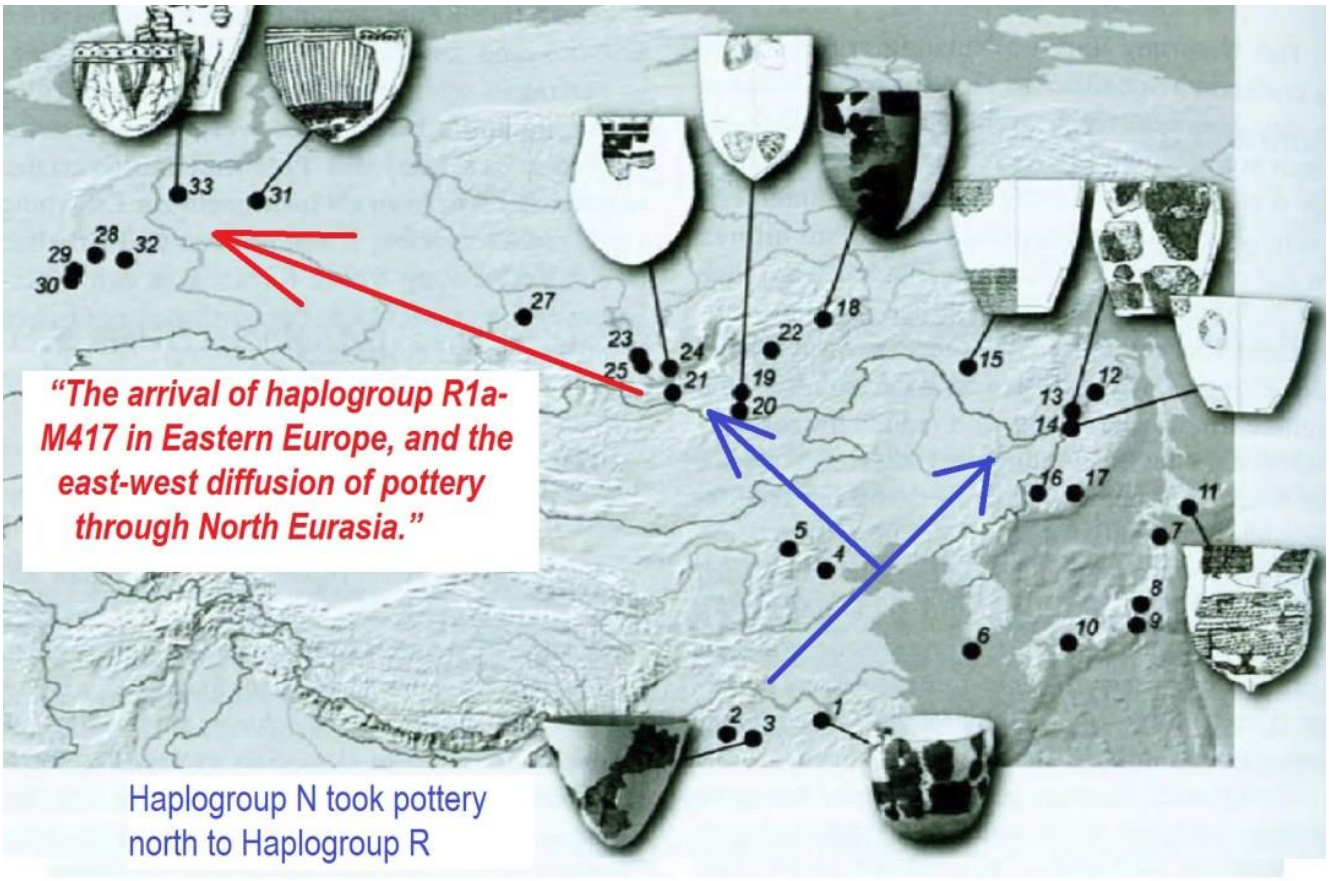
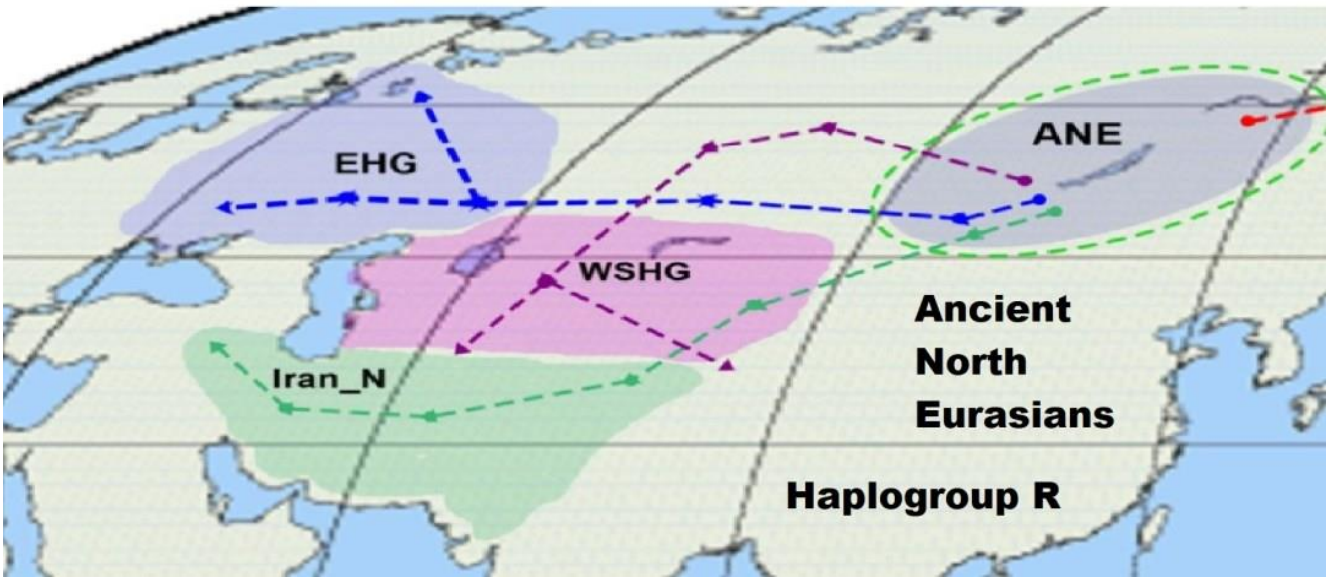
Bridging the Boreal Forest: Siberian Archaeology and the Emergence of Pottery among Prehistoric Hunter-Gatherers of Northern Eurasia

- **Globalization and the Emergence of Ceramic-using Hunter-gatherers in Northern Eurasia**

- **A comparative perspective on the 'western' and 'eastern' Neolithics of Eurasia: Ceramics; agriculture and sedentism**
- **The transmission of pottery technology among prehistoric European hunter-gatherers**





"The arrival of haplogroup R1a-M417 in Eastern Europe, and the east-west diffusion of pottery through North Eurasia." https://indo-european.eu/2018/02/the-arrival-of-haplogroup-r1a-m417-in-eastern-europe-and-the-east-west-diffusion-of-pottery-through-north-eurasia/
Ancient North Eurasian https://en.wikipedia.org/wiki/Ancient_North_Eurasian
Ancient North Eurasian/Mal'ta–Buret' culture haplogroup R* https://en.wikipedia.org/wiki/Mal%27ta%E2%80%93Buret%27_culture

ref, ref, ref, ref, ref, ref

"The arrival of haplogroup R1a-M417 in Eastern Europe, and the east-west diffusion of pottery through North Eurasia." ref

R-M417 (R1a1a1)

"R1a1a1 (R-M417) is the most widely found subclade, in two variations which are found respectively in Europe (R1a1a1b1 (**R-Z282**) ([R1a1a1a*] (**R-Z282**) and Central and South Asia (R1a1a1b2 (**R-Z93**) ([R1a1a2*] (**R-Z93**)." ref

R-Z282 (R1a1a1b1a) (Eastern Europe)

"This large subclade appears to encompass most of the R1a1a found in Europe.

- R1a1a1b1a [R1a1a1a*] (R-Z282*) occurs in northern Ukraine, Belarus, and Russia at a frequency of c. 20%.
- R1a1a1b1a3 [R1a1a1a1] (R-Z284) occurs in Northwest Europe and peaks at c. 20% in Norway.
- R1a1a1c (M64.2, M87, M204) is apparently rare: it was found in 1 of 117 males typed in southern Iran." ref

R1a1a1b2 (R-Z93) (Asia)

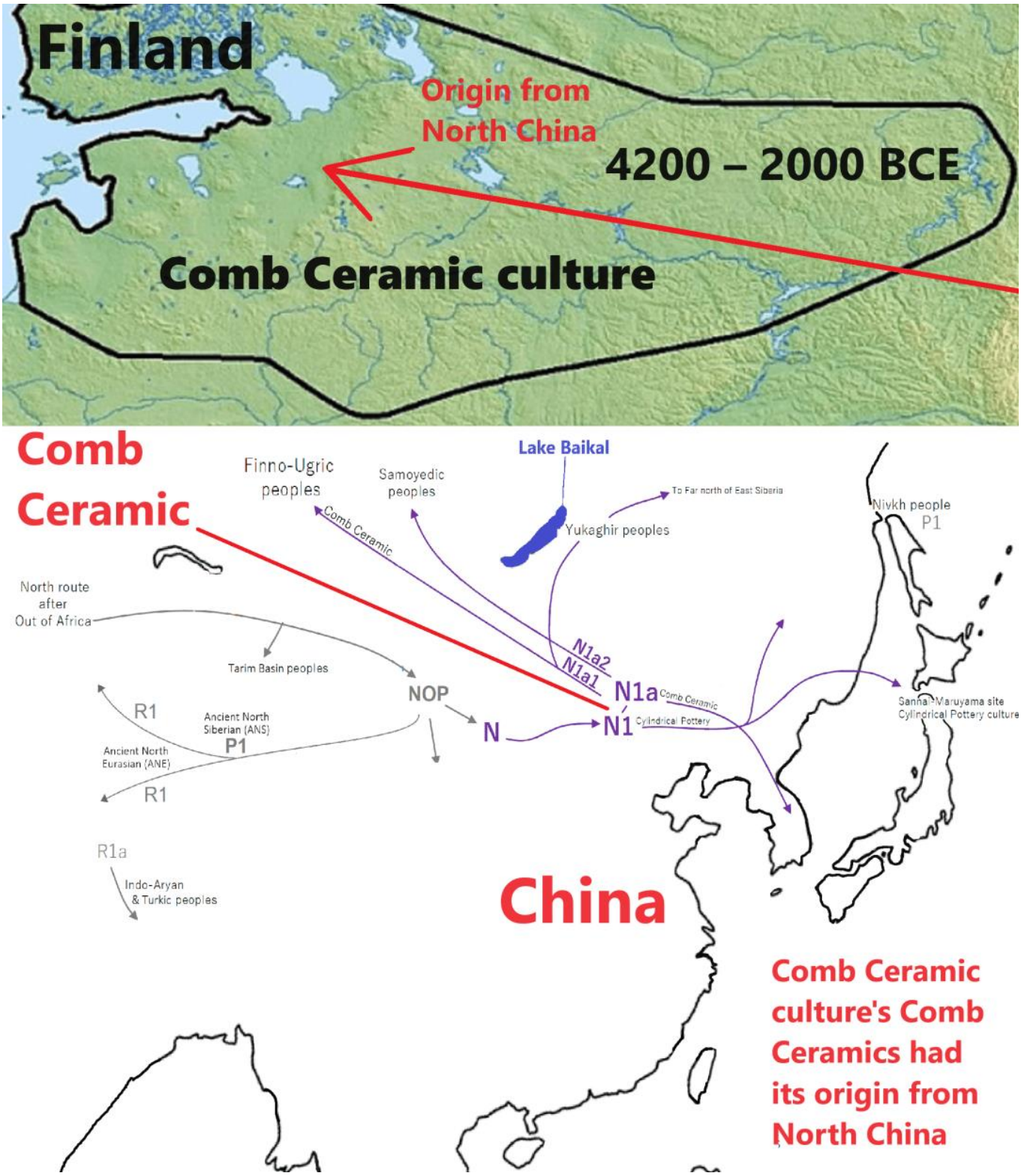
"This large subclade appears to encompass most of the R1a1a found in Asia, being related to Indo-European migrations (including Scythians, Indo-Aryan migrations, and so on).

- R-Z93* or R1a1a1b2* (R1a1a2* in Underhill (2014)) is most common (>30%) in the South Siberian Altai region of Russia, cropping up in Kyrgyzstan (6%) and in all Iranian populations (1-8%).

- R-Z2125 occurs at highest frequencies in Kyrgyzstan and in Afghan Pashtuns (>40%). At a frequency of >10%, it is also observed in other Afghan ethnic groups and in some populations in the Caucasus and Iran.
    - R-M434 is a subclade of Z2125. It was detected in 14 people (out of 3667 people tested), all in a restricted geographical range from Pakistan to Oman. This likely reflects a recent mutation event in Pakistan.
- R-M560 is very rare and was only observed in four samples: two Burushaski speakers (north Pakistan), one Hazara (Afghanistan), and one Iranian Azerbaijani.
- R-M780 occurs at high frequency in South Asia: India, Pakistan, Afghanistan, and the Himalayas. The group also occurs at >3% in some Iranian populations and is present at >30% in Roma from Croatia and Hungary." ref

R-M458 (R1a1a1b1a1)

"R-M458 is a mainly Slavic SNP, characterized by its own mutation, and was first called *cluster N*. Underhill et al. (2009) found it to be present in modern European populations roughly between the Rhine catchment and the Ural Mountains and traced it to "a founder effect that ... falls into the early Holocene period, 7.9±2.6 KYA." M458 was found in one skeleton from a 14th-century grave field in Usedom, Mecklenburg-Vorpommern, Germany. The paper by Underhill et al. (2009) also reports a surprisingly high frequency of M458 in some Northern Caucasian populations (for example 27.5% among Karachays and 23.5% among Balkars, 7.8% among Karanogays and 3.4% among Abazas)." ref



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Comb Ceramic culture's Comb Ceramics had its origin from North China

Comb Ceramic culture

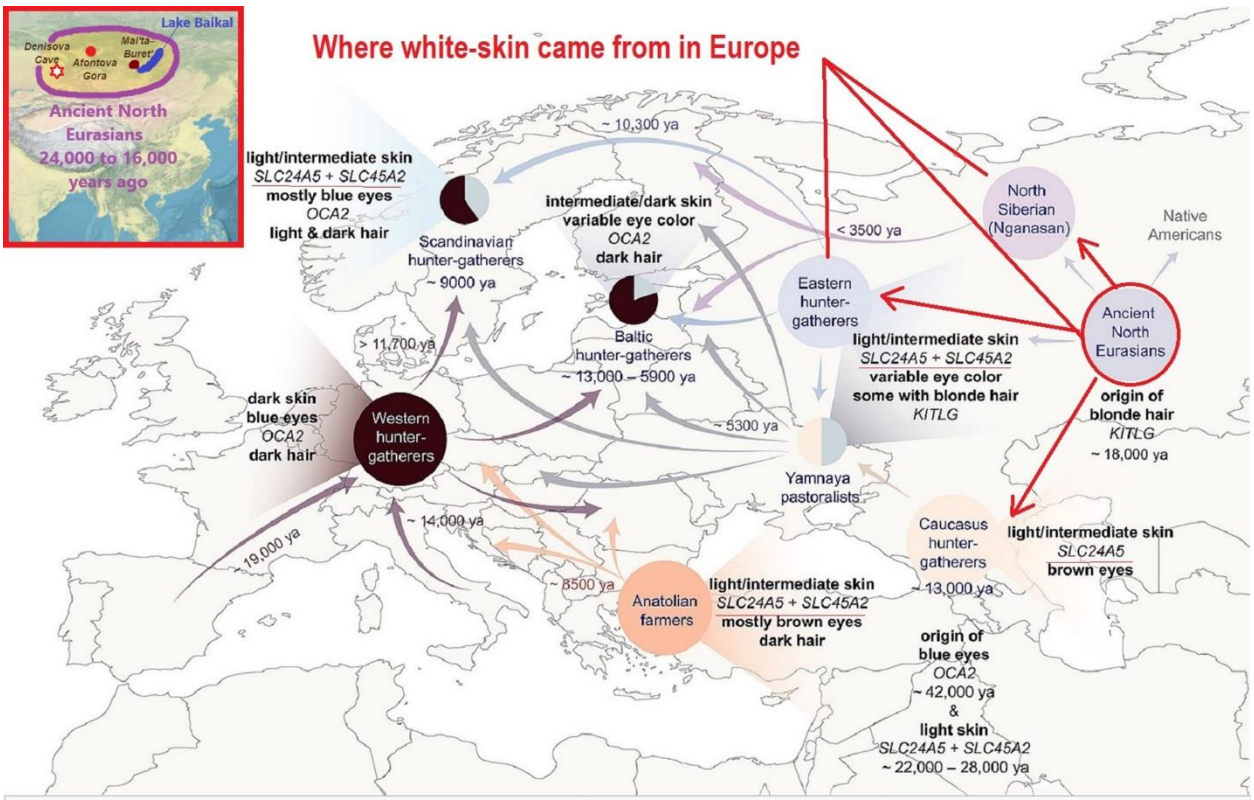
"The Comb Ceramic culture or Pit-Comb Ware culture, often abbreviated as CCC or PCW, was a northeast European culture characterised by its Pit–Comb Ware. It existed from around 4200 BCE to around 2000 BCE. The bearers of the Comb Ceramic culture are thought to have still mostly followed the Mesolithic hunter-gatherer (Eastern Hunter-Gatherer) lifestyle, with traces of early agriculture. The distribution of the artifacts found includes Finnmark (Norway) in the north, the Kalix River (Sweden) and the Gulf of Bothnia (Finland) in the west and the Vistula River (Poland) in the south. It would include the Narva culture of Estonia and the Sperrings culture in Finland, among others. They are thought to have been essentially hunter-gatherers, though e.g. the Narva culture in Estonia shows some evidence of agriculture. Some of this region was absorbed by the later Corded Ware horizon. The Pit–Comb Ware culture is one of the few exceptions to the rule that pottery and farming coexist in Europe. In the Near East farming appeared before pottery, then when farming spread into Europe from the Near East, pottery-making came with it. However, in Asia, where the oldest pottery has been found, pottery was made long before farming. It appears that the Comb Ceramic Culture reflects influences from Siberia and distant China." ref

"By dating according to the elevation of land, the ceramics have traditionally (Äyräpää 1930) been divided into the following periods: *early* (Ka I, c. 4200 BC – 3300 BC), *typical* (Ka II, c. 3300 BC – 2700 BC) and *late Comb Ceramic* (Ka III, c. 2800 BC – 2000 BC). However, calibrated radiocarbon dates for the comb-ware fragments found (e.g., in the Karelian isthmus), give a total interval of 5600 BC – 2300 BC (*Geochronometria* Vol. 23, pp 93–99, 2004). The settlements were located at sea shores or beside lakes and the economy was based on hunting, fishing, and the gathering of plants. In Finland, it was a maritime culture that became more and more specialized in hunting seals. The dominant dwelling was probably a teepee of about 30 square meters where some 15 people could live. Also, rectangular houses made of timber became popular in Finland from 4000 BC cal. Graves were dug at the settlements and the dead were covered with red ochre. The typical Comb Ceramic age shows an extensive use of objects made of flint and amber as grave offerings." ref

"The stone tools changed very little over time. They were made of local materials such as slate and quartz. Finds suggest a fairly extensive exchange network: red slate originating from northern Scandinavia, asbestos from Lake Saimaa, green slate from Lake Onega, amber from the southern shores of the Baltic Sea, and flint from the Valdai area in northwestern Russia. The culture was characterized by small figurines of burnt clay and animal heads made of stone. The animal

heads usually depict moose and bears and were derived from the art of the Mesolithic. There were also many rock paintings. There are sources noting that the typical comb ceramic pottery had a sense of luxury and that its makers knew how to wear precious amber pendants. The great westward dispersal of the Uralic languages is suggested to have happened long after the demise of the Comb Ceramic culture, perhaps in the 1st millennium BC." ref

"Saag et al. (2017) analyzed three CCC individuals buried at Kudruküla as belonging to Y-hg R1a5-YP1272 (R1a1b~ after ISOGG 2020), along with three mtDNA samples of mt-hg U5b1d1, U4a and U2e1. Mittnik (2018) analyzed two CCC individuals. The male carried R1 (2021: R1b-M343) and U4d2, while the female carried U5a1d2b. Generally, the CCC individuals were mostly of Eastern Hunter-Gatherer (EHG) descent, with even more EHG than people of the Narva culture. Lamnidis et al. (2018) found 15% Western Hunter-Gatherer (WHG) ancestry, 65% Eastern Hunter-Gatherer (EHG) – higher than among earlier cultures of the eastern Baltic, and 20% Western Steppe Herder (WSH)." ref



The mutation for blond hair is thought to have originated among the Afontova Gora population of the Ancient North Eurasian (ANE) cline of south-central Siberia

ref, ref, ref

"Lighter skin and blond hair evolved in the **Ancient North Eurasian** **(ANE)** population. The SLC24A5 gene's derived threonine or Ala111Thr allele (rs1426654) has been shown to be a major factor in the light skin tone of Europeans. Possibly originating as long as 19,000 years ago, it has been the subject of selection in the ancestors of Europeans as recently as within the last 5,000 years, and is fixed in modern European populations." ref, ref

I don't see it as white skin being more evolved than those with dark skin, as bigots could see it, but rather it is just one of many factors that happen when the evolutionary pressures on a region like Siberia have on evolutionary changes that would not have happened if not for the different climate pressures the far north have that is not experienced in lower latitudes.

DNA-researcher: It's not 'woke' to portray prehistoric Europeans with dark skin.

"It's evolution. Ancient DNA analyses suggest that prehistoric Europeans looked different from modern Europeans today, but some people find that hard to accept. There was an artistic picture of an almost 6,000-year-old, girl who was walking along Lolland's south coast and spits a piece of birch tar into the reeds. It didn't taste great, but it helped to soothe her toothache. Fast forward 6,000 years, Danish archaeologists working on the Fehmarnbelt project stumble across the piece and recognize it for what it is: an almost 6,000-year-old piece of chewing gum. This ancient piece of gum is now on display at the Museum Lolland-Falster in southern Denmark among an amazing collection of Stone Age artifacts uncovered during the excavations. If you have not been, it is well worth a visit. In 2019, my research team at the University of Copenhagen managed something quite remarkable: We succeeded in extracting DNA from the gum and used it to reconstruct the girl's entire genome — the first time anyone had sequenced an ancient human genome from anything other than skeletal remains. As the gum had been found on Lolland, we affectionately nicknamed her 'Lola'." ref

Stone-age girl in social media 'shitstorm'

"The story of Lola and her chewing gum made headlines around the world when we published the genome in 2019 and then, suddenly, in the summer of 2023, Lola was back in the news, caught up in a media 'shitstorm'. The 'shitstorm' first gathered pace on X, the platform formerly known as Twitter, and escalated to the point where the museum had to defend itself on national TV. Even the Danish newspaper 'Ekstrabladet' felt they had to comment and gave their opinion in a passionate editorial. So, what happened? These things are difficult to reconstruct, but evidently some people who had seen the image of Lola thought that she looked "way too dark" and accused us—and the museum—of 'blackwashing' the past. I suppose this episode says more about our own biases than anything else, and I would like to take this opportunity to explain why we portrayed Lola the way we did and what this tells us about the evolution of skin color in this part of the world." ref

What we know about Lola

“First a disclaimer, we do not know exactly how old Lola was when she spat that chewing gum into the water. But based on her genome and other DNA trapped in the gum, we learned a lot of other things about her and her world. For example, we learned that she was a hunter-gatherer who lived off wild resources like fish, nuts, and wild game. At the time, small farming communities started to appear in other parts of Europe, but from what we can tell Lola and her kin still lived — as her ancestors had done for thousands of years before her — as hunter-gatherers. We also learned that she likely had dark skin, dark hair, and blue eyes. But how do we know that?” ref

The genetics of human skin pigmentation

“Skin color is a highly heritable and polygenic trait, meaning that it is influenced by multiple genes and their interactions with one another. One of the most well-known genes associated with skin pigmentation is the melanocortin 1 receptor gene (MC1R), but there are dozens more that have been reported to be involved in the pigmentation process. Most of these genes influence skin color by regulating the production of melanin, a dark pigment that protects from the deleterious effects of UV radiation. Basically, the more melanin you have in your skin, the darker it will be, and the more sun your skin can tolerate before you get sunburn. Eye and hair color are determined in a similar way, but the mechanisms that control the production of melanin in the eyes and hair are quite complex and independent processes. That is why it is possible to end up with different combinations of traits, such as the dark hair and blue eyes that are often seen in Europeans today, or the light hair and brown eyes that are common for Solomon Islanders, for example.” ref

How do we know what Lola looked like?

“Because the genes involved in pigmentation have been well studied, it is possible to predict the skin, eye, and hair color of an individual based on their genotype with a certain probability, something that is routinely done in forensic investigations. In practice, this works by checking which variants of a gene are present and what phenotype they are associated with. The more genes we can include in this analysis, the more confident we can be that our prediction is correct. In Lola’s case, we studied 41 gene variants across her genome that have been associated with skin, hair, and eye color in humans, and concluded that she likely had this unusual (at least for today) combination of dark skin, dark hair, and blue eyes.” ref

A common look in prehistoric Europe

“It is difficult to know exactly what people looked like 10,000 years ago. But based on ancient DNA studies, it appears that Lola’s ‘look’ was much more common in prehistoric Europe than it is today. Thanks to advances in ancient DNA sequencing, we now have the genomes of dozens of Upper Palaeolithic and Mesolithic (i.e. the period between around 50,000 and 5,000 years before present in Europe) individuals from Western Europe. And interestingly they all seem to lack the skin-lightening variants that are so common in Europeans today, indicating that they had dark skin. This is true for ‘Cheddar Man’ who lived around 10,000 years ago in southern England, as well as dozens of other Upper Palaeolithic and Mesolithic hunter-gatherer individuals from France, northern Italy, Spain, the Baltic, and other parts of Europe. Like skin color, eye color is also a fairly complex trait, involving the interaction of many different genes. Therefore, eye color is fairly difficult to predict, but it looks like Upper Palaeolithic and Mesolithic hunter-gatherers from Western Europe often had blue eyes, just like Lola. Overall, it looks like Lola’s phenotype—the combination of dark skin, dark hair, and blue eyes—was much more common in prehistoric Europe than it is today.” ref

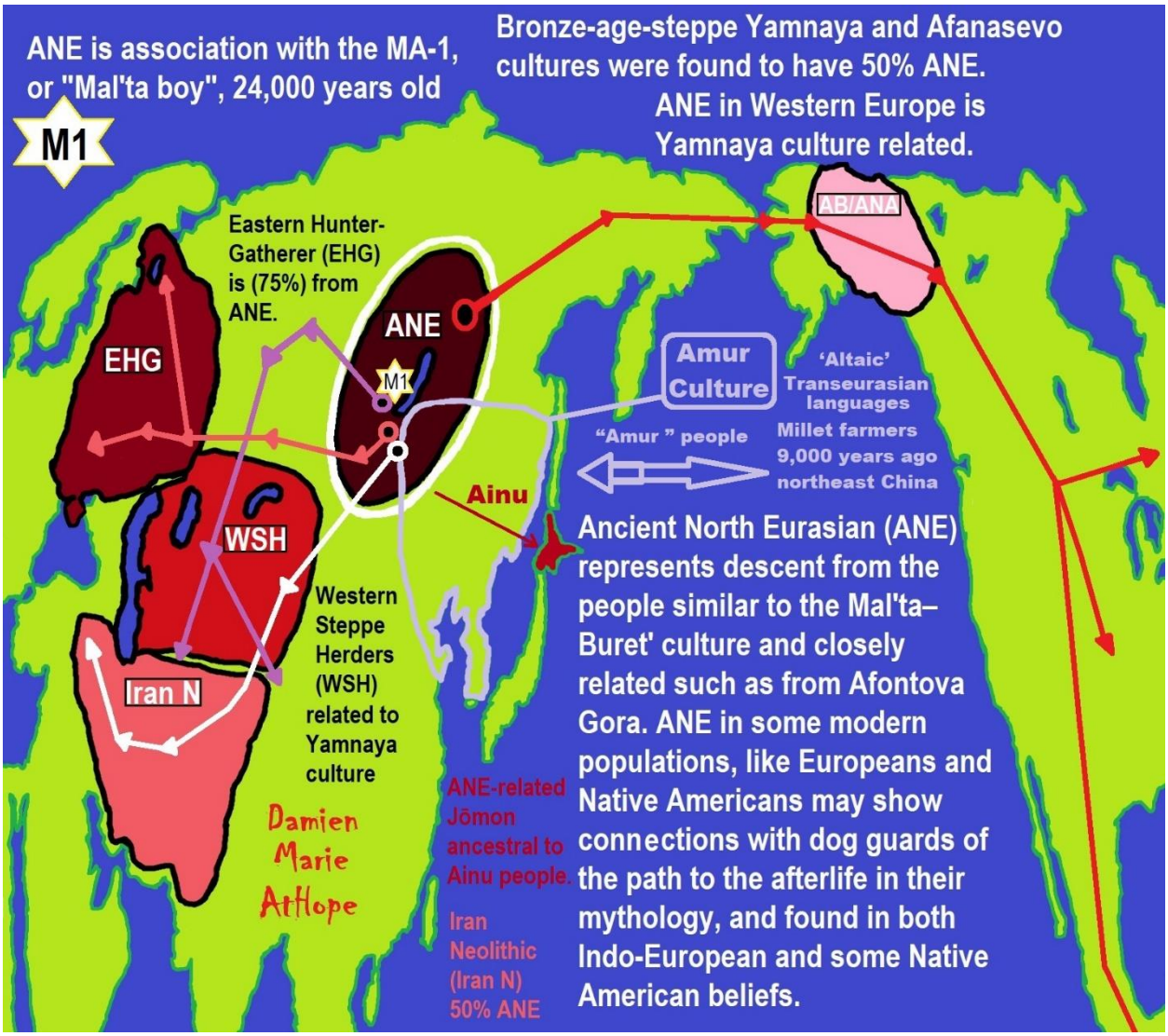
How Europeans got their lighter skin

“So, why did people in prehistoric Europe look so different from northern Europeans today? The answer to this question lies in a complex interplay between our genes, our changing diets, population movements, and the environment. It has been theorized for some time that lighter skin emerged as an adaptive trait to light poor environments as it allows you to absorb sunlight more effectively, which is essential for the production of vitamin D. However, it was unclear when this happened. Early studies suggested that we first may have evolved lighter skin as our ancestors moved out of Africa and into Europe c. 50,000 years ago, but we now believe that this happened much later in European prehistory. In fact, there is evidence that lighter skin only evolved within the last 5,000 years or so, as a result of genetic admixture from Neolithic farming populations (who carried the skin-lightening variant) and strong selection favoring lighter skin.” ref

Our changing diet also played a part

“In addition, it looks like our changing diets also played a part. During most of European prehistory people relied on wild resources like nuts, game, and fish that are all rich in vitamin D, which is essential to our health. That changed dramatically during the Neolithic when people started to rely on a farmer’s diet that was rich in carbohydrates, but poor in vitamin D. Interestingly, this is exactly the period when we see lighter skin tones evolve in Western Europe and we think

that the lack of vitamin D in the diet may have increased the selection pressures favouring lighter skin. All in all, there is solid evidence to suggest that lighter skin tones only evolved in Europe within the last 5,000 years or so, and that people who lived in Europe before then typically had darker skin. It is not that surprising, then, that Lola had darker skin. It simply reflects the fact that she lived at a time when Europeans had not yet evolved their lighter skin." ref



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Ancient North Eurasian (ANE)

Ancient Beringian/Ancestral Native American (AB/ANA)

Eastern Hunter-Gatherer (EHG)

Western Hunter-Gatherers (WHG)

Western Steppe Herders (WSH)

Scandinavian Hunter-Gatherer (SHG)

Early European Farmers (EEF)

Jōmon people (Ainu people OF Hokkaido Island)

Neolithic Iranian farmers (Iran_N) (Iran Neolithic)

Amur Culture (Amur watershed)

Haplogroup R possible time of origin about 27,000 years in Central Asia, South Asia, or Siberia**:**

- Mal'ta–Buret' culture (24,000-15,000 years ago)
- Afontova Gora culture (21,000-12,000 years ago)
- Trialetian culture (16,000–8000 years ago)
- Samara culture (7,000-6,500 years ago)
- Khvalynsk culture (7,000-6,500 years ago)
- Afanasievo culture (5,300-4,500 years ago)
- Yamna/Yamnaya Culture (5,300-4,500 years ago)
- Andronovo culture (4,000–2,900 years ago) **ref**

Groups partially derived from the Ancient North Eurasians

"The ANE lineage is defined by association with the MA-1, or "Mal'ta boy", remains of 24,000 years ago in central Siberia Mal'ta-Buret' culture 24,000-15,000 years ago. The Ancient North Eurasians (ANE) samples (Afontova Gora 3, Mal'ta 1, and Yana-RHS) show evidence for minor gene flow from an East Asian-related group (simplified by the Amis, Han, or Tianyuan) but no evidence for ANE-related geneflow into East Asians (Amis, Han, Tianyuan), except the Ainu, of North Japan." ref

“The ANE lineage is defined by association with the MA-1, or “Mal’ta boy”, remains of 24,000 years ago in central Siberia Mal’ta-Buret’ culture 24,000-15,000 years ago “basal to modern-day Europeans”. Some Ancient North Eurasians also carried East Asian populations, such as Tianyuan Man.” ref

“Bronze-age-steppe Yamnaya and Afanasevo cultures were ANE at around 50% and Eastern Hunter-Gatherer (EHG) at around 75% ANE. Karelia culture: Y-DNA R1a-M417 8,400 years ago, Y-DNA J, 7,200 years ago, and Samara, of Y-haplogroup R1b-P297 7,600 years ago is closely related to ANE from Afontova Gora, 18,000 years ago around the time of blond hair first seen there.” ref

Ancient North Eurasian

“In archaeogenetics, the term **Ancient North Eurasian** (often abbreviated as ANE) is the name given to an ancestral West Eurasian component that represents descent from the people similar to the Mal’ta–Buret’ culture and populations closely related to them, such as from Afontova Gora and the Yana Rhinoceros Horn Site. Significant ANE ancestry are found in some modern populations, including Europeans and Native Americans.” ref

“The ANE lineage is defined by association with the MA-1, or “Mal’ta boy“, the remains of an individual who lived during the Last Glacial Maximum, 24,000 years ago in central Siberia, Ancient North Eurasians are described as a lineage “which is deeply related to Paleolithic/Mesolithic hunter-gatherers in Europe,” meaning that they diverged from Paleolithic Europeans a long time ago.” ref

“The ANE population has also been described as having been “basal to modern-day Europeans” but not especially related to East Asians, and is suggested to have perhaps originated in Europe or Western Asia or the Eurasian Steppe of Central Asia. However, some samples associated with Ancient North Eurasians also carried ancestry from an ancient East Asian population, such as Tianyuan Man. Sikora et al. (2019) found that the Yana RHS sample (31,600 BP) in Northern Siberia “can be modeled as early West Eurasian with an approximately 22% contribution from early East Asians.” ref

“Populations genetically similar to MA-1 were an important genetic contributor to Native Americans, Europeans, Central Asians, South Asians, and some East Asian groups, in order of significance. Lazaridis et al. (2016:10) note “a cline of ANE ancestry across the east-west extent of Eurasia.” The ancient Bronze-age-

steppe Yamnaya and Afanasevo cultures were found to have a noteworthy ANE component at ~50%." ref

"According to Moreno-Mayar et al. 2018 between 14% and 38% of Native American ancestry may originate from gene flow from the Mal'ta–Buret' people (ANE). This difference is caused by the penetration of posterior Siberian migrations into the Americas, with the lowest percentages of ANE ancestry found in Eskimos and Alaskan Natives, as these groups are the result of migrations into the Americas roughly 5,000 years ago." ref

"Estimates for ANE ancestry among first wave Native Americans show higher percentages, such as 42% for those belonging to the Andean region in South America. The other gene flow in Native Americans (the remainder of their ancestry) was of East Asian origin. Gene sequencing of another south-central Siberian people (Afontova Gora-2) dating to approximately 17,000 years ago, revealed similar autosomal genetic signatures to that of Mal'ta boy-1, suggesting that the region was continuously occupied by humans throughout the Last Glacial Maximum." ref

"The earliest known individual with a genetic mutation associated with blonde hair in modern Europeans is an Ancient North Eurasian female dating to around 16000 BCE from the Afontova Gora 3 site in Siberia. It has been suggested that their mythology may have included a narrative, found in both Indo-European and some Native American fables, in which a dog guards the path to the afterlife." ref

"Genomic studies also indicate that the ANE component was introduced to Western Europe by people related to the Yamnaya culture, long after the Paleolithic. It is reported in modern-day Europeans (7%–25%), but not of Europeans before the Bronze Age. Additional ANE ancestry is found in European populations through paleolithic interactions with Eastern Hunter-Gatherers, which resulted in populations such as Scandinavian Hunter-Gatherers." ref

"The Ancient North Eurasians (ANE) split from the ancestors of European peoples somewhere in the Middle East or South-central Asia, and used a northern dispersal route through Central Asia into Northern Asia and Siberia. Genetic analyses show that all ANE samples (Afontova Gora 3, Mal'ta 1, and Yana-RHS) show evidence for minor gene flow from an East Asian-related group (simplified by the Amis, Han, or Tianyuan). In contrast, no evidence for ANE-related geneflow into East Asians (Amis, Han, Tianyuan), except the Ainu, was found." ref

"Genetic data suggests that the ANE formed during the Terminal Upper-Paleolithic (36+-1,5ka) period from a deeply European-related population, which

was once widespread in Northern Eurasia, and from an early East Asian-related group, which migrated northwards into Central Asia and Siberia, merging with this deeply European-related population. These population dynamics and constant northwards geneflow of East Asian-related ancestry would later gave rise to the "Ancestral Native Americans" and Paleosiberians, which replaced the ANE as dominant population of Siberia." ref

Groups partially derived from the Ancient North Eurasians

"**Eastern Hunter-Gatherer** (EHG) is a lineage derived predominantly (75%) from ANE. It is represented by two individuals from Karelia, one of Y-haplogroup R1a-M417, dated c. 8.4 kya, the other of Y-haplogroup J, dated c. 7.2 kya; and one individual from Samara, of Y-haplogroup R1b-P297, dated c. 7.6 kya. This lineage is closely related to the ANE sample from Afontova Gora, dated c. 18 kya. After the end of the Last Glacial Maximum, the Western Hunter-Gatherers (WHG) and EHG lineages merged in Eastern Europe, accounting for early presence of ANE-derived ancestry in Mesolithic Europe. Evidence suggests that as Ancient North Eurasians migrated West from Eastern Siberia, they absorbed Western Hunter-Gatherers and other West Eurasian populations as well." ref

"**Caucasian Hunter-Gatherer** (CHG) is represented by the Satsurblia individual dated ~13 kya (from the Satsurblia cave in Georgia), and carried 36% ANE-derived admixture. While the rest of their ancestry is derived from the Dzudzuana cave individual dated ~26 kya, which lacked ANE-admixture, Dzudzuana affinity in the Caucasus decreased with the arrival of ANE at ~13 kya Satsurblia." ref

"**Scandinavian Hunter-Gatherer** (SHG) is represented by several individuals buried at Motala, Sweden ca. 6000 BC. They were descended from Western Hunter-Gatherers who initially settled Scandinavia from the south, and later populations of EHG who entered Scandinavia from the north through the coast of Norway." ref

"**Iran Neolithic** (Iran_N) individuals dated ~8.5 kya carried 50% ANE-derived admixture and 50% Dzudzuana-related admixture, marking them as different from other Near-Eastern and Anatolian Neolithics who didn't have ANE admixture. Iran Neolithics were later replaced by Iran Chalcolithics, who were a mixture of Iran Neolithic and Near Eastern Levant Neolithic." ref

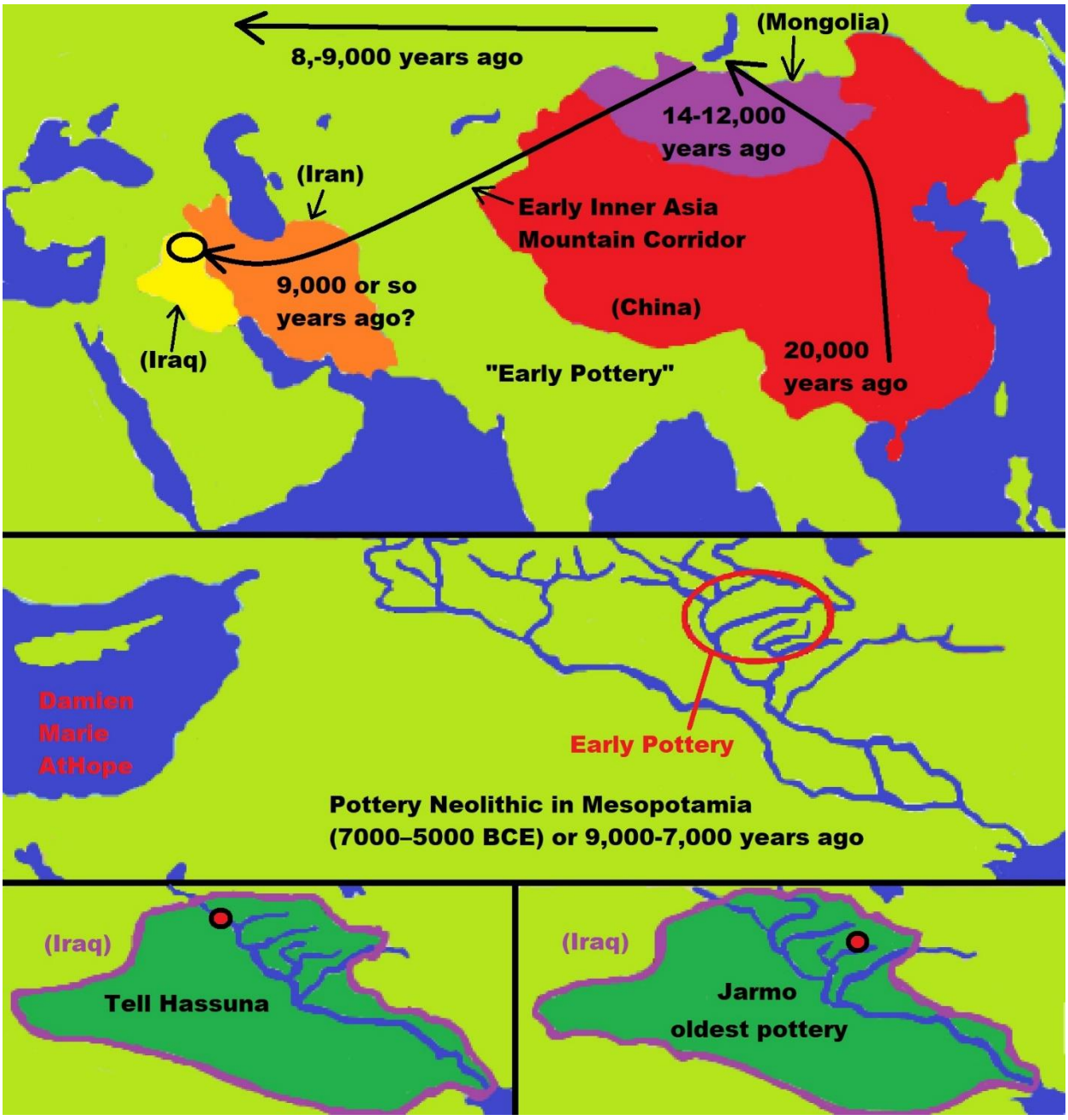
"**Ancient Beringian/Ancestral Native American** are specific archaeogenetic lineages, based on the genome of an infant found at the Upward Sun River site (dubbed USR1), dated to 11,500 years ago. The AB lineage diverged from the Ancestral Native American (ANA) lineage about 20,000 years ago." ref

“West Siberian Hunter-Gatherer (WSHG) are a specific archaeogenetic lineage, first reported in a genetic study published in Science in September 2019. WSGs were found to be of about 30% EHG ancestry, 50% ANE ancestry, and 20% to 38% East Asian ancestry.” ref

“Western Steppe Herders (WSH) is the name given to a distinct ancestral component that represents descent closely related to the Yamnaya culture of the Pontic–Caspian steppe. This ancestry is often referred to as Yamnaya ancestry or Steppe ancestry.” ref

“Late Upper Paeolithic Lake Baikal – Ust’Kyakhta-3 (UKY) 14,050-13,770 BP were mixture of 30% ANE ancestry and 70% East Asian ancestry.” ref
“Lake Baikal Holocene – Baikal Eneolithic (Baikal_EN) and Baikal Early Bronze Age (Baikal_EBA) derived 6.4% to 20.1% ancestry from ANE, while rest of their ancestry was derived from East Asians. Fofonovo_EN near by Lake Baikal were mixture of 12-17% ANE ancestry and 83-87% East Asian ancestry.” ref

“**Hokkaido Jōmon people** specifically refers to the Jōmon period population of Hokkaido in northernmost Japan. Though the Jōmon people themselves descended mainly from East Asian lineages, one study found an affinity between Hokkaido Jōmon with the Northern Eurasian Yana sample (an ANE-related group, related to Mal’ta), and suggest as an explanation the possibility of minor Yana gene flow into the Hokkaido Jōmon population (as well as other possibilities). A more recent study by Cooke et al. 2021, confirmed ANE-related geneflow among the Jōmon people, partially ancestral to the Ainu people. ANE ancestry among Jōmon people is estimated at 21%, however, there is a North to South cline within the Japanese archipelago, with the highest amount of ANE ancestry in Hokkaido and Tohoku.” ref



Damien Marie AtHope's Art

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"Migration from Siberia behind the formation of Göbeklitepe: Expert states. People who migrated from Siberia formed the Göbeklitepe, and those in Göbeklitepe migrated in five other ways to spread to the world, said experts about the 12,000-year-old Neolithic archaeological site in the southwestern province of

Şanlıurfa.“ The upper paleolithic migrations between Siberia and the Near East is a process that has been confirmed by material culture documents,” he said.” ref

“Semih Güneri, a retired professor from Caucasia and Central Asia Archaeology Research Center of Dokuz Eylül University, and his colleague, Professor Ekaterine Lipnina, presented the Siberia-Göbeklitepe hypothesis they have developed in recent years at the congress held in Istanbul between June 11 and 13. There was a migration that started from Siberia 30,000 years ago and spread to all of Asia and then to Eastern and Northern Europe, Güneri said at the international congress.” ref

“The relationship of Göbeklitepe high culture with the carriers of Siberian microblade stone tool technology is no longer a secret,” he said while emphasizing that the most important branch of the migrations extended to the Near East. “The results of the genetic analyzes of Iraq’s Zagros region confirm the traces of the Siberian/North Asian indigenous people, who arrived at Zagros via the Central Asian mountainous corridor and met with the Göbeklitepe culture via Northern Iraq,” he added.” ref

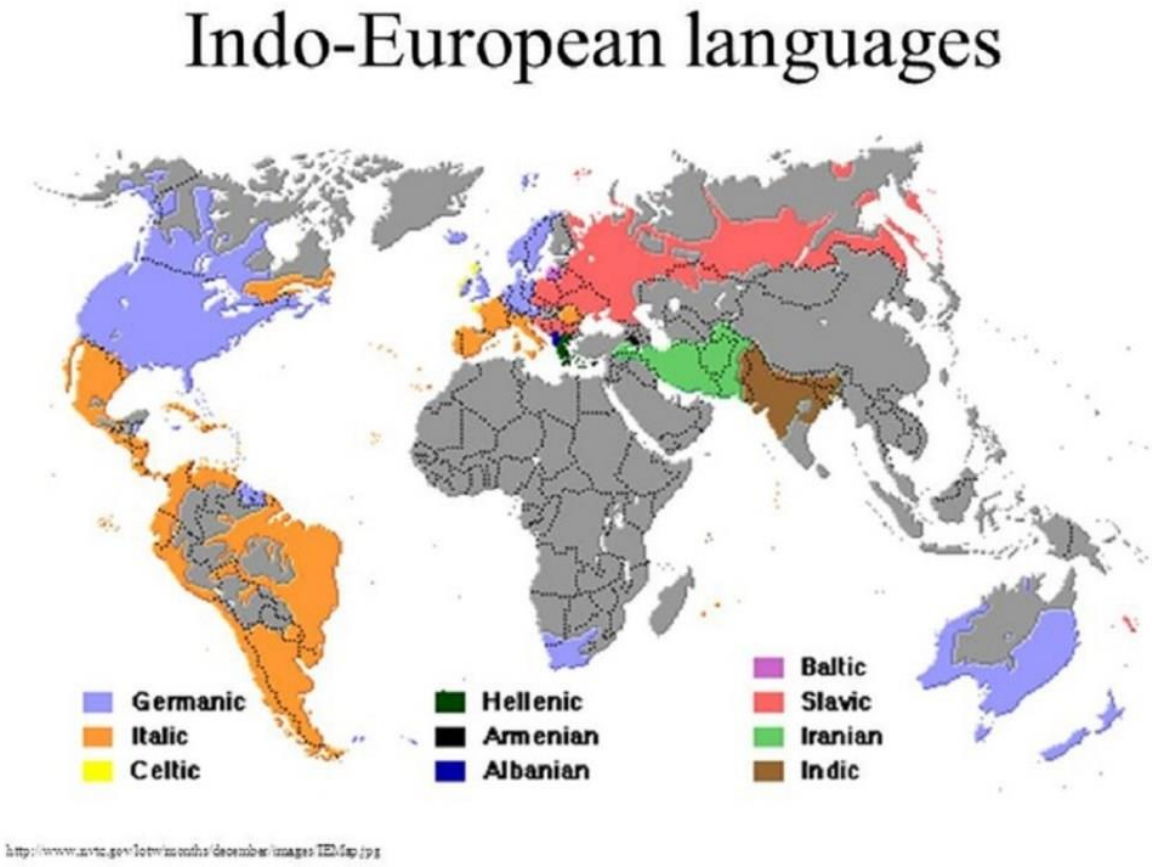
“Emphasizing that the stone tool technology was transported approximately 7,000 kilometers from east to west, he said, “It is not clear whether this technology is transmitted directly to long distances by people speaking the Turkish language at the earliest, or it travels this long-distance through using way stations.” According to the archaeological documents, it is known that the Siberian people had reached the Zagros region, he said. “There seems to be a relationship between Siberian hunter-gatherers and native Zagros hunter-gatherers,” Güneri said, adding that the results of genetic studies show that Siberian people reached as far as the Zagros.” ref

“There were three waves of migration of Turkish tribes from the Southern Siberia to Europe,” said Osman Karatay, a professor from Ege University. He added that most of the groups in the third wave, which took place between 2600-2400 BCE, assimilated and entered the Germanic tribes and that there was a genetic kinship between their tribes and the Turks. The professor also pointed out that there are indications that there is a technology and tool transfer from Siberia to the Göbeklitepe region and that it is not known whether people came, and if any, whether they were Turkish.” ref

“Around 12,000 years ago, there would be no ‘Turks’ as we know it today. However, there may have been tribes that we could call our ‘common ancestors,’” he added. “Talking about 30,000 years ago, it is impossible to identify and classify nations in today’s terms,” said Murat Öztürk, associate professor from İnönü University. He also said that it is not possible to determine who came to

where during the migrations that were accepted to have been made thousands of years ago from Siberia. On the other hand, Mehmet Özdoğan, an academic from Istanbul University, has an idea of where “the people of Göbeklitepe migrated to.” ref

“According to Özdoğan, “the people of Göbeklitepe turned into farmers, and they could not stand the pressure of the overwhelming clergy and started to migrate to five ways.” “Migrations take place primarily in groups. One of the five routes extends to the Caucasus, another from Iran to Central Asia, the Mediterranean coast to Spain, Thrace and [the northwestern province of] Kırklareli to Europe and England, and one route is to Istanbul via [Istanbul’s neighboring province of] Sakarya and stops,” Özdoğan said. In a very short time after the migration of farmers in Göbeklitepe, 300 settlements were established only around northern Greece, Bulgaria, and Thrace. “Those who remained in Göbeklitepe pulled the trigger of Mesopotamian civilization in the following periods, and those who migrated to Mesopotamia started irrigated agriculture before the Sumerians,” he said.” ref



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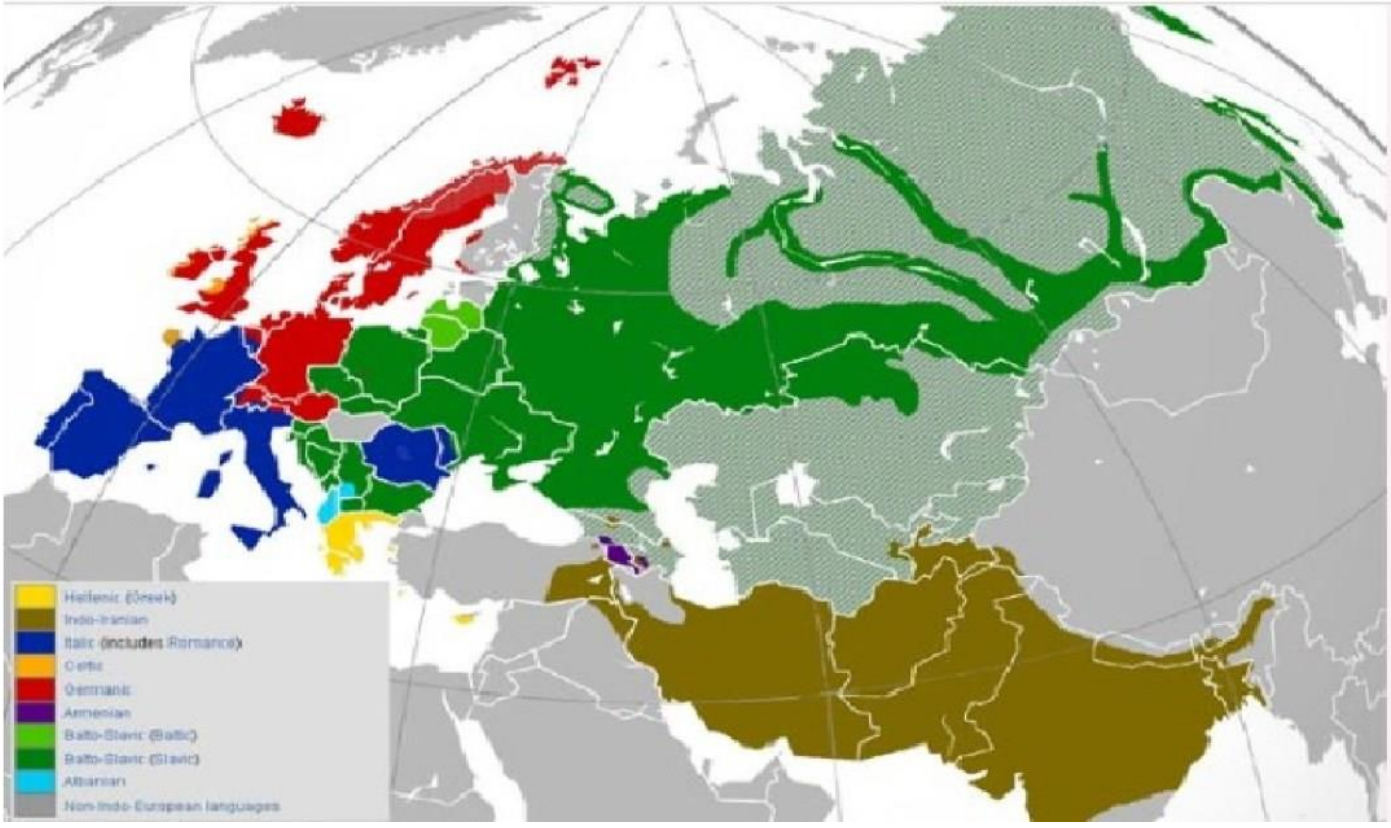
SCI NEWS

Research Shows Indo-European Languages Originated in Turkey

Aug 24, 2012 by Sergio Prostak

Published in Linguistics

An innovative computational approach applied by an international team of linguists sheds new light on the origins of Indo-European languages.



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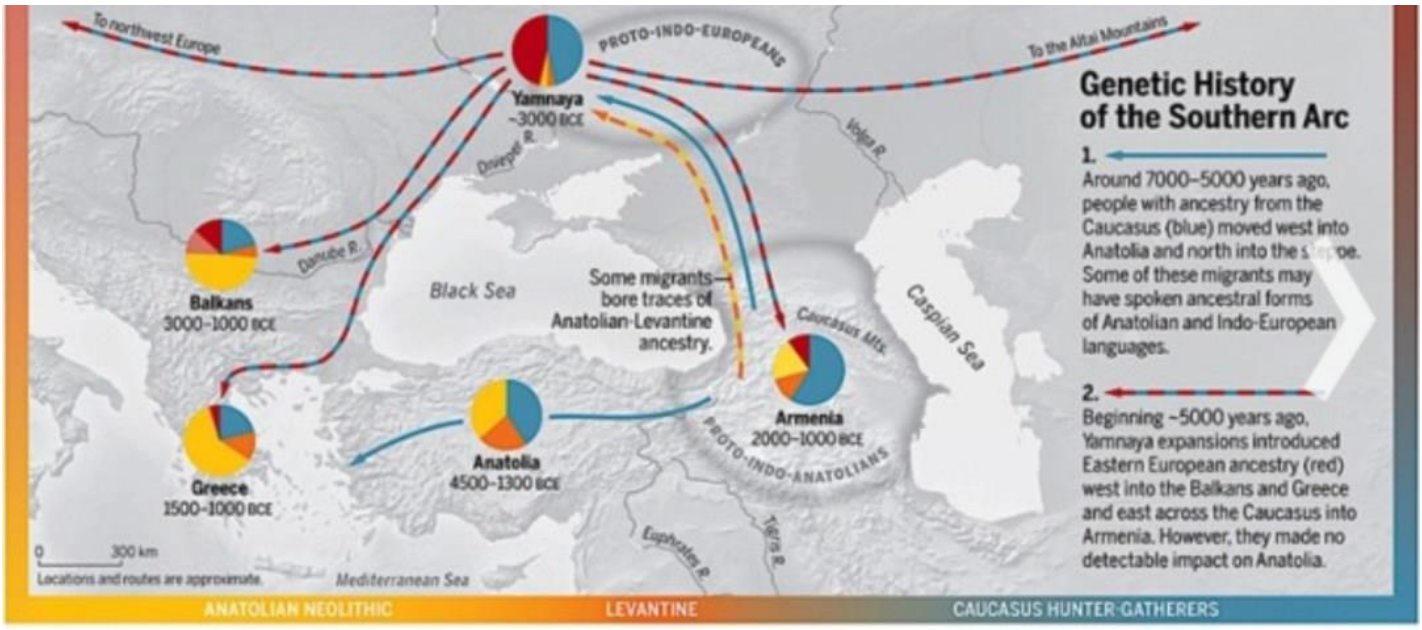
Research Shows Indo-European Languages Originated in Turkey (2012)

“The Indo-European languages belong to one of the widest spread language families of the world. For the last two millennia, many of these languages have been written, and their history is relatively clear. But controversy remains about the time and place of the origins of the family. The majority view in historical linguistics is that the homeland of Indo-European is located in the Pontic steppes – present-day Ukraine – around 6,000 years ago. The evidence for this comes from linguistic paleontology: in particular, certain words to do with the technology of wheeled vehicles are arguably present across all the branches of the Indo-European family; and archaeology tells us that wheeled vehicles arose no earlier than this date. The minority view links the origins of Indo-European with the spread of farming from Anatolia 8,000-9,500 years ago. The team’s innovative Bayesian phylogeographic analysis of Indo-European linguistic and spatial data, including basic vocabulary data from 103 ancient and contemporary Indo-European languages, decisively supports this theory. The linguists report their results in a paper in the journal *Science*.” ref

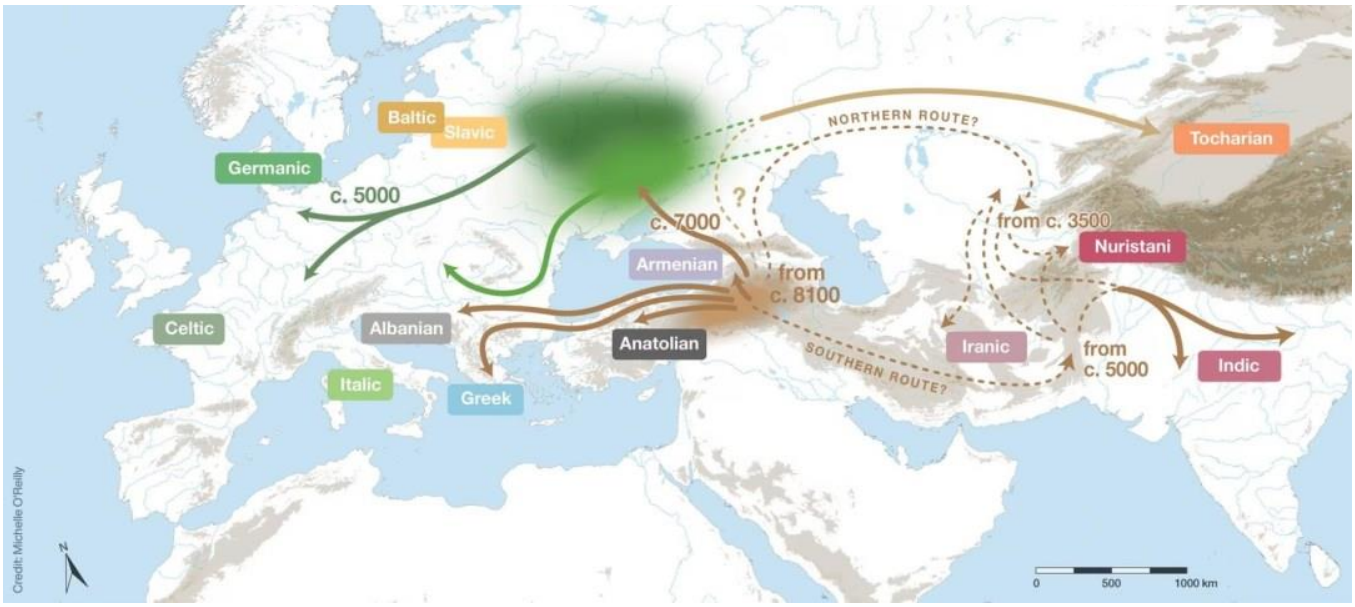


https://www.harvardmagazine.com/2022/08/indo-european-languages

ref

Indo-European dialects dispersed across Eurasia in successive waves over the course of 8,000 years.

Word origins and ancient DNA reveal the evolutionary path traveled by the languages spoken by half the world.



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“Approximately 7,000 years ago, the Indo-European linguistic lineage had already split into numerous distinct branches, according to the study published in *Science*. “This would rule out the steppe hypothesis,” said Heggarty. Around 8,120 years ago, the Proto-Indo-European language likely experienced its initial diversification event, give or take a few centuries. Recent studies of ancient DNA suggest that farmers from the Caucasus region — between the Black Sea and Caspian Sea — migrated towards Anatolia, which supports the Anatolian theory. Hittite, an extinct language spoken by the Anatolian civilization, is another significant branch of the Indo-European family. For decades, a large group of linguists argued that Hittite was the common ancestor of the other Indo-European languages, with some even considering it to be the direct heir of Proto-Indo-European.” ref

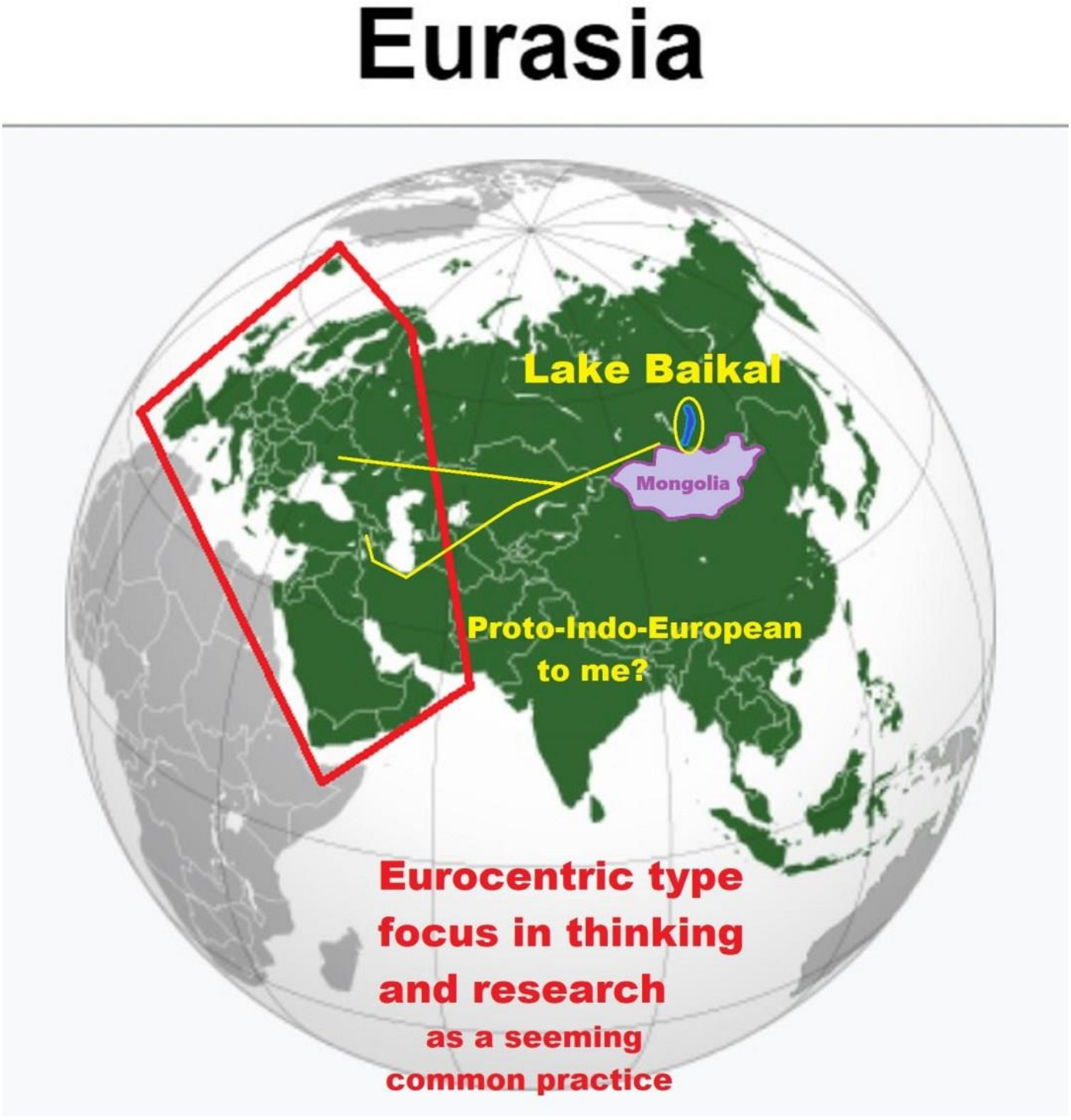
“Ancient DNA, on the other hand, has provided compelling evidence in support of the steppe hypothesis. Since 2015, it has become clear that individuals originating from the Pontic steppe, situated to the south and northeast of present-day Russia, Ukraine, and Kazakhstan, migrated to Central Europe approximately 6,000 to 4,500 years ago. Their genetic legacy is evident in both modern Europeans and the indigenous populations of that era. Notably, studies conducted in 2018 and 2019 revealed how these migrant eastern populations replaced a significant proportion of males on the Iberian Peninsula. Furthermore,

they brought with them Italic, Germanic, and Celtic languages. It is important to note that when they departed from their original homeland, they likely spoke a common or closely related language descended from Proto-Indo-European. However, as their very slow journey progressed (the Celts took centuries to reach present-day Ireland) and they settled in new territories, language diversification began to emerge." ref

"The Albanians, Greek-speaking Mycenaeans, and Hittites do not have a dominant genetic signal from the steppe." ref

Paul Heggarty, researcher at the Max Planck Institute for Evolutionary Anthropology in Germany.

"Heggarty's team made a significant contribution by shedding light on this question. By combining phylogenetic analysis of cognates with insights from ancient DNA, they found potentially two distinct origins. Expansion initially originated from the southern Caucasus region, resulting in the separation of five major language families approximately 7,000 years ago. "The Albanians, Greek-speaking Mycenaeans, and Hittites do not have a dominant genetic signal from the steppe," said Heggarty. Several millennia later, another wave emerged, led by nomadic steppe herders from the north. This wave not only influenced the development of western branches of the language tree, but it also possibly played a role in the evolution of Slavic and Baltic languages. It even extended its influence to the Indian subcontinent, while giving rise to the now-extinct Tocharian languages in what is present-day Tibet." ref



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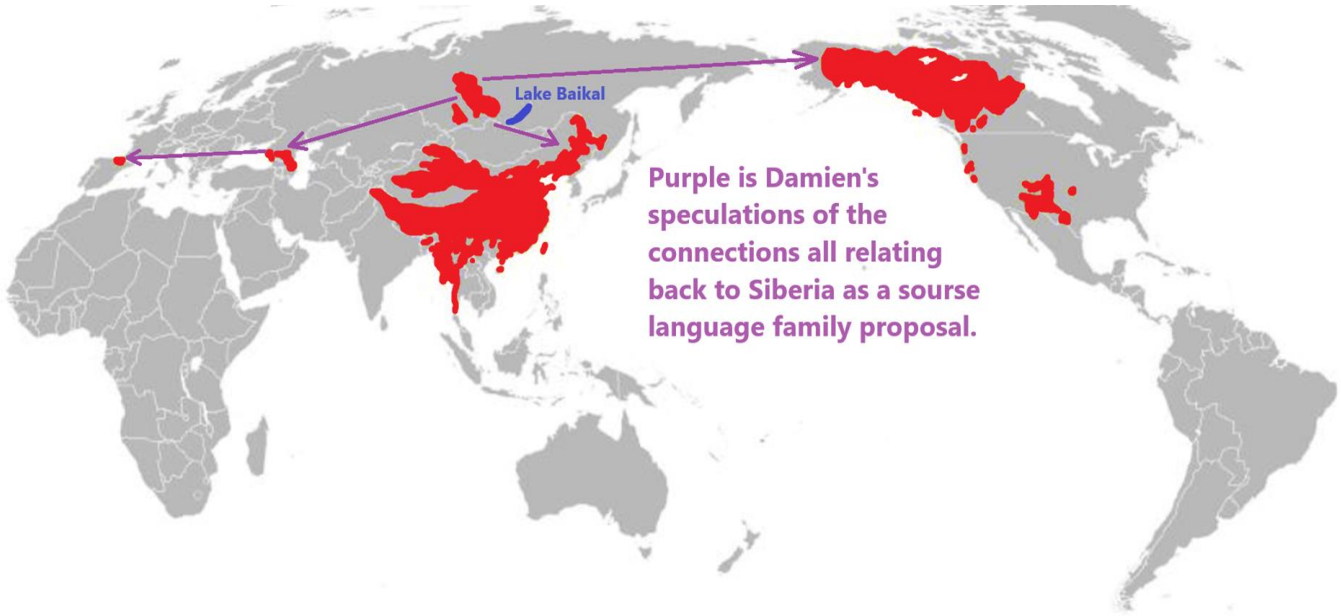
Origins of 'Transeurasian' languages traced to Neolithic millet farmers in north-eastern China about 9,000 years ago

“A study combining linguistic, genetic, and archaeological evidence has traced the origins of a family of languages including modern Japanese, Korean, Turkish and Mongolian and the people who speak them to millet farmers who inhabited a region in north-eastern China about 9,000 years ago. The findings outlined on Wednesday document a shared genetic ancestry for the hundreds of millions of people who speak what the researchers call Transeurasian languages across an area stretching more than 5,000 miles (8,000km).” ref

“Millet was an important early crop as hunter-gatherers transitioned to an agricultural lifestyle. There are 98 Transeurasian languages, including Korean, Japanese, and various Turkic languages in parts of Europe, Anatolia, Central Asia, and Siberia, various Mongolic languages, and various Tungusic languages in Manchuria and Siberia. This language family’s beginnings were traced to Neolithic millet farmers in the Liao River valley, an area encompassing parts of the Chinese provinces of Liaoning and Jilin and the region of Inner Mongolia. As these farmers moved across north-eastern Asia over thousands of years, the descendant languages spread north and west into Siberia and the steppes and east into the Korean peninsula and over the sea to the Japanese archipelago.” ref
“Eurasiatic is a proposed language with many language families historically spoken in northern, western, and southern Eurasia; which typically include Altaic (Mongolic, Tungusic, and Turkic), Chukchi-Kamchatkan, Eskimo–Aleut, Indo-European, and Uralic.” ref

“Voiced stops such as /d/ occur in the Indo-European, Yeniseian, Turkic, Mongolian, Tungusic, Japonic and Sino-Tibetan languages. They have also later arisen in several branches of Uralic.” ref

“Uralo-Siberian is a hypothetical language family of Uralic, Yukaghir, Eskimo–Aleut and besides linguistic evidence, several genetic studies, support a common origin in Northeast Asia.” ref



Dené–Caucasian is a discredited language family proposal that includes widely-separated language groups spoken in the Northern Hemisphere: Sino-Tibetan languages, Yeniseian languages, Burushaski and North Caucasian languages in Asia; Na-Dené languages in North America; and the Vasconic languages from Europe (including Basque).

ref

"**Dené–Caucasian** is a discredited language family proposal that includes widely-separated language groups spoken in the Northern Hemisphere: Sino-Tibetan languages, Yeniseian languages, Burushaski and North Caucasian languages in Asia; Na-Dené languages in North America; and the Vasconic languages from Europe (including Basque). A narrower connection specifically between North American Na-Dené and Siberian Yeniseian (the Dené–Yeniseian languages hypothesis) was proposed by Edward Vajda in 2008, and has met with some acceptance within the community of professional linguists. The validity of the rest of the family, however, is viewed as doubtful or rejected by nearly all historical linguists." ref

"The Dené–Caucasian family tree and approximate divergence dates (estimated by modified glottochronology) proposed by S. A. Starostin and his colleagues from the Tower of Babel project:

- **Dené–Caucasian languages** [8,700 BCE or around 10,700 years ago]
  - Na-Dené languages (Athabascan–Eyak–Tlingit)
  - Sino-Vasconic languages [7,900 BCE or around 9,900 years ago]

- Vasconic (see below)
- **Sino-Caucasian languages** [6,200 BCE or around 8,200 years ago]
    - Burushaski
    - Caucaso-Sino-Yeniseian [5,900 BCE or around 7,900 years ago]
        - North Caucasian languages
        - Sino-Yeniseian [5,100 BCE or around 7,100 years ago]
            - Yeniseian languages
            - Sino-Tibetan languages" ref

"John D. Bengtson groups Basque, Caucasian and Burushaski together in a Macro-Caucasian (earlier **Vasco-Caucasian**) family (see the section on Macro-Caucasian below). According to him, it is as yet premature to propose other nodes or subgroupings, but he notes that Sumerian seems to share the same number of isoglosses with the (geographically) western branches as with the eastern ones:

- **Dené–Caucasian**
    - The Macro-Caucasian family
        - Basque
        - North Caucasian
        - Burushaski
    - Sumerian
    - Sino-Tibetan
    - Yeniseian
    - Na-Dené" ref

"It has been conjectured that the North-West Caucasian languages may be genetically related to the Indo-European family, at a time depth of perhaps 12,000 years before the present. This hypothesized proto-language is called Proto-Pontic, but is not widely accepted. There does at least appear to have been extensive contact between the two proto-languages, and the resemblances may be due to this influence. A few linguists have proposed even broader relationships, of which the Dene–Caucasian hypothesis is perhaps the most popular. Dene–Caucasian links the North Caucasian (including Northwest Caucasian), Basque, Burushaski, Yeniseian, Sino-Tibetan, and Na–Dene families.

However, this is an even more tentative hypothesis than Nostratic, which attempts to relate Kartvelian, Indo-European, Uralic, and Altaic, etc., and which is widely considered to be undemonstrated." ref

"**Nostratic** is a hypothetical language macrofamily including many of the language families of northern Eurasia. Though a historically important proposal, in a contemporary context it is typically considered a fringe theory. Although the exact composition varies based on proponent, it typically comprises Kartvelian, Indo-European and Uralic languages; some languages from the similarly controversial Altaic family; the Afroasiatic languages; as well as the Dravidian languages (sometimes also Elamo-Dravidian)." ref

"Iran Neolithic (Iran_N) individuals dated ~8,500 years ago carried 50% Ancient North Eurasian-derived admixture and 50% Dzudzuana-related admixture, marking them as different from other Near-Eastern and Anatolian Neolithics who didn't have Ancient North Eurasian admixture. Iran Neolithics were later replaced by Iran Chalcolithics, who were a mixture of Iran Neolithic and Near Eastern Levant Neolithic." ref

I speculate that possibly this "Iran Neolithic" difference is a later migration relating to Ancient North Eurasian admixture, with the source languages from Siberia (pre-proto-indo-europeain, like some kind of pre/proto-Yeniseian, or Dené–Yeniseian languages/or Dené–Caucasian**) that then merged into proto-indo-European languages seen just west of Iran in the Caucasus and East Turkey areas. Also, I speculate that the idea of pottery was likewise brought by these peoples and they, to me could have influenced the creation of the earliest pottery in Tell Hassuna and Jarmo (Iraq).**

"**Proto-Yeniseian** or **Proto-Yeniseic** is the unattested reconstructed proto-language from which all Yeniseian languages are thought to descend from. It is uncertain whether Proto-Yeniseian had a similar tone/pitch accent system as Ket people, who practiced Shamanism and connected to Tengrism. Many studies about Proto-Yeniseian phonology have been done, however there are still many things unclear about Proto-Yeniseian. The probable location of the Yeniseian homeland is proposed on the basis of geographic names and genetic studies, which suggests a homeland in Southern Siberia." ref

“**Tengri** (Old Turkic: 𐰚𐰇𐰚:𐱅𐰭𐰼𐰃, romanized: *Kök Teŋri/Teŋiri*, lit. 'Blue Heaven'; Old Uyghur: *tängri*; Middle Turkic: تآنغرِ; Ottoman Turkish: تڭرى; Kyrgyz: Теңир; Kazakh: Тәңір; Turkish: *Tanrı*; Azerbaijani: *T anrı*; Bulgarian: Тангра; Proto-Turkic **teŋri / *taŋrɨ*; Mongolian script: ᠲᠩᠷᠢ, *T'ngri*; Mongolian: Тэнгэр, *Tenger*; Uyghur: تەڭرى *tengri*) is the all-encompassing God of Heaven in the traditional Turkic, Yeniseian, Mongolic, and various other nomadic Altaic religious beliefs. Tengri is not considered a deity in the usual sense, but a personification of the universe. However, some qualities associated with Tengri as the judge and source of life, and being eternal and supreme, led European and Muslim writers to identify Tengri as a deity of Turkic and Mongolic peoples. According to Mongolian belief, Tengri's will (*jayayan*) may break its own usual laws and intervene by sending a chosen person to earth. It is also one of the terms used for the primary chief deity of the early Turkic and Mongolic peoples. Worship surrounding Tengri is called *Tengrism*. The core beings in Tengrism are the Sky Father (Tenger Etseg) and the Earth Mother (Umay Ana). It involves ancestor worship, as Tengri was thought to have been the ancestral progenitor of mankind in Turkic regions and Mongolia, shamanism, animism, and totemism.” ref

“**Tengrism** (also known as **Tengriism**, **Tengerism**, or **Tengrianism**) is a religion originating in the Eurasian steppes, based on shamanism and animism. It generally involves the titular sky god Tengri, who is not considered a deity in the usual sense but a personification of the universe. According to some scholars, adherents of Tengrism view the purpose of life to be in harmony with the universe. It was the prevailing religion of the Göktürks, Xianbei, Bulgars, Xiongnu, Yeniseian and Mongolic peoples and Huns, as well as the state religion of several medieval states: the First Turkic Khaganate, the Western Turkic Khaganate, the Eastern Turkic Khaganate, Old Great Bulgaria, the First Bulgarian Empire, Volga Bulgaria, Khazaria, and the Mongol Empire. In the *Irk Bitig*, a ninth century manuscript on divination, Tengri is mentioned as *Türük Tängrisi* (God of Turks). According to many academics, Tengrism was, and to some extent still is, a

predominantly polytheistic religion based on the shamanistic concept of animism, and was first influenced by monotheism during the imperial period, especially by the 12th–13th centuries. Abdulkadir Inan argues that Yakut and Altai shamanism are not entirely equal to the ancient Turkic religion." ref

"The term also describes several contemporary Turkic and Mongolic native religious movements and teachings. All modern adherents of "political" Tengrism are monotheists. Tengrism has been advocated for in intellectual circles of the Turkic nations of Central Asia (Kyrgyzstan with Kazakhstan) and Russia (Tatarstan, Bashkortostan) since the dissolution of the Soviet Union during the 1990s. Still practiced, it is undergoing an organized revival in Buryatia, Sakha (Yakutia), Khakassia, Tuva and other Turkic nations in Siberia. Altaian Burkhanism and Chuvash Vattisen Yaly are contemporary movements similar to Tengrism. The term *tengri* (compare with Kami) can refer to the sky deity *Tenger Etseg* – also *Gök Tengri*; *Sky father*, *Blue sky* – or to other deities. While Tengrism includes the worship of personified gods (*tngri*) such as Ülgen and Kaira,Tengri is considered an "abstract phenomenon". In Mongolian folk religion, Genghis Khan is considered one of the embodiments, if not the main embodiment, of Tengri's will. The forms of the name *Tengri* (Old Turkic: Täŋri) among the ancient and modern Turkic and Mongolic are *Tengeri*, *Tangara*, *Tangri*, *Tanri*, *Tangre*, *Tegri*, *Tingir*, *Tenkri*, *Tangra*, *Teri*, *Ter*, and *Ture*. The name Tengri ("the Sky") is derived from Old Turkic: Tenk ("daybreak") or Tan ("dawn"). Meanwhile, Stefan Georg proposed that the Turkic *Tengri* ultimately originates as a loanword from Proto-Yeniseian **tɨŋgɨr-* "high". Mongolia is sometimes poetically called the "Land of Eternal Blue Sky" (*Mönkh Khökh Tengeriin Oron*) by its inhabitants. According to some scholars, the name of the important deity Dangun (also Tangol) (God of the

Mountains) of the Korean folk religion is related to the Siberian *Tengri* ("Heaven"), while the bear is a symbol of the Big Dipper (Ursa Major).” ref

“***Tiān*** (天) is one of the oldest Chinese terms for heaven and a key concept in Chinese mythology, philosophy, and religion. During the Shang dynasty (17th—11th century BCE), the Chinese referred to their highest god as *Shàngdì* (上帝, "Lord Above") or *Dì* (帝, "Lord"). During the following Zhou dynasty, *Tiān* became synonymous with this figure. Before the 20th century, worship of *Tiān* was an orthodox state religion of China. In Chinese culture, heaven tends to be "synonymous with order", "containing the blueprints for creation", "the mandate by which earthly rulers govern, and the standards by which to measure beauty, goodness, and truth.” Zhou dynasty nobles made the worship of heaven a major part of their political philosophy and viewed it as "many gods" who embodied order and kingship, as well as the mandate of heaven. For the etymology of *tiān*, Schuessler links it with the Mongolian word *tengri* "sky, heaven, heavenly deity" or the Tibeto-Burman words *taleŋ* (Adi) and *tă-lyaŋ* (Lepcha), both meaning "sky". He also suggests a likely connection between Chinese *tiān* 天, *diān* 巔 "summit, mountaintop", and *diān* 顛 "summit, top of the head, forehead", which have cognates such as Zemeic Naga *tiŋ* "sky". However, other reconstructions of 天's OC pronunciation *$q^{h}l'i$ːn or *$l̥^{ʕ}i[n]$ reconstructed a voiceless lateral onset, either a cluster or a single consonant, respectively. Baxter & Sagart pointed to attested dialectal differences in Eastern Han Chinese, the use of 天 as a phonetic component in phono-semantic compound Chinese characters, and the choice of 天 to transcribe foreign syllables, all of which prompted them to conclude that, around 200 CE, 天's onset had

two pronunciations: coronal *tʰ & dorsal *x, both of which likely originated from an earlier voiceless lateral *l̥ˤ." ref

"In Taoism and Confucianism, *Tiān* (the celestial aspect of the cosmos, often translated as "Heaven") is mentioned in relationship to its complementary aspect of *Dì* (地, often translated as "Earth"). They are thought to maintain the two poles of the Three Realms (三界) of reality, with the middle realm occupied by Humanity (人, r*én*), and the lower world occupied by demons (魔, *mó*) and "ghosts", the damned, (鬼, *guǐ*). *Tiān* was variously thought as a "supreme power reigning over lesser gods and human beings" that brought "order and calm...or catastrophe and punishment", a god, destiny, an "impersonal" natural force that controlled various events, a holy world or afterlife containing other worlds or afterlives, or one or more of these. "Confucianism has a religious side with a deep reverence for Heaven and Earth (Di), whose powers regulate the flow of nature and influence human events." Yin and yang are also thought to be integral to this relationship and permeate both, as well as humans and man-made constructs. This "cosmos" and its "principles" is something that "[t]he ways of man should conform to, or else" frustration will result. Many Confucianists, both historically and in current times, use the *I Ching* to divine events through the changes of *Tiān* and other "natural forces". Historical and current Confucianists were/are often environmentalists out of their respect for Heaven and the other aspects of nature and the "Principle" that comes from their unity and, more generally, harmony as a whole, which is "the basis for a sincere mind." The Emperor of China as *Tianzi* was formerly vital to Confucianism. Mount Tai is seen as a sacred place in Confucianism and was traditionally the most revered place where Chinese emperors offered sacrifices to heaven and earth. Some *tiān* in Chinese folk religion were thought to be many different or a hierarchy of multiple, sphere-like realms

that contained morally ambiguous creatures and spirits such as *huli jing* and fire-breathing dragons. ” ref

“**Paleo-Siberian languages**, languages spoken in Asian Russia (Siberia) that belong to four genetically unrelated groups—Yeniseian, Luorawetlan, Yukaghir, and Nivkh.” ref

Proto-Indo-European mythology

"**Proto-Indo-European mythology** is the body of myths and deities associated with the Proto-Indo-Europeans, speakers of the hypothesized Proto-Indo-European language. Although the mythological motifs are not directly attested – since Proto-Indo-European speakers lived in preliterate societies – scholars of comparative mythology have reconstructed details from inherited similarities found among Indo-European languages, based on the assumption that parts of the Proto-Indo-Europeans' original belief systems survived in the daughter traditions. The Proto-Indo-European pantheon includes a number of securely reconstructed deities, since they are both cognates – linguistic siblings from a common origin – and associated with similar attributes and body of myths: such as **Dyḗws Ph₂tḗr*, the daylight-sky god; his consort **Dʰéǵʰōm*, the earth mother; his daughter **H₂éwsōs*, the dawn goddess; his sons the Divine Twins; and **Seh₂ul and *Meh₁not*, a solar goddess and moon god, respectively. Some deities, like the weather god **Perkʷunos* or the herding-god **Péh₂usōn*, are only attested in a limited number of traditions – Western (i.e. European) and Graeco-Aryan, respectively – and could therefore represent late additions that did not spread throughout the various Indo-European dialects." ref

"Some myths are also securely dated to Proto-Indo-European times, since they feature both linguistic and thematic evidence of an inherited motif: a story portraying a mythical figure associated with thunder and slaying a multi-headed serpent to release torrents of water that had previously been pent up; a creation myth involving two brothers, one of whom sacrifices the other in order to create the world; and probably the belief that the Otherworld was guarded by a watchdog and could only be reached by crossing a river. Various schools of thought exist regarding possible interpretations of the reconstructed Proto-Indo-European mythology. The main mythologies used in comparative reconstruction are Indo-Iranian, Baltic, Roman, and Norse, often supported with evidence from

the Celtic, Greek, Slavic, Hittite, Armenian, Illyrian, and Albanian traditions as well." ref

“Early agricultural communities such as Chogha Golan in 10,000 BCE or around 12,000 years ago, along with settlements such as Chogha Bonut (the earliest village in Elam) in **8000 BCE or around 10,000 years ago**, began to flourish in and around the Zagros Mountains region **in western Iran**. Around about the same time, **the earliest-known clay vessels and modeled human and animal terracotta figurines were produced at Ganj Dareh**, also in western Iran. There are also 10,000-year-old human and animal figurines from Tepe Sarab in Kermanshah Province among many other ancient artifacts.” ref

I also speculate that there may be a connection with this to the earliest pottery in Turkey from Boncuklu Höyük as well.

“12 fired clay samples and an unfired marl sample from the late 9th and early 8th-millennium BCE site of Boncuklu Höyük (8300–7800 cal BCE or around 10,300 to 9,800 years ago) in the Konya Plain, Turkey. The clay vessels from Boncuklu Höyük, an early Neolithic site in central Anatolia, are much earlier than the accepted date for the introduction of pottery in Anatolia, c. 7000 cal BCE or around 9,000 years ago.” ref

Proto-Indo-European (PIE) is the reconstructed common ancestor of the Indo-European language family:

Subdivisions	• Albanian (Albanoid) • Anatolian • Armenian • Balto-Slavic • Celtic • *Dacian* • Elymian • Germanic • Hellenic • *Illyrian* • Indo-Iranian • Italic • *Liburnian*

- Ligurian
- *Lusitanian*
- *Messapic*
- Paeonian
- *Phrygian*
- *Thracian*
- Tocharian

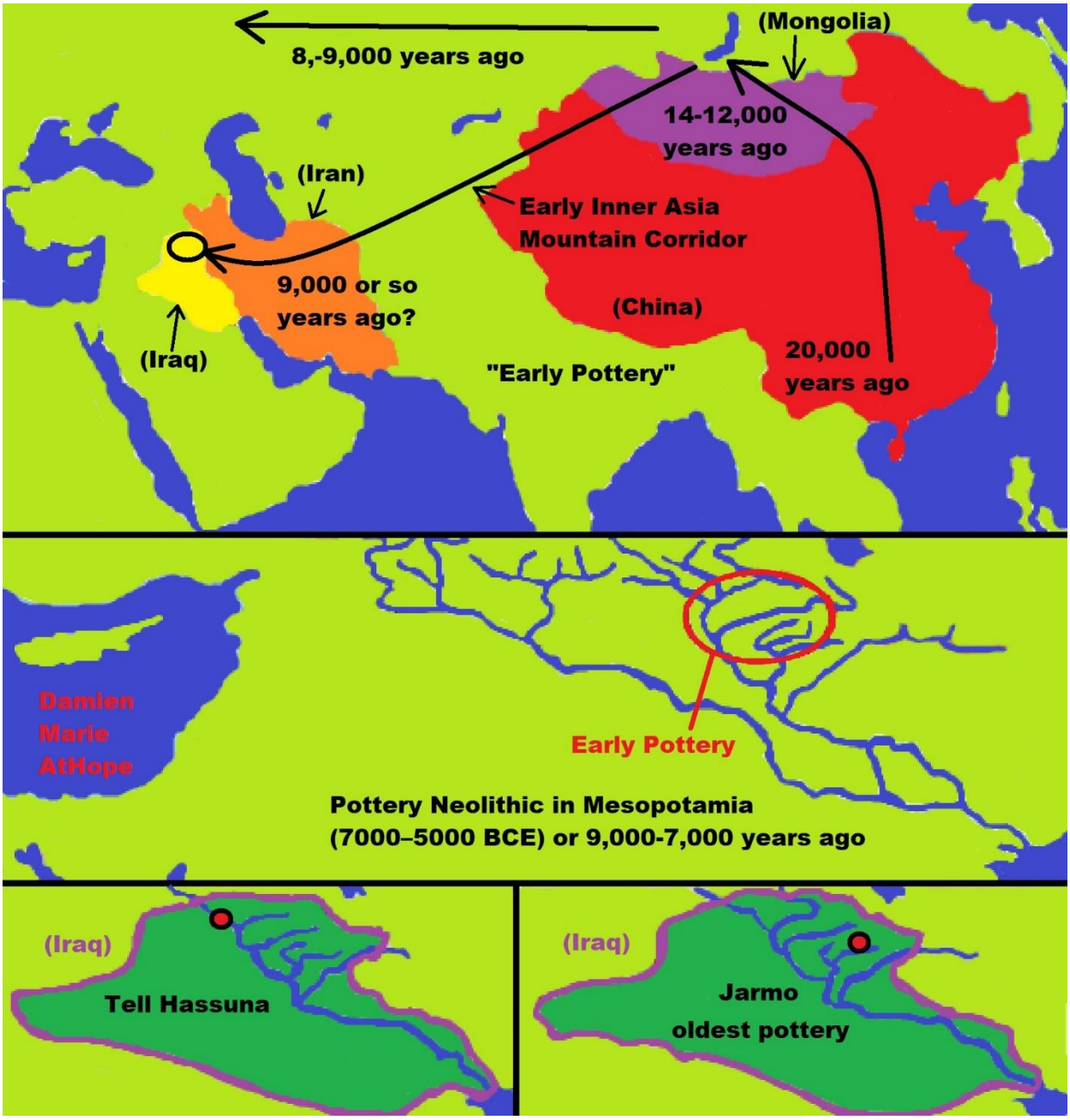
“Western Iran was inhabited by a population genetically most similar to hunter-gatherers from the Caucasus, but distinct from the Neolithic Anatolian people who later brought food production into Europe. While some degree of cultural diffusion between Anatolia, Western Iran, and other neighboring regions is possible, the genetic dissimilarity between early Anatolian farmers and the inhabitants of Ganj Dareh supports a model in which Neolithic societies in these areas were distinct. The genome of an early Neolithic female from Ganj Dareh, GD13a, from the Central Zagros (Western Iran), dated to 10000-9700 cal years ago, a region located at the eastern edge of the Near East. Ganj Dareh is well known for providing the earliest evidence of herd management of goats beginning at 9,900 years ago. The mitochondrion of GD13a (91.74X) was assigned to haplogroup X, most likely to the subhaplogroup X2, which has been associated with an early expansion from the Near East and has been found in early Neolithic samples from Anatolia, Hungary, and Germany. GD13a did not cluster with any other early Neolithic individual from Eurasia in any of the analyses. Also genetically close to GD13a were ancient samples from Steppe populations (Yamanya & Afanasievo) that were part of one or more Bronze age migrations into Europe, as well as early Bronze age cultures in that continent (Corded Ware), in line with previous relationships observed for the Caucasus Hunter-Gatherers.” ref

“Subclade X2 appears to have undergone extensive population expansion and dispersal around or soon after the Last Glacial Maximum, roughly 20,000 years ago. It is more strongly represented in the Near East, the Caucasus, and southern Europe, and somewhat less strongly present in the rest of Europe. The highest concentrations are found in the Ojibwe (25%), Sioux (15%), Nuu-Chah-Nulth (12%), Georgia (8%), Orkney (7%), and amongst the Druze Assyrian community in Israel (27%). Subclades of X2 are not present in South Americans Amerindian populations. The oldest known human associated with X2 is Kennewick Man, whose c. 9000-year old remains were discovered in Washington State. The lineage of haplogroup X in the Americas is

not derived from a European subclade, but rather represents an independent subclade, labeled X2a. The X2a subclade has not been found in Eurasia, and has most likely arisen within the early Paleo-Indian population, at roughly 13,000 years ago. A basal variant of X2a was found in the Kennewick Man fossil (ca. 9,000 years ago). No presence of mt-DNA ancestral to X2a has been found in Europe or the Near East. New World lineages X2a and X2g are not derived from the Old World lineages X2b, X2c, X2d, X2e, and X2f, indicating an early origin of the New World lineages "likely at the very beginning of their expansion and spread from the Near East." ref

"Although it occurs only at a frequency of about 3% for the total current indigenous population of the Americas, it is a bigger haplogroup in northern North America, where among the Algonquian peoples it comprises up to 25% of mtDNA types. It is also present in lesser percentages to the west and south of this area—among the Sioux (15%), the Nuu-chah-nulth (11%–13%), the Navajo (7%), and the Yakama (5%). In Latin America, Haplotype X6 was present in the Tarahumara 1.8% (1/53) and Huichol 20% (3/15) X6 and X7 was also found in 12% in Yanomani people. Unlike the four main Native American mtDNA haplogroups (A, B, C, D), X is not strongly associated with East Asia. The main occurrence of X in Asia discovered so far is in the Altai people in Siberia. One theory of how the X Haplogroup ended up in North America is that the people carrying it migrated from central Asia along with haplogroups A, B, C, and D, from an ancestor from the Altai Region of Central Asia. Two sequences of haplogroup X2 were sampled further east of Altai among the Evenks of Central Siberia. These two sequences belong to X2* and X2b. It is uncertain if they represent a remnant of the migration of X2 through Siberia or a more recent input." ref

"Haplogroup X has been found in various other bone specimens that were analysed for ancient DNA, including specimens associated with the Alföld Linear Pottery (X2b-T226C, Garadna-Elkerülő út site 2, 1/1 or 100%), Linearbandkeramik (X2d1, Halberstadt-Sonntagsfeld, 1/22 or ~5%), and Iberia Chalcolithic (X2b, La Chabola de la Hechicera, 1/3 or 33%; X2b, El Sotillo, 1/3 or 33%; X2b, El Mirador Cave, 1/12 or ~8%) cultures. Abel-beth-maachah 2201 was a man who lived between 1014 and 836 BCE during the Levant Iron Age and was found in the region now known as Abel Beth Maacah, Metula, Israel. He was associated with the Galilean cultural group. His direct maternal line belonged to mtDNA haplogroup X2b. Haplogroup X has been found in ancient Assyria and ancient Egyptian mummies excavated at the Abusir el-Meleq archaeological site in Middle Egypt, which date from the late New Kingdom and Roman periods. Fossils excavated at the Late Neolithic site of Kelif el Boroud in Morocco, which have been dated to around 5,000 years old, have also been found to carry the X2 subclade." ref



Damien Marie AtHope's Art

ref, ref, ref, ref, ref, ref, ref, ref, ref

Pre-Pottery Neolithic (10000 – 6500 BCE) and Pottery Neolithic (7000–5000 BCE)

PPNA /PPNB /PPNC: "Beyond the Pre-pottery Neolithic B interaction sphere" by Eleni Asouti

PPNA /PPNB /PPNC: "Our Place: Our Place in the World. Newsletter. January 2014" by Lee Clare

"Farmers, gatherers, or horticulturalists? Reconstructing landscapes of practice in the Early Neolithic" by Andrew Fairbairn

Animal domestication: "Subsistence and beyond: Animals in Neolithic Anatolia" by Benjamin Arbuckle

"EARLY ANIMAL PRODUCTION FOR MARITAL TRADE: A NEOLITHIC BRIDE-PRICE?" by Cedric Bodet

Pre-Pottery Neolithic

(10000 – 6500 BCE or 12,022-8,522 years ago)

"The **Pre-Pottery Neolithic** (**PPN**) represents the early Neolithic in the Levantine and upper Mesopotamian region of the Fertile Crescent, dating to c. 12,000 – c. 8,500 years ago, (10000 – 6500 BCE). It succeeds the Natufian culture of the Epipalaeolithic Near East (also called Mesolithic), as the domestication of plants and animals was in its formative stages, having possibly been induced by the Younger Dryas. The Pre-Pottery Neolithic culture came to an end around the time of the 8.2-kiloyear event, a cool spell centered on 6200 BCE that lasted several hundred years. It is succeeded by the **Pottery Neolithic**, also known as the **Late Neolithic**, or the **Ceramic Neolithic**" ref

"The time period is characterized by tiny circular mud-brick dwellings, the cultivation of crops, the hunting of wild game, and unique burial customs in which bodies were buried below the floors of dwellings. The Pre-Pottery Neolithic A and the following Pre-Pottery Neolithic B (PPNB) were originally defined by Kathleen Kenyon in the type site of Jericho (Palestine). During this time, pottery was not yet in use. They precede the ceramic Neolithic (Yarmukian). PPNA succeeds the Natufian culture of the Epipaleolithic (Mesolithic)." ref

"PPNA archaeological sites are much larger than those of the preceding Natufian hunter-gatherer culture, and contain traces of communal structures, such as the famous Tower of Jericho. PPNA settlements are characterized by round, semi-subterranean houses with stone foundations and terrazzo-floors. The upper walls

were constructed of unbaked clay mudbricks with plano-convex cross-sections. The hearths were small and covered with cobbles. Heated rocks were used in cooking, which led to an accumulation of fire-cracked rock in the buildings, and almost every settlement contained storage bins made of either stones or mud-brick." ref

"As of 2013 Gesher, modern Israel, became the earliest known of all known Neolithic sites (PPNA), with a calibrated Carbon 14 date of 10,459 BCE ± 348 years, analysis suggesting that it may have been the starting point of a Neolithic revolution. A contemporary site is Mureybet in modern Syria. One of the most notable PPNA settlements is Jericho, thought to be the world's first town (c. 9,000 BCE or around 11,000 years ago)." ref

"The PPNA town contained a population of up to 2,000–3,000 people and was protected by a massive stone wall and tower. There is much debate over the function of the wall, for there is no evidence of any serious warfare at this time. One possibility is the wall was built to protect the salt resources of Jericho. It has also been proposed that the tower caught the shadow of the largest nearby mountain on summer solstice in order to create a sense of power in support of whatever hierarchy ruled the town's inhabitants." ref

"PPNA cultures are unique for their burial practices, and Kenyon (who excavated the PPNA level of Jericho) characterized them as "living with their dead". Kenyon found no fewer than 279 burials, below floors, under household foundations, and in between walls. In the PPNB period, skulls were often dug up and reburied, or mottled with clay and (presumably) displayed. The lithic industry is based on blades struck from regular cores. Sickle-blades and arrowheads continue traditions from the late Natufian culture, transverse-blow axes, and polished adzes appear for the first time." ref

"Sedentism of this time allowed for the cultivation of local grains, such as barley and wild oats, and for storage in granaries. Sites such as Dhra′ and Jericho retained a hunting lifestyle until the PPNB period, but granaries allowed for year-round occupation. This period of cultivation is considered "pre-domestication", but may have begun to develop plant species into the domesticated forms they are today. Deliberate, extended-period storage was made possible by the use of "suspended floors for air circulation and protection from rodents". This practice "precedes the emergence of domestication and large-scale sedentary communities by at least 1,000 years." ref

"Granaries are positioned in places between other buildings early on c. 11,522 years ago, however, beginning around 10,522 years ago, they were moved inside houses, and by 9,522 years ago storage occurred in special rooms. This change

might reflect changing systems of ownership and property as granaries shifted from communal use and ownership to become under the control of households or individuals." ref

"It has been observed of these granaries that their "sophisticated storage systems with subfloor ventilation are a precocious development that precedes the emergence of almost all of the other elements of the Near Eastern Neolithic package—domestication, large scale sedentary communities, and the entrenchment of some degree of social differentiation". Moreover, "[b]uilding granaries may [...] have been the most important feature in increasing sedentism that required active community participation in new life-ways." ref

"**With more sites becoming known, archaeologists have defined a number of regional variants of Pre-Pottery Neolithic A:**

- (**Aswadian**) in the Damascus Basin, defined by finds from Tell Aswad IA; typical: bipolar cores, big sickle blades, Aswad points. The 'Aswadian' variant recently was abolished by the work of Danielle Stordeur in her initial report from further investigations in 2001–2006. The PPNB horizon was moved back at this site, to around 10,722 years ago.
- **Mureybetian** in the Northern Levant, defined by the finds from Mureybet IIIA, IIIB, typical: Helwan points, sickle-blades with base amenagée or short stem and terminal retouch. Other sites include Sheyk Hasan and Jerf el Ahmar.
- Sites in "Upper Mesopotamia" include Çayönü and Göbekli Tepe, with the latter possibly being the oldest ritual complex yet discovered.
- Sites in central Anatolia that include the 'mother city' Çatalhöyük and the smaller, but older site, rivaling even Jericho in age, Aşıklı Höyük.
- **Sultanian** in the Jordan River valley and the southern Levant, with the type site of Jericho. Other sites include Netiv HaGdud, El-Khiam, Hatoula, and Nahal Oren." ref

Pre-Pottery Neolithic A

(8800 – 6500 BCE or 12,022-8,822 years ago)

"The Pre-Pottery Neolithic is divided into Pre-Pottery Neolithic A (**PPNA** 10000 – 8800 BCE) and the following Pre-Pottery Neolithic B (**PPNB** 8800 – 6500 BCE). These were originally defined by Kathleen Kenyon in the type site of Jericho (Palestine). The Pre-Pottery Neolithic precedes the ceramic Neolithic (Yarmukian culture, 6400 – 6200 BCE). At 'Ain Ghazal, in Jordan, the culture continued a few more centuries as the so-called Pre-Pottery Neolithic C culture. Around 11000 years ago (9000 BCE), during the Pre-Pottery Neolithic A (PPNA), the world's first town, Jericho, appeared in the Levant." ref

Pre-Pottery Neolithic B

(8800 – 6500 BCE or 10,822-8,522 years ago)

"The Pre-Pottery Neolithic is divided into Pre-Pottery Neolithic A (10000 – 8800 BCE) and the following Pre-Pottery Neolithic B (8800 – 6500 BCE). PPNB differed from PPNA in showing greater use of domesticated animals, a different set of tools, and new architectural styles." ref

"Like the earlier PPNA people, the PPNB culture developed from the Mesolithic Natufian culture. However, it shows evidence of a northerly origin, possibly indicating an influx from the region of northeastern Anatolia. Cultural tendencies of this period differ from that of the earlier Pre-Pottery Neolithic A (PPNA) period in that people living during this period began to depend more heavily upon domesticated animals to supplement their earlier mixed agrarian and hunter-gatherer diet." ref

"In addition, the flint tool kit of the period is new and quite disparate from that of the earlier period. One of its major elements is the naviform core. This is the first period in which architectural styles of the southern Levant became primarily rectilinear; earlier typical dwellings were circular, elliptical, and occasionally even octagonal. Pyrotechnology, the expanding capability to control fire, was highly developed in this period. During this period, one of the main features of houses is a thick layer of white clay plaster flooring, highly polished and made of lime produced from limestone." ref

"It is believed that the use of clay plaster for floor and wall coverings during PPNB led to the discovery of pottery. The earliest proto-pottery was White Ware vessels, made from lime and gray ash, built up around baskets before firing, for several centuries around 7000 BCE at sites such as Tell Neba'a Faour (Beqaa Valley). Sites from this period found in the Levant utilizing rectangular floor plans and plastered floor techniques were found at Ain

Ghazal, Yiftahel (western Galilee), and Abu Hureyra (Upper Euphrates). The period is dated between c. 10,722-8,022 years ago." ref

"Plastered human skulls were reconstructed human skulls that were made in the ancient Levant between 9000 and 6000 BCE in the Pre-Pottery Neolithic B period. They represent some of the oldest forms of art in the Middle East and demonstrate that the prehistoric population took great care in burying their ancestors below their homes. The skulls denote some of the earliest sculptural examples of portraiture in the history of art." ref

"Danielle Stordeur's recent work at Tell Aswad, a large agricultural village between Mount Hermon and Damascus could not validate Henri de Contenson's earlier suggestion of a PPNA *Aswadian* culture. Instead, they found evidence of a fully established PPNB culture at 8700 BCE at Aswad, pushing back the period's generally accepted start date by 1,200 years. Similar sites to Tell Aswad in the Damascus Basin of the same age were found at Tell Ramad and Tell Ghoraifé. How a PPNB culture could spring up in this location, practicing domesticated farming from 8700 BCE has been the subject of speculation. Whether it created its own culture or imported traditions from the North East or Southern Levant has been considered an important question for a site that poses a problem for the scientific community." ref

"Work at the site of 'Ain Ghazal in Jordan has indicated a later Pre-Pottery Neolithic C period, which existed between 8,222-7,922 years ago. Juris Zarins has proposed that a Circum Arabian Nomadic Pastoral Complex developed in the period from the climatic crisis of 6200 BCE, partly as a result of an increasing emphasis in PPNB cultures upon animal domesticates, and a fusion with Harifian hunter-gatherers in Southern Palestine, with affiliate connections with the cultures of Fayyum and the Eastern Desert of Egypt. Cultures practicing this lifestyle spread down the Red Sea shoreline and moved east from Syria into southern Iraq." ref

The culture disappeared during the 8.2 kiloyear event, a term that climatologists have adopted for a sudden decrease in global temperatures that occurred approximately 8,200 years before the present, or c. 6200 BCE, and which lasted for the next two to four centuries. In the following Munhatta and Yarmukian post-pottery Neolithic cultures that succeeded it, rapid cultural development continues, although PPNB culture continued in the Amuq valley, where it influenced the later development of the Ghassulian culture." ref

"Around 8000 BCE, before the invention of pottery, several early settlements became experts in crafting beautiful and highly sophisticated containers from

stone, using materials such as alabaster or granite, and employing sand to shape and polish. Artisans used the veins in the material to the maximum visual effect. Such objects have been found in abundance on the upper Euphrates river, in what is today eastern Syria, especially at the site of Bouqras. These form the early stages of the development of the Art of Mesopotamia." ref

"Pre-Pottery Neolithic B fossils that were analysed for ancient DNA were found to carry the Y-DNA (paternal) haplogroups E1b1b (2/7; ~29%), CT (2/7; ~29%), E(xE2,E1a,E1b1a1a1c2c3b1,E1b1b1b1a1,E1b1b1b2b) (1/7; ~14%), T(xT1a1,T1a2a) (1/7; ~14%), and H2 (1/7; ~14%). The CT clade was also observed in a Pre-Pottery Neolithic C specimen (1/1; 100%). **Maternally, the rare basal haplogroup N*** has been found among skeletal remains belonging to the Pre-Pottery Neolithic B, as have the mtDNA clades L3 and K." ref

Haplogroup N and its related Uralic Languages and Cultures

DNA analysis has also confirmed ancestral ties between the Pre-Pottery Neolithic culture bearers and the makers of the Epipaleolithic Iberomaurusian culture of North Africa, the Mesolithic Natufian culture of the Levant, the Savanna Pastoral Neolithic culture of East Africa, the Early Neolithic Cardium culture of Morocco, and the Ancient Egyptian culture of the Nile Valley, with fossils associated with these early cultures all sharing a common genomic component." ref

Pre-Pottery Neolithic C

"Work at the site of 'Ain Ghazal in Jordan has indicated a later Pre-Pottery Neolithic C period. Juris Zarins has proposed that a Circum Arabian Nomadic Pastoral Complex developed in the period from the climatic crisis of 6200 BCE, partly as a result of an increasing emphasis in PPNB cultures upon domesticated animals, and a fusion with Harifian hunter-gatherers in the Southern Levant, with affiliate connections with the cultures of Fayyum and the Eastern Desert of Egypt. Cultures practicing this lifestyle spread down the Red Sea shoreline and moved east from Syria into southern Iraq." ref

Pottery Neolithic (7000–5000 BCE)

"In the archaeology of Southwest Asia, the **Late Neolithic**, also known as the **Ceramic Neolithic** or **Pottery Neolithic**, is the final part of the Neolithic period, following on from the Pre-Pottery Neolithic and preceding the Chalcolithic. It is sometimes further divided into Pottery Neolithic A (PNA) and Pottery Neolithic B (PNB) phases. The Late Neolithic began with the first experiments with pottery, around 7000 BCE, and lasted until the discovery of copper metallurgy and the start of the Chalcolithic around 4500 BCE." ref

“First experiments with pottery (c. 7000 BCE or around 9,000 years ago) with a Pottery bowl from Jarmo, Mesopotamia, 7100-5800 BCE. The northern Mesopotamian sites of Tell Hassuna and Jarmo are some of the oldest sites in the Near-East where pottery has been found, appearing in the most recent levels of excavation, which dates it to the 7th millennium BCE. This pottery is handmade, of simple design and with thick sides, and treated with a vegetable solvent. There are clay figures, zoomorphic or anthropomorphic, including figures of pregnant women which are taken to be fertility goddesses, similar to the Mother Goddess of later Neolithic cultures in the same region.” ref

“The Neolithic of the Southern Levant is divided into Pre-Pottery and Pottery or Late Neolithic phases, initially based on the sequence established by Kathleen Kenyon at Jericho. In the Mediterranean zone, the Pottery Neolithic is further subdivided into two subphases and several regional cultures, although the extent to which these represent real cultural phenomena is debated:

- Pottery Neolithic A (PNA) or Late Neolithic 1 (LN1)Yarmukian culture Lodian (Jericho IX) culture

- Pottery Neolithic B (PNB) or Late Neolithic 2 (LN2)Wadi Rabah culture” ref

“In the eastern desert regions of the Southern Levant—the *Badia*—the whole period is referred to as the Late Neolithic (c. 7000–5000 BCE or around 9,000 to 7,000 years ago). It is marked by the appearance of the first pastoralist societies in the desert, who may have migrated there following the abandonment of the large PPNB settlements to the west. In the southern Negev and Sinai Deserts, the Late Neolithic is characterized by the pastoralist Timnian culture, which persisted through to the Bronze Age.” ref

“The Late Neolithic began around 6,400 BCE or around 8,400 years ago in the Fertile Crescent, succeeding the period of the Pre-Pottery Neolithic. By then distinctive cultures emerged, with pottery like the Halafian (Turkey, Syria, Northern Mesopotamia) and Ubaid (Southern Mesopotamia).” ref

Tell Hassuna

“**Tell Hassuna** is a tell, or settlement mound, in the Nineveh Province (Iraq), about 35km south-west of Nineveh. It is the type site for the Hassuna

culture (early sixth millennium BCE). Excavations revealed that there was once an advanced village culture that was spread throughout northern Mesopotamia. At Hassuna, six different layers of houses were uncovered, revealing various vessels and pottery that date ~5600-5350 BCE, with each layer becoming more substantial. Similar vessels were found throughout the Middle East, showing that there was an extensive trade network that was present as early as the 6th Millennium BCE." ref

"Tell Hassuna is located approximately 35 kilometers (22 mi) southwest of modern Mosul, along the west bank of the Tigris River. It is a small site, roughly 200 by 150 meters (660 ft × 490 ft) and about 7 meters (23 ft) high. Hassuna was one of the earliest cultures in Northern Mesopotamia. Before this time, Southern Mesopotamia was considered the cradle of civilization. When settlements began forming in the north, such as Hassuna, Jarmo, Samarra, and Tell Halaf, the north became the important region. The architecture at Hassuna was built of packed mud, with the width varying from 20 to 50 centimeters. The mud-brick technique may perhaps have been developed in Southern Mesopotamia, where mud-bricks were common in the first half of the 6th millennium BCE." ref

"Around 6,000 BCE, people began moving to the foothills of northern Mesopotamia and practicing methods of dry agriculture. These people were the first known farmers, and Hassuna became one of the most ancient centers for the principal forms of producing economies, such as the cultivation of soil and raising livestock. Evidence of this is shown in the oldest layers of Hassuna. The occupants of Hassuna also led the way in improving agriculture, settling the river valleys, the beginning of irrigation, and progress in all branches of production and culture." ref

"Around 6,000 BCE, at Tell Hassuna, adobe dwellings were built around open central courts; fine painted pottery was replacing the crude pottery of the earlier levels. Hand axes, sickles, grinding stones, bins, baking ovens, and numerous bones of domesticated animals reflect settled agricultural life. Stone tools found at Tell Hassuna do not seem to be as advanced as tools found at other sites of the Hassuna culture, such as Jarmo, and were typically made of flint and obsidian. Female figurines were also used in relation to worship and jar burials, within which food was placed due to belief in the afterlife." ref

"Pottery found at Hassuna can be divided into three different categories: Hassuna Archaic, Hassuna Standard, and Samarran. These also include painted, incised, and painted-incised ware. The decoration of the Samarra Painted Fine Ware is always monochrome, but it seems as if three types of paint have been used: an ivory black, a dark violet brown, and a medium chocolate brown. Circumstances of firing and variations in the concentration of the paint have caused color

changes, so that for example an oxidizing firing of vessels painted with ivory black has produced an Indian red color." ref

"In general, the designs of the Samarra Painted Fine Ware are carefully painted. Occasionally, however, parallel lines approach or diverge slightly, and the thickness of some lines varies, apparently due to the use of a soft painting-brush. The outside rim motifs are spaced and limited by groups of horizontal lines." ref

Jarmo

"**Jarmo** (Qal'at Jarmo) (Kurdish: Çermo) is a prehistoric archeological site located in modern Iraq on the foothills of the Zagros Mountains. It lies at an altitude of 800 m above sea-level in a belt of oak and pistachio woodlands in the Adhaim River watershed. Excavations revealed that Jarmo was an agricultural community dating back to 7090 BCE or around 9,090 years ago. It was broadly contemporary with such other important Neolithic sites such as Jericho in the Southern Levant and Çatal Hüyük in Anatolia." ref

"The excavations exposed a small village, covering an area of 12,000 to 16,000 m2, and which has been dated (by carbon-14) to 7090 BCE, for the oldest levels, to 4950 BCE for the most recent. The entire site consists of twelve levels. Jarmo appears to be two older, permanent Neolithic settlements and, approximately, contemporary with Jericho or the Neolithic stage of Shanidar. The high point is likely to have been between 6,200 and 5,800 BCE. This small village consisted of some twenty-five houses, with adobe walls and sun-dried mud roofs, which rested on stone foundations, with a simple floor plan dug from the earth." ref

"These dwellings were frequently repaired or rebuilt. In all, about 150 people lived in the village, which was clearly a permanent settlement. In the earlier phases, there is a preponderance of objects made from stone, silex—using older styles—and obsidian. The use of this latter material, obtained from the area of Lake Van, 200 miles away, suggests that some form of organized trade already existed, as does the presence of ornamental shells from the Persian Gulf. In the oldest level baskets have been found, waterproofed with pitch, which is readily available in the area." ref

"Agricultural activity is attested by the presence of stone sickles, cutters, bowls and other objects, for harvesting, preparing and storing food, and also by receptacles of engraved marble. In the later phases instruments made of bone, particularly perforating tools, buttons, and spoons, have been found. Further research has shown that the villagers of Jarmo grew wheat of two types, emmer,

and einkorn, a type of primitive barley and lentils (it is common to record the domestication of grains, less so of pulses). Their diet, and that of their animals, also included species of wild plants, peas, acorns, carob seeds, pistachios, and wild wheat. Snail shells are also abundant. There is evidence that they had domesticated goats, sheep, and dogs. On the higher levels of the site, pigs have been found, together with the first evidence of pottery." ref

"Jarmo is one of the oldest sites at which pottery has been found, appearing in the most recent levels of excavation, which dates it to the 7th millennium BCE. This pottery is handmade, of simple design and with thick sides, and treated with a vegetable solvent. There are clay figures, zoomorphic or anthropomorphic, including figures of pregnant women which are taken to be fertility goddesses, similar to the Mother Goddess of later Neolithic cultures in the same region. These constitute the inception of the Art of Mesopotamia." ref

Prehistory of Iran from Neolithic to Chalcolithic

"The **prehistory** of the **Iranian plateau**, and the wider region now known as Greater Iran. Some nearby and more constantly occupied settlements in the Zagros date from a short time after Asiab, from the time between 8,000 and 6,800 BC. Still, the material culture of Tappeh Ganj Dareh and Tappeh Abdul Hosein does not include any pottery. Thus this period is often called "aceramic Neolithic". This is also true for the oldest levels of Tappeh Guran, located in Luristan, as well as for the sites of Ali Kosh and Chogha Sefid in the plain of Deh Luran, west of the Zagros Mountains. There, flocks of sheep and herds of goats were kept for the first time. Managing animals meant a fundamentally new orientation of the Neolithic inhabitants of Iran and must be understood to be connected with a whole number of other innovations, particularly the architecture of houses. We do not definitely know if in those days there was any cultivation of cereals. Tools for harvesting and for making cereal products are there, but remnants of burned grain are extremely rare." ref

"In the eighth millennium BCE, around 10,022 to 9,022 years ago. In chronological terms, it is the second full millennium of the current Holocene epoch and is entirely within the Pre-Pottery Neolithic B (PPNB) phase of the Early Neolithic. **Agricultural communities such as Chogha Bonut (the earliest village in Susiana) started to form in western Iran, either as a result of indigenous development or of outside influences.** Around about the same time the earliest known clay vessels and modeled human and animal terracotta figurines were produced at Ganj Dareh and Teppe Sarab, also in western Iran. The south-western part of Iran was part of the Fertile Crescent." ref

“Early agricultural communities such as Chogha Golan in 10,000 BCE along with settlements such as Chogha Bonut (the earliest village in Elam) in 8000 BCE, began to flourish in and around the Zagros Mountains region in western Iran. Around about the same time, the earliest-known clay vessels and modeled human and animal terracotta figurines were produced at Ganj Dareh, also in western Iran. There are also 10,000-year-old human and animal figurines from Tepe Sarab in Kermanshah Province among many other ancient artifacts.” ref

“Some of the oldest agricultural ground has been discovered in Susa and south-western part of Iran was part of the Fertile Crescent where most of humanity’s first major crops were grown, in villages such as Susa (where a settlement was first founded possibly as early as 4395 cal BCE) and settlements such as Chogha Mish, dating back to 6800 BCE; there are 7,000-year-old jars of wine excavated in the Zagros Mountains and ruins of 7000-year-old settlements such as Tepe Sialk are further testament to that.” ref

Boncuklu Höyük: The earliest ceramics on the Anatolian plateau?

"Boncuklu Höyük is a Neolithic site in Central Anatolia, Turkey, around 9 km/5.5 miles from Çatalhöyük." ref

"12 fired clay samples and an unfired marl sample from the late 9th and early 8th-millennium BCE site of Boncuklu Höyük (8300–7800 cal BCE or around 10,300 to 9,800 years ago) in the Konya Plain, Turkey, were analyzed by optical microscopy and SEM-EDX. The plant remains in the pottery fabrics were also examined in the variable pressure scanning electron microscope. Chemical analyses show that the same clays were used for multiple purposes, and more than one type of raw material was used to make the fired clay objects examined. Only one sherd showed signs of having added temper. The presence of scattered organic remains in the fabrics also suggests that the clay was minimally processed. Although the minerals present do not show any optical alteration, the shrinkage of the plant matter and the discoloring of bone inclusions suggested

that all but one sample were fired, albeit at a relatively low temperature. These sherds are therefore regarded as among the earliest ceramic vessels known in southwest Asia, although the manufacturing technique was different to that used to make the contemporaneous PPNB ceramics found at Kfar HaHoresh in Israel." ref

"The clay vessels from Boncuklu Höyük, an early Neolithic site in central Anatolia. The site dates to c. 8300 to 7800 cal BCE, much earlier than the accepted date for the introduction of pottery in Anatolia, c. 7000 cal BCE. Thus the primary question is whether the clay vessels constitute true ceramics, i.e. were fired intentionally. Boncuklu Höyük appears to have been established on a rise within a wetland area. Evidence for the use of crop plants at Boncuklu is clearly present but sparse, and foraging was probably more important than farming. Seasonality proxies suggest that the site was occupied throughout the year, but the community may well have included more mobile groups that were absent at different times." ref

"Excavation of several areas with a combined exposure of over 400 m^2 has revealed houses with painted floors, bucrania, and clay and plaster relief decoration, predating similar practices at the nearby site of Çatalhöyük by about a millennium. A sequence of six buildings, reconstructed one above another, has been excavated in one area (Area K); as at Çatalhöyük, continuous reconstruction in the same place appears to have been important. The buildings at Boncuklu were c. 3 × 5 m and ellipsoidal with the walls made from mudbrick. The buildings showed evidence of ground-level entry, unlike at Çatalhöyük where entry was from the roof. As at Çatalhöyük, however, there is strong evidence for a highly structured use of internal space, and the presence of plaster installations and painting. Extensive midden deposits accumulated in open areas and were associated with hearths and lightweight structures that may have formed shelters for work areas." ref

"The inhabitants of Boncuklu made a variety of objects from clay, including vessels, storage structures, figurines, and a large number of other geometric and amorphous objects. Seventy-seven fragments of fine and coarse clay vessels which can be assigned to the assemblage related to Neolithic phases of occupation at the site were recovered from the site by 2012. Circa one third of these are from securely stratified Neolithic contexts, from different parts of the sequences dated directly by C14. Around half of the stratified examples were isolated sherds within ashy midden deposits and found in areas outside buildings. Middens were associated with activities involving food preparation and consumption, which occurred both outside and inside buildings. Sherds were also found within buildings, mainly in the 'dirty' areas surrounding hearths. One sherd was found in a grave fill in a house, but seems to have been deposited

unintentionally when the grave was closed. Given the early date of the site in terms of pottery use in southwest Asia, the main question discussed here is whether these vessels were fired or only sun-dried, and if they were fired, at what temperature?" ref

"Five potential categories of ware-types were identified: fine wares, coarse wares, structural wares, fired marl, and unfired marl. Two examples of fine wares were from open bowls with flat rim profiles, and diameters of 220 mm and 280 mm. Both rim fragments were decorated with lateral incised lines. Each showed breakage in a manner consistent with poorly smoothed and bonded coils. Coarse ware sherds were from open bowls, hole mouth pots, and jars. These were pinched, slab- or coil-built and all had rounded rims (diameters varied from 40 to 220 mm). For some examples, thin layers of clay were used to create the exterior surface. It was not always clear whether the fragments of structural wares were from large vessels, oven walls, or sections of storage bins, perhaps intentionally fired in situ to make them more robust." ref

"Examples were coil- or slab-built, with well-smoothed outer and inner surfaces. Two sections of rim were found, one from an open bowl (diameter 320 mm) and one from a straight-necked jar (diameter 250 mm). The thickness of the walls suggests they were used for hot stone cooking, a technique that focuses on insulation rather than conduction. Other examples of structural wares may be derived from fire installations and thereby have been baked by default. Sherds incorporated into the base of hearths have been found in the midden area (Area M) at Boncuklu; possibly they increased thermal shock resistance and thereby the hearths' use-life. It is unclear, however, if they were fired before their incorporation into the hearth or as a result of it." ref

"Examples within the fired marl category were thought to be broken/detached sections of the basins and channels that have been found in situ on site. They may have helped to drain liquids and a light firing may have increased their durability. Similar 'water-channels' have been identified for the Pottery Neolithic phase at Tell Seker al-Aheimar. Many of the exterior surfaces were notably rough and pitted. Others showed plant impressions suggesting they may have been formed around or over basketry. Examples categorized as unfired marl were made in the same way with the same materials as the fired marl but not baked at all. No sections of rim were recovered, which is probably indicative of the friable nature of these objects. Thirteen samples were analyzed: a figurine fragment (BK15), two fragments of fine ware vessels (BK1, 2), two fragments of coarse ware vessels (BK4, 5), four examples of structural wares (BK6, 7, 9 and 10); three fragments of fired marl (BK11, 12 and 13) and a section of unfired marl (BK14)." ref

Ancient mDNA "N1a1a1" and Pottery from Turkey to Europe? People likely descended from central Anatolian populations with Pottery and mDNA "N1a1a1" such as Boncuklu/Çatalhöyük, spread to central Europe through NW Anatolia thousands of years later?

"Boncuklu Höyük in Central Anatolia, Turkey, situated around 9 km from the more famous Çatalhöyük site, the remains of one of the world's oldest villages, occupied between around 8300 to 7800 BCE. The buildings are small and oval-shaped with walls constructed of mudbricks. The remains of burials of human bodies were found below the floors of the buildings. The earliest known ceramics of Anatolia have been discovered there." ref

"Çatalhöyük is a tell of a very large Neolithic and Chalcolithic proto-city settlement in southern Anatolia, which existed from approximately 7500 BC to 6400 BCE, and flourished around 7000 BCE. Çatalhöyük was composed entirely of domestic buildings, with no obvious public buildings. While some of the larger ones have rather ornate murals, the purpose of some rooms remains unclear. The population of the eastern mound has been estimated to be around 10,000 people, but the population likely varied over the community's history. An average population of between 5,000 and 7,000 is a reasonable estimate." ref

Seventy Years of Pottery Studies in the Archaeology of Mesolithic and Neolithic Sudan

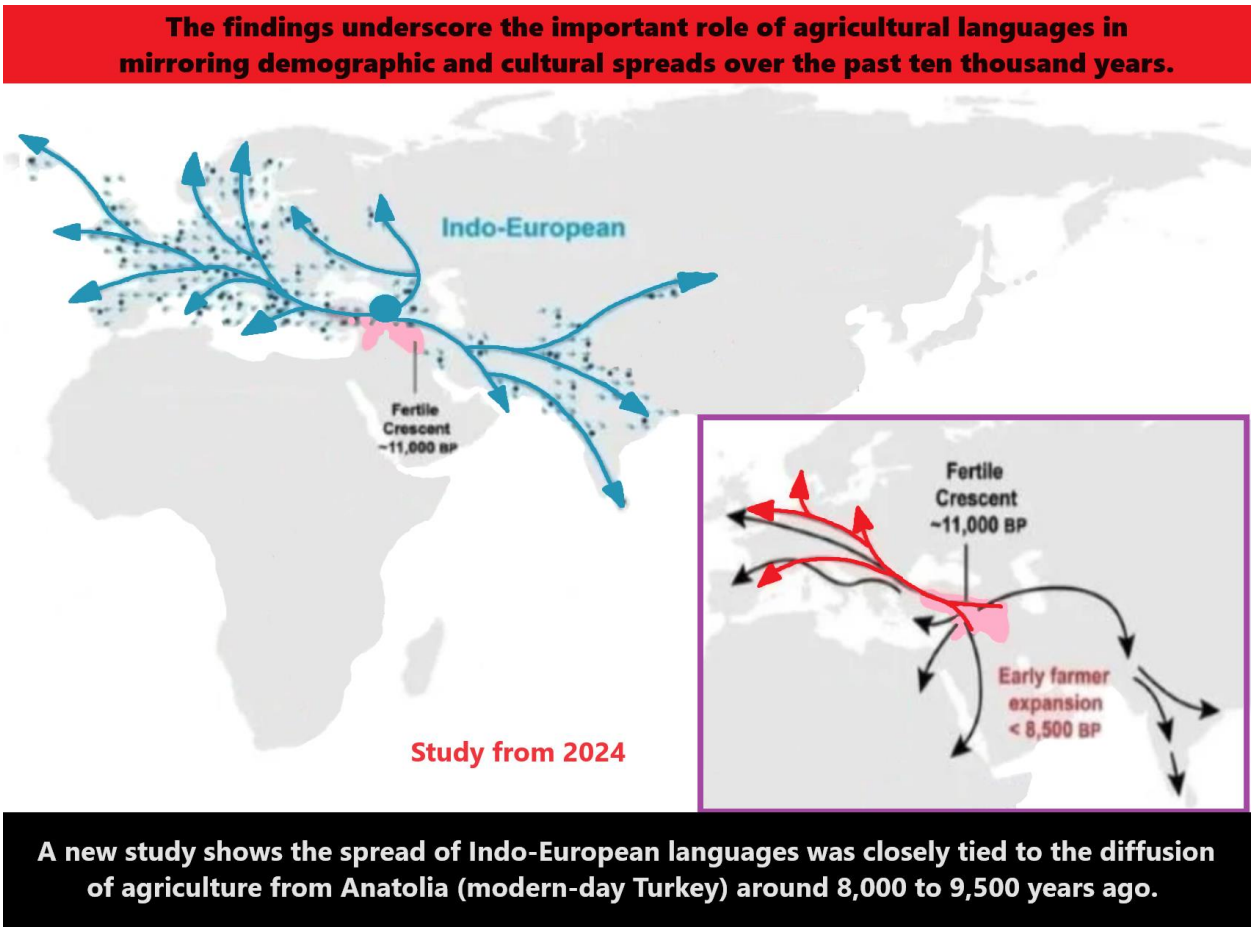
"Ceramics have always played a prominent role in archaeological material culture studies. Ceramic production represents the earliest chemical and physical transformation process deliberately operated by humans dating to 12,000 years ago in the Sahel and southern part of the Sahara and has since been ubiquitous in archaeological sites. Arguably, no class of artifacts has been as versatile as pottery in understanding human behavior. On the one hand, a pot is an object of daily use, relatively simple in form and very tangible. On the other hand, even an ordinary vessel concentrates human creativity, technological awareness, and social complexity." ref

"Ceramic objects have been studied and interpreted from several perspectives, for their aesthetic value, as tools having technological and functional meanings, and for their social and cultural significance. Theoretical approaches to the study of pottery are as diverse as geography, local research traditions, and archaeological premises and questions. For example, for several years, pottery studies in central, eastern, and southern Africa used ceramics as proxies for recognizing ethnic groups and linguistic identities—e.g., the spread of the Bantu language speakers.

This approach has been criticized, and alternative directions have been offered.” ref

“In Near Eastern archaeology, the standardization and innovations in ceramic forming techniques, such as the potter’s wheel, have been used to understand the paths toward social complexity and urban expansion. Some other theoretical, conceptual, and methodological developments can be recognized worldwide. For example, pottery has been studied as a craft object focusing on the analysis of manufacturing processes. There are also studies emphasizing ceramic functions through use-wear and residue analyses for reconstructing foodway traditions and practices. Moreover, there are ceramic studies that privilege cultural encounters, networks, and dynamics of cultural hybridization. There has also been an increasing application of hard science methods to archaeological material in general and ceramics in particular.” ref

“In Sudan, the earliest ceramics date from the mid-ninth millennium BC and come from Site 2-R-66—Amara West, northern Upper Nubia; Busharia I—Kerma, Upper Nubia; and Sorourab II—central Sudan. The early pottery in the region was produced by sedentary or semi-sedentary hunter-gatherers or pre-pastoral groups, who settled in the mosaic ecological environments of the early Holocene (c. 10,000–6300 BCE) that developed at the onset of the humid period. During this time, in the northernmost parts of the Sudanese Nile Valley (e.g., Sai Island, in northern Upper Nubia), precipitations occurred during the winter months and hunter-gatherers settled in an open savannah type of vegetation with seasonal fresh water.” ref



ref

"The new study appears to align with the spread of Indo-European languages and was closely tied to the diffusion of agriculture from Anatolia (modern-day Turkey) around 8,000 to 9,500 years ago." ref

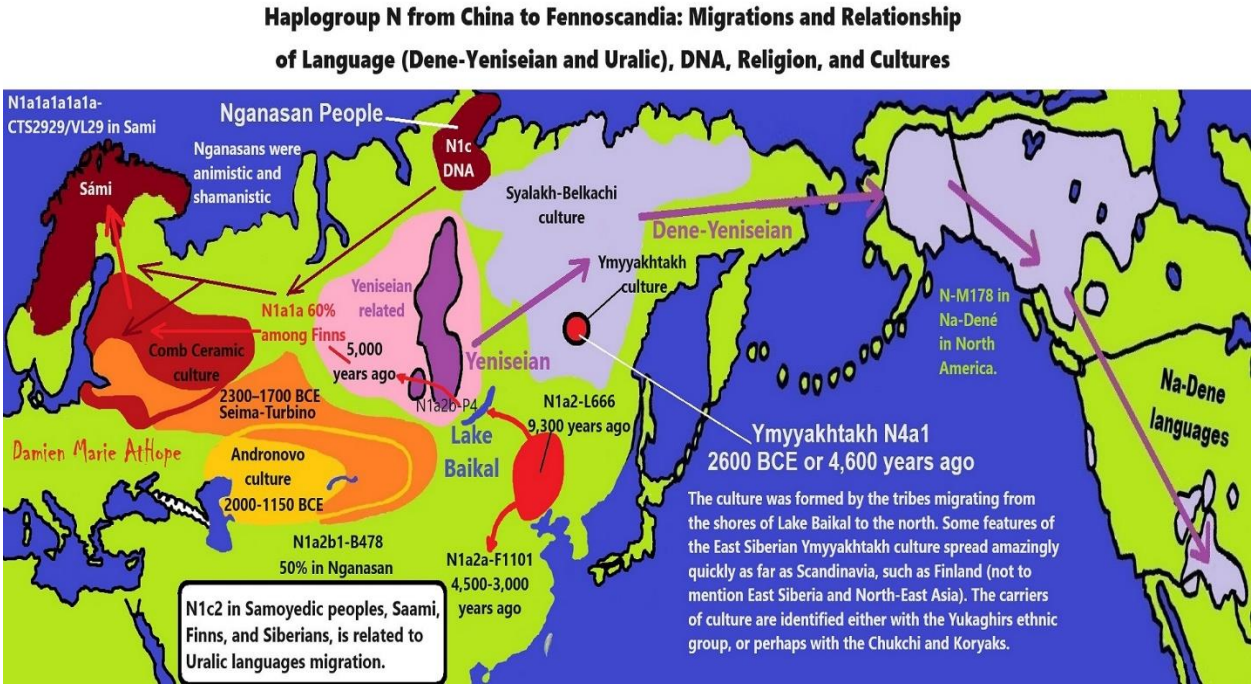
World's oldest known fort was constructed by hunter-gatherers 8,000 years ago in Siberia

"The fact that this Stone Age fort was built by hunter-gatherers is transforming our understanding of ancient human societies. Hunter-gatherers built the oldest known fort in the world about 8,000 years ago in Siberia, a new study finds. Archaeologists have long associated fortresses with permanent agricultural settlements. However, this cluster of fortified structures reveals that prehistoric groups were constructing protective edifices much earlier than originally thought." ref

"These hunter-gatherers "defy conventional stereotypes that depict such societies as basic and nomadic, unveiling their capacity to construct intricate structures,"

study co-author Tanja Schreiber, an archaeologist at Free University of Berlin, told Live Science in an email. Located along the Amnya River in western Siberia, remains of the Amnya fort include roughly 20 pit-house depressions scattered across the site, which is divided into two sections: Amnya I and Amnya II. Radiocarbon dating confirmed that the settlement was first inhabited during the Mesolithic, or Middle Stone Age, according to the study. When constructed, each pit house would have been protected by earthen walls and wooden palisades — two construction elements that suggest "advanced agricultural and defensive capabilities" by the inhabitants, the archaeologists said in a statement." ref

"One of the Amnya fort's most astonishing aspects is the discovery that approximately 8,000 years ago, hunter-gatherers in the Siberian Taiga built intricate defense structures," Schreiber said. "This challenges traditional assumptions that monumental constructions were solely the work of agricultural communities." It's unknown what triggered the need for these fortified structures in the first place, but the strategic location overlooking the river would have not only been an ideal lookout point for potential threats but also allowed hunter-gatherers to keep tabs on their fishing and hunting grounds, the researchers noted." ref



Damien Marie AtHope's Art

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Postglacial genomes from foragers across Northern Eurasia reveal prehistoric mobility associated with the spread of the Uralic and Yeniseian languages

Abstract

"The North Eurasian forest and forest-steppe zones have sustained millennia of sociocultural connections among northern peoples. We present genome-wide ancient DNA data for 181 individuals from this region spanning the Mesolithic, Neolithic, and Bronze Age. We find that Early to Mid-Holocene hunter-gatherer populations from across the southern forest and forest-steppes of Northern Eurasia can be characterized by a continuous gradient of ancestry that remained stable for millennia, ranging from fully West Eurasian in the Baltic region to fully East Asian in the Transbaikal region. In contrast, cotemporaneous groups in far Northeast Siberia were genetically distinct, retaining high levels of continuity from a population that was the primary source of ancestry for Native Americans. By the mid-Holocene, admixture between this early Northeastern Siberian population and groups from Inland East Asia and the Amur River Basin produced two distinctive populations in eastern Siberia that played an important role in the genetic formation of later people. Ancestry from the first population, Cis-Baikal Late Neolithic-Bronze Age (Cisbaikal_LNBA), is found substantially only among Yeniseian-speaking groups and those known to have admixed with them. Ancestry from the second, Yakutian Late Neolithic-Bronze Age (Yakutia_LNBA), is strongly associated with present-day Uralic speakers. We show how Yakutia_LNBA ancestry spread from an east Siberian origin ~4.5kya, along with subclades of Y-chromosome haplogroup N occurring at high frequencies among present-day Uralic speakers, into Western and Central Siberia in communities associated with Seima-Turbino metallurgy: a suite of advanced bronze casting techniques that spread explosively across an enormous region of Northern Eurasia ~4.0kya. However, the ancestry of the 16 Seima-Turbino-period individuals–the first reported from sites with this metallurgy–was otherwise extraordinarily diverse, with partial descent from Indo-Iranian-speaking pastoralists and multiple hunter-gatherer populations from widely separated regions of Eurasia. Our results provide support for theories suggesting that early Uralic speakers at the beginning of their westward dispersal where involved in the expansion of Seima-Turbino metallurgical traditions, and suggests that both cultural transmission and migration were important in the spread of Seima-Turbino material culture." ref

Ancient mDNA "N1a1a1" and Pottery from Turkey to Europe? People likely descended from central Anatolian populations with Pottery and mDNA "N1a1a1" such as Boncuklu/Çatalhöyük, spread to central Europe through NW Anatolia thousands of years later?

Ancient mDNA "N1a1a1" and Pottery?

Bon005 – **Boncuklu Höyük mtDNA N1a1a1** around 10,220 years ago Turkey – Central Anatolia ref

Bon004 – **Boncuklu Höyük mtDNA N1a1a1** around 10,076 years ago Turkey – Central Anatolia ref

ZHAG – **Boncuklu Höyük mtDNA N1a1a1** around 9,900 years ago Turkey – Central Anatolia ref

People who lived in ancient settlement in central Turkey migrated to Europe: archaeologists

"10,300-year-old Boncuklu Höyük settlement in Turkey revealed that the people who lived in the settlement migrated to Europe. And the Boncuklu Höyük settlement was established a thousand years before Çatalhöyük, so is the ancestor of later Çatalhöyük." ref

Ash040 – **Aşıklı Höyük mtDNA N1a1a1** around 9,875 years ago Turkey – Central Anatolia ref

CCH144 – **Çatalhöyük mtDNA N1a1a1** around 8,808 years ago Turkey – Central Anatolia ref

I1096 – **Barcın Höyük mtDNA N1a1a1** around 8,300 years ago Turkey – Northwest Anatolia ref

Bar25 – **Barcın Höyük mtDNA N1a1a1** around 8,295 years ago Turkey – Northwest Anatolia ref

Tep004 – **Tepecik-Çiftlik Höyük mtDNA N1a1a1** around 8,237 years ago Turkey – Northwest Anatolia ref

Tep006 – **Tepecik-Çiftlik Höyük mtDNA N1a1a1** around 8,099 years ago Turkey – Northwest Anatolia ref

I0725 – **Mentese mtDNA N1a1a1** around 7,950 years ago Turkey – South-Western corner, on the Aegean Sea ref

I0174 – **Alsonyek-Bataszek mtDNA N1a1a1** around 7,558 years ago Hungary – Starcevo ref (Starčevo–Körös–Criş culture: 6,200 – 4,500 BCE or around 8,223-6,523 years ago)

"Starčevo culture of Southeastern Europe originates in the spread of the Neolithic package of peoples and technological innovations including farming and ceramics from Anatolia to the area of Sesklo. The Starčevo culture marks its spread to the inland Balkan peninsula as the Cardial ware culture did along the Adriatic coastline. It forms part of the wider Starčevo–Körös–Criş culture which gave rise to the central European Linear Pottery culture c. 700 years after the initial spread of Neolithic farmers towards the northern Balkans." ref

Klein1 – **Kleinhadersd mtDNA N1a1a1** around 7,500 years ago Austria – LBK/AVK ref

(Linear Pottery culture *LBK*: 5,500–4,500 BCE or around 7,523-6,523 years ago)
UZZ74 – **Grotta dell'Uzzo, Sicily mtDNA N1a1a1** around 7,223 years ago Italy – Stentinello I ref

(Stentinello culture: dated to the 5th millennium BCE: 5000 to 4000 BCE or around 7,023-6,023 years ago)

I0412 – **Els Trocs, Bisaurri, Huesca, Aragón mtDNA N1a1a1** around 7,177 years ago Spain – Epicardial ref

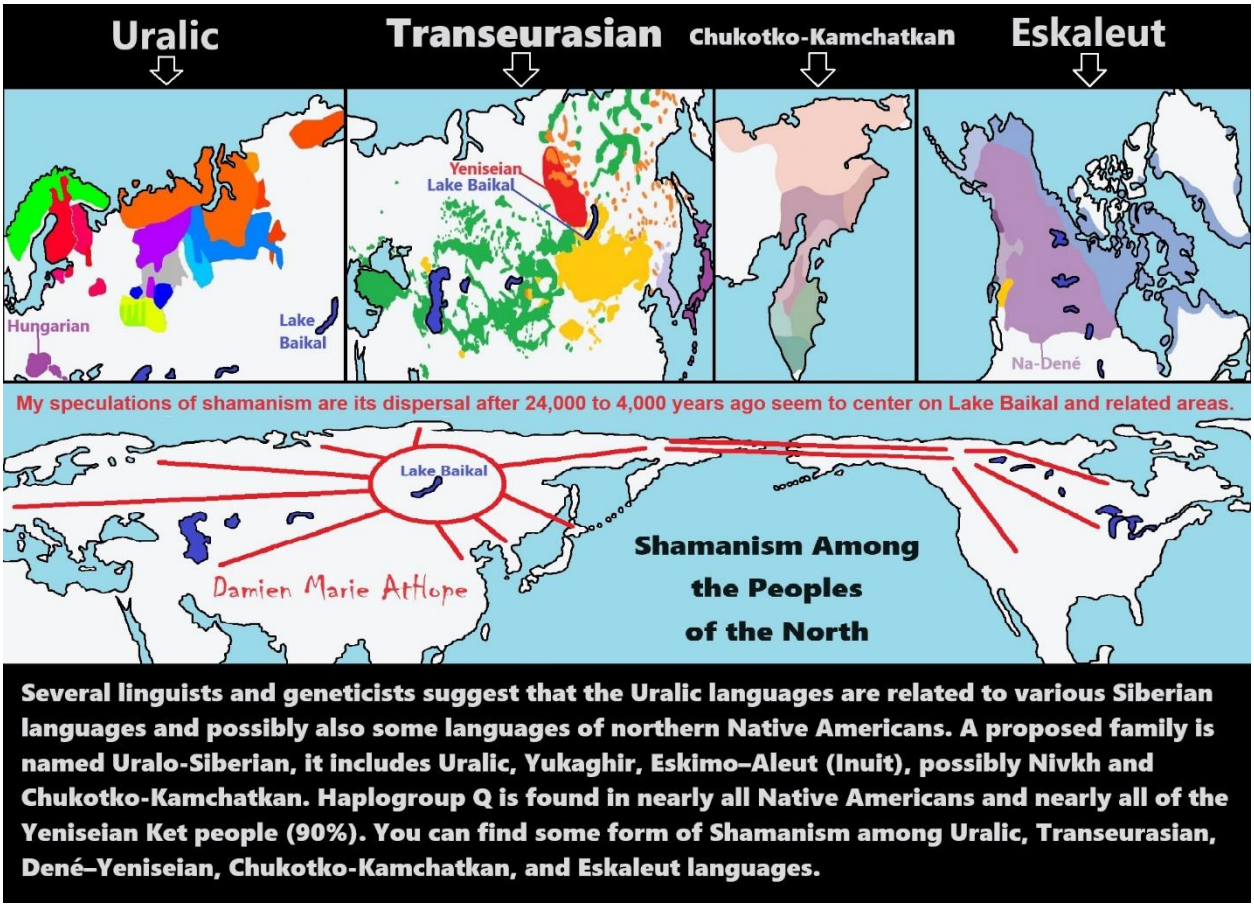
(Cardium/Cardial–Epicardial pottery culture: 6400 – 5500 BCE or around 8,423-7,023 years ago)

A Common Genetic Origin for Early Farmers from Mediterranean Cardial and Central European LBK Cultures

"Fernández et al. 2014 found traces of maternal genetic affinity between people of the Linear Pottery Culture and Cardium pottery with earlier peoples of the Near Eastern Pre-Pottery Neolithic B, including the rare **mtDNA (maternal) basal haplogroup N***, and suggested that Neolithic period was initiated by seafaring colonists from the Near East. Mathieson et al. 2018 examined three Cardials buried at the Zemunica Cave near Bisko in modern-day Croatia c. 5800 BCE the

three samples of mtDNA extracted belonged to the maternal haplogroups H1, K1b1a, and N1a1." ref

Haplogroup N from China to Fennoscandia: Migrations and Relationship of Language (Dene-Yeniseian and Uralic), DNA, and Cultures



Damien Marie AtHope's Art

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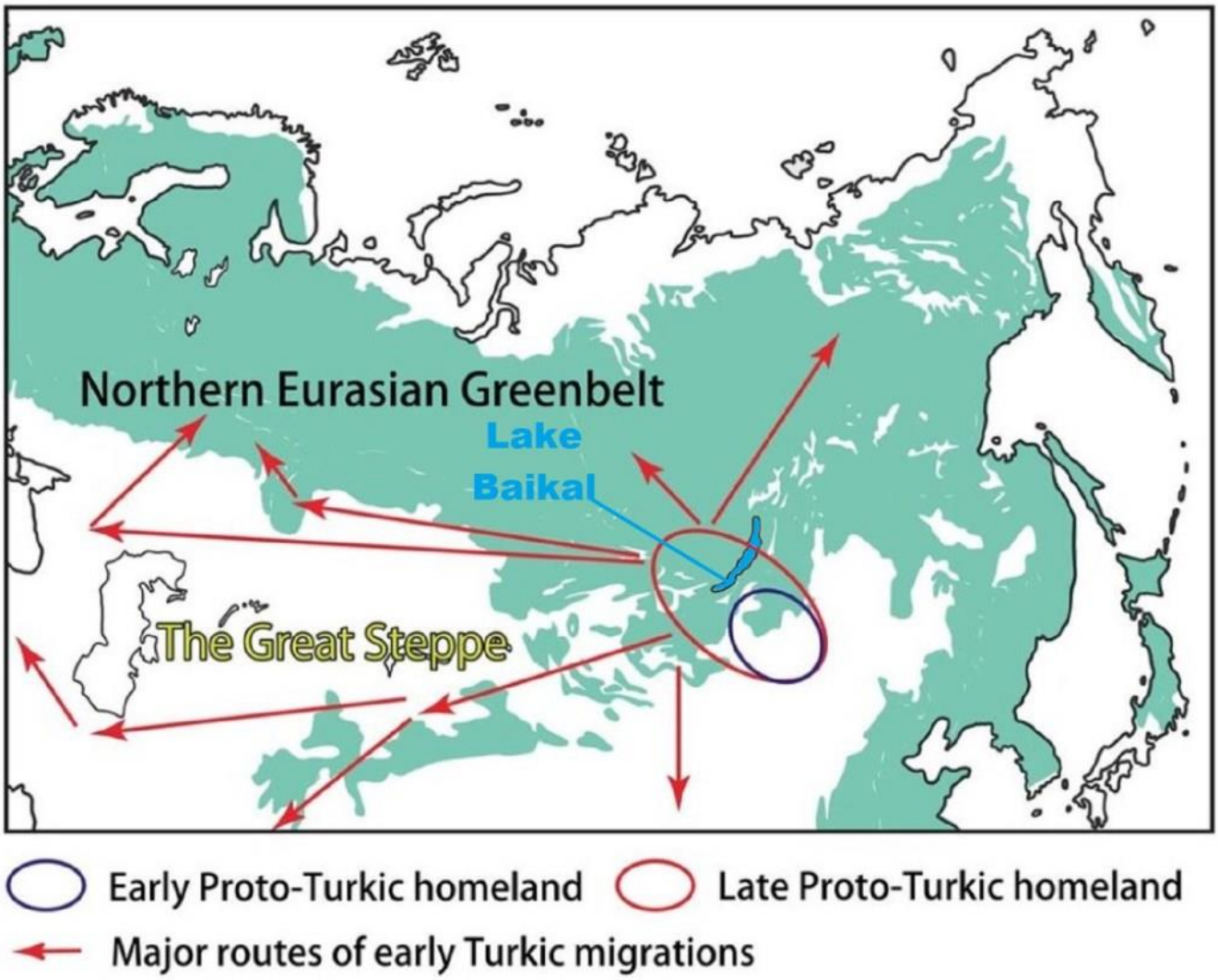
"Several linguists and geneticists suggest that the Uralic languages are related to various Siberian languages and possibly also some languages of northern Native Americans. A proposed family is named Uralo-Siberian, it includes Uralic, Yukaghir, Eskimo–Aleut (Inuit), possibly Nivkh, and Chukotko-Kamchatkan.

Haplogroup Q is found in nearly all Native Americans and nearly all of the Yeniseian Ket people (90%).” ref, ref

You can find some form of Shamanism, among Uralic, Transeurasian, Dené–Yeniseian, Chukotko-Kamchatkan, and Eskaleut languages.

My speculations of shamanism are its dispersals, after 24,000 to 4,000 years ago, seem to center on Lake Baikal and related areas. To me, the hotspot of Shamanism goes from west of Lake Baikal in the “Altai Mountains” also encompassing “Lake Baikal” and includes the “Amur Region/Watershed” east of Lake Baikal as the main location Shamanism seems to have radiated out from.

Shamanism Among the Peoples of the North: Uralic, Transeurasian, Dené–Yeniseian, Chukotko-Kamchatkan, and Eskaleut languages
Haplogroup N from China to Fennoscandia: Migrations and Relationship of Language (Dene-Yeniseian and Uralic), DNA, and Cultures



The homeland(s) and the early migrations of the Turkic peoples.

ref


Turkic languages, including also North Siberian Yakuts (but Dolgans are omitted), South Siberian areas, and also Central Asia. As they come from the north east.
Republic of Turkey

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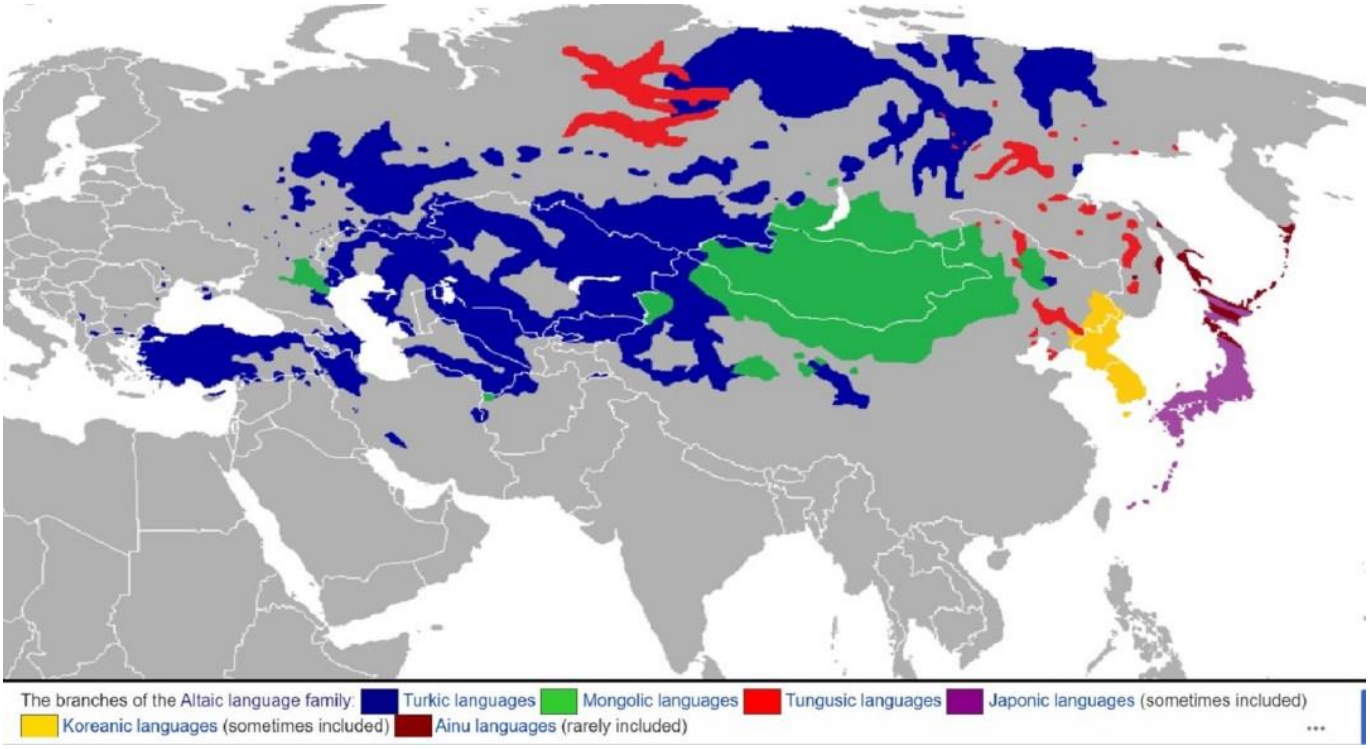

The branches of the Altaic language family: Turkic languages Mongolic languages Tungusic languages Japonic languages (sometimes included)
Koreanic languages (sometimes included) Ainu languages (rarely included)

ref

“Altaic (also called **Transeurasian**) is a proposed language family that would include the Turkic, Mongolic, and Tungusic language families and possibly also the Japonic and Koreanic languages. Speakers of these languages are currently scattered over most of Asia north of 35 °N and in some eastern parts of Europe, extending in longitude from Turkey to Japan. The group is named after the Altai mountain range in the center of Asia.” ref

The distribution and classification of the Transeurasian languages.

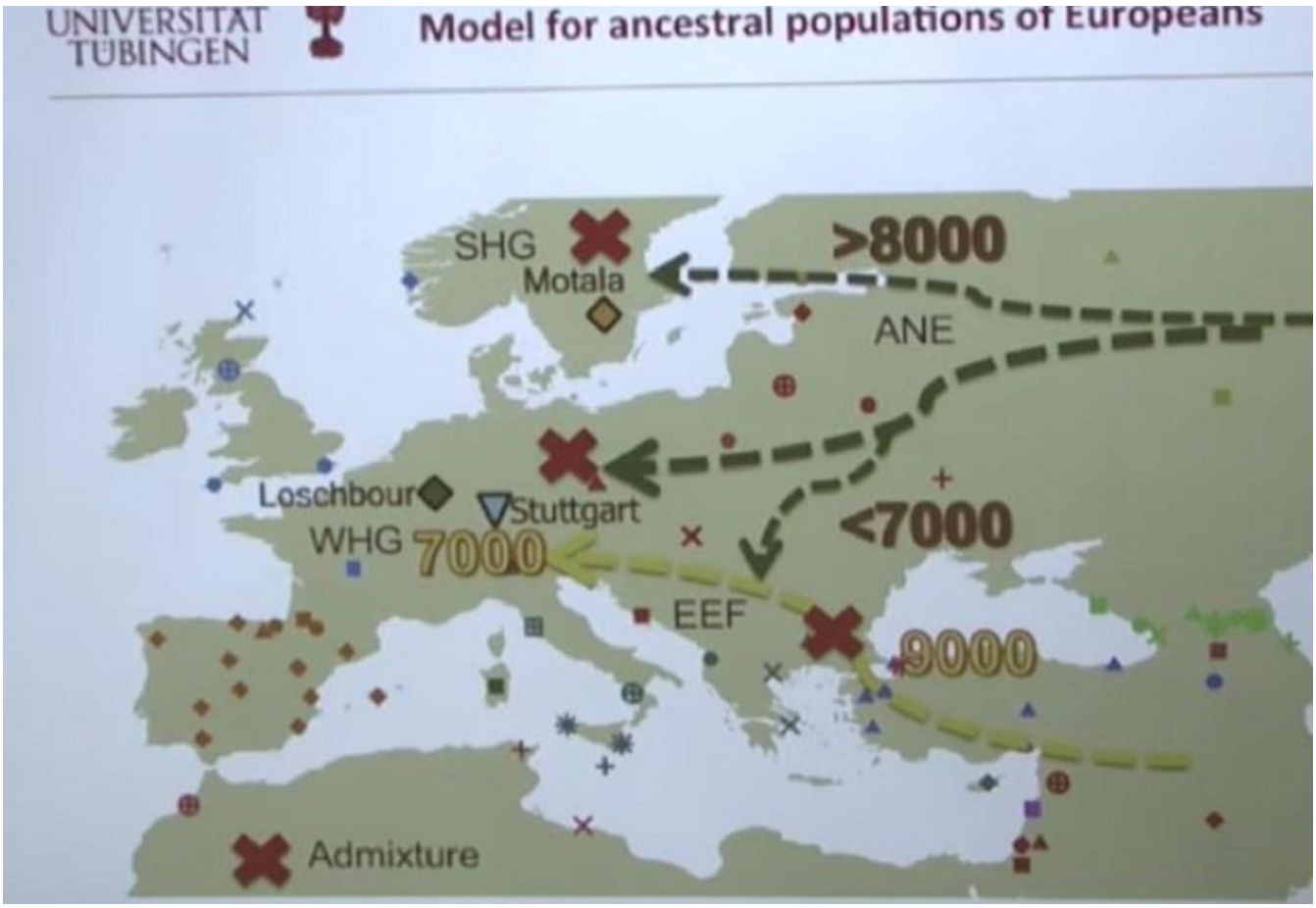
ref

Tracing population movements in ancient East Asia through the linguistics and archaeology of textile production – 2020

Abstract

“Archaeolinguistics, a field which combines language reconstruction and archaeology as a source of information on human prehistory, has much to offer to deepen our understanding of the Neolithic and Bronze Age in Northeast Asia. So far, integrated comparative analyses of words and tools for textile production are completely lacking for the Northeast Asian Neolithic and Bronze Age. To remedy this situation, here we integrate linguistic and archaeological evidence of textile production, with the aim of shedding light on ancient population movements in Northeast China, the Russian Far East, Korea, and Japan. We show that the transition to more sophisticated textile technology in these regions can be

associated not only with the adoption of millet agriculture but also with the spread of the languages of the so-called 'Transeurasian' family. In this way, our research provides indirect support for the Language/Farming Dispersal Hypothesis, which posits that language expansion from the Neolithic onwards was often associated with agricultural colonization." ref



Who were the Groups migrating and merging with the previous Groups of Europe 9,000 to 7,000 years ago?

Pic ref

Ancient Human Genomes…Present-Day Europeans – Johannes Krause (Video)

Ancient North Eurasian (ANE)
Eastern Hunter-Gatherer (EHG)
Western Hunter-Gatherers (WHG)

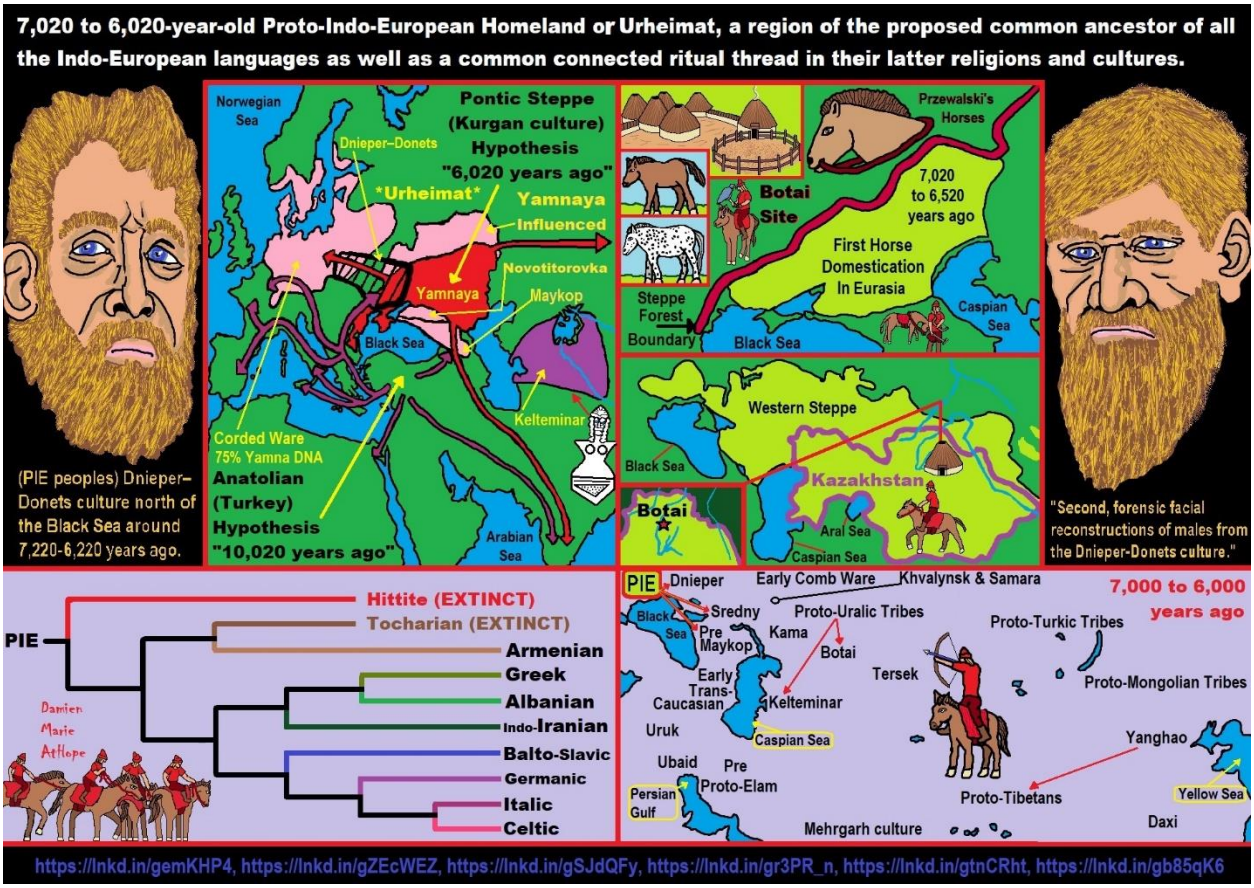
Scandinavian Hunter-Gatherer (SHG)
Early European Farmers (EEF)

A quick look at the Genetic history of Europe

"The most significant recent dispersal of modern humans from Africa gave rise to an undifferentiated "non-African" lineage by some 70,000-50,000 years ago. By about 50–40 ka a basal West Eurasian lineage had emerged, as had a separate East Asian lineage. Both basal East and West Eurasians acquired Neanderthal admixture in Europe and Asia. European early modern humans (EEMH) lineages between 40,000-26,000 years ago (Aurignacian) were still part of a large Western Eurasian "meta-population", related to Central and Western Asian populations. Divergence into genetically distinct sub-populations within Western Eurasia is a result of increased selection pressure and founder effects during the Last Glacial Maximum (LGM, Gravettian). By the end of the LGM, after 20,000 years ago, A Western European lineage, dubbed West European Hunter-Gatherer (WHG) emerges from the Solutrean refugium during the European Mesolithic. These Mesolithic hunter-gatherer cultures are substantially replaced in the Neolithic Revolution by the arrival of Early European Farmers (EEF) lineages derived from Mesolithic populations of West Asia (Anatolia and the Caucasus). In the European Bronze Age, there were again substantial population replacements in parts of Europe by the intrusion of Ancient North Eurasian (ANE) lineages from the Pontic–Caspian steppes. These Bronze Age population replacements are associated with the Beaker culture archaeologically and with the Indo-European expansion linguistically." ref

"As a result of the population movements during the Mesolithic to Bronze Age, modern European populations are distinguished by differences in WHG, EEF, and ANE ancestry. Admixture rates varied geographically; in the late Neolithic, WHG ancestry in farmers in Hungary was at around 10%, in Germany around 25%, and in Iberia as high as 50%. The contribution of EEF is more significant in Mediterranean Europe, and declines towards northern and northeastern Europe, where WHG ancestry is stronger; the Sardinians are considered to be the closest European group to the population of the EEF. ANE ancestry is found throughout Europe, with a maximum of about 20% found in Baltic people and Finns. Ethnogenesis of the modern ethnic groups of Europe in the historical period is associated with numerous admixture events, primarily those associated with the Roman, Germanic, Norse, Slavic, Berber, Arab and Turkish expansions. Research into the genetic history of Europe became possible in the second half of the 20th century, but did not yield results with a high resolution before the 1990s. In the 1990s, preliminary results became possible, but they remained mostly limited to studies of mitochondrial and Y-

chromosomal lineages. Autosomal DNA became more easily accessible in the 2000s, and since the mid-2010s, results of previously unattainable resolution, many of them based on full-genome analysis of ancient DNA, have been published at an accelerated pace." ref



Damien Marie AtHope's Art

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Proto-Indo-Europeans: Western Steppe Herders

"The **Proto-Indo-Europeans** are a hypothetical prehistoric population of Eurasia who spoke Proto-Indo-European (PIE), the ancestor of the Indo-European languages according to linguistic reconstruction. Knowledge of them comes chiefly from that linguistic reconstruction, along with material evidence from archaeology and archaeogenetics. The Proto-Indo-Europeans likely lived during the late Neolithic, or roughly the 4th millennium BCE. Mainstream scholarship places them in the Pontic–Caspian steppe zone in Eastern Europe (present-day Ukraine and southern Russia)." ref

“Some archaeologists would extend the time depth of PIE to the middle Neolithic (5500 to 4500 BCE or 7,522-6,522 years ago) or even the early Neolithic (7500 to 5500 BCE or 9,522-7,522 years ago), and suggest alternative location hypotheses. By the early second millennium BCE, descendants of the Proto-Indo-Europeans had reached far and wide across Eurasia, including Anatolia (Hittites), the Aegean (the linguistic ancestors of Mycenaean Greece), the north of Europe (Corded Ware culture), the edges of Central Asia (Yamnaya culture), and southern Siberia (Afanasievo culture).” ref

“While ‘Proto-Indo-Europeans’ is used in scholarship to designate the group of speakers associated with the reconstructed proto-language and culture, the term ‘Indo-Europeans’ may refer to any historical people that speak an Indo-European language. In the words of philologist Martin L. West, “If there was an Indo-European language, it follows that there was a people who spoke it: not a people in the sense of a nation, for they may never have formed a political unity, and not a people in any racial sense, for they may have been as genetically mixed as any modern population defined by language.” ref

“**Using linguistic reconstruction from old Indo-European languages such as Latin and Sanskrit, hypothetical features of the Proto-Indo-European language are deduced. Assuming that these linguistic features reflect the culture and environment of the Proto-Indo-Europeans, the following cultural and environmental traits are widely proposed:**

- pastoralism, including domesticated cattle, horses, and dogs
- agriculture and cereal cultivation, including technology commonly ascribed to late-Neolithic farming communities, e.g., the plow
- transportation by or across water
- the solid wheel, used for wagons, but not yet chariots with spoked wheels
- worship of a sky god, **Dyḗus Ph2tḗr* (lit. “sky father”; > Vedic Sanskrit *Dyáuṣ Pitṛ́*, Ancient Greek *Ζεύς (πατήρ) / Zeus (dyeus)*), vocative **dyeu ph2ter* (> Latin *Iūpiter*, Illyrian *Deipaturos*)
- oral heroic poetry or song lyrics that used stock phrases such as *imperishable fame* (**kléwos ńdʰgʷʰitom*) and the *wheel of the sun* (**sh2uens kʷekʷlos*).
- a patrilineal kinship-system based on relationships between men” ref

“A 2016 phylogenetic analysis of Indo-European folktales found that one tale, *The Smith and the Devil*, could be confidently reconstructed to the Proto-Indo-

European period. This story, found in contemporary Indo-European folktales from Scandinavia to India, describes a blacksmith who offers his soul to a malevolent being (commonly a devil in modern versions of the tale) in exchange for the ability to weld any kind of materials together. The blacksmith then uses his new ability to stick the devil to an immovable object (often a tree), thus avoiding his end of the bargain. According to the authors, the reconstruction of this folktale to PIE implies that the Proto-Indo-Europeans had metallurgy, which in turn "suggests a plausible context for the cultural evolution of a tale about a cunning smith who attains a superhuman level of mastery over his craft." ref

"Researchers have made many attempts to identify particular prehistoric cultures with the Proto-Indo-European-speaking peoples, but all such theories remain speculative. The scholars of the 19th century who first tackled the question of the Indo-Europeans' original homeland (also called *Urheimat*, from German), had essentially only linguistic evidence. They attempted a rough localization by reconstructing the names of plants and animals (importantly the beech and the salmon) as well as the culture and technology (a Bronze Age culture centered on animal husbandry and having domesticated the horse)." ref

"The scholarly opinions became basically divided between a European hypothesis, positing migration from Europe to Asia, and an Asian hypothesis, holding that the migration took place in the opposite direction. In the early 20th century, the question became associated with the expansion of a supposed "Aryan race", a now-discredited theory promoted during the expansion of European empires and the rise of "scientific racism". The question remains contentious within some flavors of ethnic nationalism (see also Indigenous Aryans)." ref
"A series of major advances occurred in the 1970s due to the convergence of several factors. First, the radiocarbon dating method (invented in 1949) had become sufficiently inexpensive to be applied on a mass scale.
Through dendrochronology (tree-ring dating), pre-historians could calibrate radiocarbon dates to a much higher degree of accuracy. And finally, before the 1970s, parts of Eastern Europe and Central Asia had been off-limits to Western scholars, while non-Western archaeologists did not have access to publications in Western peer-reviewed journals." ref

"The pioneering work of Marija Gimbutas, assisted by Colin Renfrew, at least partly addressed this problem by organizing expeditions and arranging for more academic collaboration between Western and non-Western scholars. The Kurgan hypothesis, as of 2017 the most widely held theory, depends on linguistic and archaeological evidence, but is not universally accepted. It suggests PIE origin in the Pontic–Caspian steppe during the Chalcolithic. A minority of scholars prefer the Anatolian hypothesis, suggesting an origin in Anatolia during the Neolithic.

Other theories (Armenian hypothesis, Out of India theory, Paleolithic Continuity Theory, Balkan hypothesis) have only marginal scholarly support." ref

"In regard to terminology, in the 19th and early 20th centuries, the term *Aryan* was used to refer to the Proto-Indo-Europeans and their descendants. However, *Aryan* more properly applies to the Indo-Iranians, the Indo-European branch that settled parts of the Middle East and South Asia, as only Indic and Iranian languages explicitly affirm the term as a self-designation referring to the entirety of their people, whereas the same Proto-Indo-European root (*aryo-) is the basis for Greek and Germanic word forms which seem only to denote the ruling elite of Proto-Indo-European (PIE) society." ref

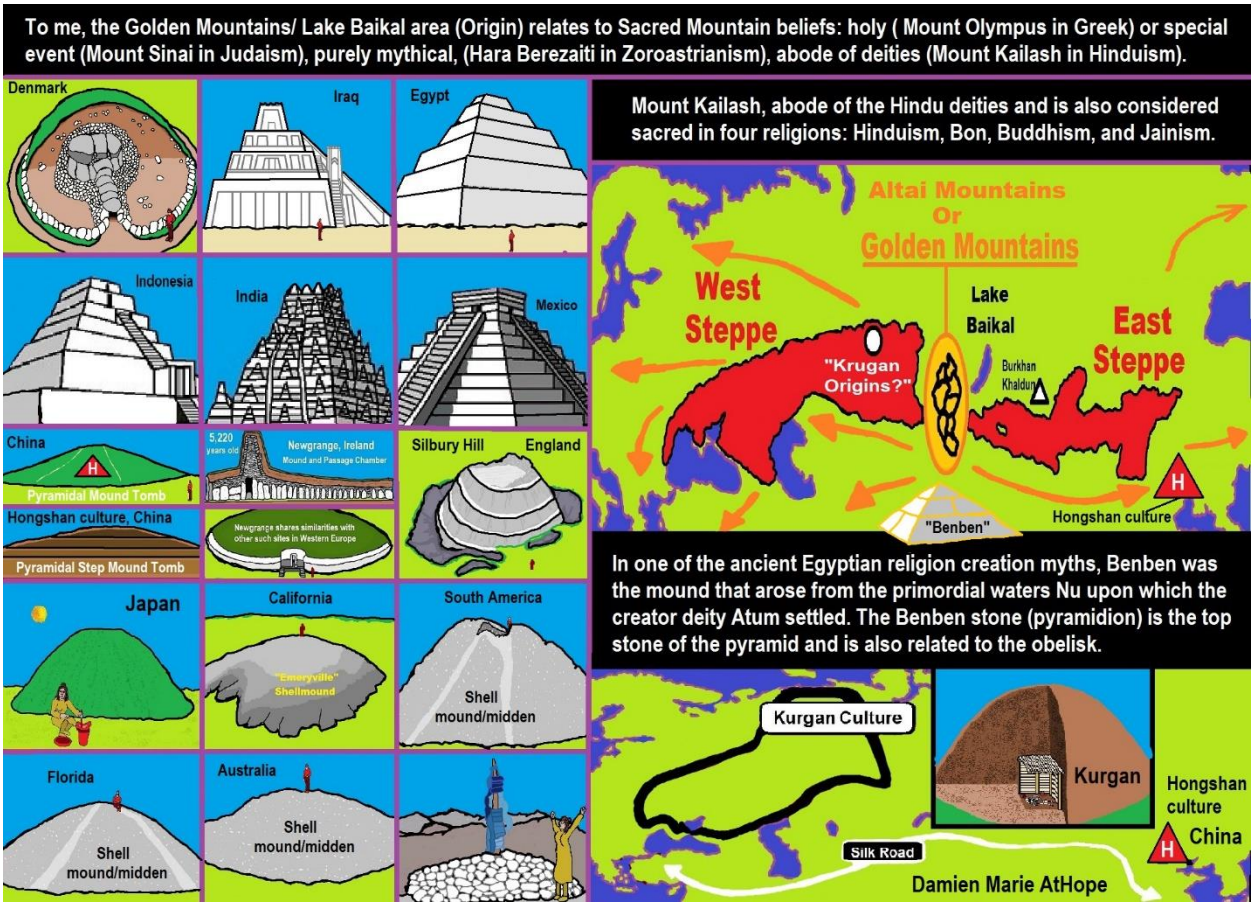
"In fact, the most accessible evidence available confirms only the existence of a common, but vague, socio-cultural designation of "nobility" associated with PIE society, such that Greek socio-cultural lexicon and Germanic proper names derived from this root remain insufficient to determine whether the concept was limited to the designation of an exclusive, socio-political elite, or whether it could possibly have been applied in the most inclusive sense to an inherent and ancestral "noble" quality which allegedly characterized all ethnic members of PIE society. Only the latter could have served as a true and universal self-designation for the Proto-Indo-European people." ref

"By the early twentieth century, this term had come to be widely used in a racist context referring to a hypothesized white, blonde, and blue-eyed "master race" (*Herrenrasse*), culminating with the pogroms of the Nazis in Europe. Subsequently, the term *Aryan* as a general term for Indo-Europeans has been largely abandoned by scholars (though the term *Indo-Aryan* is still used to refer to the branch that settled in Southern Asia)." ref

Proto-Indo-European Urheimat hypotheses and Indo-European migrations

"According to some archaeologists, PIE speakers cannot be assumed to have been a single, identifiable people or tribe, but were a group of loosely related populations ancestral to the later, still partially prehistoric, Bronze Age Indo-Europeans. This view is held especially by those archaeologists who posit an original homeland of vast extent and immense time depth. However, this view is not shared by linguists, as proto-languages, like all languages before modern transport and communication, occupied small geographical areas over a limited time span, and were spoken by a set of close-knit communities—a tribe in the broad sense. Researchers have put forward a great variety of proposed locations for the first speakers of Proto-Indo-European. Few of these hypotheses have

survived scrutiny by academic specialists in Indo-European studies sufficiently well to be included in modern academic debate.” ref



Damien Marie AtHope’s Art

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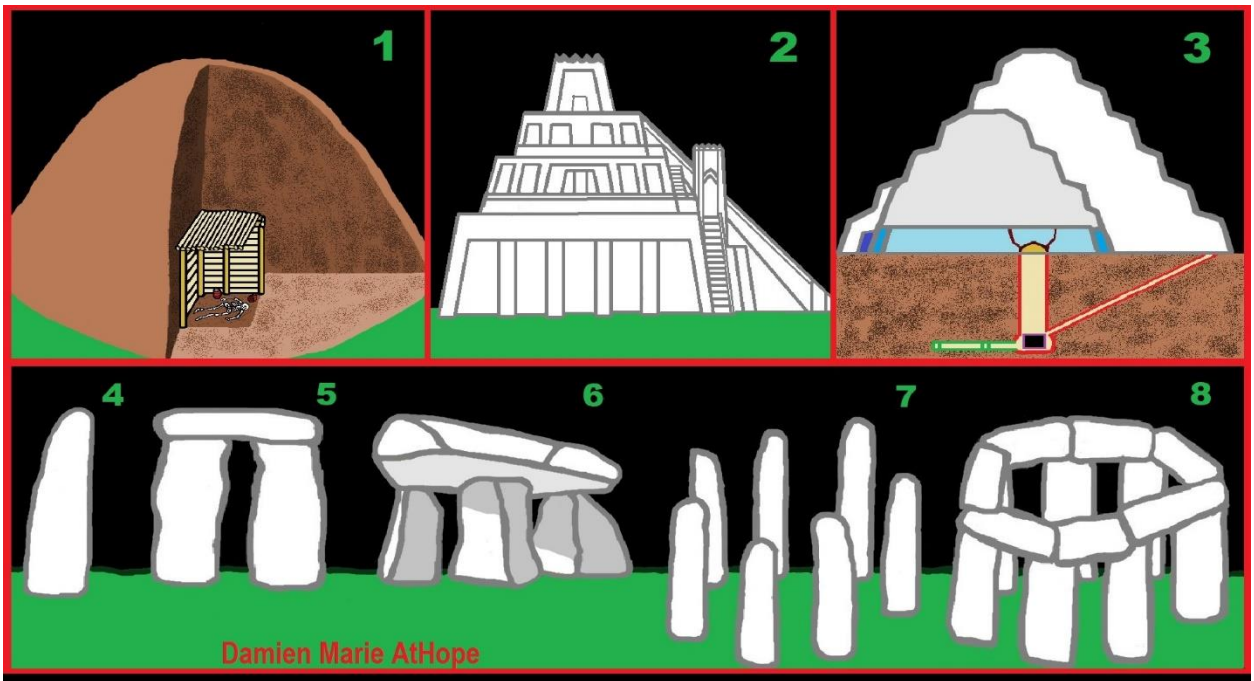

1. Kurgan, 2. Ziggurat, 3. Pyramid, 4. Menhir, 5. Trilithon, 6. Dolman, 7. Kromlech, 8. Kromlech of Trilithons

Masseboth similar but much smaller than a European Menhir, dates to around 13,000-11,000 years ago in the Near East. Kurgan a burial mound over a timber burial chamber, dates to around 7,000/6,000 years ago. Dolmen a single-chamber ritual megalith, dates to around 7,000/6,000 years ago. Ziggurat a multi-platform temple around 4,900 years ago. Pyramid a multi-platform tomb, dates to around 4,700 years ago. #3 is a Step Pyramid (or proto pyramid) for the burial of Pharaoh Djoser it went through several revisions and redevelopments. First are three layers of Mastaba "house of eternity" a flat-roofed rectangular structure, then two step pyramid one on top the other, showing the evolution of ideas.

https://lnkd.in/g992yMu https://lnkd.in/gF3J_Nk https://lnkd.in/gZ8zZn8 https://lnkd.in/g-6ge4A https://lnkd.in/gYnsSbr https://lnkd.in/g84HvJU

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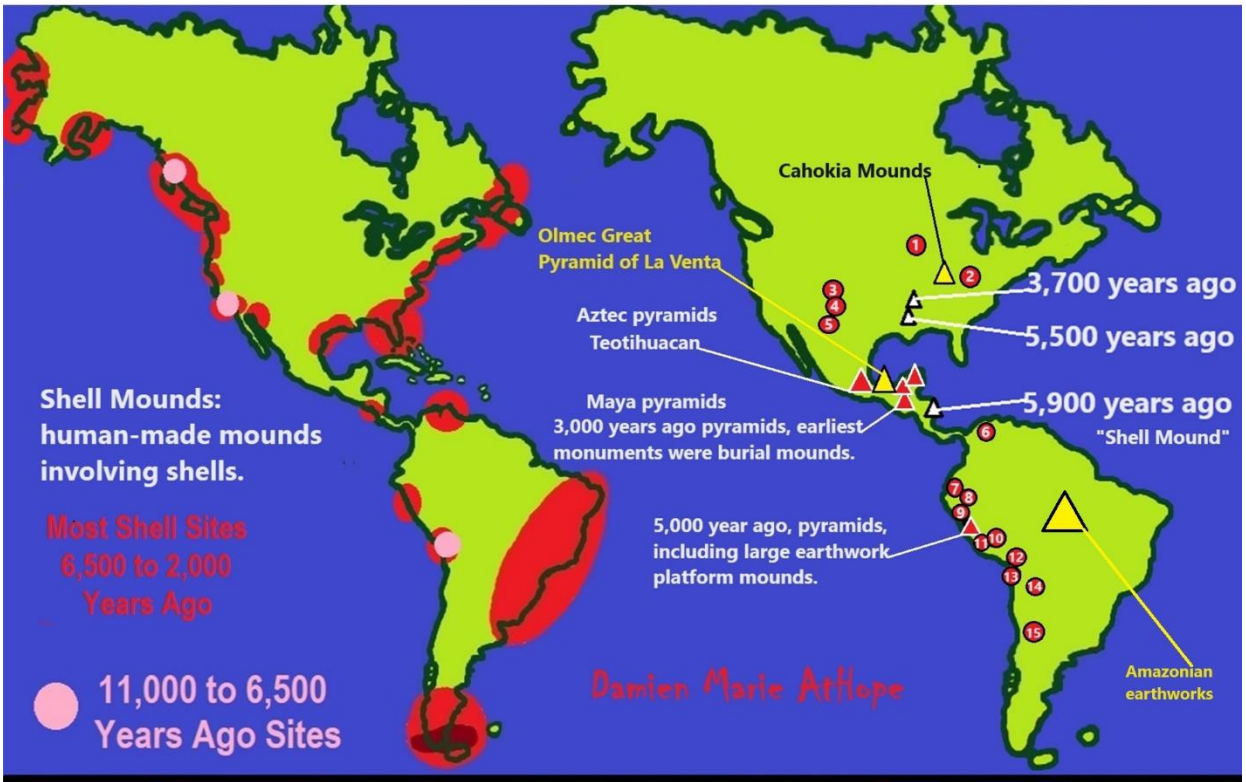
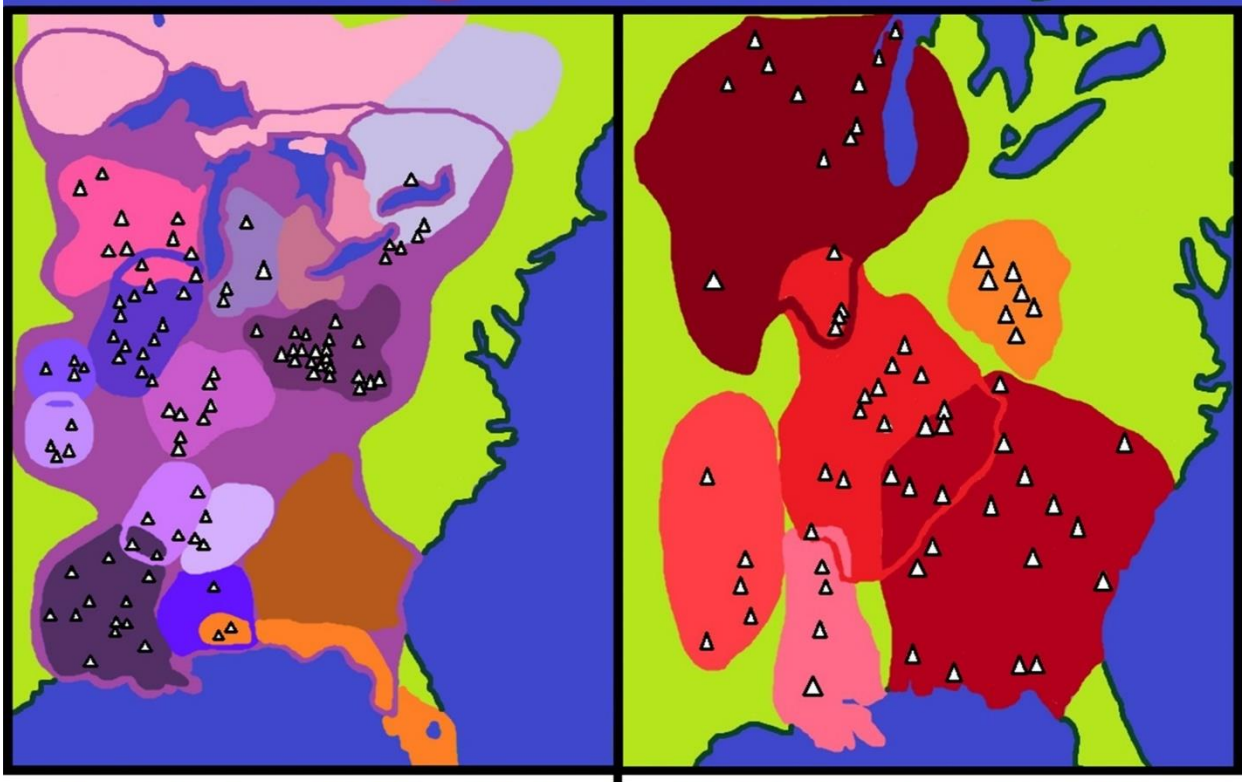
Shell Mounds, Earth Mounds, Raised Platforms, and Pyramids: which I think are somewhat related in mythology thinking and culture beliefs





Hopewell cultures 100 BCE to 500 CE

Mississippian cultures 800 to 1600 CE

Damien Marie AtHope's Art

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1. Medicine Wheel
2. Serpent Mound
3. Mesa Verde
4. Chaco Canyon
5. Casas Grandes/Paquime
6. Ciudad Perdida "lost city"; Teyuna
7. Ingapirca "Inca"
8. Chavín de Huántar "pre-Inca"
9. Sacred City of Caral-Supe *Caral culture developed between 3000 – 1800 BCE*
10. Machu Picchu
11. Nazca Lines
12. Sacsayhuamán
13. Tiwanaku/Tiahuanaco
14. Atacama Giant/Lines
15. Pucará de Tilcara "pre-Inca"

Eighth Millennium Pottery from a Prehistoric Shell Midden in the Brazilian Amazon

9,000 years ago in the coastal city of Sao Luis, northeastern Brazil: stone tools, ceramic shards, decorated shells, and bones

"The top layer was left by the Tupinamba people, who inhabited the region when European colonizers founded Sao Luis in 1612. Then comes a layer of artifacts typical of Amazon rainforest peoples, followed by a "sambaqui": a mound of pottery, shells and bones used by some Indigenous groups to build their homes or bury their dead. Beneath that, about 6.5 feet below the surface, lies another layer, left by a group that made rudimentary ceramics and lived around 8,000 to 9,000 years ago, based on the depth of the find. Far older than the oldest documented "pre-sambaqui" settlement found so far in the region, which dates to 6,600 years ago." ref

Sambaqui (Shell Mound) Societies of Coastal Brazil

“Sambaquis (the Brazilian term for shell mounds, derived from the Tupi language) are widely distributed along the shoreline of Brazil and were noted in European accounts as early as the sixteenth century. They typically occur in highly productive bay and lagoon ecotones where the mingling of salt and fresh waters supports mangrove vegetation and abundant shellfish, fish, and aquatic birds. More than one thousand sambaqui locations are recorded in Brazil’s national register of archaeological sites, but represent a fraction of the original number because colonial through modern settlements coincide with these favorable environments. Although sambaquis are of variable scale overall, massive shell mounds are characteristic of Brazil’s southern coast.” ref

“The term “sambaqui” is applied to cultural deposits of varying size and stratigraphy in which shell is a major constituent, undoubtedly encompassing accumulations with a range of functions and origins. Proportions of soil, sand, shell, and the kinds of cultural inclusions and features in sambaquis also are variable. Small sambaquis often consist of shell layers over sandy substrates or sequences of shell and sand layers, with or without signs of burning or significant numbers of artifacts. Larger shell mounds typically have horizontally and vertically complex stratigraphy, including alternating sequences of shell deposits, narrower and darker layers of charcoal and burned bone that mark occupation surfaces, and clusters of burials, hearths, and postholes descending from these surfaces.” ref

The Chronology and Relationships of the Earliest Ceramic Complexes in the New World, 6000-1500 BCE. by John W Hoopes

Mound cultures are some of the most amazing things in North America and so-called “Americans” don’t care, think it’s Aliens, or believe some mythical white people from the minds of bigots. All Americans should have to learn about Indigenous American history.

“Many pre-Columbian cultures in North America were collectively termed “**Mound Builders**” ref

***Bleera Kaanu*-Shell Mound Nicaragua 5,900 years ago human-made shell mound**

Watson Brake Louisiana 5,500 years ago human-made mounds

Caral culture 5,000 years ago pyramids, large earthwork platform mounds, and sunken circular plazas

"Archaeological evidence suggests use of textile technology and, possibly, the worship of common deity symbols, both of which recur in pre-Columbian Andean cultures. A sophisticated government is presumed to have been required to manage the ancient Caral." ref, ref

"The alternative name, Caral–Supe, is derived from the city of Caral in the Supe Valley, a large and well-studied Caral–Supe civilization site. Complex society in the Caral–Supe arose a millennium after Sumer in Mesopotamia, was contemporaneous with the Egyptian pyramids, and predated the Mesoamerican Olmec by nearly two millennia. In archaeological nomenclature, Caral–Supe is a pre-ceramic culture of the pre-Columbian Late Archaic; it completely lacked ceramics and no evidence of visual art has survived. The most impressive achievement of the civilization was its monumental architecture, including large earthwork platform mounds and sunken circular plazas." ref

Poverty Point Louisiana 3,700 years ago human-made mounds

Olmec La Venta Great pyramid 2,394 years ago human-made earth and clay mound

"Olmecs can be divided into the Early Formative (1800-900 BCE), Middle Formative (900-400 BCE), and Late Formative (400 BCE-200 CE). Olmecs are known as the "mother culture" of Mesoamerica, meaning that the Olmec civilization was the first culture that spread and influenced Mesoamerica. The spread of Olmec culture eventually led to cultural features found throughout all Mesoamerican societies. Rising from the sedentary agriculturalists of the Gulf Lowlands as early as 1600 BCE in the Early Formative period, the Olmecs held sway in the Olmec heartland, an area on the southern Gulf of Mexico coastal plain, in Veracruz and Tabasco. Prior to the site of La Venta, the first Olmec site of San Lorenzo dominated the modern day state of Veracruz (1200-900 BCE)." ref

"Unlike later Maya or Aztec cities, La Venta was built from earth and clay—there was little locally abundant stone for the construction. Large basalt stones were brought in from the Tuxtla Mountains, but these were used nearly exclusively for monuments including the colossal heads, the "altars" (actually thrones), and various stelae. For example, the basalt columns that surround Complex A were quarried from Punta Roca Partida, on the Gulf coast north of the San Andres Tuxtla volcano. "Little more than half of the ancient city survived

modern disturbances enough to map accurately." Today, the entire southern end of the site is covered by a petroleum refinery and has been largely demolished, making excavations difficult or impossible. Many of the site's monuments are now on display in the archaeological museum and park in the city of Villahermosa, Tabasco." ref

"Complex C, "The Great Pyramid," is the central building in the city layout, is constructed almost entirely out of clay, and is visible from a distance. The structure is built on top of a closed-in platform—this is where Blom and La Farge discovered Altars 2 and 3, thereby discovering La Venta and the Olmec civilization. A carbon sample from a burned area of the Structure C-1's surface resulted in the date of 394 ± 30 BCE." ref

"One of the earliest pyramids known in Mesoamerica, the Great Pyramid is 110 ft (34 m) high and contains an estimated 100,000 cubic meters of earth fill. The current conical shape of the pyramid was once thought to represent nearby volcanoes or mountains, but recent work by Rebecca Gonzalez Lauck has shown that the pyramid was in fact a rectangular pyramid with stepped sides and inset corners, and the current shape is most likely due to 2,500 years of erosion. The pyramid itself has never been excavated, but a magnetometer survey in 1967 found an anomaly high on the south side of the pyramid. Speculation ranges from a section of burned clay to a cache of buried offerings to a tomb." ref

"Complex A is a mound and plaza group located just to the north of the Great Pyramid (Complex C). The centerline of Complex A originally oriented to Polaris (true north) which indicates the Olmec had some knowledge of astronomy. Surrounded by a series of basalt columns, which likely restricted access to the elite, it was erected in a period of four construction phases that span over four centuries (1000 – 600 BCE). Beneath the mounds and plazas were found a vast array of offerings and other buried objects, more than 50 separate caches by one count, including buried jade, polished mirrors made of iron-ores, and five large "Massive Offerings" of serpentine blocks. It is estimated that Massive Offering 3 contains 50 tons of carefully finished serpentine blocks, covered by 4,000 tons of clay fill." ref

"Also unearthed in Complex A were three rectangular mosaics (also known as "Pavements") each roughly 4.5 by 6 metres (15 by 20 feet) and each consisting of up to 485 blocks of serpentine. These blocks were arranged horizontally to form what has been variously interpreted as an ornate Olmec bar-and-four-dots motif, the Olmec Dragon, a very abstract jaguar mask, a cosmogram, or a symbolic map of La Venta and environs. Not intended for display, soon after completion these pavements were covered over with colored clay and then many feet of earth." ref

“Five formal tombs were discovered within Complex A, one with a sandstone sarcophagus carved with what seemed to be an crocodilian earth monster. Diehl states that these tombs “are so elaborate and so integrated to the architecture that it seems clear that Complex A really was a mortuary complex dedicated to the spirits of deceased rulers.” ref

Maya 3,000 years ago mounds, raised platforms, pyramids

“The Maya are a people of southern Mexico and northern Central America (Guatemala, Belize, western Honduras, and El Salvador) (1000 BCE, approximately 3,000 years ago) they were building pyramidal-plaza ceremonial architecture. The earliest monuments consisted of simple burial mounds, the precursors to the spectacular stepped pyramids from the Terminal Pre-classic period and beyond. These pyramids relied on intricate carved stone in order to create a stair-stepped design. Many of these structures featured a top platform upon which a smaller dedicatory building was constructed, associated with a particular Maya deity. Maya pyramid-like structures were also erected to serve as a place of interment for powerful rulers. Maya pyramidal structures occur in a great variety of forms and functions, bounded by regional and periodical differences.” ref

“Hopewell mtDNA, showed clear links between Adena culture, and earlier Glacial Kame culture, confirming Hopewell culture as the descendants of Adena culture (circa 800 BCE to CE 1) who were, in turn, descended from Archaic cultures (circa 3000-500 BCE).” ref

“The **Glacial Kame culture** was a culture of Archaic people in North America that occupied southern Ontario, Michigan, Ohio, and Indiana from around 8000 to 1000 BCE. The name of this culture derives from its members’ practice of burying their dead atop glacier-deposited gravel hills. Among the most common types of artifacts found at Glacial Kame sites are shells of marine animals and goods manufactured from a copper ore, known as *float copper*. Other regional cultures include the Maple Creek Culture of southwestern Ohio, Red Ocher Culture and Old Copper Culture of Wisconsin.” ref

“Glacial Kame culture produced ceramics, as seen in the discovery of basic pottery at the Zimmerman site near Roundhead, Ohio. Excavation of Glacial Kame sites frequently yields few projectile points — some of the most important sites have yielded no projectile points at all — and their few points that have been found are of diverse styles. For this reason, it appears that different groups of Glacial Kame peoples independently developed different methods of

manufacturing their projectile points. This diversity appears even in the culture's heartland in Champaign, Hardin, and Logan counties in western Ohio; one large Logan County site yielded just three points, each of which was significantly different from the other two." ref

"Glacial Kame Culture, Late Archaic cultural grouping found around Michigan, Ohio, Indiana, and southern Ontario in the period c.1500–1000 BCE. Characterized by mortuary rituals which involved interring the dead in natural hills of glacial gravel. Grave goods of copper ornaments and marine shells were sometimes included and attested to long-distance trade links." ref

"The **Adena "mound-building" culture** was a Pre-Columbian Native American culture that existed from 500 BCE to 100 CE, in a time known as the Early Woodland period. The Adena culture refers to what were probably a number of related Native American societies sharing a burial complex and ceremonial system. The Adena culture was centered on the location of the modern state of Ohio, but also extended into contiguous areas of northern Kentucky, eastern Indiana, West Virginia, and parts of extreme western Pennsylvania. The culture is the most prominently known of a number of similar cultures in eastern North America that began mound building ceremonialism at the end of the Archaic period." ref

Amazonian Earthworks

"More than 1,100 ancient Amazonian earthworks, with over 1,050 geoglyphs and zanjas plus over 50 mound villages documented in both the Excel file and the KML placemarks file linked above. Almost all earthworks are outlined, along with highlighting of 1,000 lines, visible ancient roads and embankments. Hundreds of Geoglyphs Discovered in the Amazon." ref

"Cahokia Mounds were involved in the largest and most influential urban settlement of the Mississippian culture, which developed advanced societies across much of what is now the Central and the Southeastern United States, beginning more than 1,000 years before European contact." ref

In response to my art above **John Hoopes @KUHoopes Archaeologist** said, **"Nice! Since you have the Ohio mound groups, you need to start adding the ones in Amazonia. Hundreds of Geoglyphs Discovered in the Amazon"**

My response, I was not aware of the Amazonia mounds, thanks. The shell mound erected above the woman's grave buried in what is now Nicaragua nearly 6,000 years ago. I thought this was cool.

John Hoopes @KUHoopes Archaeologist – "Yes, it is! The revelation of thousands of mounds and ditch-and-embankment structures (unfortunately named "geoglyphs") is radically changing our understanding of ancient South America."

My response, I totally agree, great stuff, made by the indigenous, and why I get upset when people like Graham Hancock or Ancient Aliens, say it was someone else.

John Hoopes @KUHoopes Archaeologist – "James Q. Jacobs' work in Google Earth is amazing. If you don't know it, you really should check it out."

My response, I will check it out. Thanks for your help.

John Hoopes @KUHoopes Archaeologist – "Sure thing! Thanks for YOUR help in getting correct and accurate information out to a wide audience!"

My response, I appreciate your support.

John Hoopes (Department of Anthropology, University of Kansas), who Graham Hancock thinks is "the most vehement and insulting of all archaeologists" and I think is great, addresses Pseudoarchaeology, Pseudohistory, and Pseudoscience

Your Shell Mound blog post, "looks good, I did want to make one clarification. The Caddo people don't see themselves (or their ancestors) as being a "Mississippian" culture. I see on the drawn map that a few sites (particularly

Spiro) are shown for “Mississippian cultures”. I assume that is from the H. Roe’s map from 2010. That map was done before Caddo Nation worked with archaeologists to re-classify the social systems/traditions of their ancestors during that time and found that the “Mississippian” label didn’t align with the cultural systems of their ancestors. It is not a big deal but just something to be aware of in the future. I only know because I work with Caddo Nation now and rather knowledge about the latest research of the Caddo.” – **Jeffrey (JT) Lewis @jtlewis_arch Southeastern archaeologist. MA, RPA. PhD Grad Student at OU.**

Jeffrey (JT) Lewis is a southeastern archaeologist and Ph.D. Grad Student who makes archaeology YouTube videos

Shell Mounds, Earth Mounds, Raised Platforms, and Pyramids: which I think are somewhat related in mythology thinking and culture beliefs

The world's oldest-known promontory fort: Amnya and the acceleration of hunter-gatherer diversity in Siberia 8000 years ago

ref

8,000 years ago in Siberia, the World's oldest known fortress (fortified structure) was constructed by hunter-gatherers.

"Archaeologists have long associated fortresses with permanent agricultural settlements. However, this cluster of fortified structures reveals that prehistoric groups were constructing protective edifices much earlier than originally thought. Located along the Amnya River in western Siberia, remains of the Amnya fort include roughly 20 pit-house depressions scattered across the site, which is divided into two sections: Amnya I and Amnya II. "One of the Amnya fort's most astonishing aspects is the discovery that approximately 8,000 years ago, hunter-gatherers in the Siberian Taiga built intricate defense structures," Schreiber said. "This challenges traditional assumptions that monumental constructions were solely the work of agricultural communities." It's unknown what triggered the need for these fortified structures in the first place, but the strategic location overlooking the river would have not only been an ideal lookout point for potential threats but also allowed hunter-gatherers to keep tabs on their fishing and hunting grounds, the researchers noted." ref

"Hunter-gatherers built the oldest known fort in the world about 8,000 years ago in Siberia, a new study finds. "It remains uncertain whether these constructions were commissioned by those in authority or if the entire community collaborated in constructing them for the purpose of protecting people or valuables," Schreiber said. "Ethnohistorical records offer a nuanced comprehension of these forts, disclosing various potential reasons for fortifying residences." Ancient forts were built for a number of reasons, according to these records, "such as securing possessions or individuals, handling armed conflicts, addressing imbalances in attacker-defender ratios, thwarting raids and functioning as elaborate signals by influential chiefs," Schreiber said." ref

So, this almost 8,000-year-old war evidence is just a little bit before the 7,000 to 5,000 years ago, time of clan violence and World War 0. When it went down to 14 women to 1 man in genetics due to wars.

- "**6200 – 6000 BCE or 8,200 to 8,000 years ago:** The 8.2-kiloyear event, involved a rapid cooling, it was a sudden decrease of global temperatures, probably caused by the final collapse of the Laurentide Ice Sheet, which led to drier conditions in East Africa and Mesopotamia. In West Asia, especially Mesopotamia, the 8.2-kiloyear event was a 300-year aridification and cooling episode, which may have

provided the natural force for Mesopotamian irrigation agriculture and surplus production, which were essential for the earliest formation of classes and urban life. Lacustrine sediment records show that Western Siberia underwent humidification and the Tarim Basin shows a major dry spell during the 8.2 ka event." ref, ref

- "**6200 – 5600 BCE or 8,200 to 7,600 years ago:** Sudden rise in sea level (Meltwater pulse 1C) by 6.5 m (21 ft) in less than 140 years; this concludes the early Holocene sea level rise and sea level remains largely stable throughout the Neolithic." ref
- "**6100 BCE or 8,100 years ago:** Great Britain had become an island." ref
- "**6,000 BCE or 8,000 years ago:** Approximately 8,000 years ago (c. 6000 BCE), a massive volcanic landslide off Mount Etna, Sicily, caused a megatsunami that devastated the eastern Mediterranean coastline on the continents of Asia, Africa, and Europe." ref
- "**6,000 BCE or 8,000 years ago:** Neolithic culture and technology had spread from the Near East and into Eastern Europe by 6000 BC. Its development in the Far East grew apace and there is increasing evidence through the millennium of its presence in prehistoric Egypt and the Far East. In much of the world, however, including Northern and Western Europe, people still lived in scattered Palaeolithic hunter-gatherer communities." ref
- "**6,000 BCE or 8,000 years ago:** The oldest fort is in Siberia around 6000 BCE." ref
- "**5500 BCE or 7,500 years ago:** Copper smelting in evidence in Pločnik and Belovode, Serbia." ref

"Four identified cultures starting around 5300 BCE or 7,300 years ago, were the Dnieper-Donets, the Narva (eastern Baltic), the Ertebølle (Denmark and northern Germany), and the Swifterbant (Low Countries). They were linked by a common pottery style that had spread westward from Asia: starting in south China, then the Lake Baikal area of Siberia, then west to Europe and is sometimes called "ceramic Mesolithic", distinguishable by a point or knob base and flared rims." ref, ref, ref, ref

“The Baikal area, has a long history of human habitation. Some 160 km northwest of the lake, remains of a young human male known as **MA-1** or “Mal’ta Boy” are indications of local habitation by the Mal’ta–Buret’ culture ca. 24,000 years old **(who I think were involved in Shamanism and may have by their descendants or those with related DNA spread shamanism all over)**.” ref

“Siberian cultural identity is **closely connected with the mythology and ancient religion of the indigenous peoples of Siberia – shamanism**, whose rituals, images, symbols, and motifs are often manifested in the clients’ dreams.” ref

“The earliest Indigenous peoples of Siberia were hunter-gatherers distantly related to modern Europeans, and diverged from a shared ancestral population around 38kya before populating Siberia. In Siberia, they received geneflow from an East-Eurasian population, most closely related to the 40kya old Tianyuan man (c. 22-50%), representing a deep sister lineage of contemporary East Asian people, giving rise to a distinct Siberian lineage known as Ancient North Eurasian (such as the Mal’ta–Buret’ culture), populations carrying Ancient North Eurasian-related ancestry were probably widely distributed across northeast Eurasia.” ref

“The earliest known archaeological finds from Siberia date to the Lower Palaeolithic. In various places in West Siberia, the Baikal region and Yakutia, storage places from early Neolithic times have been found, which often remained in use for centuries. Alongside tent settlements which leave no traces in the ground, there were also huts, often dug slightly into the ground, whose walls and roofs were made of animal bone and reindeer antlers. Tools and weapons were mostly made from flint, slate, and bone, with few discernable differences between them despite their immense chronological and geographical scope. In some settlements, early artworks have been found, which consist of human, animal, and abstract sculptures and carvings. The Palaeolithic and Mesolithic inhabitants of Siberia were hunter-gatherers, whose prey consisted of mammoths and reindeer, and occasionally fish as well. In the 6th millennium BCE, pottery spread across the whole of Siberia, which scholars treat as the beginning of the Siberian Neolithic. Unlike Europe and the Near East, this event did not mark a major change in lifestyle, economy, or culture.” ref

“The last historical population movement can be associated with the Neo-Siberian expansion outgoing from Northeast Asia (15,000 years ago), and contributed ancestry to Indigenous groups throughout Siberia as well as to Native Americans, associated with the expansion of Paleo-Eskimo, and Eskimo-Aleut groups. Modern Indigenous peoples of Siberia derive varying degrees of ancestry

from these three layers, although the Ancient North Eurasian-like ancestry has been largely replaced." ref

"The increase in cases of interpersonal violence from the Mesolithic period is most likely related to better preservation and the much higher number of burials and more complete skeletons. Violence is present not only in recent hunter-gatherers and nomadic groups but also among Mesolithic hunter-gatherers." ref

"From the Neolithic or early in the Chalcolithic, sedentary groups in which pastoralism played an important economic role developed in southwestern Siberia. The transition to the new economic system and to sedentarism was very smooth. Subsequently, it spread to the Baikal region, where the influence of northern China may also have played a role. All horse nomad cultures shared the burial of the dead in barrow graves which are known as *kurgans*." ref

Bridging the Boreal Forest: Siberian Archaeology and the Emergence of Pottery among Prehistoric Hunter-Gatherers of Northern Eurasia

- **Globalization and the Emergence of Ceramic-using Hunter-gatherers in Northern Eurasia**
- **A comparative perspective on the 'western' and 'eastern' Neolithics of Eurasia: Ceramics; agriculture and sedentism**
- **The transmission of pottery technology among prehistoric European hunter-gatherers**

"The **Dnieper–Donets culture complex (DDCC)** (ca. 5th—4th millennium BCE) was a Mesolithic and later Neolithic culture which flourished north of the Black Sea ca. 5000-4200 BCE or 7,000 to 6,200 years ago. It has many parallels with the Samara culture, and was succeeded by the Sredny Stog culture. Striking similarities with the Khvalynsk culture have also been detected. The Dnieper–Donets culture was originally a hunter-gatherer culture. David Anthony (2007: 155) dated the beginning of the Dnieper–Donets culture as roughly between 5800/5200 BCE or 7,800/7,200 to 6,200 years ago. It quickly expanded in all directions, eventually absorbing all other local Neolithic groups. According to David W. Anthony, the Indo-European languages were initially spoken by EHGs living in Eastern Europe, such as the Dnieper-Donets people. The precise role of the culture and its language to the derivation of the Pontic-Caspian cultures, such as Sredny Stog and Yamnaya culture, is open to debate, but the display of recurrent traits points to longstanding mutual contacts or to underlying genetic relations." ref

“The physical remains recovered from graves of the Dnieper–Donets culture have been classified as “Proto-Europoid“. The Dnieper–Donets culture produced no female figurines. By 5200 BCE or 7,200 years ago the Dnieper–Donets culture II followed, which ended between 4400/4200 BCE. From around 5200 BCE, the Dnieper-Donets people began keeping cattle, sheep, and goats. Other domestic animals kept included pigs, horses, and dogs. During the following centuries, domestic animals from the Dnieper further and further east towards the Volga–Ural steppes, where they appeared ca. 4700-4600 BCE. Some scholars suggest that from about 4200 BCE, the Dnieper–Donets culture adopted agriculture.” ref

“**Certain Dnieper-Donets burials are accompanied with copper, crystal or porphyry ornaments, shell beads, bird-stone tubes, polished stone maces or ornamental plaques made of boar’s tusk. The items, along with the presence of animal bones and sophisticated burial methods, appear to have been a symbol of power.** Certain deceased children were buried with such items, which indicates that wealth was inherited in Dnieper-Donets society. Very similar boar-tusk plaques and copper ornaments have been found at contemporary graves of the Samara culture in the middle Volga area. **Maces of a different type than those of Dnieper-Donets have also been found. The wide adoption of such a status symbol attests to the existence of the institute of power in the Dnieper–Donets culture complex.” ref**

“The first archaeogenetic analysis involving **the Dnieper–Donets culture complex** individuals from the Mykilske (Nikols’skoye in Russian) and Yasynuvatka (Yasinovatka) cemeteries held the haplogroups of west Eurasian (H, U3, U5a1a) and east Eurasian (C, C4a) descent have been identified. The authors linked the appearance of east Eurasian haplogroups with potential influence from the northern Lake Baikal area.” ref

“C4a – China (Guangdong, Han from Beijing)

- C4a1 – Mongol from Chifeng and Hulunbuir, Tashkurgan (Kyrgyz, Sarikoli, Wakhi), Czech Republic, Denmark
    - C4a1a – Korea, China, Uyghur, Buryat (South Siberia), Denmark, Sweden, France, Scotland, Canada.” ref

“Mathieson et al. (2018) analyzed 32 individuals from three Eneolithic cemeteries at Deriivka, Vilnyanka, and Vovnigi, which Anthony (2019a) ascribed to the Dnieper–Donets culture. These individuals belonged exclusively to the paternal haplogroups R and I (mostly R1b and I2), and almost exclusively to the maternal haplogroup U (mostly U5, U4, and U2). This suggests that the Dnieper-Donets people were “distinct, locally derived population” of mostly of Eastern

Hunter-Gatherer (EHG) descent, with Western Hunter-Gatherer (WHG) admixture. The WHG admixture appears to have increased in the transition from the Mesolithic to the Neolithic. Unlike the Yamnaya culture, whose genetic cluster is known as Western Steppe Herder (WSH), in the Dnieper–Donets culture no Caucasian Hunter-Gatherer (CHG) or Early European Farmer (EEF) ancestry has been detected. At the same time, several Eneolithic individuals from the Deriivka I cemetery carried Anatolian Neolithic Farmer (ANF) – derived, as well as WSH ancestry. At the Vilnyanka cemetery, all the males belong to the paternal haplogroup I, which is common among WHGs. David W. Anthony suggests that this influx of WHG ancestry might be the result of EEFs pushing WHGs out of their territories to the east, where WHG males might have mated with EHG females." ref

"Dnieper-Donets males and Yamnaya males carry the same paternal haplogroups (R1b and I2a), suggesting that the CHG and EEF admixture among the Yamnaya came through EHG and WHG males mixing with EEF and CHG females. According to Anthony, this suggests that the Indo-European languages were initially spoken by EHGs living in Eastern Europe." ref

"The original homeland of the Indo Europeans' ancestors in the Palaeolithic, the Northern and Eastern Siberian cultures did not have any agricultural introduction or even pastoralism in Siberia during the central European Neolithic. Its cultures are characterized by characteristic stone production techniques and the presence of pottery of Eastern origin via trade despite West Eurasian genetics. However, the Neolithic cultures of North Asia are distinguished from the preceding Mesolithic cultures and far more visible as a result of the introduction of pottery from Southwards. The Afanasevan population was a mix of people descended from a mother culture of Indo-Europeans in central Russia, and from people who migrated back c. 3700–3300 BCE across the Eurasian Steppe from the pre-Yamnaya Repin culture of the Don–Volga region. Such migrations including early Uralic Eastern migrations, into North Asia from Eurasia started and occurred during the mid-5th millennium." ref

7,000 year old Siberian warrior: Buried with stone axe and horn-tipped arrow in a burial mound dating to the 'New Stone Age' has been unearthed in Novosibirsk region.

This fact proves, that the burial mounds emerged much earlier than the Bronze Age, in Neolithic times. It means there had been major changes in the socio-economic structure of the society, destruction of collectivism, on which early tribal societies were based.

ref, ref, ref, ref

Kurgan Hypothesis

"The **Kurgan hypothesis** (also known as the **Kurgan theory** or **Kurgan model**) or **Steppe theory** is the most widely accepted proposal to identify the Proto-Indo-European homeland from which the Indo-European languages spread out throughout Europe and parts of Asia. It postulates that the people of a Kurgan culture in the Pontic steppe north of the Black Sea were the most likely speakers of the Proto-Indo-European language (PIE). The term is derived from the Russian *kurgan* (курга́н), meaning tumulus or burial mound. The Steppe theory was first formulated by Otto Schrader (1883) and V. Gordon Childe (1926), then systematized in the 1950s by Marija Gimbutas, who used the term to group various prehistoric cultures, including the Yamnaya (or Pit Grave) culture and its predecessors. In the 2000s, David Anthony instead used the core Yamnaya culture and its relationship with other cultures as a point of reference." ref

“Gimbutas defined the Kurgan culture as composed of four successive periods, with the earliest (Kurgan I) including the Samara and Seroglazovo cultures of the Dnieper–Volga region in the Copper Age (early 4th millennium BCE). The people of these cultures were nomadic pastoralists, who, according to the model, by the early 3rd millennium BCE had expanded throughout the Pontic–Caspian steppe and into Eastern Europe. Recent genetics studies have demonstrated that populations bearing specific Y-DNA haplogroups and a distinct genetic signature expanded into Europe and South Asia from the Pontic-Caspian steppe during the third and second millennia BCE. These migrations provide a plausible explanation for the spread of at least some of the Indo-European languages, and suggest that the alternative Anatolian hypothesis, which places the Proto-Indo-European homeland in Neolithic Anatolia, is less likely to be correct.” ref

“Cultures that Gimbutas considered as part of the “Kurgan culture”:

- Bug–Dniester (6th millennium)
- Samara (5th millennium)
- Khvalynsk (5th millennium)
- Dnieper–Donets (5th to 4th millennia)
- Sredny Stog (mid-5th to mid-4th millennia)
- Maikop–Dereivka (mid-4th to mid-3rd millennia)
- Yamnaya (Pit Grave): This is itself a varied cultural horizon, spanning the entire Pontic–Caspian steppe from the mid-4th to the 3rd millennium.
- Usatovo culture (late 4th millennium)” ref

In my prehistory art in this blog, I offer my speculations relating to art with possible religious/supernatural thinking which I think are justified, or reasoned speculations/conjectures.

My thoughts on speculations/conjectures:
Unreasoned speculations/conjectures
Wild speculations/conjectures
Loose speculations/conjectures
Justified speculations/conjectures
Reasoned speculations/conjectures
Sound/proven speculations/conjectures

12,420-11,270 years ago Stone mace-head from Körtik Tepe 12,420-11,270 years ago ref, ref

11,520–10,520 years ago Stone mace heads – Two Hallan Cemi Turkey ref

10,320–8,020 years ago "in Mesopotamia, the earliest mace-heads can also be traced back to around this time, or equivalent to the PPN period (8300–6000 BCE). They are mostly ball-shaped or pear-shaped. Besides boulder and bronze materials, mace-heads were also made by chalcedony or glass, suggesting that they were in fact items of prestige goods. Some of the boulder mace-heads were carved with cuneiforms or figures and animal embossments on their surface." ref "Mesopotamia occupies the area of present-day Iraq, and parts of Iran, Turkey, Syria, and Kuwait." ref

9,020-8,020 years ago Calcite mace head Syria ref

8,520-7,720 years ago "Catal Hoyuk **(starting more equalitarian, total occupation 9,120-7,720 years ago)** signs of inequality begin to emerge. Skulls with depressed fractures in the head, dozens with similar wounds, all showing a consistent pattern of injury to the top back of the skull, but all of them were healed, not fatal injuries, perhaps to control members of the group, and/or to abduct outsiders as wives or slaves." ref

"The skulls with this characteristic were found primarily in later levels of the site, when more independence and differentiation between households started to emerge. Speculations are that, with these inequalities potentially created new tensions among the community's members, non-fatal violence may have been a means to keep everyone in check and prevent or diffuse full-fledged conflicts. "The head wounds, in a way, confirm the idea of a controlled society." ref

8,020-7,020 years ago Can Hasan a copper mace-head ref, ref

"The mace head does not show any trace of having been used. That could indicate that it wasn't so much a working weapon but a cult object or a status symbol." ref

7,220 years ago – "Mersin, seaport, south-central Turkey, a planned and constructed fortress, steep mound crowned by a defensive wall, slit windows, and entered protected by flanking towers, containing evidence of military." ref

6,520-4,920 years ago "stone macehead from a prehistoric site in northeastern Iran. Furthermore, the prehistoric pottery from this area, has close affinities with ceramic materials from Central Asia rather than with contemporary sites in Iran, meaning that in this period its inhabitants were likely culturally linked to their neighbors to the east. Indeed, a very similar stone mace head was excavated at Anau in Turkmenistan in 1904. Nishapur's location on

what later became known as the Great Khorasan Road suggests that it was part of the trade network that facilitated the import of precious stones such as lapis lazuli, carnelian, and turquoise from Central Asia to Mesopotamia." ref

6,420-5,520 years ago "Earliest mace-heads from the Levant can also be traced back to around the PPN period.*"* ref

"The archaeological evidence available so far has revealed that the earliest mace-heads first appeared in the Near East about or before 10,000 years ago. along with the early development and spread of agriculture. After that mace-heads began to spread throughout the ancient world: southward to the Ancient Egypt Kingdom in North Africa, and northwest to Europe, and then to the Eurasian steppe of Central Asia and Siberia. Eventually, this movement gradually arrived at the Northwestern region of China. In China, mace-heads were found only in Xinjiang, Gansu, Qinghai, and Western Shaanxi in Northwestern Chine. In fact, the morphology of these objects is quite similar to those found outside China. The author assumes that maces, as they bear special and symbolic functions, are not the original or indigenous cultural trait of Chinese civilization. Instead, they are more likely to be exotic goods coming from outside. The author argues the reasons can be summarized as follow: first, mace-heads in the Near East significantly predate all counterparts in China. Second, the amounts of mace-heads found in China are relatively limited. Third, mace-head discoveries in China are concentrated only in the northwestern area, a pattern explicitly indicating the Western origin of this type of artifacts." ref

The Chalcolithic Period (Copper Age)

"The transition from the Neolithic to the Chalcolithic phase of cultural evolution is thought to have taken place gradually in the late 7th millennium BCE. At most sites where its progress can be traced, no perceptible break occurs in the continuity of occupation, and there is little reason to assume any major ethnographic upheaval. Archaeologically, the most conspicuous innovation is the decoration of pottery with colored paint, a widespread development in western Anatolia. Late periods at Hacılar were characterized by the production of some of the most competently and attractively decorated pottery in prehistoric Anatolia, and in the subsequent middle phase of the Chalcolithic Period, polychrome wares were produced in south-central Anatolia and Cilicia. Village architecture of this period is undistinguished but provides evidence for the necessity of communal defense, which was accomplished by means of a circuit wall or—as in Hacılar—a continuous wall formed by the outside rear walls of contiguous houses. At Hacılar and Can Hasan, the heavy ground-floor chambers of these houses had no doorways and were evidently entered by ladders from a more fragile upper story. Improvements in architecture at this period, however, can be seen at Mersin,

where one of its later phases is represented by a neatly planned and constructed fortress. The steeply revetted slope of the mound was crowned by a continuous defensive wall, pierced by slit windows, and entered through a gateway protected by flanking towers. Inside, there was formally arranged accommodation for the garrison and other evidence of military discipline as conceived in 5200 BCE." ref

"Metallurgy was beginning to be understood, and copper was used for pins and simple implements. But there are occasional glimpses of a greater sophistication: a copper mace-head from Can Hasan, more developed tools and the first occurrence of silver at Beycesultan, and a stamp-seal in tin bronze at Mersin. Little is known about the late phase of the Chalcolithic Period; soundings into strata below settlements of the Early Bronze Age, which the period anticipates, indicate that in western and central Anatolia this late phase introduced simpler rectangular houses and dark burnished pottery with simple incised, jabbed, polished, or white-painted decoration." ref

Ghassulian

"**Ghassulian** refers to a culture and an archaeological stage dating to the Middle and Late Chalcolithic Period in the Southern Levant (c. 4400 – c. 3500 BCE or 6,420-5,520 years ago). Its type-site, **Teleilat Ghassul** (**Teleilat el-Ghassul**, **Tulaylat al-Ghassul**), is located in the eastern Jordan Valley near the northern edge of the Dead Sea, in modern Jordan. The Ghassulian stage was characterized by small hamlet settlements of mixed farming peoples, who had immigrated from the north and settled in the southern Levant – today's Jordan, Israel, and Palestine. People of the Beersheba Culture (a Ghassulian subculture) lived in underground dwellings – a unique phenomenon in the archaeological history of the region – or in houses that were trapezoid-shaped and built of mud-brick." ref

"Those were often built partially underground (on top of collapsed underground dwellings) and were covered with remarkable polychrome wall paintings. Their pottery was highly elaborate, including footed bowls and horn-shaped drinking goblets, indicating the cultivation of wine. Several samples display the use of sculptural decoration or of a reserved slip (a clay and water coating partially wiped away while still wet). The Ghassulians were a Chalcolithic culture as they used stone tools but also smelted copper. Funerary customs show evidence that they buried their dead in stone dolmens and also practiced secondary burial." ref

"Settlements belonging to the Ghassulian culture have been identified at numerous other sites in what is today southern Israel, especially in the region of Beersheba, where elaborate underground dwellings have been excavated. The Ghassulian culture correlates closely with the Amratian of Egypt and also seems

to have affinities (e.g., the distinctive churns, or "bird vases") with early Minoan culture in Crete." ref

"**It should be understood that the mace-head is more than a weapon.** It is a unique object that has a ritual role symbolizing one's authority and prestige. In Dorak, near the Marmara Coast, two magnificent tombs have been unearthed, and one was the final resting place of a local king. A mace mounted with a wooden handle was placed in his arms. The other tomb was a joint burial for a king and his queen. In this case, too, a mace with a wooden handle was placed above each individual's arm. The two tombs clearly reflected elite status as they were stacked with luxurious burial articles and date to 4,553–4,539 years ago." ref

The End of Old Europe and the Rise of the Steppe

"By 4300–4200 BCE Old Europe was at its peak. The Varna cemetery in eastern Bulgaria had the most ostentatious funerals in the world, richer than anything of the same age in the Near East. Among the 281 graves at Varna, 61 (22%) contained more than three thousand golden objects together weighing 6 kg (13.2 lb). Two thousand of these were found in just four graves (1, 4, 36, and 43). Grave 43, an adult male, had golden beads, armrings, and rings totaling 1,516 grams (3.37 lb), including a copper ax-adze with a gold-sheathed handle. Golden ornaments have also been found in tell settlements in the lower Danube valley, at Gumelniţa, Vidra, and at Hotnitsa (a 310-gm cache of golden ornaments). A few men in these communities played prominent social roles as chiefs or clan leaders, symbolized by the public display of shining gold ornaments and cast copper weapons." ref

"Thousands of settlements with broadly similar ceramics, houses, and female figurines were occupied between about 4500 and 4100 BCE in eastern Bulgaria (Varna), the upland plains of Balkan Thrace (KaranovoVI), the upper part of the Lower Danube valley in western Bulgaria, and Romania (Krivodol-Sălcuta), and the broad riverine plains of the lower Danube valley (Gumelniţa). Beautifully painted ceramic vessels, some almost 1 m tall and fired at temperatures of over 800°C, lined the walls of their two-storied houses. Conventions in ceramic design and ritual were shared over large regions. The crafts of metallurgy, ceramics, and even flint working became so refined that they must have required master craft specialists who were patronized and supported by chiefs. In spite of this, power was not obviously centralized in any one village. Perhaps, as John Chapman observed, it was a time when the restricted resources (gold, copper, *Spondylus* shell) were not critical, and the critical resources (land, timber, labor, marriage partners) were not seriously restricted. This could have prevented any one region or town from dominating others." ref

Mace (bludgeon)

“A **mace** is a blunt weapon, a type of club or virge that uses a heavy head on the end of a handle to deliver powerful strikes. A mace typically consists of a strong, heavy, wooden or metal shaft, often reinforced with metal, featuring a head made of stone, bone, copper, bronze, iron, or steel.” ref

“The mace was developed during the Upper Paleolithic from the simple club, by adding sharp spikes of flint or obsidian. In Europe, an elaborately carved ceremonial flint mace head was one of the artifacts discovered in excavations of the Neolithic mound of Knowth in Ireland, and Bronze Age archaeology cites numerous finds of perforated mace heads.” ref

“In ancient Ukraine, stone mace heads were first used nearly eight millennia ago. The others known were disc maces with oddly formed stones mounted perpendicularly to their handle. The Narmer Palette shows a king swinging a mace. See the articles on the Narmer Macehead and the Scorpion Macehead for examples of decorated maces inscribed with the names of kings.” ref

“The problem with early maces was that their stone heads shattered easily and it was difficult to fix the head to the wooden handle reliably. The Egyptians attempted to give them a disk shape in the predynastic period (about 3850–3650 BCE) in order to increase their impact and even provide some cutting capabilities, but this seems to have been a short-lived improvement.” ref

“A rounded pear form of mace head known as a “piriform” replaced the disc mace in the Naqada II period of pre-dynastic Upper Egypt (3600–3250 BCE) and was used throughout the Naqada III period (3250–3100 BCE). Similar mace heads were also used in Mesopotamia around 2450–1900 BCE. On a Sumerian Clay tablet written by the scribe Gar. Ama, the title Lord of the Mace is listed in the year 3100 BCE or 5,120 years ago. The Assyrians used maces probably about nineteenth-century BC and in their campaigns; the maces were usually made of stone or marble and furnished with gold or other metals, but were rarely used in battle unless fighting heavily armored infantry.” ref

“An important, later development in mace heads was the use of metal for their composition. With the advent of copper mace heads, they no longer shattered and a better fit could be made to the wooden club by giving the eye of the mace head the shape of a cone and using a tapered handle.” ref

“The Shardanas or warriors from Sardinia who fought for Ramses II against the Hittites were armed with maces consisting of wooden sticks with bronze heads.

Many bronze statuettes of the times show Sardinian warriors carrying swords, bows, and original maces." ref

R12 (cemetery) Sudan

"**R12** is a middle Neolithic cemetery located in the Northern Dongola Reach on the banks of the Seleim Nile palaeochannel of modern day Sudan. The site is dated to between 5000 and 4000 BCE or 7,020-6,020 years ago. *Centro Veneto di Studi Classici e Orientali* excavated the site, within the concession of the Sudan Archaeological Research Society and after an agreement with it, between 2000 and 2003 over three digging seasons. The first was in 2000 and 33 graves were discovered. The second was in 2001 and another 33 graves were discovered. The third was in 2003 and the last 100 graves were discovered. There are 166 graves total at the site. Contents of the graves include ceramics, animal bones, grinding stones, human skeletons, and plant remains." ref

"The R12 cemetery is held within a mound-like formation spanning 1400m2. The mound is 2.9 meters above the surface of the plain. The cemetery within the mound has an area of about 650m2. The mound is a layer of Nile silt on top of an irregular sandy deposit. Underneath these two layers is a regularly deposited silt layer. Over the past 7000 years, wind and water have eroded the mound causing it to have the morphology that it did before excavation. Because some of this wind and water eroded the lower part of the mound, some skeletal remains and artifacts breached the body of the mound. These processes of erosion did not affect the graves in the top of the mound. This made them easily detectable as compared to the graves at the lower part." ref

Grave contents

"Some of the graves have filled with gravel or stones from processes of erosion. The graves were dug through the upper silt layer. Mud was placed on the walls of the grave to prevent falling sand. After the person was placed in the grave, they filled the grave with silt or small pebbles. The people buried in the graves were usually placed on their left side. The direction of the body was aligned with the cardinal directions. It appears that when new graves were dug, they cut into older graves. The graves often contained pottery, tools, bone spatulas, mammal bone perforators. Bodies were adorned with ivory bracelets, stone and ivory bangles, stone necklaces, lip plugs, and stone pendants. Graves also contained pebbles, beads, and marine shells. Children were buried with furniture or distinctive signs of family. These children seem to have had the same treatment as adults. This is a sign that status is attributed at birth." ref

Pottery

“Ninety-five percent of the graves at R12 contain pottery. There are between one and nine pottery vessels in any given grave. At least 220 pottery vessels were found in total. Most of the pottery is made from fine sand temper and fired in an earthen kiln. Sometimes, the fine sand temper pottery contains mica. Other materials that the pottery could be partially made from are chaff, limestone splinters, and shells. The pottery was decorated and then smoother and polished. Some of the pottery had stripes and was so polished that it gained a metallic brightness. Red or black spots were found on some of the pottery. This was caused by oxidation or reduction processes. There is evidence that the pottery was not made for only funerary purposes. Many of the pots show signs of prolonged use over fire which shows that it was used many times before being placed in the graves. When a grave has more than one pot, they have similar or identical decorations. It is possible that this signifies that a certain group of people or family is associated with a decorative motif.” ref

Bowls

“Most of the pottery found are bowls. These bowls were mainly hemispherical and were either restricted (47%) or unrestricted (32.5%). A distinctive type of bowl at R12 is a composite contour bowl with a carinated profile with the upper body going from straight to concave. The bowls ranged from a height of 2 cm to over 14 cm. The bowls found in Period 1 of R12 are composite with a sinuous profile. These bowls also have a complex decorated motif of dot impressions. Bowls with a rising lug handle, small bowls with depressions on the rim, and small colanders were only found in children’s graves.” ref

Jars

“Another form of pottery found are jars (12.5%). They range in shape from ovoid to globular. The jars ranged from a height of 10 cm to over 40 cm. A jar with covered with ochre powder and a complex dot decoration was found.” ref

Caliciform beakers

“A third form of pottery found at R12 are caliciform beakers (8%). Sixteen complete beakers were found along with several fragments. Four different types of caliciform beakers were found at R12. The first type is decorated with wide horizontal bands. These bands are either dotted or are incised lines separated by undecorated bands. The internal rims had chains of hatched triangles. These caliciform beakers were between 20.6 cm and 33 cm in height. The second type is decorated with hatched, oblique, regularly spaced bands covering the entire beaker. The rims are rounded on the inside and slightly flared out. The rims are

decorated with clusters of dotted parallel lines. The third group of beakers have the same geometric pattern, rounded rim, rim decoration, and are between 18.4 cm and 21.5 cm tall. The fourth group of beakers are generally squat in shape and have thin horizontal bands with hatched dotted lines and rounded rims. The surface of the beakers are purposely imprecise, making the beakers seem less elegant than the other groups of beakers." ref

Jewelry

"Most of the jewelry found at R12 are bead bracelets, necklaces, and stone pendants. There are also a few examples of stone bracelets and ear or lip plugs. Jewelry is present in 21.69% of the graves at R12. Jewelry was found in 11 male graves, 9 female graves, and 14 child graves. Jewelry is absent in graves of people over the age of 50. This could suggest that jewelry was only available to a certain group within the population." ref

"Grave 92 included a bead-belt. Grave 60 contained a person wearing headband made out of ostrich eggshell beads. Thirteen bead blanks were found inside a shell in Grave 38. They were made from agate and quartz flakes reduced to a cylindrical shape. After this, they were polished and perforated. Other beads were made from ochre, amazonite, or ostrich eggshells. Amazonite beads were made into a teardrop shape. It seems that all beads buried in R12 graves were constructed by the same people that utilized the cemetery. Ochre beads had the most specialized production because they are the most regular in measurement." ref

Bracelets and necklaces

"Fifteen bracelets were found at R12 across a total of nine graves. Forty necklaces were found at R12 across a total of 39 graves. Similar necklaces have been found at other Neolithic cemeteries in Nubia and Sudan. These bracelets and necklaces were made from various types of beads." ref

Stone jewelry

"Pendants, bangles, and lip/ear plugs are the common forms of stone jewelry found at R12. The stone pendants were made of small elongated pebbles of agate, carnelian, quartz, white and variegated stones. Sometimes the pendants were used as bracelets. Similar pendants are found in other Neolithic cemeteries in Sudan and Nubia. Stone bangles are made from a white stone that has not been identified. They were worn on the upper arm. There are no other objects like them found in any other Neolithic cemetery and there is no evidence for how they were made. Three lip plugs and one possible ear plug were found at R12. The

three lip plugs are made of zeolite and are angular with a conical extremity. They were found in two separate graves. The third lip plug was found on the surface. Grave 18 possibly had an ear plug. In general, lip and ear plugs are common in other Neolithic cemeteries in Sudan and Nubia. There is no evidence for how the ear and lip plugs were made." ref

Ritual and social context

"Because the differing tools found at R12 is smaller than the actual amount of tools created by the people of R12, archaeologists can only make hypotheses about what the people were doing. It is also hard to tell which tools the people of R12 created and which tools were accumulated through trade. Even though the pottery at R12 shows change over the 600 active site years, the lithic assemblage does not. Most of the lithics seem to have been created for burial as they do not show signs of wear. Male and female graves contained lithics at significant percentages. This could mean that there was a somewhat equal division of labor." ref

"Grave 38 is considered the richest grave excavated at R12 and contained an adult male buried with the set of bead blanks discussed previously, bone tools, three large bowls, a small jar, and 87 lithic pieces, making this grave have the largest amount of lithics. He also was wearing a bracelet made from pebbles and a necklace made from carnelian, agate, amazonite, and shell beads. The presence of lithics and other artifacts in this grave could represent wealth in terms of quantity and variety of materials." ref

Axes

"There were 48 stone axes found from a total of 26 graves. The axes could have been used as an adze, for butchering, or as weapons. The axes at R12 are highly variable in length, width, and thickness. Because axes were found in male, female, and child graves, it is hard to tell social context of the axes." ref

Mace-heads

"There were eight mace-heads were found at R12 within a total of seven graves. They were made from granite and pumice. The mace-heads made of pumice are the first ever found in Sudan. Six of the maces had a biconical shape, one had an ovoid shape, and one was disk-shaped with rising edges around the central hole. Mace-heads usually are a symbol of power. At R12, they only found in male and child graves. This possibly means that mace-heads have a social context and may only be associated with men or children." ref

Stone palettes

“There were 50 stone palettes found at R12 within a total of 27 graves. They were usually made from sandstone or granite. The red and yellow staining on the sandstone palettes indicates that they were probably used to grind red and yellow ochre to make pigments. Peoples of R12 most likely used these pigments on themselves and animals as well as on the surface of pottery. The granite palettes were used to grind malachite and amazonite which are assumed to be used as pigments. The three different classes of stone palettes are rectangular, ellipsoidal, and irregular. Stone palettes are evenly represented in male, female, and child graves.” ref

“The spatial distribution of R12 gives insight to the social structure of the people who created the cemetery. Within the cemetery, there is no segregation between males and females nor between adults and children. Because there is roughly and equal number of males and females it is possible that R12 was a non-polygamous society.” ref

“Based on the artifacts found in the graves, the population has been split into three categories. The first category is people buried with no or few grave goods. This category comprises 68% of the population. Forty-three individuals buried at R12 have no grave goods. However, it is possible that erosion and human disturbances affected these graves, inflating the number of graves with no goods. The second category is people buried with a larger amount of grave goods. The third category is people buried with an even larger number of grave goods. As the number of objects in the grave increases, there are less graves. The third category comprises 20% of the population. The three categories could potentially signify a difference of wealth or rank. The distribution of objects, classes of objects, and presence and number of pottery are relatively the same.” ref

“However, social status is explained more by amount of items rather than quality of items. This supports the idea that there were three segmented groups in the population based on wealth. Wealth seems to be distributed equally between males and females. Because children were found with grave goods, it is possible that status was ascribed and that there was family status. The children found with mace heads could signify a symbol of their family or lineage authority. Some grave goods such as animal remains, axes, and grinding stones could signify that the people of R12 were hunting. The lithic industry and plant remains could signify agricultural activities. Shells signify trade and contact with the Red Sea area. Cattle, sheep, and goat breeding were definitely a significant part of the society. This is known from animal remains and frequency of bucrania. Based on this evidence, it is likely that this was a pastoralist society that engaged in some hunting practices as well.” ref

Gebel Ramlah

"Gebel Ramlah is a Neolithic site that is located in Egypt. It is known for its six pastoral cemeteries including the world's oldest known infant cemetery. Dental samples of people at Gebel Ramlah and people at R12 were compared to see if there was any biological relatedness between these two groups of people. Teeth from 59 individuals from Gebel Ramlah were examined. Teeth from 50 individuals from R12 were examined. Teeth from both sites ranged in quality from poor to fair. Each tooth was evaluated under 36 different traits. Based on the traits of the teeth, it was concluded that people from Gebel Ramlah and people from R12 were not closely biologically related." ref

"Even though there was no biological relation between these groups, they did share many cultural similarities. Objects found in graves at each site include pottery, ground stone, lithics, personal adornments, pigments, and animal remains. Both sites had similar pottery in the form of beakers. Even though there were these cultural similarities, there were also cultural differences. Bodies at Gebel Ramlah were placed on their right side in a flexed position, while bodies at R12 were placed on their left side." ref

Unusual Neolithic Burials Unearthed in Egypt

"At a cemetery in Gebel Ramlah, an area of Egypt's Western Desert near the border of Sudan, archaeologists led by Jacek Kabaciński of the Polish Academy of Sciences unearthed the **6,500-year-old burials of 60 adults**. One of the graves contained the remains of two individuals. **Deliberate cuts on the femur,** which have not been seen in other Neolithic burials in North Africa, were found on one of these skeletons. Another unusual grave had been lined with stone slabs, and in a third burial, the team found the remains of a man whose body had been covered with pottery fragments, stones, and lumps of red dye. A fragment of a Dorcas gazelle skull with horns found near his head may have been a ceremonial headdress. This skeleton also showed signs of abnormal bone adhesions and fractures. According to a report in *Science & Scholarship in Poland*, Kabaciński and his team think this man may have performed rites associated with hunting. To read more about this period, go to "The Neolithic Toolkit." ref

Who were the mysterious Neolithic people that enabled the rise of ancient Egypt?

"To many, ancient Egypt is synonymous with the pharaohs and pyramids of the Dynastic period starting about 3,100BCE or 5,100 years ago. Yet long before that,

about 9,300-4,000BCE, enigmatic Neolithic peoples flourished. Indeed, it was the lifestyles and cultural innovations of these peoples that provided the very foundation for the advanced civilizations to come." ref

"Though not lush, the Neolithic was wetter than today, which allowed these ancient herders to populate what is now the middle of nowhere. We focus on the Final Neolithic (4,600-4,000BCE), which was built on the success of the Late Neolithic (5,500-4,650BCE) with domesticated cattle and goats, wild plant processing, and cattle burials. These people also made apparent megaliths, shrines, and even calendar circles—which look a bit like a mini Stonehenge." ref

"During the final part of the Neolithic period, people started burying the dead in formal cemeteries. Skeletons provide critical information because they are from once-living people who interacted with the cultural and physical environments. Health, relationships, diet, and even psychological experiences can leave telltale signs on teeth and bone." ref

"Three cemeteries from this era—the first in the western desert—where we uncovered and studied 68 skeletons. The graves were full of artifacts, with ornamental pottery, seashells, stone, and ostrich eggshell jewelry. We also discovered carved mica (a silicate mineral) and animal remains, as well as elaborate cosmetic tools for women and stone weapons for men. These people enjoyed low childhood mortality, tall stature, and long life. Men averaged 170cm, while women were about 160cm. Most men and women lived beyond 40 years, with some into their 50s—a long time in those days." ref

"Strangely, in two more cemeteries, things were very different. After analyzing another 130 skeletons, we discovered that few artifacts accompanied them, and that they suffered from higher childhood mortality as well as shorter lives and stature. We're talking several centimeters shorter and perhaps ten years younger for adults of both sexes. Astonishingly, the largest of these two cemeteries had a separate burial area for children under three years of age, but mostly infants including late-term fetuses. Three women buried with infants were also found, so perhaps they died in childbirth. In fact, this is the world's earliest known infant cemetery." ref

Interpreting the findings

"So what can this tell us about these peoples, let alone their descendants? As it turns out, a lot. We can use the findings to make interpretations about gender, life-stage, well-being, status, and other things. For example, why were there such differences between the two gravesites? They could have been separate populations, but it is unlikely based on overall physical similarities." ref

“So perhaps they imply variation by status—with one graveyard being for the elite and the other for workers. This is the earliest such evidence in Egypt. The sites also shed light on the family structures of the time. The overall sex ratio across all cemeteries is three women to each man, which may indicate polygamy. However, the total number of burials and a lack of reference to individual houses suggests these were extended family cemeteries.” ref

“Also, believe that attainment of “personhood”—the age children are socialized into being “people” – was from three years, given their inclusion in adult cemeteries. There is also clear evidence of respect for previously buried people by later mourners reusing the graves to bury their dead. When coming across old skeletons, they often carefully repositioned the bones of these ancestors. In some interesting cases, they even made attempts to “reconstruct” the skeletons by replacing teeth that had fallen out back into the skeleton—and not always correctly (see lead image).” ref

“These behavioral indicators, together with the seemingly innovative technological and ceremonial architecture mentioned earlier, such as the calendar circles and shrines, imply a level of sophistication well beyond that of simple herders. Taken together, the findings provide a glimpse of things yet to come in Ancient Egypt.” ref

“Archaeologists at Gebel Ramlah refer to its Final Neolithic inhabitants as part of the Bunat El Asnan culture, individuals especially well known for their megalith constructions throughout the period. It is thought that the Bunat El Asnan people of the Gebel Ramlah region were *trans-huming* pastoralists. During the wet season they traveled to uplands where they could graze their cattle, while during the dry season they lived in permanent settlements on the paleo-lake. These individuals were some of the last to inhabit the Western Desert before drought and desertification finally intensified enough to drive them out. Some traveled up the Nile into northern Africa, potentially setting the stage for Ancient Egyptian civilizations. There are cultural elements found in the Final Neolithic of Gebel Ramlah which overlap with or are potential precursors for Ancient Egyptian elements, such as astronomical knowledge and the production of amulets. Additionally, it has been argued that the evidence for passive burial conservation in Gebel Ramlah cemeteries could be a precursor for Ancient Egyptian mummification, perhaps being based in similar protective beliefs.” ref

“Archaeology throughout in the Western Desert shows a wide span of Neolithic occupation, such as in Nabta Playa where early occupation dates back to 7500 BCE. Nabta Playa is just 20 kilometers northwest of Gebel Ramlah, and findings from the two regions are often compared. At Gebel Ramlah, the earliest known

burials have been dated to the late Early Neolithic, around 6500 BCE. Burials dated to the Middle and Late Neolithic are scattered throughout the area as well. These are individual burials or sometimes burial clusters, predating the use of large-scale cemeteries in the region." ref

"With its large and unusual cemetery sites, Gebel Ramlah is beneficial to archaeologists in understanding the use of funerary pottery within the Neolithic Western Desert region. However, some limitations are found in the relatively small amount of pottery excavated from the burial sites. An analysis of Gebel Ramlah's pottery assemblage was done by Maria C. Gatto." ref

"It appears that temper wasn't intentionally added to the clay, which was also common practice in early Nubian and Egyptian ceramics. The high quality of local clay made temper unnecessary. Small sand particles and occasional shale fragments were likely already in the clay when it was collected. Clay is present within some nearby hills (including Gebel Ramlah itself), as are sand and shale similar to those found in the ceramics. Thus, Gatto hypothesizes that the pottery was made within or nearby Gebel Ramlah. Considering the consistent water supply needed for pottery work, this is potentially significant. During the Final Neolithic when this production was occurring, we know that the Gebel Ramlah paleo-lake was drying up and water was most likely becoming more limited." ref

"Erosion on the pottery made certain analyses of shaping and design difficult, but comparative study has led archaeologists to believe that coiling and pinching techniques were used to form the vessels found at Gebel Ramlah, with potential paddle and anvil methods as well. The works were typically either smoothed or burnished. Some seem to have been coated with a thin layer of clay around the rim after being shaped, creating a black-topped outer layer once the vessel was fired." ref

"The most elaborate vessels found at Gebel Ramlah's burial sites are large, tulip-shaped (or caliciform) beakers, with wide flared rims. The beakers are typically decorated with geometric patterns, such as curved bands, triangles, and diamonds. Ripple and zigzag textures are commonly seen within these shapes. The caliciform beakers, as well as the black-topped ware discussed previously, are specifically characteristic of the later Egyptian Badarian culture, possibly indicating a connection. However, similar caliciform beakers have been discovered throughout Egypt and from various Neolithic phases." ref

"Only around a fourth of the vessels found within Gebel Ramlah burial sites were caliciform beakers, produced specifically as funerary pieces. The rest were offerings that originally had a utilitarian purpose (mend holes indicate their

previous use). These vessels include pots, bowls, jars, and cups. Many were medium-sized bowls- often more simply constructed than the elaborate funerary beakers. Notably, over half of the pre-used vessels were still decorated, typically with a ripple pattern. Gatto hypothesizes that perhaps decorated vessels held a greater significance and were more likely to be selected as funerary offerings. In different Gebel Ramlah cemetery sites, however, the percentages of funerary pieces, pre-used pieces, and decorated pieces differ." ref

"Some of the intricate shapes and designs of Final Neolithic pottery at Gebel Ramlah differ greatly from even Late Neolithic productions of the region just before. In fact, pieces like the ripple-decorated caliciform beakers most closely resemble Nubian pottery. Gatto hypothesizes that, perhaps, individuals from farther out in the Nubian Nile valley were moving toward Gebel Ramlah and surrounding regions (where water sources were slightly more reliable) as water dwindled during the Final Neolithic. If true, these individuals may have introduced Gebel Ramlah populations to their own pottery styles and techniques (and vice versa)." ref

"Comparison with better studied Late and Final Neolithic sites in Nubia and Upper Egypt also helps to supplement for the minimal testing done on Gebel Ramlah Pottery. The analysis of pottery from sites such as Nabta Playa helped to form hypotheses concerning the impacts of different firing temperatures on the unique local clay used in these ceramics, as well as the formation of features such as the previously described black-topped layer." ref

"Excavation at Gangu'ya Cemetery of Jiuquan, Gansu, found one boulder mace-head was uncovered in burial 44. These important discoveries attracted my attention and drew me to further investigate this question. Similar mace-heads had been discovered in earlier years before: Huoshaogou Cemetery of Yumen, Gansu; Ningjiazhuang site of Xihe County; Dadiwan site of Qin'an County; Qijiaping site of Guanghe County; Maojiaping site of Gangu County, Gansu Province; burial no. 13 at Zhu'yuan'gou, Baoji city; Bodong tomb of Fufeng County, Shaanxi. The material of these maceheads includes ceramic, jade, stone, and bronze. These items date the Yangshao Culture, which is equivalent to 5000 years ago, to the subsequent Majiayao Cultury (3000–2000 BCE), Qijia Culture (2300–1600 BCE), Siba Culture (1950–1550 BCE), Shajing Culture (1000–500 BCE) and up until the Zhou dynastic period (the first millennium BCE)." ref

"To the west of the Gansu Province in the Xinjiang Uygur Autonomous Region, there mace-heads are more commonly found. These sites include the Erdaogou site of Hami city, Xiaohe Cemetery of Ruoqiang County, Hongqijiqichang site of Qitai County, Sa'nsayi Cemetery of Urumchi, Ni'ya site of Minfeng County etc.

The material of these mace-heads also includes jade, stone, and bronze, all dating to the Neolithic and Bronze Age (or possibly later)." ref

"One point must be clarified here. In scholarship, some Chinese scholars have mistaken mace-heads as daily-use tools or common weapons. But my analysis below demonstrates the function of mace-heads is not this case. But where did these Chinese mace head examples come from?" ref

"This is indeed a question of great importance and is worthwhile further investigation. The earliest mace head examples come from the Near East during the PPNA period. An early example is the stone mace head from the site of Hallan Cemi in Antolia, Turkey, dated to 9500–8500 BCE. Another contemporary example is the stone mace-head from Körtik Tepe. At Can Hasan a copper mace-head was unearthed dating to 5000 BCE – the earliest known metal mace-head discovered to date." ref

"In Mesopotamia, some of the boulder mace-heads were carved with cuneiforms or figures and animal embossments on their surface. One white mace-head from the third Kingdom of Ur (2500 BCE) with cuneiforms on the surface saying 'Consecrated to Goddess Shara'. Stylistically, this mace-head is quite similar to the one found in tomb no.44 at the Ganguya cemetery in Gansu, although the latter does not include any inscriptions." ref

"The earliest mace-heads from the Levant can also be traced back to around the PPN period. A remarkable hoard was found in the cave of Nahal Mishmar to the west of the Dead Sea. The collection contained more than 400 metal objects, of which a fairly large amount was scepters and mace-heads. Some of these artifacts had handles, and some had crosses or figures of animal decorations made with the lost-wax casting technique. The casting of such objects required a high level of skill since the bronze was rich in arsenic and antimony-elements, according to scientific analysis. These artifacts date to the 4000 BCE." ref

"As alluded to before, the mace-head is more than a weapon. It is a unique object that has a ritual role symbolizing one's authority and prestige. In Dorak, near the Marmara Coast, two magnificent tombs have been unearthed, and one was the final resting place of a local king. A mace mounted with a wooden handle was placed in his arms. The other tomb was a joint burial for a king and his queen. In this case, too, a mace with a wooden handle was placed above each individual's arm. The two tombs clearly reflected elite status as they were stacked with luxurious burial articles and date to 2553–2539 BCE." ref

"At around 1000 BCE, the making and using of mace-heads had gradually become prevalent in the Near East, yet the bronze mace-heads still remained

highly significant in the demonstration and legitimation of elite status and authority. The scene of kings and elites using mace was a common motif in Near Eastern and Mesopotamian art. Kings, aristocracy, and warriors are frequently found holding maces Akkadian, Assyrian, Babylonian, and Hittite stone artwork. The undefeatable image of these iconographies is so clear and prominent that the political propaganda message behind these artworks can be easily identified even though our modern eyes." ref

"One of the areas where the largest number of maces has been discovered is the Ancient Egyptian Kingdom in Northern Africa. In the Nubian kingdom in the Upper Nile, mace-heads have been found dating to the Late Neolithic period (4000 BCE), and are probably the first North Africa mace-head example. As early as the Pre-dynastic period (before 3050 BCE), maces were already quite widespread. There were three different types of mace-heads in ancient Egypt: 1) shuttle-shaped with two points; 2) circle slice-shaped, wider on the top but dwindled at the bottom 3) and pear-shaped or ball-shaped (same as which were found in China)." ref

"All mace-head types in ancient Egypt could be mounted through a hole in their center. Several mace-heads were carved with enlaced decorative designs of relief and papilla on their surface, and all were made with fine and scarce materials. It is important to point out that these three types of mace-heads were all found in the Levant before they are known in Egypt." ref

"Mace-heads are prominently displayed in Egyptian artwork and their use is clearly depicted in paintings, sculptures, and other artworks. The earliest case is found on the wall-painted tomb in Hierakonpolis during the Pre-dynastic period, in which a warrior (identified as the King) waving a mace at a trussed captive was depicted. This theme – depicting conquerors striking bound captives with a mace – then became a common motif in Egyptian artwork and can be found on painted murals, stone carvings, and ceramic labels. Perhaps the most famous example of these depictions is the one found on the Narmer Palette, which was also unearthed at Hierakonpolis. It is 63 centimeters high with double-faced anaglyphs." ref

"The palette commemorates King Narmer's victory against northern foes and marks, for many, the beginning of First Egyptian Kingdom. One side of the palette shows King Narmer, wearing the white crown of Upper Egypt and holding a mace about to strike a captive kneeling on the ground. The other is separated into three parts: two huge monstrous animals intertwined with each other in the middle part and the conquering images both in the upper and lower columns. The upper column shows King Narmer, wearing the red crown of Lower Egypt

and holding a mace inspecting two lines of beheaded and bound captives as he is accompanied by his subordinates." ref

"In the famous tomb of Pharaoh Tutankhamun, two luxuriant gold-plated statues measuring 190 centimeters in length with a golden mace in their hands were unearthed. Some scholars have suggested that these statues depict the King Tutankhamun himself." ref

"Mace-heads are less known in Europe since much fewer examples have been unearthed. Between the Dnepr River and Don River, at the North bank of the Azov Sea, a number of mace-heads have been found in burial contexts belonging to the Skelya Culture (4550–3000 BCE). These are probably the earliest mace-head examples in Europe identified so far. A white stone mace-head is exhibited in the European section at the Anthropology Museum of Cambridge University of England. This mace-head dates to the second millennium BCE, and is from the Tisza Valley which stretches from Hungary to Yugoslavia." ref

"A number of bronze mace-heads from the Tli burial ground located at the south piedmont of Caucasia Mountains have been found as well. The mace-heads were round or elliptical: some were cast, and there are four to five strumae-like or spiral shell-shaped protruding nubs on the surface, an element not only for decoration but also for enhancing attacking ability; some carved with horses, fish, snakes, birds and tiger-eating-people designs. The design of these artifacts demonstrates an extraordinary artistic style." ref

"One mace-head of this type with five strumae-shaped nubs is morphologically close to the one with four goat heads unearthed at the Huoshaogou Cemetery of Yumen, Gansu, and the one from burial no.13 of Zhuyuangou, Baoji city, China. Similar mace-heads were also discovered at Borodino hoard of Moldavia and the tomb of King Dorak, near the Marmara Coast, dating from about the same time." ref

Central Asian mace-head examples are mostly dated to the Bronze Age period. At the Bactrian-Margiana Culture (2000–1800 BCE) of Uzbekistan, boulder or bronze mace-heads were unearthed (Sarianidi 1981). In the Sintashta Valley of South Ural, archaeologists from the former Soviet Union have excavated one site belonging to the Sintashta-Petrovka Culture. At this site a passel of boulder mace-head was unearthed, which was mainly round and elliptical and quite similar to the counterpart in Northwestern China. Dating to roughly 2000 BCE they are contemporary to the Chinese early examples as well." ref

"The archaeological evidence available so far has revealed that the earliest mace-heads first appeared in the Near East about 10000 years ago. along with the early

development and spread of agriculture. After that mace-heads began to spread throughout the ancient world: southward to the Ancient Egypt Kingdom in North Africa, and northwest to Europe, and then to the Eurasian steppe of Central Asia and Siberia. Eventually, this movement gradually arrived at the Northwestern region of China." ref

"Mace-heads were a special artifact for the display of status and symbolized authority limited to noble and elite warrior classes. The discoveries in Dorak showed that only the kings were qualified to use maces. In Ancient Egypt and the Near East, a large number of carvings representing mace-head holders have confirmed the unique functions of maces. One can argue that this tradition persisted and last even today and was illustrated by British beefeaters as well as Ukrainian and Argentinian president guards." ref

"This unique social function of mace heads was maintained when they were introduced to China. For example, of the 167 excavated tombs at Xiaohei in Xinjiang, only one mace head was uncovered in the largest tomb in the cemetery. Similarly, among the 107 tombs excavated in Gangu'ya Cemetery of Jiuquan, Gansu, there was only one contained mace-head. Also, the burial articles in this tomb were more prestige than those in the whole cemetery. Similarly, among the 306 tombs excavated in Huoshaogou Cemetery, only 10 mace-heads were unearthed." ref

"In China, mace-heads were found only in Xinjiang, Gansu, Qinghai, and Western Shaanxi in Northwestern China. In fact, the morphology of these objects is quite similar to those found outside China. Thus we can assume that maces, as they bear special and symbolic functions, are not the original or indigenous cultural trait of Chinese civilization. Instead, they are more likely to be exotic goods coming from outside. As I argued before, the reasons can be summarized as follow: first, mace-heads in the Near East significantly predate all counterparts in China. Second, the amounts of mace-heads found in China are relatively limited. Third, mace-head discoveries in China are concentrated only in the northwestern area, a pattern explicitly indicating the western origin of this type of artifact." ref

"Right upon its arrival, mace-heads seemed to generate a deep impact in northwest China along the Great Wall. From an archaeological perspective, however, the Central Plains, or known as the core-zone of ancient Chinese civilization, did not accept this exotic cultural trait at all, which was clearly demonstrated by the sporadic discoveries in Shaanxi and western Henan. Instead, the core-zone of ancient Chinese civilization had developed a system using fu and yue axes as symbols of authority and power from its very beginning. More importantly, this case study shows that for a given ethnic group or

community, the acceptance and adoption of certain exotic cultural practices will be highly selective and within certain limitation. The understanding of this issue can not only shed insight on history but also disclose an essential aspect in social reality." ref

"The introduction of mace-heads in China also provides important lines of information on cultural interaction and exchange between the East and West. First, it provides inarguable evidence documenting some of the earliest interactions before 5000 years ago. In fact, the mace-heads is just one of the many artifacts in the package from the West that were adopted in China during this period (e.g., sheep goat metallurgy, wheat, etc.). The impacts that each element had imposed on different parts of Western China through cultural contact varied widely in term of the scale and scope. In addition, the fact that the most frequent interaction through mace-heads took place in China around the second millennium BCE – the period overlapped with the rise of the royal dynasty of ancient China – should be seen as more than merely a coincidence. Perhaps there are some deep historical factors that made this interaction inevitable. Indeed, more research and scholarship on this matter is necessary." ref

"History also proves that regional interaction played a dynamic role in stimulating the early development of different human societies, cultures, cities, and states. In addition, the continued investigation of newly excavated archaeological materials will significantly benefit the development of a deeper understanding of the processes by which ancient civilizations have evolved." ref

Varna culture

"The **Varna culture** belongs to the later Neolithic of northeastern Bulgaria, dated ca. 4400-4100 BCE. It is contemporary and closely related with Gumelniţa in southern Romania, often considered as local variants. It is characterized by polychrome pottery and rich cemeteries, the most famous of which are Varna Necropolis, the eponymous site, and the Durankulak complex, which comprises the largest prehistoric cemetery in southeastern Europe, with an adjoining coeval Neolithic settlement (published) and an unpublished and incompletely excavated Chalcolithic settlement." ref

"294 graves have been found in the necropolis, many containing sophisticated examples of copper and gold metallurgy, pottery (about 600 pieces, including gold-painted ones), high-quality flint and obsidian blades, beads, and shells. The site was accidentally discovered in October 1972 by excavator operator Raycho Marinov. Research excavation was under the direction of Mihail Lazarov and

Ivan Ivanov. About 30% of the estimated necropolis area is still not excavated." ref

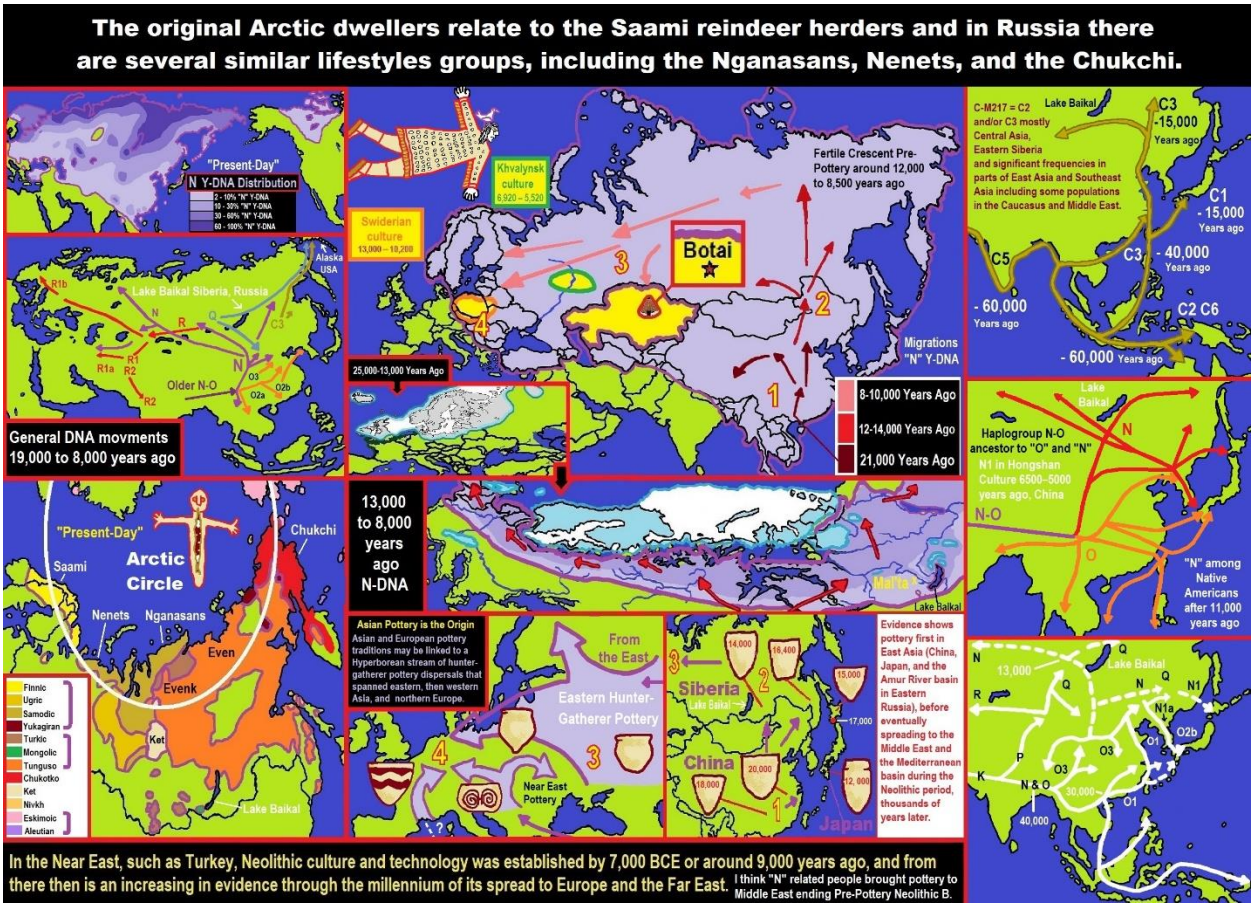
"The findings showed that the Varna culture had trade relations with distant lands, possibly including the lower Volga region and the Cyclades, perhaps exporting metal goods and salt from the Provadiya rock salt mine. The copper ore used in the artifacts originated from a Sredna Gora mine near Stara Zagora, and Mediterranean spondylus shells found in the graves may have served as primitive currency." ref

"Burials at Varna have the oldest human-modified gold artifacts in history jewelry. There are crouched and extended inhumations. Some graves do not contain a skeleton, but grave gifts (cenotaphs). The symbolic (empty) graves are the richest in gold artifacts. 3000 gold artifacts were found, with a weight of approximately 6 kilograms. Grave 43 contained more gold than has been found in the entire rest of the world for that epoch. Three symbolic graves contained masks of unfired clay." ref

"The weight and the number of gold finds in the Varna cemetery exceeds by several times the combined weight and number of all of the gold artifacts found in all excavated sites of the same millenium, 5000-4000 BCE or around 7,000 to 6,000 years ago, from all over the world, including Mesopotamia and Egypt." ref

"The culture had sophisticated religious beliefs about the afterlife and developed hierarchical status differences: it constitutes the oldest known burial evidence of an elite male. The end of the fifth millennium BC is the time that Marija Gimbutas, founder of the Kurgan hypothesis claims the transition to male dominance began in Europe. The high-status male was buried with remarkable amounts of gold, held a war ax or mace, and wore a gold penis sheath. The bull-shaped gold platelets perhaps also venerated virility, instinctive force, and warfare. Gimbutas holds that the artifacts were made largely by local craftspeople." ref

"The discontinuity of the Varna, Karanovo, Vinča, and Lengyel cultures in their main territories and the large-scale population shifts to the north and northwest are indirect evidence of a catastrophe of such proportions that cannot be explained by possible climatic change, desertification, or epidemics. Direct evidence of the incursion of horse-riding warriors is found, not only in single burials of males under barrows, but in the emergence of a whole complex of Indo-European cultural traits." ref



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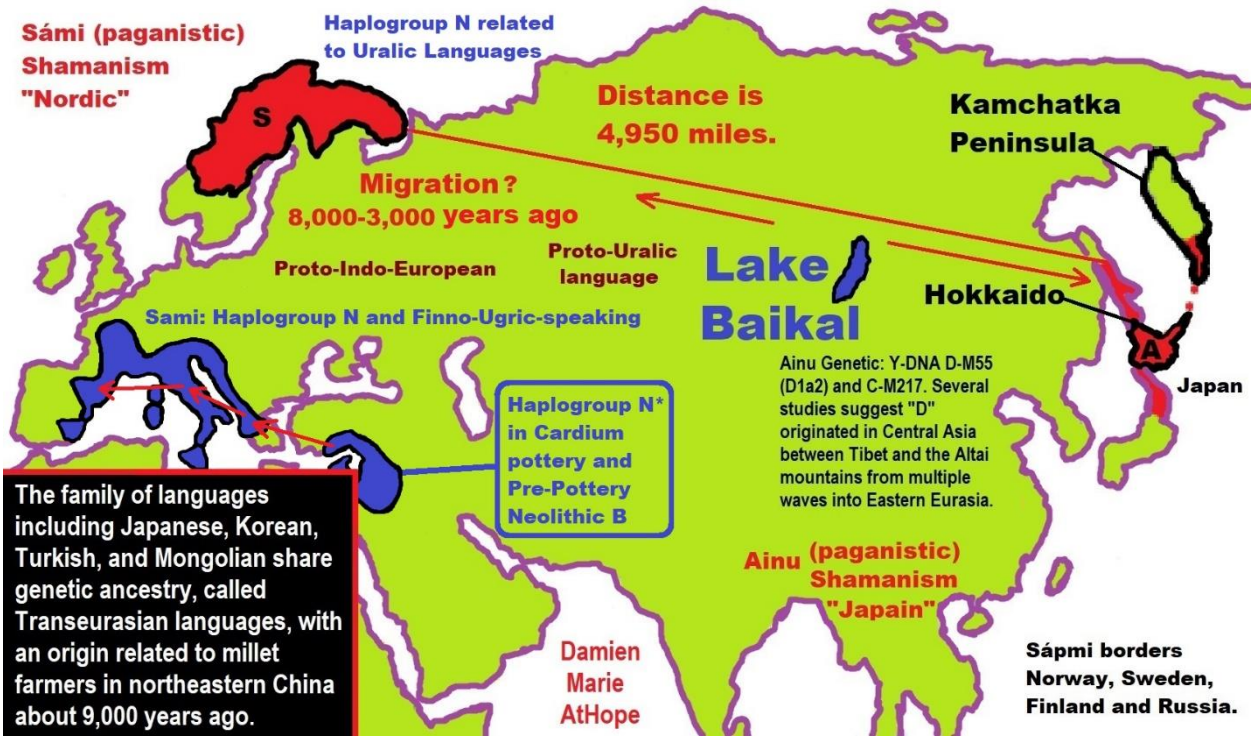
"The shaman is, above all, a connecting figure, bridging several worlds for his people, traveling between this world, the underworld, and the heavens. He transforms himself into an animal and talks with ghosts, the dead, the deities, and the ancestors. He dies and revives. He brings back knowledge from the shadow realm, thus linking his people to the spirits and places which were once mythically accessible to all.–anthropologist Barbara Meyerhoff" ref



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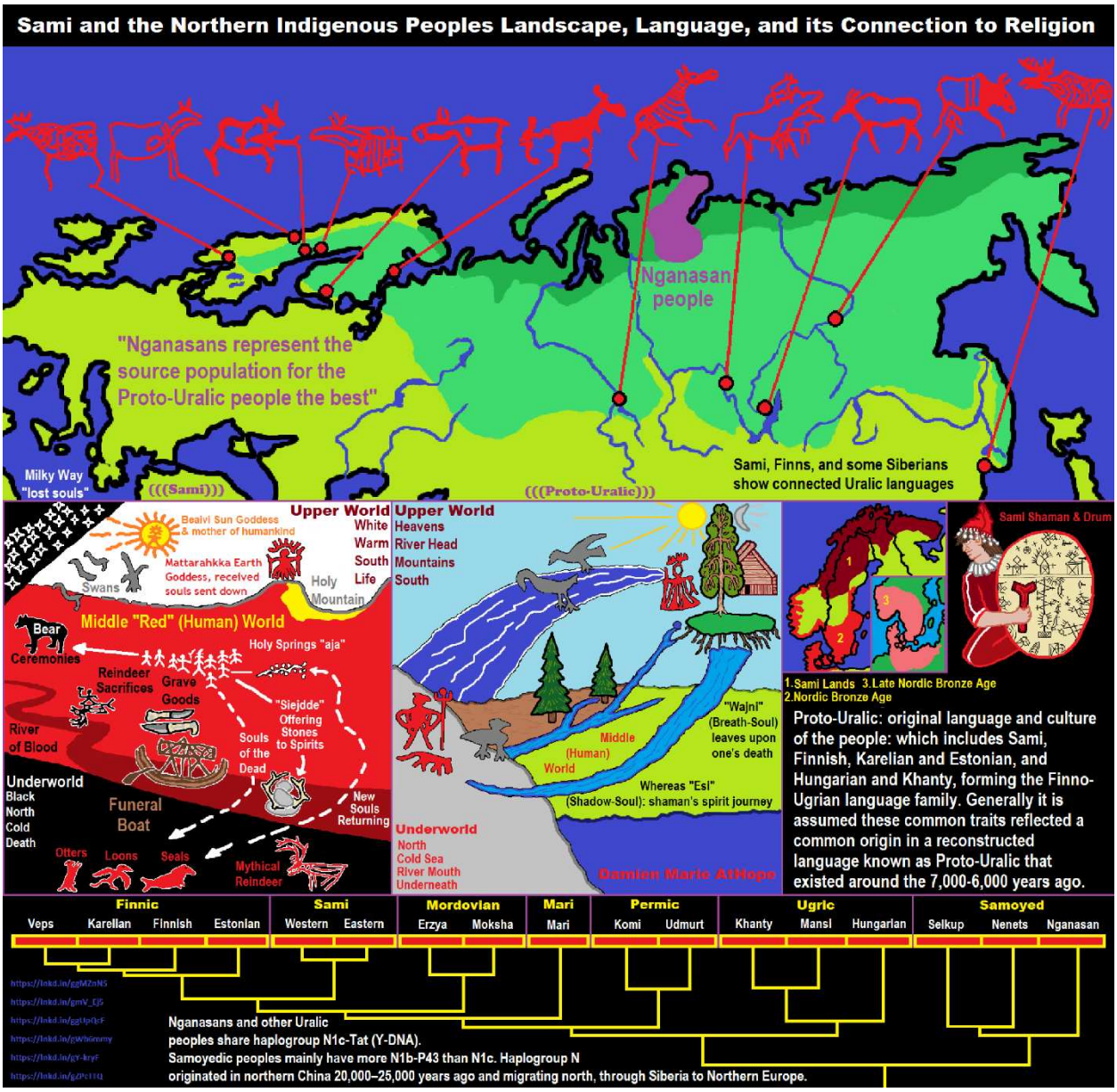

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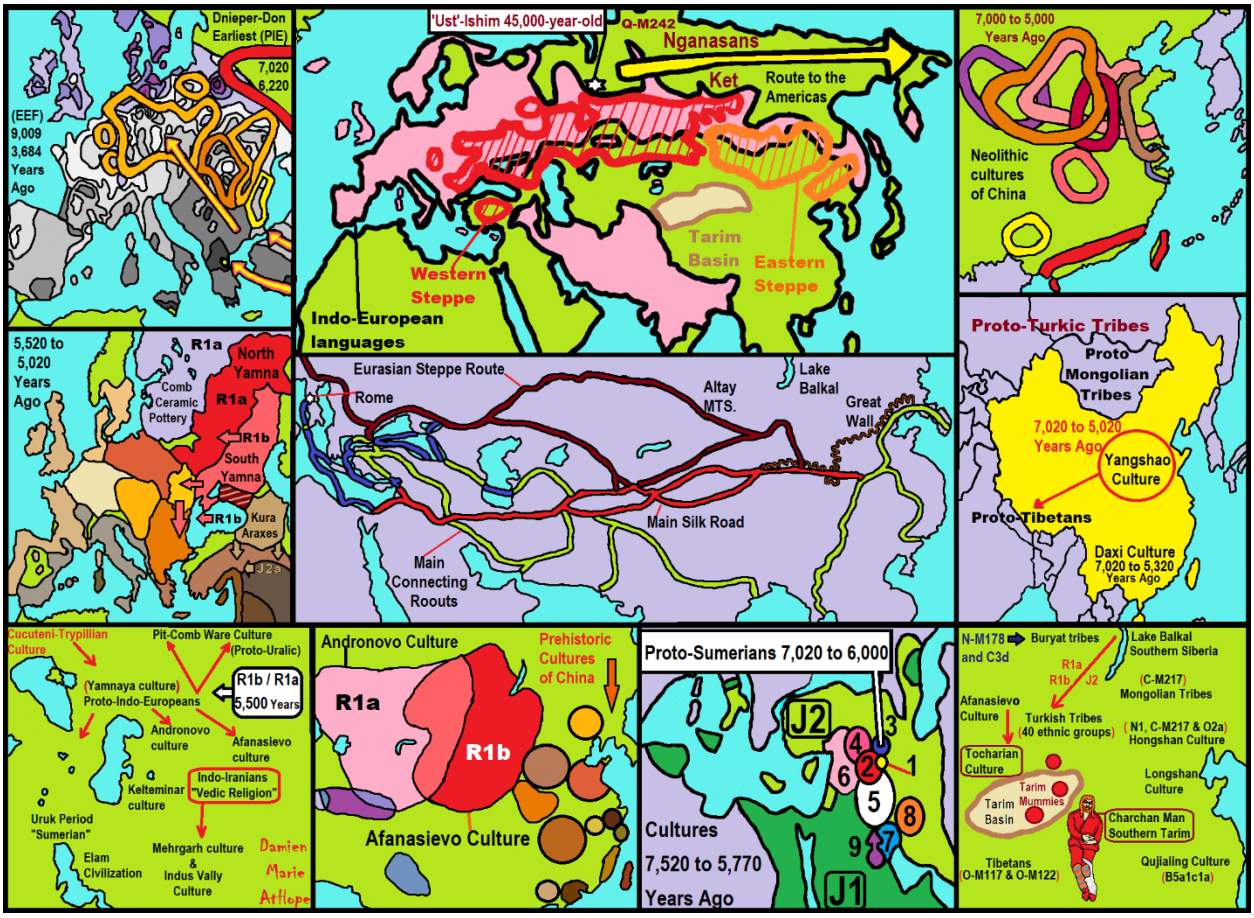

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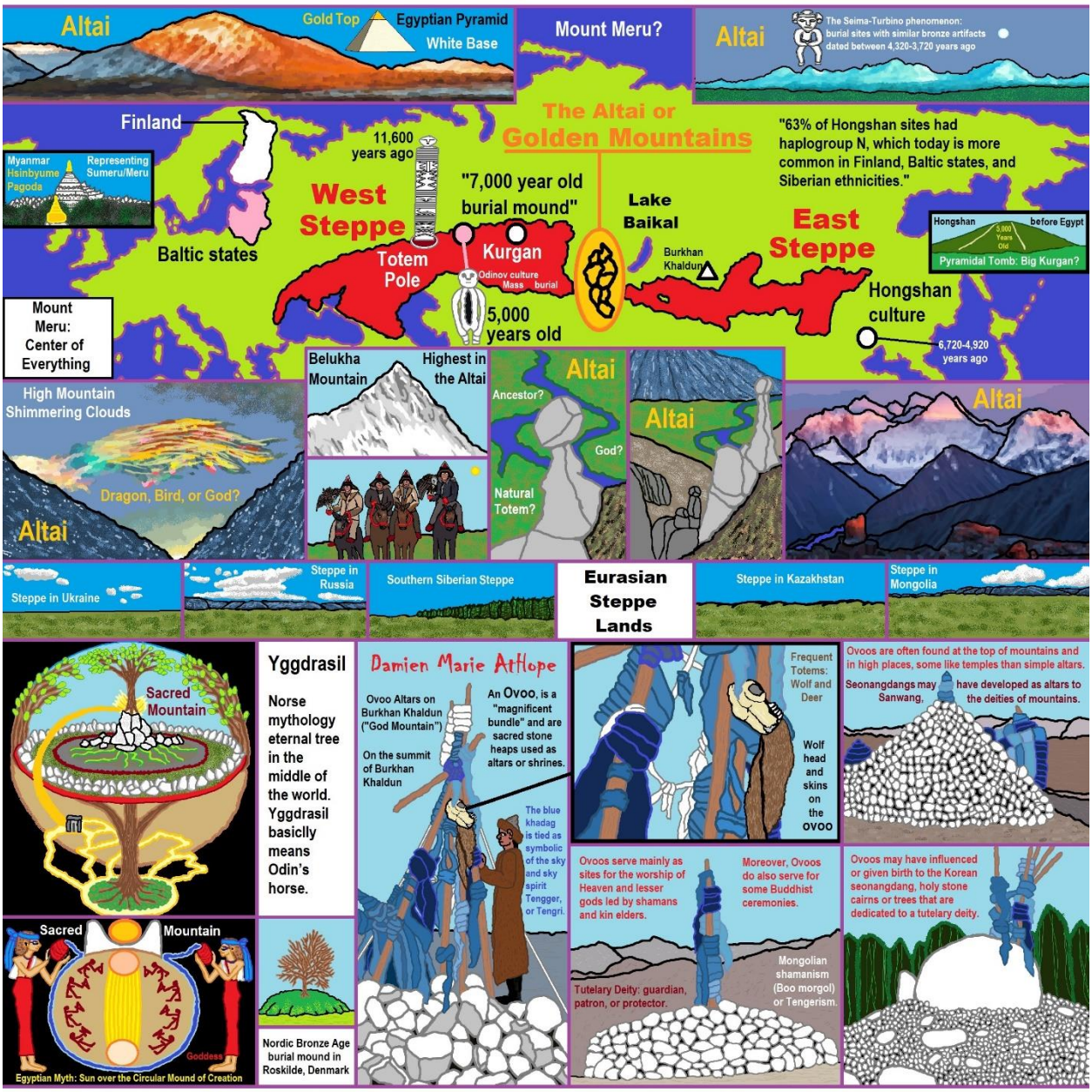
The Center of the World "Axis Mundi" and/or “Sacred Mountains” Mythology Could Relate to the Altai Mountains, Heart of the Steppe



"The Steppe Route centers on the North Asian steppes and connects eastern Europe to north-eastern China."

The ancient Egyptians saw mountains as a symbol of what is real, and it also relates to their cosmic mythology beliefs. The Egyptian necropolis was typically located in the mountainous desert and so the mountain symbol "Djew" was strongly associated with the concepts of the tomb and of the afterlife. To them, the "mountain symbol" was an image of the universal mountain whose two peaks were believed to hold up the sky. The god of mummification, an epithet for Anubis, "He who is upon his mountain." Hathor, while in the form of a cow, emerges from the side of the western mountain.

Seima-Turbino phenomenon weapons contain tin and bronze that originated from the Altai Mountains region (around central Mongolia and southern Siberia), further Seima-Turbino discoveries point more specifically to the southeastern portions of the Altai and Xinjiang, China.

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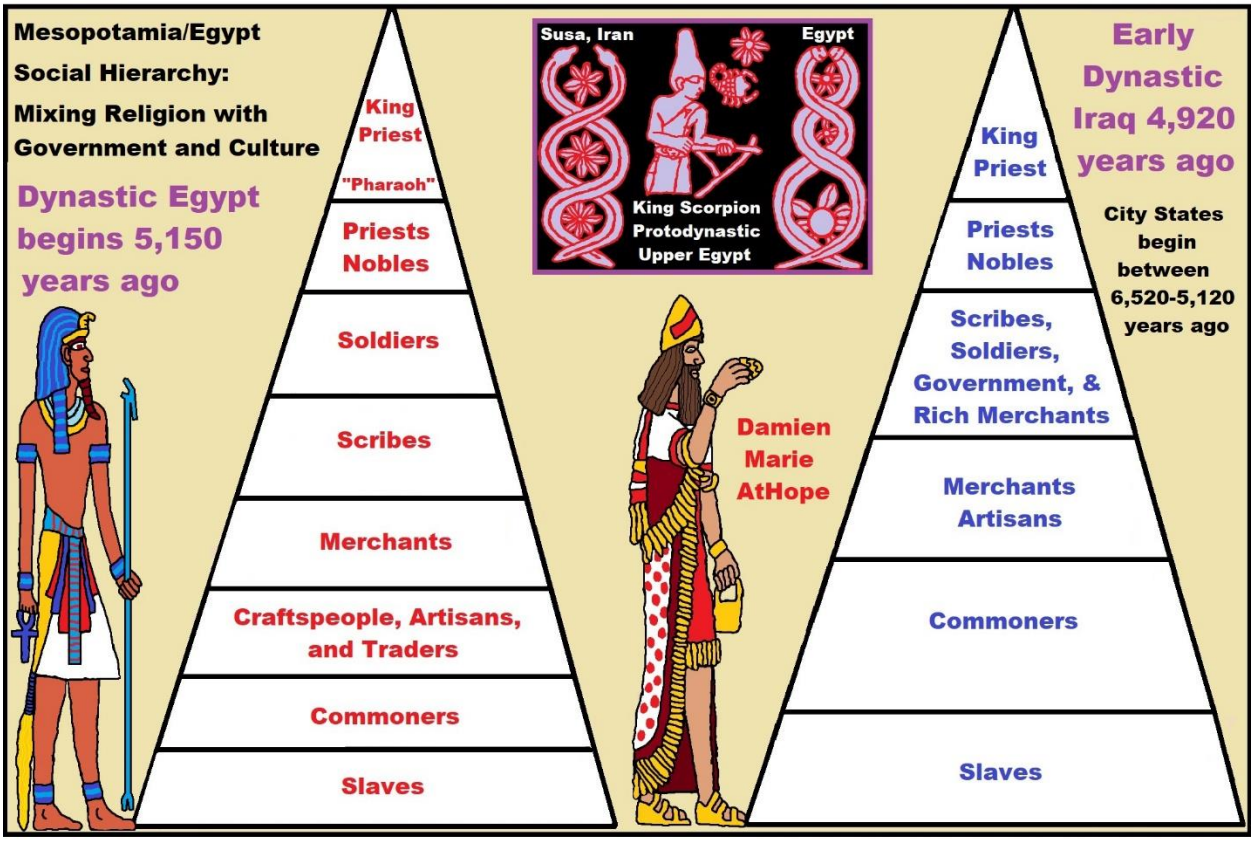
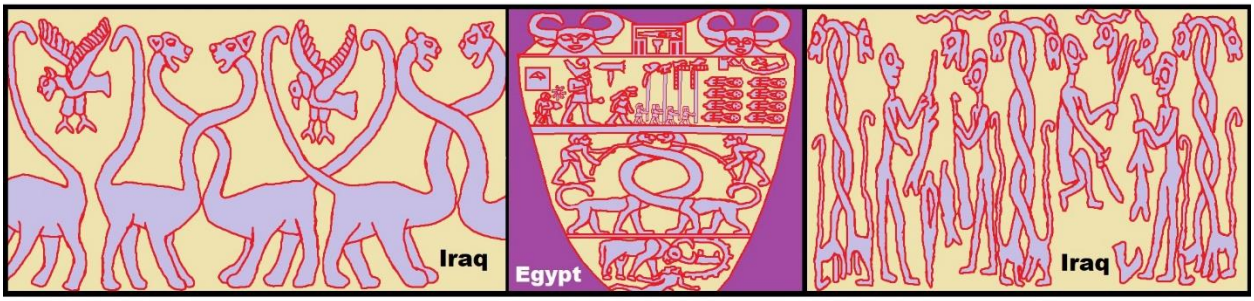
Around 5,000 years ago: "Birth of the State" where Religion gets Military Power and Influence



* **Ubaid (7,320–6,120 years ago), a Proto-State Phase (Mesopotamia):** South Mesopotamia the Ubaid period dates between about 8,520-5,820 and North Mesopotamia the period dates between about 7,320-6,320 years ago in Iraq.

* **Uruk (6,020-5,120 years ago, Proto-literate period):** Expansion Interactions with southern Mesopotamia and surrounding areas start from 5,620 years ago onward, major urban development accompanying the coming birth of the state.



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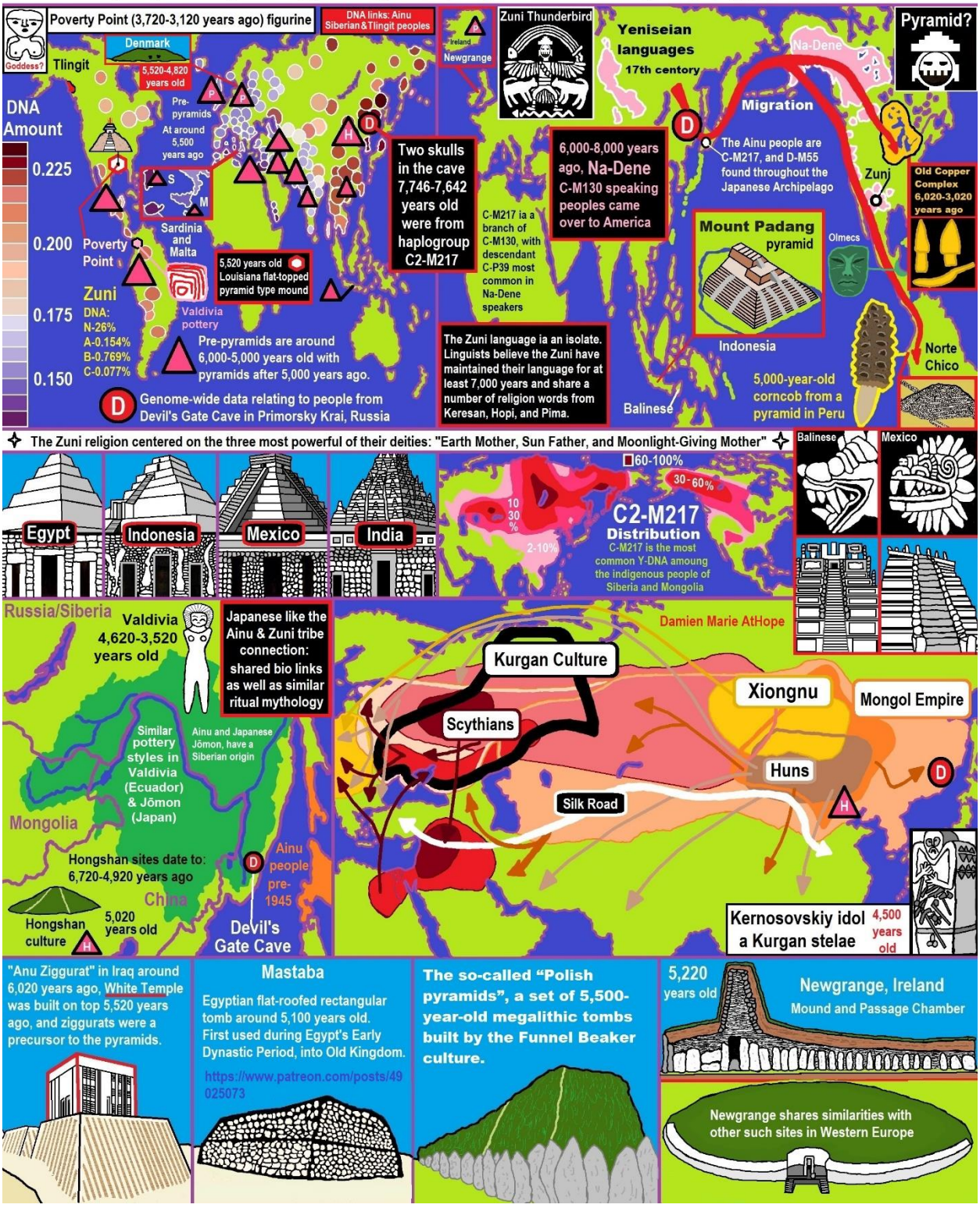
Religious/Ritual Ideas, including goddesses and gods as well as ritual mounds or pyramids from Northeastern Asia at least 6,000 years old, seemingly filtering to Iran, Iraq, the Mediterranean, Europe, Egypt, and the Americas?



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Kurgan/Steppe hypothesis: Kurgan hypothesis

"The Kurgan hypothesis or steppe theory is the most widely accepted proposal to identify the Proto-Indo-European homeland from which the Indo-European languages spread out throughout Europe and parts of Asia. It postulates that the people of a Kurgan culture in the Pontic steppe north of the Black Sea were the most likely speakers of the Proto-Indo-European language (PIE). The term is derived from the Russian kurgan (курга́н), meaning tumulus or burial mound." ref

Pontic-Caspian steppe hypothesis

"The Kurgan (or Steppe) hypothesis was first formulated by Otto Schrader (1883) and V. Gordon Childe (1926), and was later systematized by Marija Gimbutas from 1956 onwards. The name originates from the *kurgans* (burial mounds) of the Eurasian steppes. The hypothesis suggests that the Indo-Europeans, a patriarchal, patrilinear, and nomadic culture of the Pontic–Caspian steppe (now part of Eastern Ukraine and Southern Russia), expanded in several waves during the 3rd millennium BCE, coinciding with the taming of the horse. Leaving archaeological signs of their presence (see Corded Ware culture), they subjugated the supposedly peaceful, egalitarian, and matrilinear European neolithic farmers of Gimbutas' Old Europe. A modified form of this theory by J. P. Mallory, dating the migrations earlier (to around 3500 BCE or 5,522 years ago) and putting less insistence on their violent or quasi-military nature, remains the most widely accepted view of the Proto-Indo-European expansion." ref

Armenian highland hypothesis or Iranian/Armenian hypothesis

"The Armenian hypothesis, based on the glottalic theory, suggests that the Proto-Indo-European language was spoken during the 4th millennium BC in the Armenian Highland. This Indo-Hittite model does not include the Anatolian languages in its scenario. The phonological peculiarities of PIE proposed in the glottalic theory would be best preserved in the Armenian language and the Germanic languages, the former assuming the role of the dialect which remained *in situ*, implied to be particularly archaic in spite of its late attestation. Proto-Greek would be practically equivalent to Mycenean Greek and would date to the 17th century BCE, closely associating Greek migration to Greece with the Indo-Aryan migration to India at about the same time (viz., Indo-European expansion at the transition to the Late Bronze Age, including the

possibility of Indo-European Kassites). The Armenian hypothesis argues for the latest possible date of Proto-Indo-European (*sans* Anatolian), a full millennium later than the mainstream Kurgan hypothesis. In this, it figures as an opposite to the Anatolian hypothesis, in spite of the geographical proximity of the respective *Urheimaten* suggested, diverging from the time-frame suggested there by a full three millennia." ref

"David Reich (2018), noting the presence of some Indo-European languages (such as Hittite) in parts of ancient Anatolia, argues that "the most likely location of the population that first spoke an Indo-European language was south of the Caucasus Mountains, perhaps in present-day Iran or Armenia, because ancient DNA from people who lived there matches what we would expect for a source population both for the Yamnaya and for ancient Anatolians." Yet, Reich also notes that "...the evidence here is circumstantial as no ancient DNA from the Hittites themselves has yet been published." Kristian Kristiansen, in an interview with *Der Spiegel* in May 2018, stated that the Yamnaya culture may have had a predecessor at the Caucasus, where "proto-proto-Indo-European" was spoken." ref

"Recent DNA-research has led to renewed suggestions of a Caucasian homeland for the 'proto-Indo-Europeans'. According to Kroonen et al. (2018), Damgaard et al. (2018) ancient Anatolia "show no indication of a large-scale intrusion of a steppe population." They further note that this lends support to the Indo-Hittite hypothesis, according to which both proto-Anatolian and proto-Indo-European split-off from a common mother language "no later than the 4th millennium BCE." Haak et al. (2015) states that "the Armenian plateau hypothesis gains in plausibility" since the Yamnaya partly descended from a Near Eastern population, which resembles present-day Armenians." ref

"Wang et al. (2018) note that the Caucasus served as a corridor for gene flow between the steppe and cultures south of the Caucasus during the Eneolithic and the Bronze Age, stating that this "opens up the possibility of a homeland of PIE south of the Caucasus." However, Wang et al. also comment that the most recent genetic evidence supports an expansion of proto-Indo-Europeans through the steppe, noting: "but the latest ancient DNA results from South Asia also lend weight to a spread of Indo-European languages "via the steppe belt. The spread of some or all of the proto-Indo-European branches would have been possible via the North Caucasus and Pontic region and from there, along with pastoralist expansions, to the heart of Europe. This scenario finds support from the well-attested and now widely documented 'steppe ancestry' in European populations, the postulate of increasingly patrilinear societies in the wake of these expansions (exemplified by R1a/R1b), as attested in the latest study on the Bell Beaker phenomenon." ref

"David W. Anthony in a 2019 analysis, criticizes the "southern" or "Armenian" hypothesis (addressing Reich, Kristiansen, and Wang). Among his reasons being: that the Yamnaya lack evidence of genetic influence from the Bronze Age or late neolithic Caucasus (deriving instead from an earlier mixture of Eastern European hunter-gatherers and Caucasus hunter-gatherers) and have paternal lineages that seem to derive from the hunter-gatherers of the Eastern European Steppe rather than the Caucasus, as well as a scarcity in the Yamnaya of the Anatolian Farmer admixture that had become common and substantial in the Caucasus around 5,000 BCE or 7,022 years ago. Anthony instead suggests a genetic and linguistic origin of proto-Indo-Europeans (the Yamnaya) in the Eastern European steppe north of the Caucasus, from a mixture of these two groups (EHG and CHG). He suggests that the roots of Proto-Indo-European ("archaic" or proto-proto-Indo-European) were in the steppe rather than the south and that PIE formed mainly from a base of languages spoken by Eastern European hunter-gathers with some influences from languages of Caucasus hunter-gatherers." ref

Anatolian hypothesis

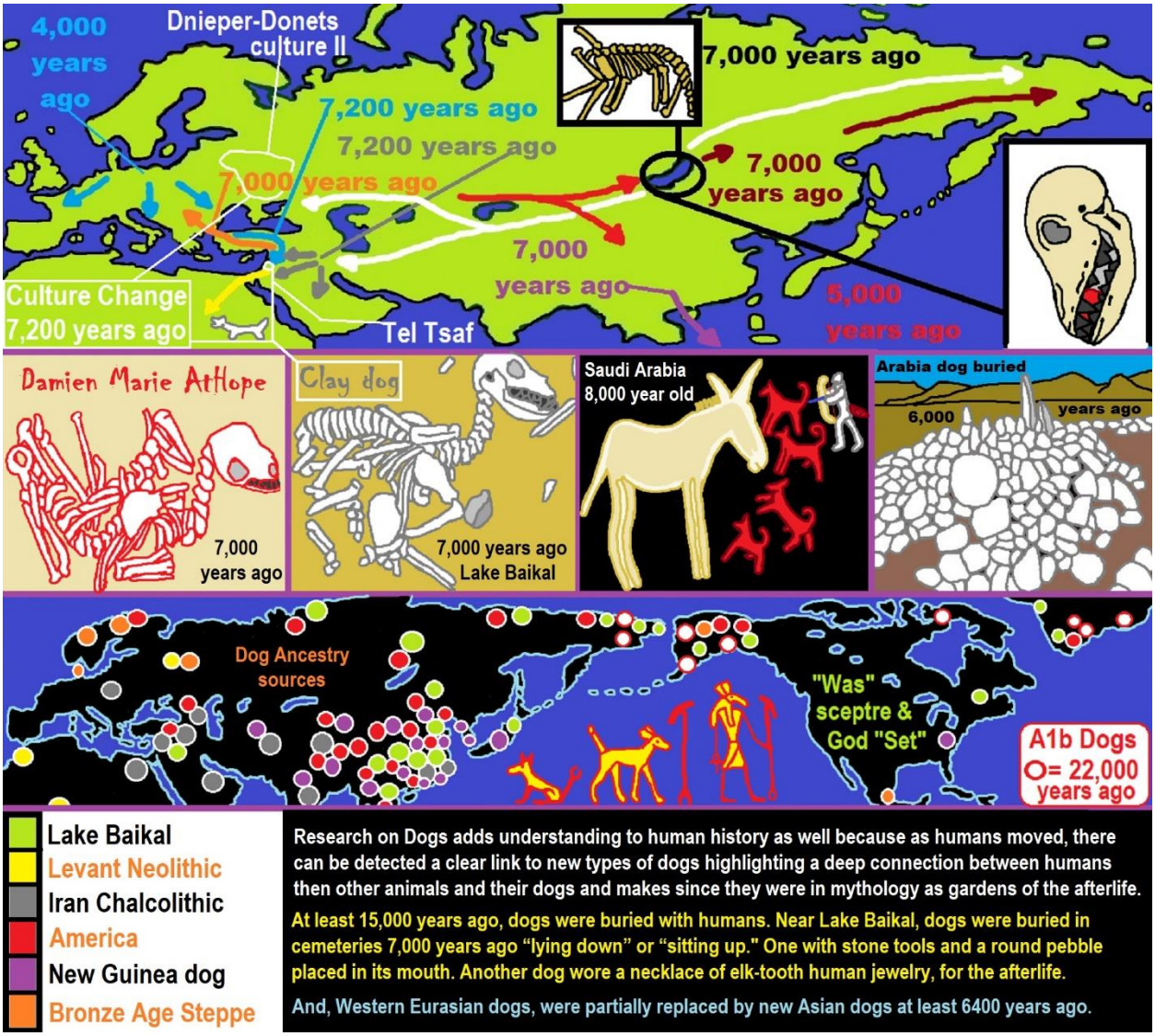
"The Anatolian hypothesis, notably advocated by Colin Renfrew from the 1980s onwards, proposes that the Indo-European languages spread peacefully into Europe from Asia Minor from around 7000 BCE or 9,022 years ago with the advance of farming (*wave of advance*). The culture of the Indo-Europeans as inferred by linguistic reconstruction raises difficulties for this theory, since early neolithic cultures lacked the horse, the wheel, and metal – terms for all of which are securely reconstructed for Proto-Indo-European. Renfrew dismisses this argument, comparing such reconstructions to a theory that the presence of the word "café" in all modern Romance languages implies that the ancient Romans had cafés too." ref

"Another argument, made by proponents of the steppe Urheimat (such as David Anthony) against Renfrew, points to the fact that ancient Anatolia is known to have been inhabited in the 2nd millennium BCE by non-Indo-European-speaking peoples, namely the Hattians (perhaps North Caucasian-speaking), the Chalybes (language unknown), and the Hurrians (Hurro-Urartian). Following the publication of several studies on ancient DNA in 2015, Colin Renfrew subsequently acknowledged the important role of migrations of populations speaking one or several Indo-European languages from the Pontic steppe towards Northwestern Europe, noting that the DNA evidence from ancient skeletons "had completely rejuvenated Maria Gimbutas' kurgan hypothesis." ref

"Luigi Luca Cavalli-Sforza and Alberto Piazza argue that Renfrew and Gimbutas reinforce rather than contradict each other. Cavalli-Sforza

(2000) states that "It is clear that, genetically speaking, peoples of the Kurgan steppe descended at least in part from people of the Middle Eastern Neolithic who immigrated there from Turkey." Piazza & Cavalli-Sforza (2006) state that:
if the expansions began at 9,500 years ago from Anatolia and at 6,000 years ago from the Yamnaya culture region, then a 3,500-year period elapsed during their migration to the Volga–Don region from Anatolia, probably through the Balkans. There a completely new, mostly pastoral culture developed under the stimulus of an environment unfavourable to standard agriculture, but offering new attractive possibilities. Our hypothesis is, therefore, that Indo-European languages derived from a secondary expansion from the Yamnaya culture region after the Neolithic farmers, possibly coming from Anatolia and settled there, developing pastoral nomadism." ref

"Spencer Wells suggests in a 2001 study that the origin, distribution, and age of the R1a1 haplotype points to an ancient migration, possibly corresponding to the spread by the Kurgan people in their expansion across the Eurasian steppe around 3000 BCE 5,022 years ago. About his old teacher Cavalli-Sforza's proposal, Wells (2002) states that "there is nothing to contradict this model, although the genetic patterns do not provide clear support either", and instead argues that the evidence is much stronger for Gimbutas' model:
While we see substantial genetic and archaeological evidence for an Indo-European migration originating in the southern Russian steppes, there is little evidence for a similarly massive Indo-European migration from the Middle East to Europe. One possibility is that, as a much earlier migration (8,000 years old, as opposed to 4,000), the genetic signals carried by Indo-European-speaking farmers may simply have dispersed over the years. There is clearly *some* genetic evidence for migration from the Middle East, as Cavalli-Sforza and his colleagues showed, but the signal is not strong enough for us to trace the distribution of Neolithic languages throughout the entirety of Indo-European-speaking Europe." ref



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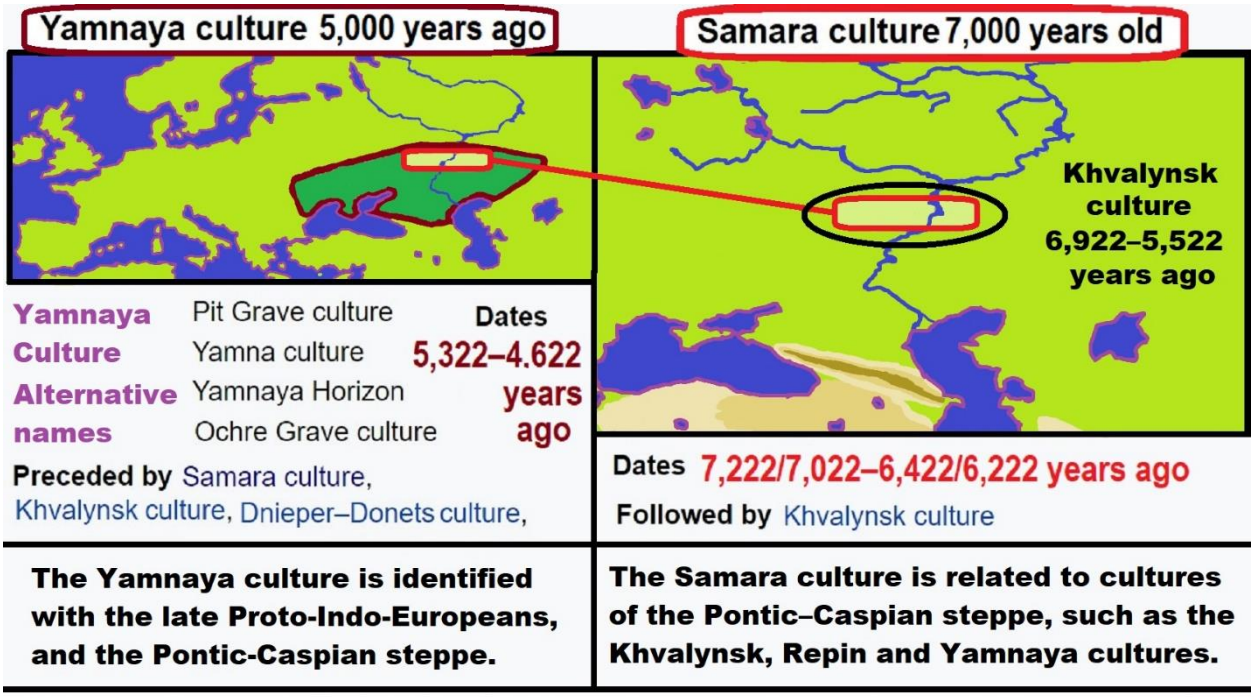
Comparative Mythology

"Since the term 'Ancient North Eurasian' refers to a genetic bridge of connected mating networks, scholars of comparative mythology have argued that they probably shared myths and beliefs that could be reconstructed via the comparison of stories attested within cultures that were not in contact for millennia and stretched from the Pontic–Caspian steppe to the American continent." ref

“The mytheme of the dog guarding the Otherworld possibly stems from an older Ancient North Eurasian belief, as suggested by similar motifs found in Indo-European, Native American and Siberian mythology.
In Siouan, Algonquian, Iroquoian, and in Central and South American beliefs, a fierce guard dog was located in the Milky Way, perceived as the path of souls in the afterlife, and getting past it was a test.” ref

“The Siberian Chukchi and Tungus believed in a guardian-of-the-afterlife dog and a spirit dog that would absorb the dead man’s soul and act as a guide in the afterlife. In Indo-European myths, the figure of the dog is embodied by Cerberus, Sarvarā, and Garmr. In Zoroastrianism, two four-eyed dogs guard the bridge to the afterlife called Chinvat Bridge. Anthony and Brown note that it might be one of the oldest mythemes recoverable through comparative mythology.” ref

“A second canid-related series of beliefs, myths and rituals connected dogs with healing rather than death. For instance, Ancient Near Eastern and Turkic–Kipchaq myths are prone to associate dogs with healing and generally categorised dogs as impure. A similar myth-pattern is assumed for the Eneolithic site of Botai in Kazakhstan, dated to 3500 BCE or around 5,500 years ago, which might represent the dog as absorber of illness and guardian of the household against disease and evil. In Mesopotamia, the goddess Nintinugga, associated with healing, was accompanied or symbolized by dogs. Similar absorbent-puppy healing and sacrifice rituals were practiced in Greece and Italy, among the Hittites, again possibly influenced by Near Eastern traditions.” ref



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Samara culture

"The **Samara culture** was an Eneolithic (Copper Age) culture that flourished around the turn of the 5th millennium BCE, at the Samara Bend of the Volga River (modern Russia). The Samara culture is regarded as related to contemporaneous or subsequent prehistoric cultures of the Pontic–Caspian steppe, such as the Khvalynsk, Repin, and Yamna (or Yamnaya) cultures." ref
"Genetic analyses of a male buried at Lebyazhinka, radiocarbon dated to 5640-5555 BCE, found that he belonged to a population often referred to as "Samara

hunter-gatherers", a group closely associated with Eastern Hunter-Gatherers. The male sample carried Y-haplogroup R1b1a1a and mitochondrial haplogroup U5a1d." ref

"Pottery consists mainly of egg-shaped beakers with pronounced rims. They were not able to stand on a flat surface, suggesting that some method of supporting or carrying must have been in use, perhaps basketry or slings, for which the rims would have been a useful point of support. The carrier slung the pots over the shoulder or onto an animal. The decoration consists of circumferential motifs: lines, bands, zig-zags, or wavy lines, incised, stabbed, or impressed with a comb. These patterns are best understood when seen from the top. They appear then to be a solar motif, with the mouth of the pot as the sun. Later developments of this theme show that in fact the sun is being represented." ref

"The culture is characterized by the remains of animal sacrifice, which occur over most of the sites. There is no indisputable evidence of riding, but there were horse burials, the earliest in the Old World. Typically the head and hooves of cattle, sheep, and horses are placed in shallow bowls over the human grave, smothered with ochre. Some have seen the beginning of the horse sacrifice in these remains, but this interpretation has not been more definitely substantiated. We know that the Indo-Europeans sacrificed both animals and people, like many other cultures." ref

"The graves found are shallow pits for single individuals, but two or three individuals might be placed there. Some of the graves are covered with a stone cairn or a low earthen mound, the very first predecessor of the kurgan. The later, fully developed kurgan was a hill on which the deceased chief might ascend to the sky god, but whether these early mounds had that significance is doubtful." ref

"Grave offerings included ornaments depicting horses. The graves also had an overburden of horse remains; it cannot yet be determined decisively if these horses were domesticated and ridden or not, but they were certainly used as a meat-animal. Most controversial are bone plaques of horses or double oxen heads, which were pierced. The graves yield well-made daggers of flint and bone, placed at the arm or head of the deceased, one in the grave of a small boy. Weapons in the graves of children are common later. Other weapons are bone spearheads and flint arrowheads. Other carved bone figurines and pendants were found in the graves." ref

Yamnaya culture

“The **Yamnaya culture** or the **Yamna culture**, also known as the **Pit Grave culture** or **Ochre Grave culture**, was a late Copper Age to early Bronze Age archaeological culture of the region between the Southern Bug, Dniester, and Ural rivers (the Pontic–Caspian steppe), dating to 3300–2600 BCE or around 5,300 to 4,600 years ago. It was discovered by Vasily Gorodtsov following his archaeological excavations near the Donets River in 1901–1903. Its name derives from its characteristic burial tradition: Я́мная (romanization: *yamnaya*) is a Russian adjective that means ‘related to pits (*yama*)’, as these people used to bury their dead in tumuli (kurgans) containing simple pit chambers.” ref

“The Yamnaya economy was based upon animal husbandry, fishing, and foraging, and the manufacture of ceramics, tools, and weapons. The people of the Yamnaya culture lived primarily as nomads, with a chiefdom system and wheeled carts and wagons that allowed them to manage large herds. They are also closely connected to Final Neolithic cultures, which later spread throughout Europe and Central Asia, especially the Corded Ware people and the Bell Beaker culture, as well as the peoples of the Sintashta, Andronovo, and Srubnaya cultures.” ref

“Back migration from Corded Ware also contributed to Sintashta and Andronovo. In these groups, several aspects of the Yamnaya culture are present. Yamnaya material culture was very similar to the Afanasevo culture of South Siberia, and the populations of both cultures are genetically indistinguishable. This suggests that the Afanasevo culture may have originated from the migration of Yamnaya groups to the Altai region or, alternatively, that both cultures developed from an earlier shared cultural source.” ref

“Genetic studies have suggested that the people of the Yamnaya culture can be modelled as a genetic admixture between a population related to Eastern European Hunter-Gatherers (EHG) and people related to hunter-gatherers from the Caucasus (CHG) in roughly equal proportions, an ancestral component which is often named “Steppe ancestry”, with additional admixture from Anatolian, Levantine, or Early European farmers. Genetic studies also indicate that populations associated with the Corded Ware, Bell Beaker, Sintashta, and Andronovo cultures derived large parts of their ancestry from the Yamnaya or a closely related population.” ref

“The origin of the Yamnaya culture continues to be debated, with proposals for its origins pointing to both the Khvalynsk and Sredny Stog cultures. The Khvalynsk culture (4700–3800 BCE) (middle Volga) and the Don-based Repin culture (c. 3950–3300 BCE) in the eastern Pontic-Caspian steppe, and the closely related Sredny Stog culture (c. 4500–3500 BCE) in the western Pontic-Caspian steppe,

preceded the Yamnaya culture (3300–2500 BCE). The Yamnaya culture was succeeded in its western range by the Catacomb culture (2800–2200 BCE); in the east, by the Poltavka culture (2700–2100 BCE) at the middle Volga. These two cultures were followed by the Srubnaya culture (18th–12th century BCE)." ref

"Further efforts to pinpoint the location came from Anthony (2007), who suggested that the Yamnaya culture (3300–2600 BCE) originated in the Don–Volga area at c. 3400 BCE, preceded by the middle Volga-based Khvalynsk culture and the Don-based Repin culture (c. 3950–3300 BCE), arguing that late pottery from these two cultures can barely be distinguished from early Yamnaya pottery. Earlier continuity from eneolithic but largely hunter-gatherer Samara culture and influences from the more agricultural Dnieper–Donets II are apparent." ref

"**He argues that the early Yamnaya horizon spread quickly across the Pontic–Caspian steppes between c. 3400 and 3200 BCE:**
The spread of the Yamnaya horizon was the material expression of the spread of late Proto-Indo-European across the Pontic–Caspian steppes.
[...] The Yamnaya horizon is the visible archaeological expression of a social adjustment to high mobility – the invention of the political infrastructure to manage larger herds from mobile homes based in the steppes." ref

"Alternatively, Parpola (2015) relates both the Corded ware culture and the Yamnaya culture to the late Trypillia (Tripolye) culture. He hypothesizes that "the Tripolye culture was taken over by PIE speakers by c. 4000 BCE," and that in its final phase the Trypillian culture expanded to the steppes, morphing into various regional cultures which fused with the late Sredny Stog (Serednii Stih) pastoralist cultures, which, he suggests, gave rise to the Yamnaya culture. Dmytro Telegin viewed Sredny Stog and Yamna as one cultural continuum and considered Sredny Stog to be the genetic foundation of the Yamna." ref

"The Yamnaya culture was nomadic or semi-nomadic, with some agriculture practiced near rivers, and a few fortified sites, the largest of which is Mikhaylivka. Characteristic for the culture are the burials in pit graves under kurgans (tumuli), often accompanied by animal offerings. Some graves contain large anthropomorphic stelae, with carved human heads, arms, hands, belts, and weapons. The dead bodies were placed in a supine position with bent knees and covered in ochre. Some kurgans contained "stratified sequences of graves." ref

"Kurgan burials may have been rare, and were perhaps reserved for special adults, who were predominantly, but not necessarily, male. Status and gender are

marked by grave goods and position, and in some areas, elite individuals are buried with complete wooden wagons. Grave goods are more common in eastern Yamnaya burials, which are also characterized by a higher proportion of male burials and more male-centred rituals than western areas." ref

"The Yamnaya culture had and used two-wheeled carts and four-wheeled wagons, which are thought to have been oxen-drawn at this time, and there is evidence that they rode horses. For instance, several Yamnaya skeletons exhibit specific characteristics in their bone morphology that may have been caused by long-term horseriding. Metallurgists and other craftsmen are given a special status in Yamnaya society, and metal objects are sometimes found in large quantities in elite graves." ref

"New metalworking technologies and weapon designs are used. Stable isotope ratios of Yamna individuals from the Dnipro Valley suggest the Yamnaya diet was terrestrial protein based with insignificant contribution from freshwater or aquatic resources. Anthony speculates that the Yamnaya ate meat, milk, yogurt, cheese, and soups made from seeds and wild vegetables, and probably consumed mead." ref

"Mallory and Adams suggest that Yamnaya society may have had a tripartite structure of three differentiated social classes, although the evidence available does not demonstrate the existence of specific classes such as priests, warriors, and farmers." ref

"According to Jones et al. (2015) and Haak et al. (2015), autosomal tests indicate that the Yamnaya people were the result of a genetic admixture between two different hunter-gatherer populations: distinctive "Eastern Hunter-Gatherers" (EHG), from Eastern Europe, with high affinity to the Mal'ta–Buret' culture or other, closely related people from Siberia and a population of "Caucasus hunter-gatherers" (CHG) who probably arrived from the Caucasus or Iran. Each of those two populations contributed about half the Yamnaya DNA. This admixture is referred to in archaeogenetics as Western Steppe Herder (WSH) ancestry." ref

"Admixture between EHGs and CHGs is believed to have occurred on the eastern Pontic-Caspian steppe starting around 5,000 BCE, while admixture with Early European Farmers (EEF) happened in the southern parts of the Pontic-Caspian steppe sometime later. More recent genetic studies have found that the Yamnaya were a mixture of EHGs, CHGs, and to a lesser degree Anatolian farmers and Levantine farmers, but not EEFs from Europe due to lack of WHG DNA in the Yamnaya. This occurred in two distinct admixture events from West Asia into the Pontic-Caspian steppe." ref

“Haplogroup R1b, specifically the Z2103 subclade of R1b-L23, is the most common Y-DNA haplogroup found among the Yamnaya specimens. This haplogroup is rare in Western Europe and mainly exists in Southeastern Europe today. Additionally, a minority are found to belong to haplogroup I2. They are found to belong to a wider variety of West Eurasian mtDNA haplogroups, including U, T, and haplogroups associated with Caucasus Hunter-Gatherers and Early European Farmers. A small but significant number of Yamnaya kurgan specimens from Northern Ukraine carried the East Asian mtDNA haplogroup C4.” ref

“In 2014, a study discovered a new mtDNA subclade C1f from the remains of 3 people found in north-western Russia and dated to 7,500 years ago. The subclades C1b, C1c, C1d, and C4c are found in the first people of the Americas. C1a is found only in Asia.” ref

“C4 – Upper Palaeolithic (14050 – 13770 years ago) Ust-Kyakhta (Buryatia), Late Neolithic-Bronze Age Irkutsk Oblast, Late Neolithic-Iron Age Yakutia, Tubalar (Ederbes), Todzhin (Toora-Hem, Iiy, Adir-Kezhig), Yukaghir (Andrushkino), Yukaghir/Chuvan (Markovo), Russian, Myanmar

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- C4a’b’c – Irkutsk Oblast (6815 years ago), India (Jenu Kuruba)
    - C4a – China (Guangdong, Han from Beijing)
        - C4a1
          – Mongol from Chifeng and Hulunbuir, Tashkurgan (Kyrgyz, Sarikoli, Wakhi), Czech Republic, Denmark
            - C4a1a – Korea, China, Uyghur, Buryat (South Siberia), Denmark, Sweden, France, Scotland, Canada
                - C4a1a1
                    - C4a1a1a
                        - C4a1a1a1 – Lepcha, Sherpa (Nepal)
                        - C4a1a1a2 – Lachungpa
                        - C4a1a1a3 – Wancho
                    - C4a1a1b – Poland, Finland (Hamina)
                - C-T195C! – Ireland, Scotland, England, USA, Hungary (Szeged region), Poland,

Belarus, Russia (Russian, Buryat), Turkey, Pakistan (Hazara), India (Jammu and Kashmir), China (Bargut and Mongol in Inner Mongolia, *etc.*), Korea

- C4a1a2 – China
  - C4a1a2a – China (Han from Ili, Han from Henan, *etc.*)
  - C4a1a2b
    - C4a1a2b1 – China
    - C4a1a2b2 – Uyghur
- C4a1a3 – Bronze Age Irkutsk Oblast (Ust'-Belaya, Khaptsagai, Silinskij, Chastaja Padi), Russian (Kemerovo Oblast), Koryak, Yukaghir, Yakut, Evenk (Nyukzha, Chumikan, Nelkan/Dzhigda), Even (Sakkyryyr, Sebjan, Tompo, Markovo, Kamchatka), Udinsk Buryat (Kushun), Todzhin (Toora-Hem, Adir-Kezhig), Altai Kizhi, Iran (Qashqai), Sweden
  - C4a1a3a – Yakut, Buryat (Buryat Republic, Irkutsk Oblast), Bargut, Nentsi
    - C4a1a3a1 – Yakut, Nganasan (Vadei of Taimyr Peninsula)
      - C4a1a3a1a – Evenk (Taimyr, Stony Tunguska)

- C4a1a3a1b – Tofalar
- C4a1a3b – Bargut, Uyghur
- C4a1a3b1 – Chelkan, Tubalar
- C4a1a3c – Evenk (Taimyr Peninsula, Stony Tunguska)
- C4a1a3d – Yakut
- C4a1a4 – Buryat, Kazakhstan
- C4a1a4a – Evenk (Okhotsk region), Shor
- C4a1a5 – Teleut, Ladakh
- C4a1a6
- C4a1a6a – Russia (Bashkortostan, Khamnigan), Kyrgyzstan (Kyrgyz), Inner Mongolia (Bargut, Buryat)
- C4a1a6b – Buryat (South Siberia, Inner Mongolia), Uyghur
- C4a1a7 – Denmark
- C4a1b – China, Thailand (Palaung)
- C4a1c – Russia (Bashkortostan, Adygei), Iran (Azerbaijanian), China (Xibo, Mongol from Tianjin)
- C4a2
- C4a2a – Yakut, Evenk (Chumikan)
- C4a2a1 – Bronze Age (2275 – 2040 cal BCE or around 4,275 to 4,040 years ago) Irkutsk Oblast (specimen irk076 from burial 3 at the Shamanka 2 site, South Baikal), Shor, Chelkan, Teleut, Altai Kizhi, Yakut, Kazakh, Ket, Evenk (Stony Tunguska, Taimyr), Buryat (Irkutsk Oblast, Inner Mongolia), China, Korea

- C4a2a1a – Yukaghir, Yakut, Evenk (Nyukzha, Iyengra, Nelkan/Dzhigda), Even (Tompo)
- C4a2a1b – Evenk (Nyukzha), Yakut
  - C4a2a1b1 – Evenk (Nyukzha)
- C4a2a1c – China (Zhejiang, Uyghurs), Buryat, Todzhin (Iiy), Karanogay (Dagestan)
  - C4a2a1c1 – Tofalar (Alygdzher, Nerkha, V. Gutara), Khamnigan
  - C4a2a1c2 – Uyghurs
- C4a2a1d – Uyghurs
  - C4a2a1d1 – Udinsk Buryat (Kushun), Tofalar (V. Gutara), Evenk (Central Siberia)
  - C4a2a1d2 – Evenk (Nelkan/Dzhigda), Evenk/Nivkh (Val)
- C4a2a1e – Bargut (Inner Mongolia), Buryat (Irkutsk Oblast)
- C4a2a1f – Buryat (South Siberia, Irkutsk Oblast)
- C4a2a1g – Ket

- C4a2b – Tibet, Korea
  - C4a2b1 – Wancho
  - C4a2b2 – China (Han from Beijing)
    - C4a2b2a – Tibet (Sherpa)
- C4a2c – Bargut (Inner Mongolia)
  - C4a2c1 – India (Jenu Kuruba)
  - C4a2c2 – Lepcha
    - C4a2c2a – Ladakh

- C4b – Mongol from Jilin and Hulunbuir, Yukaghir, Altai Kizhi, Ukraine, Slovakia
    - C4b1 – Yukaghir, Buryat, Mongol from Jilin
        - C4b1a – Bargut (Inner Mongolia)
        - C4b1b – Evenk (Stony Tunguska), Buryat
    - C4b2 – Koryak
        - C4b2a – Koryak, Chukchi
    - C4b3 – Yakut, Altai Kizhi
        - C4b3a – Yukaghir, Even (Berezovka), Mongol from Xilingol
            - C4b3a1 – Yukaghir
        - C4b3b – Buryat, Evenk (Stony Tunguska)
    - C4b5 – Khamnigan, Buryat
    - C4b6 – Altai Kizhi, Tubalar
    - C4b7 – Yukaghir
    - C4b8 – Yakut
        - C4b8a – Nganasan
- C4c – Ijka
    - C4c1 – Sioux (Carson County of South Dakota), Shuswap, Canada, USA, France, Spain
        - C4c1a – Cherokee (Flint District of Oklahoma)
        - C4c1b – Chippewa (Trempealeau in Wisconsin), Ottawa or Chippewa (Sault Saint Marie, Chippewa County, Michigan), Canada
    - C4c2 – Métis (Red River, Manitoba), USA
- C4-T152C! – Russia (Bashkortostan), England
    - C4-T152C!-A12780G – Uyghur
        - C4d – Turkey, Tibet (Chamdo, Nyingchi, Shannan, Lhoba), Thailand (Khon Mueang from Chiang Mai Province), Han from Beijing, Mongol from Tongliao
    - C4-T152C!-T4742C – Altai Republic (ancient DNA), Uyghur
        - C4-T152C!-T4742C-T16093C – Kyrgyz (Kyrgyzstan), Tibet (Nyingchi)

        - C4-T152C!-T4742C-T8602C – Sarikoli (Tashkurgan), Burusho (Pakistan)
        - C4-T152C!-T4742C-T8602C-G11176A – Pamiri (Gorno-Badakhshan Autonomous Region of Tajikistan)
    - C4e – Teleut, Shor" ref

"People of the Yamnaya culture are believed to have had mostly brown eye colour, light to intermediate skin, and brown hair colour, with some variation." ref

"Some Yamnaya individuals are believed to have carried a mutation to the KITLG gene associated with blond hair, as several individuals with Steppe ancestry are later found to carry this mutation. The Ancient North Eurasian Afontova Gora group, who contributed significant ancestry to Western Steppe Herders, are believed to be the source of this mutation. A study in 2015 found that Yamnaya had the highest ever calculated genetic selection for height of any of the ancient populations tested. It has been hypothesized that an allele associated with lactase persistence (conferring lactose tolerance into adulthood) was brought to Europe from the steppe by Yamnaya-related migrations." ref

"A 2022 study by Lazaridis et al. found that the typical phenotype among the Yamnaya population was brown eyes, brown hair, and intermediate skin colour. None of their Yamnaya samples were predicted to have either blue eyes or blond hair, in contrast with later Steppe groups in Russia and Central Asia, as well as the Bell Beaker culture in Europe, who did carry these phenotypes in high proportions." ref

"The geneticist David Reich has argued that the genetic data supports the likelihood that the people of the Yamnaya culture were a "single, genetically coherent group" who were responsible for spreading many Indo-European languages. Reich's group recently suggested that the source of Anatolian and Indo-European subfamilies of the Proto-Indo-European (PIE) language may have been in west Asia and the Yamna were responsible for the dissemination of the latter. Reich also argues that the genetic evidence shows that Yamnaya society was an oligarchy dominated by a small number of elite males." ref

"The genetic evidence for the extent of the role of the Yamnaya culture in the spread of Indo-European languages has been questioned by Russian archaeologist Leo Klejn and Balanovsky et al., who note a lack of male haplogroup continuity between the people of the Yamnaya culture and the contemporary populations of Europe. Klejn has also suggested that the autosomal evidence does not support a Yamnaya migration, arguing that Western

Steppe Herder ancestry in both contemporary and Bronze Age samples is lowest around the Danube in Hungary, near the western limits of the Yamnaya culture, and highest in Northern Europe, which Klejn argues is the opposite of what would be expected if the geneticists' hypothesis is correct." ref

Yamnaya culture and the Proto-Indo-Europeans (PIE) Language

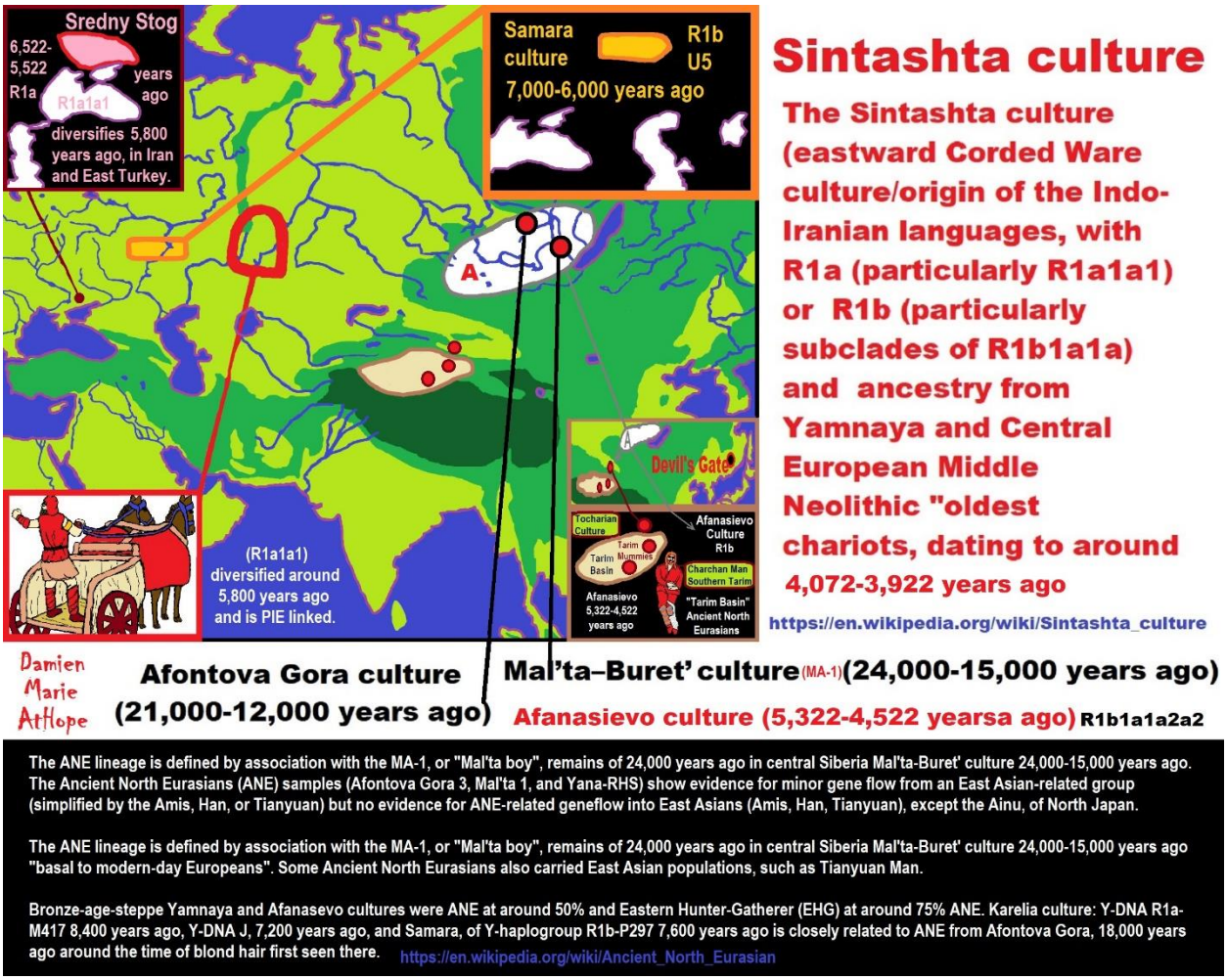
"Marija Gimbutas identified the Yamnaya culture with the late Proto-Indo-Europeans (PIE) in her Kurgan hypothesis. In the view of David Anthony, the Pontic-Caspian steppe is the strongest candidate for the *Urheimat* (original homeland) of the Proto-Indo-European language, citing evidence from linguistics and genetics which suggests that the Yamnaya culture may be the homeland of the Indo-European languages, with the possible exception of the Anatolian languages. On the other hand, Colin Renfrew has argued for a Near Eastern origin of the earliest Indo-European speakers." ref

"According to David W. Anthony, the genetic evidence suggests that the leading clans of the Yamnaya were of EHG (Eastern European hunter-gatherer) and WHG (Western European hunter-gatherer) paternal origin and implies that the Indo-European languages were the result of "a dominant language spoken by EHGs that absorbed Caucasus-like elements in phonology, morphology, and lexicon." It has also been suggested that the PIE language evolved through trade interactions in the circum-Pontic area in the 4th millennium BCE, mediated by the Yamna predecessors in the North Pontic steppe." ref

"Guus Kroonen et al. 2022 found that the "basal Indo-European stage", also known as Indo-Anatolian or Pre-Proto-Indo-European language, largely but not totally, lacked agricultural-related vocabulary, and only the later "core Indo-European languages" saw an increase in agriculture-associated words. According to them, this fits a homeland of early core Indo-European within the westernmost Yamnaya horizon, around and west of the Dnieper, while its basal stage, Indo-Anatolian, may have originated in the Sredny Stog culture, as opposed to the eastern Yamnaya horizon." ref

"The Corded Ware culture may have acted as major source for the spread of later Indo-European languages, including Indo-Iranian, while Tocharian languages may have been mediated via the Catacomb culture. They also argue that this new data contradicts a possible earlier origin of Pre-Proto-Indo-European among agricultural societies South of the Caucasus, rather "this may support a scenario of linguistic continuity of local non-mobile herders in the Lower Dnieper region and their genetic persistence after their integration into the successive and expansive Yamnaya horizon". Furthermore the authors mention that this scenario can explain the difference in paternal haplogroup

frequency between the Yamnaya and Corded Ware cultures, while both sharing similar autosomal DNA ancestry.” ref



Damien Marie AtHope’s Art

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Sintashta culture

“The **Sintashta culture** is a Middle Bronze Age archaeological culture of the Southern Urals, dated to the period c. 2200–1900 BCE. It is the first phase of the **Sintashta–Petrovka complex**, c. 2200–1750 BCE or around 4,200 to 3,750 years ago. The culture is named after the Sintashta archaeological site, in Chelyabinsk Oblast, Russia, and spreads through Orenburg

Oblast, Bashkortostan, and Northern Kazakhstan. The Sintashta culture is thought to represent an eastward migration of peoples from the Corded Ware culture." ref

"Sintashta settlements are estimated to have a population of between 200 and 700 individuals with economies that "heavily exploited domesticated cattle, sheep, and goats alongside horses with occasional hunting of wild fauna". Anthony (2007) assumes that probably the people of the Sintashta culture spoke "Common-Indo-Iranian". This identification is based primarily on similarities between sections of the *Rig Veda*, a religious text which includes ancient Indo-Iranian hymns recorded in Vedic Sanskrit, and the funerary rituals of the Sintashta culture as revealed by archaeology." ref

"Some cultural similarities with Sintashta have also been found to be common with the Nordic Bronze Age of Scandinavia. There is linguistic evidence of interaction between Finno-Ugric and Indo-Iranian languages, showing influences from the Indo-Iranians into the Finno-Ugric culture. From the Sintashta culture the Indo-Iranian followed the migrations of the Indo-Iranians to Anatolia, the Iranian plateau and the Indian subcontintinent. From the 9th century BCE onward, Iranian languages also migrated westward with the Scythians back to the Pontic steppe where the proto-Indo-Europeans came from." ref

"It is widely regarded as the origin of the Indo-Iranian languages (*Indo-Iranic languages*), whose speakers originally referred to themselves as the *Arya*. The earliest known chariots have been found in Sintashta burials, and the culture is considered a strong candidate for the origin of the technology, which spread throughout the Old World and played an important role in ancient warfare. Sintashta settlements are also remarkable for the intensity of copper mining and bronze metallurgy carried out there, which is unusual for a steppe culture. Among the main features of the Sintashta culture are high levels of militarism and extensive fortified settlements, of which 23 are known." ref

"Because of the difficulty of identifying the remains of Sintashta sites beneath those of later settlements, the culture was only distinguished in the 1990s from the Andronovo culture. It was then recognised as a distinct entity, forming part of the "Andronovo horizon". Koryakova (1998) concluded from their archaeological findings that the Sintashta culture originated from the interaction of the two precursors Poltavka culture and Abashevo culture. Allentoft et al. (2015) concluded from their genetic results that the Sintashta culture should have emerged from an eastward migration of peoples from the Corded Ware culture. In addition, Narasimshan et al. (2019) cautiously cite that "morphological data has been interpreted as suggesting that both Fedorovka and Alakul' skeletons are similar to Sintashta groups, which in turn may reflect

admixture of Neolithic forest HGs and steppe pastoralists, descendants of the Catacomb and Poltavka cultures." ref

"Sintashta emerged during a period of climatic change that saw the already arid Kazakh steppe region become even colder and drier. The marshy lowlands around the Ural and upper Tobol rivers, previously favored as winter refuges, became increasingly important for survival. Under these pressures both Poltavka and Abashevo herders settled permanently in river valley strongholds, eschewing more defensible hill-top locations. Its immediate predecessor in the Ural-Tobol steppe was the Poltavka culture, an offshoot of the cattle-herding Yamnaya horizon that moved east into the region between 2800 and 2600 BCE. Several Sintashta towns were built over older Poltavka settlements or close to Poltavka cemeteries, and Poltavka motifs are common on Sintashta pottery." ref

"Sintashta material culture also shows the influence of the late Abashevo culture, derived from the Fatyanovo-Balanovo culture, a collection of Corded Ware settlements in the forest steppe zone north of the Sintashta region that were also predominantly pastoralist. Radiocarbon dating indicates that the Sintashta culture dates to between c. 2200 and 1750 BCE, roughly contemporary with the associated Abashevo and Petrovka cultures. Some authors date the Petrovka culture slightly later, from c. 1900 BCE." ref

"In Cis-Urals, burial sites Berezovaya and Tanabergen II showed Sintashta culture established there c. 2290–1750 BCE (68.2% probability), and the earliest values of this culture, in Trans-Urals, at the burial sites Sintashta II and Kamenny Ambar-5 (Kurgan 2) are c. 2200–2000 BCE. Chariots appear in southern Trans-Urals region in middle and late phases of the culture, c. 2050-1750 BC. Blöcher et al. (2023) consider Sintashta-Petrovka period came to an end in Trans-Urals c. 1900–1800 BCE." ref

Genetics

"Allentoft et al. 2015 analyzed the remains of four individuals ascribed to the Sintastha culture. One male carried Y-haplogroup R1a and mt-J1c1b1a, while the other carried Y-R1a1a1b and mt-J2b1a2a. The two females carried U2e1e and U2e1h respectively. The study found a close autosomal genetic relationship between peoples of Corded Ware culture and Sintashta culture, which "suggests similar genetic sources of the two," and may imply that "the Sintashta derives directly from an eastward migration of Corded Ware peoples." ref

"Sintashta individuals and Corded Ware individuals both had a relatively higher ancestry proportion derived from the Central Europe, and both differed markedly

in such ancestry from the population of the Yamnaya Culture and most individuals of the Poltavka Culture that preceded Sintashta in the same geographic region. Individuals from the Bell Beaker culture, the Unetice culture, and contemporary Scandinavian cultures were also found to be closely genetically related to Corded Ware. A particularly high lactose tolerance was found among Corded Ware and the closely related Nordic Bronze Age. In addition, the study found samples from the Sintashta culture to be closely genetically related to the succeeding Andronovo culture." ref

"Narasimhan et al. 2019 analyzed the remains of several individuals associated with the Sintashta culture. mtDNA was extracted from two females buried at the Petrovka settlement. They were found to be carrying subclades of U2 and U5. The remains of fifty individuals from the fortified Sintastha settlement of Kamennyi Ambar was analyzed. This was the largest sample of ancient DNA ever sampled from a single site. The Y-DNA from thirty males was extracted. Eighteen carried R1a and various subclades of it (particularly subclades of R1a1a1), five carried subclades of R1b (particularly subclades of R1b1a1a), two carried Q1a and a subclade of it, one carried I2a1a1a, and four carried unspecified R1 clades. The majority of mtDNA samples belonged to various subclades of U, while W, J, T, H and K also occurred. A Sintashta male buried at Samara was found to be carrying R1b1a1a2 and J1c1b1a." ref

"The authors of the study found the majority of Sintashta people (ca. 80%) to be closely genetically related to the people of the Corded Ware culture, the Srubnaya culture, the Potapovka culture, and the Andronovo culture. These were found to harbor mixed ancestry from the Yamnaya culture and peoples of the Central European Middle Neolithic, like the Globular Amphora culture. The remaining sampled Sintashta individuals belonged to various ancestral types different from the majority population, with affinities to earlier populations such as Eneolithic samples collected at Khvalynsk and hunter-gatherers from Tyumen Oblast in western Siberia. This indicates that the Sintashta settlement of Kamennyi Ambar was a cosmopolitan site that united a genetically heterogenous population in a single social group. Estimates based on DATES (Distribution of Ancestry Tracts of Evolutionary Signals) suggest that genetic characteristics typical of the Sintashta culture formed by c. 3200 BCE." ref

Warfare

"The preceding Abashevo culture was already marked by endemic intertribal warfare; intensified by ecological stress and competition for resources in the Sintashta period. This drove the construction of fortifications on an unprecedented scale and innovations in military technique such as the invention

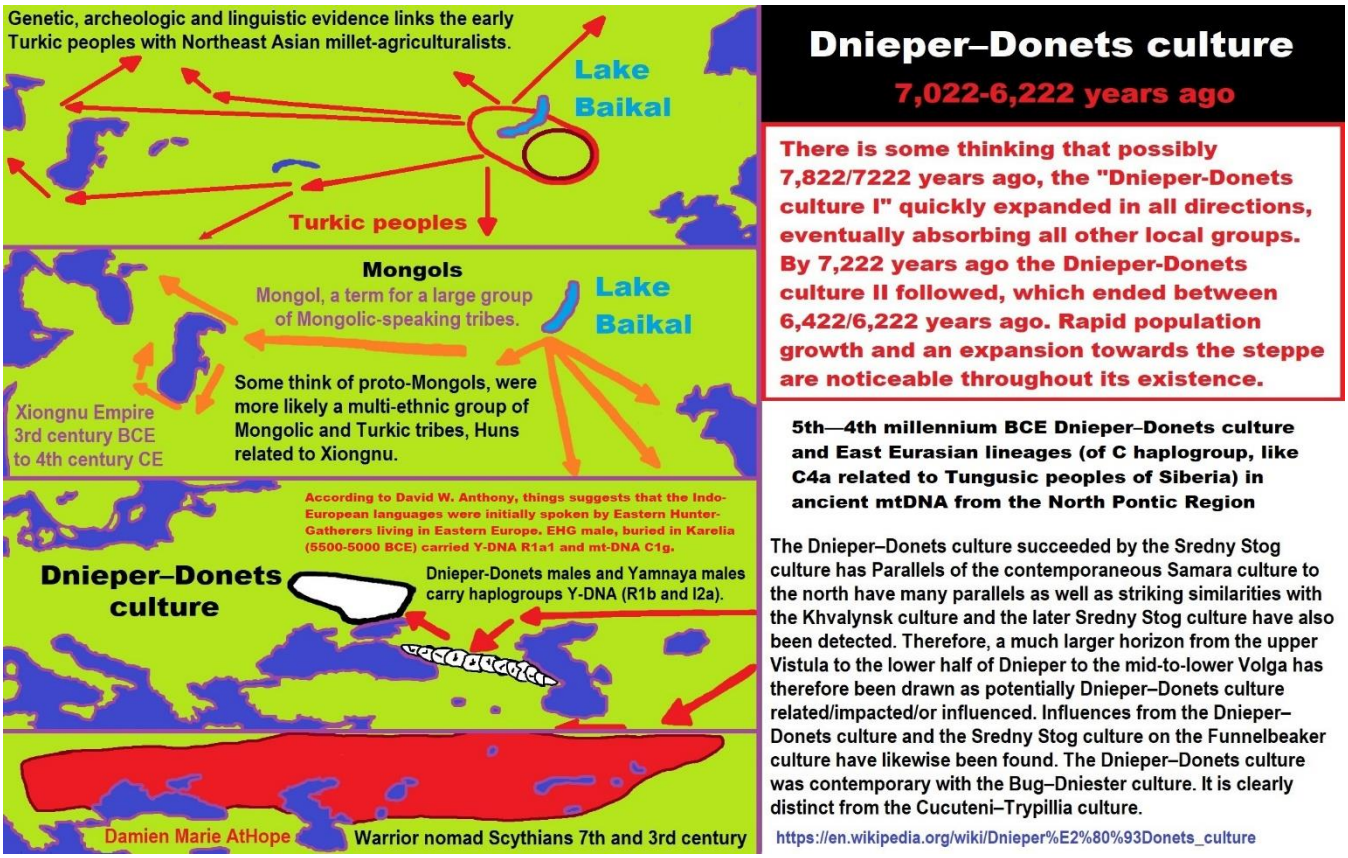
of the war chariot. Increased competition between tribal groups may also explain the extravagant sacrifices seen in Sintashta burials, as rivals sought to outdo one another in acts of conspicuous consumption analogous to the North American potlatch tradition." ref

"Sintashta artefact types such as spearheads, trilobed arrowheads, chisels, and large shaft-hole axes were taken east. Many Sintashta graves are furnished with weapons, although the composite bow associated later with chariotry does not appear. Higher-status grave goods include chariots, as well as axes, mace-heads, spearheads, and cheek-pieces. Sintashta sites have produced finds of horn and bone, interpreted as furniture (grips, arrow rests, bow ends, string loops) of bows; there is no indication that the bending parts of these bows included anything other than wood. Arrowheads are also found, made of stone or bone rather than metal. These arrows are short, 50–70 cm long, and the bows themselves may have been correspondingly short." ref

"Sintashta culture, and the chariot, are also strongly associated with the ancestors of modern domestic horses, the DOM2 population. DOM2 horses originated from the Western Eurasia steppes, especially the lower Volga-Don, but not in Anatolia, during the late fourth and early third millennia BCE. Their genes may show selection for easier domestication and stronger backs." ref

"The Sintashta economy came to revolve around copper metallurgy. Copper ores from nearby mines (such as Vorovskaya Yama) were taken to Sintashta settlements to be processed into copper and arsenical bronze. This occurred on an industrial scale: all the excavated buildings at the Sintashta sites of Sintashta, Arkaim and Ust'e contained the remains of smelting ovens and slag. Around 10% of graves, mostly adult male, contained artifacts related to bronze metallurgy (molds, ceramic nozzles, ore and slag remains, metal bars and drops). However, these metal-production related grave goods rarely co-occur with higher-status grave goods. This likely means that those who engaged in metal production were not at the top of the social-hierarchy, even though being buried at a cemetery evidences some sort of higher status." ref

"Much of Sintashta metal was destined for export to the cities of the Bactria–Margiana Archaeological Complex (BMAC) in Central Asia. The metal trade between Sintashta and the BMAC for the first time connected the steppe region to the ancient urban civilisations of the Near East: the empires and city-states of modern Iran and Mesopotamia provided a large market for metals. These trade routes later became the vehicle through which horses, chariots and ultimately Indo-Iranian-speaking people entered the Near East from the steppe." ref



Damien Marie AtHope's Art

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Genetic history of Europe, Genetics and archaeogenetics of South Asia, *and* Genetic history of the Middle East

PIE Speakers and Haplogroups R1b as well as R1a

"According to three autosomal DNA studies, haplogroups R1b and R1a, now the most common in Europe (R1a is also very common in South Asia) would have expanded from the Pontic steppes, along with the Indo-European languages; they also detected an autosomal component present in modern Europeans which was not present in Neolithic Europeans, which would have been introduced with paternal lineages R1b and R1a, as well as Indo-European languages. Studies that

analyzed ancient human remains in Ireland and Portugal suggest that R1b was introduced in these places along with autosomal DNA from the Pontic steppes." ref

"The subclade R1a1a (R-M17 or R-M198) is most commonly associated with Indo-European speakers. Data so far collected indicate that there are two widely separated areas of high frequency, one in Eastern Europe, around Poland and the Russian core, and the other in South Asia, around Indo-Gangetic Plain. The historical and prehistoric possible reasons for this are the subject of on-going discussion and attention amongst population geneticists and genetic genealogists, and are considered to be of potential interest to linguists and archaeologists also. Ornella Semino et al. propose a postglacial (Holocene) spread of the R1a1 haplogroup from north of the Black Sea during the time of the Late Glacial Maximum, which was subsequently magnified by the expansion of the Kurgan culture into Europe and eastward." ref

"A large, 2014 study by Underhill et al., using 16,244 individuals from over 126 populations from across Eurasia, concluded there was compelling evidence, that R1a-M420 originated in the vicinity of Iran. The mutations that characterize haplogroup R1a occurred ~10,000 years ago. Its defining mutation (M17) occurred about 10,000 to 14,000 years ago. Pamjav et al. (2012) believe that R1a originated and initially diversified either within the Eurasian Steppes or the Middle East and Caucasus region." ref

Yamnaya culture

"All Yamnaya individuals sampled by Haak et al. (2015) belonged to the Y-haplogroup R1b. According to Jones et al. (2015) and Haak et al. (2015), autosomal tests indicate that the Yamnaya-people were the result of admixture between "Eastern Hunter-Gatherers" from eastern Europe (EHG) and "Caucasus hunter-gatherers" (CHG). Each of those two populations contributed about half the Yamnaya DNA. According to co-author Dr. Andrea Manica of the University of Cambridge:
The question of where the Yamnaya come from has been something of a mystery up to now [...] we can now answer that, as we've found that their genetic make-up is a mix of Eastern European hunter-gatherers and a population from this pocket of Caucasus hunter-gatherers who weathered much of the last Ice Age in apparent isolation." ref

"Based on these findings and by equating the people of the Yamnaya culture with the Proto-Indo-Europeans, David W. Anthony (2019) suggests that the **Proto-**

Indo-European language formed mainly from a base of languages spoken by Eastern European hunter-gathers with influences from **languages of northern Caucasus hunter-gatherers, in addition to a possible later influence from the language of the Maikop culture** to the south (which is hypothesized to have belonged to the North Caucasian family) in the later neolithic or Bronze Age involving little genetic impact." ref

Eastern European hunter-gatherers

"According to Haak et al. (2015), "Eastern European hunter-gatherers" who inhabited Russia were a distinctive population of hunter-gatherers with high affinity to a ~24,000-year-old Siberian from the Mal'ta-Buret' culture, or other, closely related Ancient North Eurasian (ANE) people from Siberia and to the Western Hunter-Gatherers (WHG). Remains of the "Eastern European hunter-gatherers" have been found in Mesolithic or early Neolithic sites in Karelia and Samara Oblast, Russia, and put under analysis. Three such hunter-gathering individuals of the male sex have had their DNA results published. Each was found to belong to a different Y-DNA haplogroup: R1a, R1b, and J. R1b is also the most common Y-DNA haplogroup found among both the Yamnaya and modern-day Western Europeans. R1a is more common in Eastern Europeans and in the northern parts of the Indian subcontinent." ref

Near East population

"The Near East population were most likely hunter-gatherers from the Caucasus (CHG) c.q. Iran Chalcolithic related people with a major CHG-component. Jones et al. (2015) analyzed genomes from males from western Georgia, in the Caucasus, from the Late Upper Palaeolithic (13,300 years old) and the Mesolithic (9,700 years old). These two males carried Y-DNA haplogroup: J* and J2a. The researchers found that these Caucasus hunters were probably the source of the farmer-like DNA in the Yamnaya, as the Caucasians were distantly related to the Middle Eastern people who introduced farming in Europe." ref

"Their genomes showed that a continued mixture of the Caucasians with Middle Eastern took place up to 25,000 years ago, when the coldest period in the last Ice Age started. According to Lazaridis et al. (2016), "a population related to the people of the Iran Chalcolithic contributed ~43% of the ancestry of early Bronze Age populations of the steppe." According to Lazaridis et al. (2016), these Iranian Chalcolithic people were a mixture of "the Neolithic people of western Iran, the Levant, and Caucasus Hunter-Gatherers." Lazaridis et al. (2016) also note that farming spread at two places in the Near East, namely the Levant and Iran, from where it spread, Iranian people spreading to the steppe and south Asia." ref

Northern and Central Europe

"Haak et al. (2015) studied DNA from 94 skeletons from Europe and Russia aged between 3,000 and 8,000 years old. They concluded that about 4,500 years ago there was a major influx into Europe of Yamnaya culture people originating from the Pontic–Caspian steppe north of the Black Sea and that the DNA of copper-age Europeans matched that of the Yamnaya. The four Corded Ware people could trace an astonishing three-quarters of their ancestry to the Yamnaya, according to the paper. That suggests a massive migration of Yamnaya people from their steppe homeland into Eastern Europe about 4500 years ago when the Corded Ware culture began, perhaps carrying an early form of Indo-European language." ref

Bronze age Greece

"A 2017 archaeogenetics study of Mycenaean and Minoan remains published in the journal *Nature* concluded that the Mycenaean Greeks were genetically closely related with the Minoans but unlike the Minoans also had a 13-18% genetic contribution from Bronze Age steppe populations." ref

Haplogroup R1a

"**Haplogroup R1a**, or **haplogroup R-M420**, is a human Y-chromosome DNA haplogroup that is distributed in a large region in Eurasia, extending from Scandinavia and Central Europe to southern Siberia and South Asia. While R1a originated ca. 22,000 to 25,000 years ago, its subclade M417 (R1a1a1) diversified ca. 5,800 years ago. The place of origin of the subclade plays a role in the debate about the origins of Proto-Indo-Europeans." ref

"The split of R1a (M420) is computed to ca. 22,000 or 25,000 years ago, which is the time of the last glacial maximum. A 2014 study by Peter A. Underhill et al., using 16,244 individuals from over 126 populations from across Eurasia, concluded that there was "a compelling case for the Middle East, possibly near present-day Iran, as the geographic origin of hg R1a." The ancient DNA record has shown the first R1a during the Mesolithic in Eastern Hunter-Gatherers (from Eastern Europe), and the earliest case of R* among Upper Paleolithic Ancient North Eurasians, from which the Eastern Hunter-Gatherers predominantly derive their ancestry. No early samples of R1a have so far been found in Iran." ref

"According to Underhill et al. (2014), the downstream R1a-M417 subclade diversified into Z282 and Z93 circa 5,800 years ago "in the vicinity of Iran and

Eastern Turkey." Even though R1a occurs as a Y-chromosome haplogroup among various languages such as Slavic and Indo-Iranian, the question of the origins of R1a1a is relevant to the ongoing debate concerning the urheimat of the Proto-Indo-European people, and may also be relevant to the origins of the Indus Valley Civilization. R1a shows a strong correlation with Indo-European languages of Southern and Western Asia, Central and Eastern Europe and to some extent Scandinavia being most prevalent in Eastern Europe, West Asia, and South Asia. In Europe, Z282 is prevalent, particularly while in Asia Z93 dominates. The connection between Y-DNA R-M17 and the spread of Indo-European languages was first noted by T. Zerjal and colleagues in 1999." ref

Proposed steppe dispersal of R1a1a: Indo-European migrations and Indo-Aryan migrations and R1a

"Semino et al. (2000) proposed Ukrainian origins, and a postglacial spread of the R1a1 gene during the Late Glacial Maximum, subsequently magnified by the expansion of the Kurgan culture into Europe and eastward. Spencer Wells proposes Central Asian origins, suggesting that the distribution and age of R1a1 points to an ancient migration corresponding to the spread by the Kurgan people in their expansion from the Eurasian steppe. According to Pamjav et al. (2012), R1a1a diversified in the Eurasian Steppes or the Middle East and Caucasus region: Inner and Central Asia is an overlap zone for the R1a1-Z280 and R1a1-Z93 lineages [which] implies that an early differentiation zone of R1a1-M198 conceivably occurred somewhere within the Eurasian Steppes or the Middle East and Caucasus region as they lie between South Asia and Central- and Eastern Europe." ref

"Three genetic studies in 2015 gave support to the Kurgan theory of Gimbutas regarding the Indo-European Urheimat. According to those studies, haplogroups R1b and R1a, now the most common in Europe (R1a is also common in South Asia) would have expanded from the Pontic–Caspian steppes, along with the Indo-European languages; they also detected an autosomal component present in modern Europeans which was not present in Neolithic Europeans, which would have been introduced with paternal lineages R1b and R1a, as well as Indo-European languages." ref

Source of R1a1a1 in Corded Ware culture

"David Anthony considers the Yamnaya culture to be the Indo-European Urheimat. According to Haak et al. (2015), a massive migration from the Yamnaya culture northwards took place ca. 2,500 BCE or 4,622 years ago, accounting for 75% of the genetic ancestry of the Corded Ware culture, noting that R1a and R1b may have "spread into Europe from the East after 3,000 BCE"

or 5,022 years ago. Yet, all their seven Yamnaya samples belonged to the R1b-M269 subclade, but no R1a1a has been found in their Yamnaya samples. This raises the question of where the R1a1a in the Corded Ware culture came from, if it was not from the Yamnaya culture." ref

"Semenov & Bulat (2016) do argue for such an origin of R1a1a in the Corded Ware culture, noting that several publications point to the presence of R1a1 in the Comb Ware culture. Haak et al. (2015) found that part of the Yamnaya ancestry derived from the Middle East and that neolithic techniques probably arrived at the Yamnaya culture from the Balkans. The Rössen culture (4,600–4,300 BCE or 6,622-6,322 years ago), which was situated on Germany and predates the Corded Ware culture, an old subclade of R1a, namely L664, can still be found." ref

Transcaucasia & West Asian origins and possible influence on Indus Valley Civilization

Kura–Araxes culture, Uruk period, and Origins of the Indus Valley Civilisation
"Part of the South Asian genetic ancestry derives from west Eurasian populations, and some researchers have implied that Z93 may have come to India via Iran and expanded there during the Indus Valley Civilization. However, according to Narasimhan et al. (2018), steppe pastoralists are a likely source for R1a in India." ref

"Mascarenhas et al. (2015) proposed that the roots of Z93 lie in West Asia, and proposed that "Z93 and L342.2 expanded in a southeasterly direction from Transcaucasia into South Asia," noting that such an expansion is compatible with "the archeological records of eastward expansion of West Asian populations in the 4th millennium BCE culminating in the so-called Kura-Araxes migrations in the post-Uruk IV period." Yet, Lazaridis noted that sample I1635 of Lazaridis et al. (2016), their Armenian Kura-Araxes sample, carried Y-haplogroup R1**b**1-M415(xM269) (also called R1b1a1b-CTS3187)." ref

"According to Underhill et al. (2014) the diversification of Z93 and the "early urbanization within the Indus Valley [...] occurred at [5,600 years ago] and the geographic distribution of R1a-M780 may reflect this." Poznik et al. (2016) note that 'striking expansions' occurred within R1a-Z93 at ~4,500–4,000 years ago, which "predates by a few centuries the collapse of the Indus Valley Civilisation." ref

Proposed South Asian origins

“Kivisild et al. (2003) have proposed either South or West Asia, while Mirabal et al. (2009) see support for both South and Central Asia. Sharma et al.(2009) showcased the existence of R1a in India beyond 18,000 years to possibly 44,000 years in origin. South Asian populations have the highest STR diversity within R1a1a, and subsequent older TMRCA datings, and R1a1a is present among both higher (Brahmin) castes and lower castes, although the frequency is higher among Brahmin castes. From these findings some researchers have concluded that R1a1a originated in South Asia, excluding a substantial genetic influx from Indo-European migrants.” ref

“However, this diversity, and the subsequent older TMRCA-datings, can also be explained by the historically high population numbers, which increases the likelihood of diversification and microsatellite variation. According to Sengupta et al. (2006), “[R1a1 and R2] could have actually arrived in southern India from a southwestern Asian source region multiple times.” Silva et al. (2017) noted that R1a in South Asia most “likely spread from a single Central Asian source pool, there do seem to be at least three and probably more R1a founder clades within the Subcontinent, consistent with multiple waves of arrival.” According to Martin P. Richards, co-author of Silva et al. (2017), “[the prevalence of R1a in India was] very powerful evidence for a substantial Bronze Age migration from central Asia that most likely brought Indo-European speakers to India.” ref

R-M458 (R1a1a1b1a1) 7,900 years old?

“R-M458 is a mainly Slavic SNP, characterized by its own mutation, and was first called *cluster N*. Underhill et al. (2009) found it to be present in modern European populations roughly between the Rhine catchment and the Ural Mountains and traced it to *“a founder effect that [...] falls into the early Holocene period, 7,900±2.6 KYA.”* M458 was found in one skeleton from a 14th-century grave field in Usedom, Mecklenburg-Vorpommern, Germany. The paper by Underhill et al. (2009) also reports a surprisingly high frequency of M458 in some Northern Caucasian populations (for example 27.5% among Karachays and 23.5% among Balkars, 7.8% among Karanogays and 3.4% among Abazas).” ref

R-L260 (R1a1a1b1a1a)

“R1a1a1b1a1a (R-L260), commonly referred to as West Slavic or Polish, is a subclade of the larger parent group R-M458, and was first identified as an STR cluster by Pawlowski et al. 2002. In 2010 it was verified to be a haplogroup identified by its own mutation (SNP). It apparently accounts for about 8% of Polish men, making it the most common subclade in Poland. Outside of Poland it is less common. In addition to Poland, it is mainly found in the Czech Republic and Slovakia, and is considered “clearly West Slavic.” The founding

ancestor of R-L260 is estimated to have lived between 2000 and 3000 years ago, i.e. during the Iron Age, with significant population expansion less than 1,500 years ago." ref

"In Mesolithic Europe, R1a is characteristic of Eastern Hunter-Gatherers (EHGs). A male EHG of the Veretye culture buried at Peschanitsa near Lake Lacha in Arkhangelsk Oblast, Russia ca. 10,700 BCE or 12,722 years ago was found to be a carrier of the paternal haplogroup R1a5-YP1301 and the maternal haplogroup U4a. A Mesolithic male from Karelia ca. 8,800 to 7950 BCE or 10,822-9,972 years ago has been found to be carrying haplogroup R1a. A Mesolithic male buried at Deriivka ca. 7000 to 6700 BCE or 9,022-8,722 years ago carried the paternal haplogroup R1a and the maternal U5a2a. Another male from Karelia from ca. 5,500 to 5,000 BCE or 7,522-7,022 years ago, who was considered an EHG, carried haplogroup R1a. A male from the Comb Ceramic culture in Kudruküla ca. 5,900 to 3,800 BCE 7,922-5,822 years ago has been determined to be a carrier of R1a and the maternal U2e1." ref

"According to archaeologist David Anthony, the paternal R1a-Z93 was found at Alexandria, Ukraine ca. 4000 BCE or 6,022 years ago, Sredny Stog culture, "the earliest known sample to show the genetic adaptation to lactase persistence (I3910-T)." R1a has been found in the Corded Ware culture, in which it is predominant. Examined males of the Bronze Age Fatyanovo culture belong entirely to R1a, specifically subclade R1a-Z93. Haplogroup R1a has later been found in ancient fossils associated with the Urnfield culture; as well as the burial of the remains of the Sintashta, Andronovo, the Pazyryk, Tagar, Tashtyk, and Srubnaya cultures, the inhabitants of ancient Tanais, in the Tarim mummies, and the aristocracy Xiongnu. The skeletal remains of a father and his two sons, from an archaeological site discovered in 2005 near Eulau (in Saxony-Anhalt, Germany) and dated to about 2600 BCE or 4,622 years ago, tested positive for the Y-SNP marker SRY10831.2. The Ysearch number for the Eulau remains is 2C46S. The ancestral clade was thus present in Europe at least 4600 years ago, in association with one site of the widespread Corded Ware culture." ref

R1a and Europe

"In Europe, the R1a1 sub-clade is found at highest levels among peoples of Central and Eastern European descent, with results ranging from 35-65% among Czechs, Hungarians, Poles, Slovaks, western Ukrainians (particularly Rusyns), Belarusians, Moldovans, and Russians. In the Baltics, R1a1a frequencies decrease from Lithuania (45%) to Estonia (around 30%). There is a significant presence in peoples of Scandinavian descent, with the highest levels in Norway and Iceland, where between 20 and 30% of men are in

R1a1a. Vikings and Normans may have also carried the R1a1a lineage further out; accounting for at least part of the small presence in the British Isles, the Canary Islands, and Sicily. In East Germany, where Haplogroup R1a1a reaches a peak frequency in Rostock at a percentage of 31.3%, it averages between 20 and 30%." ref

"In Southern Europe, R1a1a is not common, but significant levels have been found in pockets, such as in the Pas Valley in Northern Spain, areas of Venice, and Calabria in Italy. The Balkans shows wide variation between areas with significant levels of R1a1a, for example, 36–39% in Slovenia, 27%-34% in Croatia, and over 30% in Greek Macedonia, but less than 10% in Albania, Kosovo, and parts of Greece south of Olympus gorge. R1a is virtually composed only of the Z284 subclade in Scandinavia. In Slovenia, the main subclade is Z282 (Z280 and M458), although the Z284 subclade was found in one sample of a Slovenian. There is a negligible representation of Z93 in each region other than Turkey." ref

"West Slavs and Hungarians are characterized by a high frequency of the subclade M458 and a low Z92, a subclade of Z280. Hundreds of Slovenian samples and Czechs lack the Z92 subclade of Z280, while Poles, Slovaks, Croats and Hungarians only show a very low frequency of Z92. The Balts, East Slavs, Serbs, Macedonians, Bulgarians, and Romanians demonstrate a ratio Z280>M458 and a high, up to a prevailing share of Z92. Balts and East Slavs have the same subclades and similar frequencies in a more detailed phylogeny of the subclades. The Russian geneticist Oleg Balanovsky speculated that there is a predominance of the assimilated pre-Slavic substrate in the genetics of East and West Slavic populations, according to him the common genetic structure that contrasts East Slavs and Balts from other populations may suggest the explanation that the pre-Slavic substrate of the East Slavs consisted most significantly of Baltic-speakers, which at one point predated the Slavs in the cultures of the Eurasian steppe according to archaeological and toponymic references." ref

R1a and Central Asia

"Zerjal et al. (2002) found R1a1a in 64% of a sample of the Tajiks of Tajikistan and 63% of a sample of the Kyrgyz of Kyrgyzstan. Haber et al. (2012) found R1a1a-M17(xM458) in 26.0% (53/204) of a set of samples from Afghanistan, including 60% (3/5) of a sample of Nuristanis, 51.0% (25/49) of a sample of Pashtuns, 30.4% (17/56) of a sample of Tajiks, 17.6% (3/17) of a sample of Uzbeks, 6.7% (4/60) of a sample of Hazaras, and in the only sampled Turkmen individual." ref

"Di Cristofaro et al. (2013) found R1a1a-M198/M17 in 56.3% (49/87) of a pair of samples of Pashtuns from Afghanistan (including 20/34 or 58.8% of a sample of Pashtuns from Baghlan and 29/53 or 54.7% of a sample of Pashtuns from Kunduz), 29.1% (37/127) of a pool of samples of Uzbeks from Afghanistan (including 28/94 or 29.8% of a sample of Uzbeks from Jawzjan, 8/28 or 28.6% of a sample of Uzbeks from Sar-e Pol, and 1/5 or 20% of a sample of Uzbeks from Balkh), 27.5% (39/142) of a pool of samples of Tajiks from Afghanistan (including 22/54 or 40.7% of a sample of Tajiks from Balkh, 9/35 or 25.7% of a sample of Tajiks from Takhar, 4/16 or 25.0% of a sample of Tajiks from Samangan, and 4/37 or 10.8% of a sample of Tajiks from Badakhshan), 16.2% (12/74) of a sample of Turkmens from Jawzjan, and 9.1% (7/77) of a pair of samples of Hazara from Afghanistan (including 7/69 or 10.1% of a sample of Hazara from Bamiyan and 0/8 or 0% of a sample of Hazara from Balkh)." ref

"Malyarchuk et al. (2013) found R1a1-SRY10831.2 in 30.0% (12/40) of a sample of Tajiks from Tajikistan. Ashirbekov et al. (2017) found R1a-M198 in 6.03% (78/1294) of a set of samples of Kazakhs from Kazakhstan. R1a-M198 was observed with greater than average frequency in the study's samples of the following Kazakh tribes: 13/41 = 31.7% of a sample of Suan, 8/29 = 27.6% of a sample of Oshaqty, 6/30 = 20.0% of a sample of Qozha, 4/29 = 13.8% of a sample of Qypshaq, 1/8 = 12.5% of a sample of Tore, 9/86 = 10.5% of a sample of Jetyru, 4/50 = 8.0% of a sample of Argyn, 1/13 = 7.7% of a sample of Shanyshqyly, 8/122 = 6.6% of a sample of Alimuly, 3/46 = 6.5% of a sample of Alban. R1a-M198 also was observed in 5/42 = 11.9% of a sample of Kazakhs of unreported tribal affiliation." ref

R1a and South Asia

"In South Asia, R1a1a has often been observed in a number of demographic groups. In India, high frequencies of this haplogroup are observed in West Bengal Brahmins (72%) to the east, Gujarat Lohanas (60%) to the west, Khatris (67%) in the north, and Iyengar Brahmins (31%) in the south. It has also been found in several South Indian Dravidian-speaking Adivasis including the Chenchu (26%) and the Valmikis of Andhra Pradesh, Kota (22.58%), and the Kallar of Tamil Nadu suggesting that R1a1a is widespread in Tribal Southern Indians. Besides these, studies show high percentages in regionally diverse groups such as Manipuris (50%) to the extreme North-East and among Punjabis (47%) to the extreme North West. In Pakistan, it is found at 71% among the Mohanna tribe in Sindh province to the south and 46% among the Baltis of Gilgit-Baltistan to the north. Among the Sinhalese of Sri Lanka, 23% were found to be R1a1a (R-SRY1532) positive. Hindus of Chitwan District in the Terai region Nepal show it at 69%." ref

R1a and East Asia

“The frequency of R1a1a is comparatively low among some Turkic-speaking groups like Yakuts, yet levels are higher (19 to 28%) in certain Turkic or Mongolic-speaking groups of Northwestern China, such as the Bonan, Dongxiang, Salar, and Uyghurs. A Chinese paper published in 2018 found R1a-Z94 in 38.5% (15 / 39) of a sample of Keriyalik Uyghurs from Darya Boyi / Darya Boye Village, Yutian County, Xinjiang (于田县达里雅布依乡), R1a-Z93 in 28.9% (22/76) of a sample of Dolan Uyghurs from Horiqol township, Awat County, Xinjiang (阿瓦提县乌鲁却勒镇), and R1a-Z93 in 6.3% (4/64) of a sample of Loplik Uyghurs from Karquga / Qarchugha Village, Yuli County, Xinjiang (尉犁县喀尔曲尕乡). R1a(xZ93) was observed only in one of 76 Dolan Uyghurs. Note that Darya Boyi Village is located in a remote oasis formed by the Keriya River in the Taklamakan Desert. A 2011 Y-dna study found Y-dna R1a1 in 10% of a sample of southern Hui people from Yunnan, 1.6% of a sample of Tibetan people from Xizang (Tibet Autonomous Region), 1.6% of a sample of Xibe people from Xinjiang, 3.2% of a sample of northern Hui from Ningxia, 9.4% of a sample of Hazak (Kazakhs) from Xinjiang, and rates of 24.0%, 22.2%, 35.2%, 29.2% in 4 different samples of Uyghurs from Xinjiang, 9.1% in a sample of Mongols from Inner Mongolia, 10% of a sample of Northern Han Chinese from Gansu and 8.9% of a sample of Northern Han from western Henan. A different subclade of R1 was also found in 1.5% of a sample of northern Hui from Ningxia.” ref

“In the same study, there were no cases of R1a detected at all in 6 samples of Han Chinese in Yunnan, 1 sample of Han in Guangxi, 5 samples of Han in Guizhou, 2 samples of Han in Guangdong, 2 samples of Han in Fujian, 2 samples of Han in Zhejiang, 1 sample of Han in Shanghai, 1 samples of Han in Jiangxi, 2 samples of Han in Hunan, 1 sample of Han in Hubei, 2 samples of Han in Sichuan, 1 sample of Han in Chongqing, 3 samples of Han in Shandong, 5 samples of Han in Gansu, 3 samples of Han in Jilin and 2 samples of Han in Heilongjiang. T-M70, R-M207 (a subclade of R1a), Q-M242, L-M20, J-P209, I-M170, H-M69, G-M201, C5-M356 and E-SRY4064 collectively make up only 6.79% of the total male population of East Asia (from samples in North Korea and China). The vast majority of East Asia is N-M231, C-M130 except for C5-M356, D-M174, and O-M175 which is 92.87% of the population and are all East Eurasian male haplogroups. R-M207 (a subclade of R1a) came into East Asia via the north from the Central South Asia region (CSA) during paleolithic times in the post-glacial period, especially R1a1a. R1a1a in East Asia is an extremely ancient subclade from the Central Asia-South Asia region and is older than the Western Eurasian (European_ and Central Asian-South Asian (CSA) R1a1*-M17, rivaling the R1a1*-M17 of IWest India in age from testing on variations in STR. The Europe and West Asian R1a1*-M17 split into 7 subbranches only after R1a1 came to North-

East Asia, indicating R1a1 in East Asia is an extremely ancient one dating back 15,370 years ago juding from variation in STR (predating the more recent Aryan and Indo-European expansions)." ref

"In a 2014 paper, R1a1a has been detected in 1.8% (2/110) of Chinese samples. These two samples (R-M17, R-M198, R-M434, R-M458 for both) belonged to Han individuals from Fujian and Shanxi provinces. 40% of Salars, 45.2% of Tajiks of Xinjiang, 54.3% of Dongxiang, 60.6% of Tatars, and 68.9% of Kyrgyz in Xinjiang in northwestern China tested in one sample had R1a1-M17. Bao'an (Bonan) had the most haplogroup diversity of 0.8946±0.0305 while the other ethnic minorities in northwestern China had a high haplogroup diversity like Central Asians, of 0.7602±0.0546. In Eastern Siberia, R1a1a is found among certain indigenous ethnic groups including Kamchatkans and Chukotkans, and peaking in Itel'man at 22%." ref

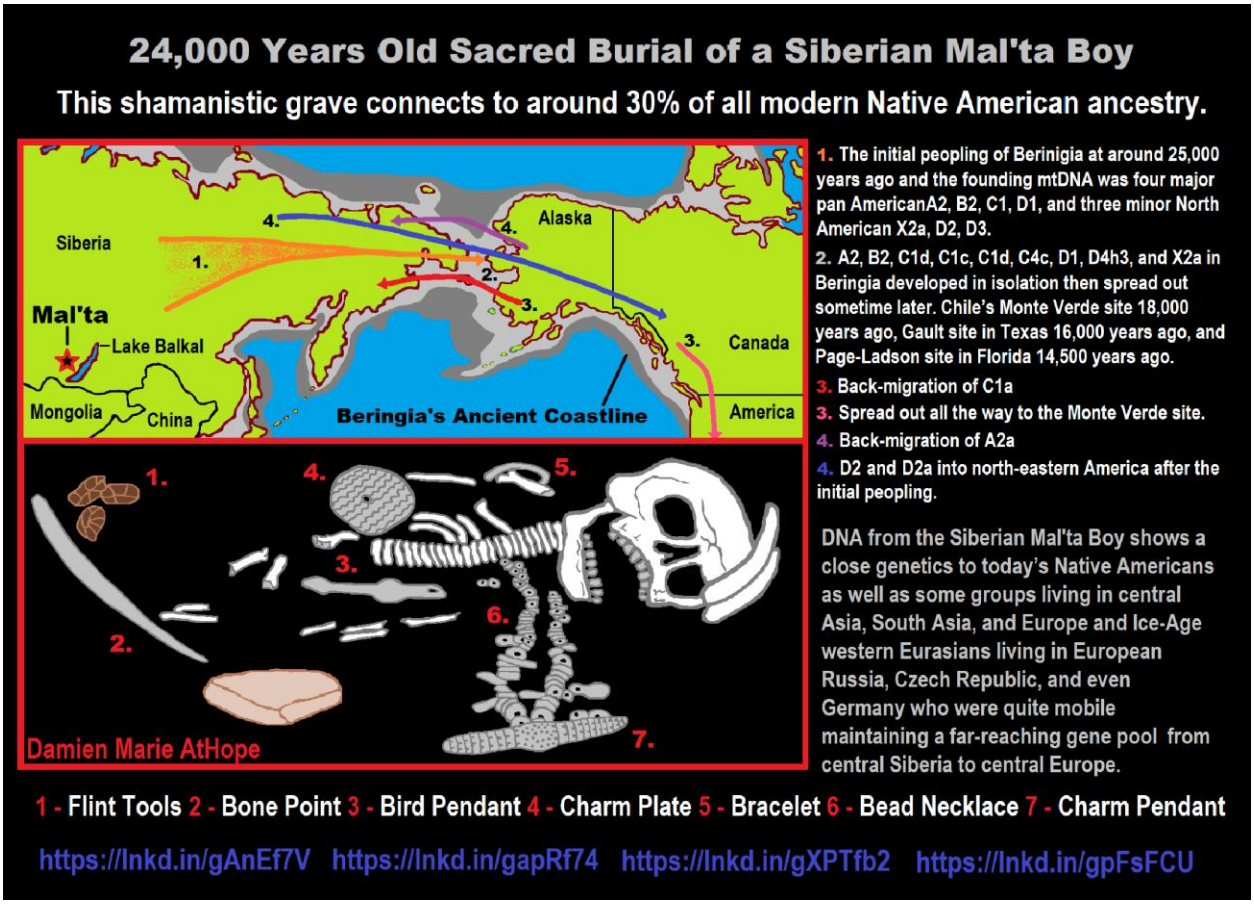
R1a and West Asia

"R1a1a has been found in various forms, in most parts of Western Asia, in widely varying concentrations, from almost no presence in areas such as Jordan, to much higher levels in parts of Kuwait and Iran. The Shimar (Shammar) Bedouin tribe in Kuwait show the highest frequency in the Middle East at 43%. Wells 2001, noted that in the western part of the country, Iranians show low R1a1a levels, while males of eastern parts of Iran carried up to 35% R1a1a. Nasidze et al. 2004 found R1a1a in approximately 20% of Iranian males from the cities of Tehran and Isfahan. Regueiro 2006 in a study of Iran, noted much higher frequencies in the south than the north." ref

"A newer study has found 20.3% R-M17* among Kurdish samples which were taken in the Kurdistan Province in western Iran, 19% among Azerbaijanis in West Azerbaijan, 9.7% among Mazandaranis in North Iran in the province of Mazandaran, 9.4% among Gilaks in province of Gilan, 12.8% among Persian and 17.6% among Zoroastrians in Yazd, 18.2% among Persians in Isfahan, 20.3% among Persians in Khorasan, 16.7% Afro-Iranians, 18.4% Qeshmi "Gheshmi", 21.4% among Persian Bandari people in Hormozgan and 25% among the Baloch people in Sistan and Baluchestan Province." ref

"Di Cristofaro et al. (2013) found haplogroup R1a in 9.68% (18/186) of a set of samples from Iran, though with a large variance ranging from 0% (0/18) in a sample of Iranians from Tehran to 25% (5/20) in a sample of Iranians from Khorasan and 27% (3/11) in a sample of Iranians of unknown provenance. All Iranian R1a individuals carried the M198 and M17 mutations except one individual in a sample of Iranians from Gilan (n=27), who was reported to belong to R1a-SRY1532.2(xM198, M17)." ref

"Malyarchuk et al. (2013) found R1a1-SRY10831.2 in 20.8% (16/77) of a sample of Persians collected in the provinces of Khorasan and Kerman in eastern Iran, but they did not find any member of this haplogroup in a sample of 25 Kurds collected in the province of Kermanshah in western Iran. Further to the north of these Western Asian regions, on the other hand, R1a1a levels start to increase in the Caucasus, once again in an uneven way. Several populations studied have shown no sign of R1a1a, while the highest levels so far discovered in the region appears to belong to speakers of the Karachay-Balkar language among whom about one-quarter of men tested so far are in haplogroup R1a1a." ref



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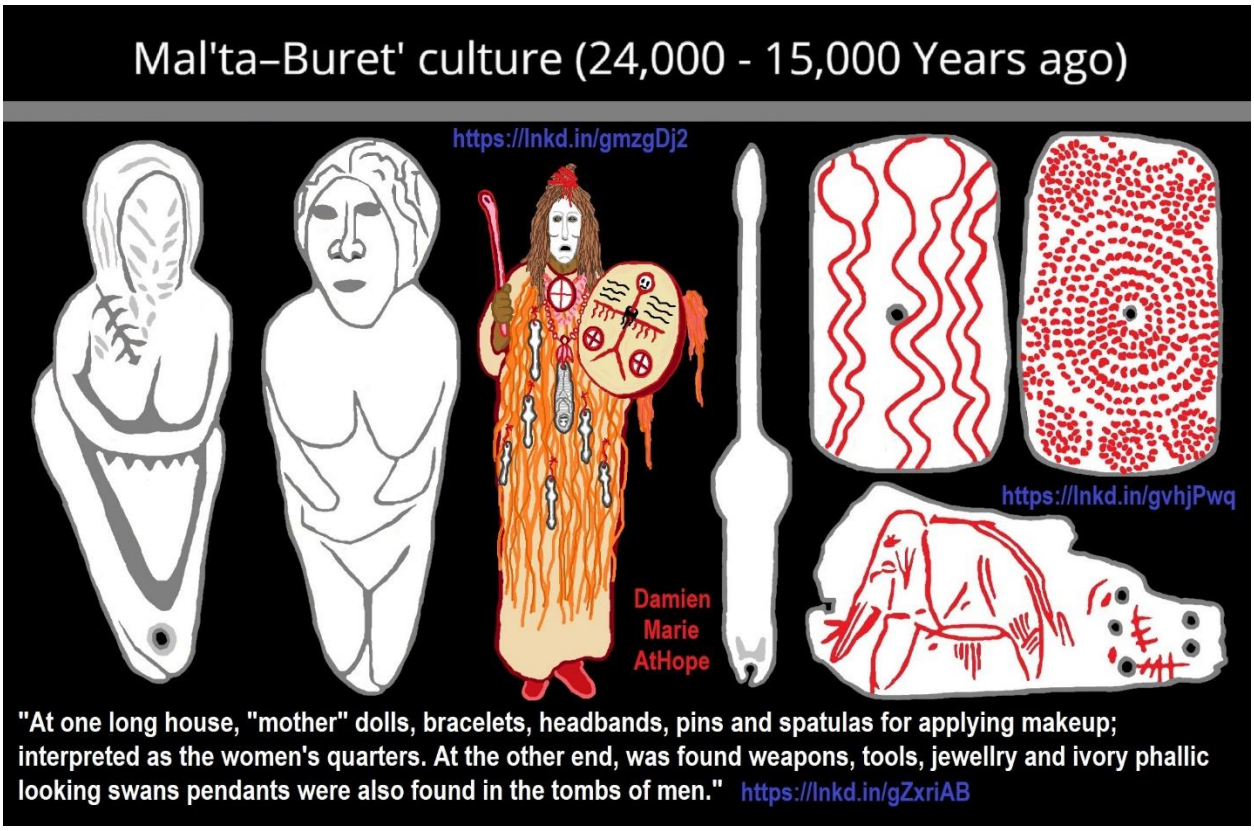

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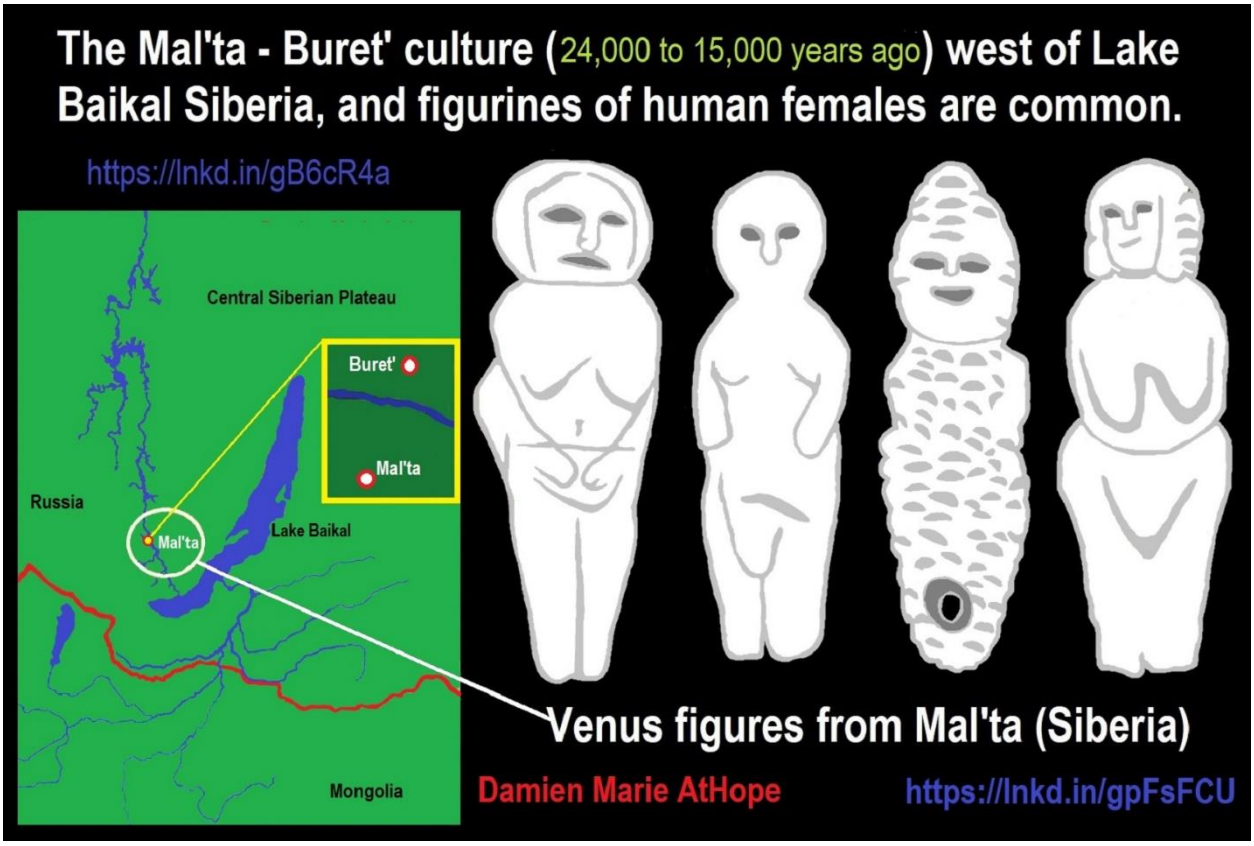

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- **The Gravettian culture (Europe) shared ritual ideas and The Ancient North Eurasian culture (Asia) 24,000 years ago**
- **24,000 Years Old Sacred Burial of a Siberian Mal'ta Boy**
- **Leda and the Swan: possibly relates back to 24,000–15,000 years old Mal'ta–Buret' culture, Lake Baikal, Siberia?**
- **The Mytheme of Ancient North Eurasian Sacred-Dog belief and similar motifs are found in Indo-European, Native American, and Siberian comparative mythology**
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- **Swing of the Mace: the rise of Elite, Forced Authority, and Inequality begin to Emerge 8,500 years ago?**
- **A Hierarchy (Greek: hierarkhia, 'rule of a high priest', from hierarkhes, 'president of sacred rites')**

Haplogroup R* and Paleolithic Mammoth Hunters

"Haplogroup R* originated in North Asia just before the Last Glacial Maximum (26,500-19,000 years before present). This haplogroup has been identified in the 24,000-year-old remains of the so-called "Mal'ta boy" from the Altai region, in south-central Siberia (Raghavan et al. 2013). This individual belonged to a tribe of **mammoth hunters** that may have roamed across Siberia and parts of Europe during the Paleolithic. Autosomally this Paleolithic

population appears to have passed on its genes mostly to the modern populations of Europea and South Asia, the two regions where haplogroup R also happens to be the most common nowadays (R1b in Western Europe, R1a in Eastern Europe, Central and South Asia, and R2 in South Asia)." ref

"The series of mutations that made haplogroup R1* evolve into R1a probably took place during or soon after the Last Glacial Maximum. Little is known for certain about R1a's place of origin. Some think it might have originated in the Balkans or around Pakistan and Northwest India, due to the greater genetic diversity found in these regions. The diversity can be explained by other factors though. The Balkans have been subject to 5000 years of migrations from the Eurasian Steppes, each bringing new varieties of R1a. South Asia has had a much bigger population than any other parts of the world (occasionally equaled by China) for at least 10,000 years, and larger populations bring about more genetic diversity. The most likely place of origin of R1a is Central Asia or southern Russia/Siberia." ref

"From there, R1a could have migrated directly to eastern Europe (European Russia, Ukraine, Belarus), or first southward through Central Asia and Iran. In that latter scenario, R1a would have crossed the Caucasus during the Neolithic, alongside R1b, to colonize the Pontic-Caspian Steppe. In the absence of ancient Y-DNA from those regions the best evidence supporting a Late Paleolithic migration to Iran is the presence of very old subclades of R1a (like M420) in the region, notably in the Zagros mountains. However, these samples only make up a fraction of all R1a in the region and could just as well represent the descendants of Eastern European hunter-gatherers who branched off from other R1a tribes and crossed from the North Caucasus any time between 20,000 and 8,000 years ago." ref

"The logic behind this is that most known historical migrations in Eurasia took place from north to south, as people sought warmer climes. The only exception happened during the Holocene warming up of the climate, which corresponds to the Neolithic colonisation of Europe from the Near East. A third possibility is that R1a tribes split in two around Kazakhstan during the Late Paleolithic, with one group moving to eastern Europe, while the other moved south to Iran." ref

Did R1a come to Europe with Neolithic Farmers? Early European Farmers (EEF)

"Some people have theorized that R1a was one of the lineages of the Neolithic farmers, and would have entered Europe through Anatolia, then spread across the Balkans toward Central Europe, then only to Eastern Europe. There are many issues with this scenario. The first is that 99% of modern R1a descends from the branch R1a-M417, which clearly expanded from the Bronze Age onwards, not from the early Neolithic. Its phylogeny also points at an Eastern European origin.

Secondly, most of the R1a in Middle East are deep subclades of the R1a-Z93 branch, which originated in Russia (see below). It could not have been ancestral to Balkanic or Central European R1a. Thirdly, there is a very strong correlation between the Northeast European autosomal admixture and R1a populations, and this component is missing from the genome of all European Neolithic farmers tested to date – even from Ötzi, who was a Chalcolithic farmer. This admixture is also missing from modern Sardinians, who are mostly descended from Neolithic farmers. This is incontrovertible evidence that R1a did not come to Europe with Neolithic farmers, but only propagated from Eastern Europe to the rest of Europe from the Bronze Age onwards." ref

R1a and Bronze Age Proto-Indo-Europeans

"R1a is thought to have been the dominant haplogroup among the northern and eastern **Proto-Indo-European tribes**, who evolved into the Indo-Iranian, Thracian, Baltic and Slavic people. The Proto-Indo-Europeans originated in the Yamna culture (3300-2500 BCE or 5,322-4,522 years ago). Their dramatic expansion was possible thanks to an early adoption of bronze weapons and the domestication of the horse in the Eurasian steppes (circa 4000-3500 BCE or 6,022-5,5022 years ago). Individuals from the southern part of the Steppe are believed to have carried predominantly lineages belonging to haplogroup R1b (L23 and subclades), while the people of the northern **forest-steppe** to the north would have belonged essentially to haplogroup R1a. The first expansion of the forest-steppe people occurred with the Corded Ware Culture (see Germanic branch below). The forest-steppe origin of this culture is obvious from the usage of corded pottery and the abundant use of polished battle axes, the two most prominent features of the Corded Ware culture." ref

"This is also probably the time when the **satemisation process** of the Indo-European languages began, considering that the Balto-Slavic and Indo-Iranian language groups belong to the same Satem isogloss and both appear to have evolved from the Catacomb and Srubna cultures. Ancient DNA testing has confirmed the presence of haplogroup R1a-M417 in samples from the Corded Ware culture in Germany (2600 BCE or 4,622 years ago), from Tocharian mummies (2000 BCE or 4,022 years ago) in Northwest China, from Kurgan burials (circa 1600 BCE or 3,622 years ago) from the Andronovo culture in southern Russia and southern Siberia, as well as from a variety of Iron-age sites from Russia, Siberia, Mongolia, and Central Asia." ref

The Germanic branch corresponding to haplogroup R1a

"The first major expansion of R1a took place with the westward propagation of the Corded Ware (or Battle Axe) culture (2800-1800 BCE or 4,822-3,822 years

ago) from the northern forest-steppe in the Yamna homeland. This was the first wave of R1a into Europe, the one that brought the **Z283** subclade to Germany and the Netherlands, and **Z284** to Scandinavia. The Corded Ware R1a people would have mixed with the pre-Germanic I1 and I2 aborigines, which resulted in the first Indo-European culture in Germany and Scandinavia, although that culture could not be considered Proto-Germanic – it was simply Proto-Indo-European at that stage, or perhaps or Proto-Balto-Slavic." ref

"Germanic languages probably did not appear before the Nordic Bronze Age (1800-500 BCE or 3,822-2,622 years ago). Proto-Germanic language probably developed as a blend of two branches of Indo-European languages, namely the Proto-Balto-Slavic language of the Corded-Ware culture (R1a-Z283) and the later arrival of Proto-Italo-Celto-Germanic people from the Unetice culture (R1b-L11). This is supported by the fact that Germanic people are a R1a-R1b hybrid, that these two haplogroups came via separate routes at different times, and that Proto-Germanic language is closest to Proto-Italo-Celtic, but also shares similarities with Proto-Slavic." ref

"The R1b branch of the Indo-Europeans is thought to have originated in the southern Yamna culture (northern shores of the Black Sea). It was the first one to migrate from the steppes to the west, invading the Danube delta around 4200 BCE or 6,222 years ago, then making its way around the Balkans and the Hungarian plain in the 4th millennium BCE. It is likely that a minority of R1a people accompanied this migration of R1b tribes. Those R1a men would have belonged to the **L664** subclade, the first to split from the Yamna core. These early steppe invaders were not a homogeneous group, but a cluster of tribes. It is possible that the R1a-L664 people were one or several separate tribes of their own, or that they mixed with some R1b tribes, notably R1b-U106, which would become the main Germanic lineage many centuries later. The R1b-R1a contingent moved up the Danube to the Panonian plain around 2800 BCE or 4,822 years ago, brought to an end the local Bell Beaker culture (circa 2200 BCE or 4,222 years ago) and Corded Ware culture (c. 2400 BCE or 4,422 years ago) in Central Europe, and set up the Unetice culture (2300-1600 BCE or 4,322-3,622 years ago) around Bohemia and eastern Germany. Unetice can be seen as the source of future Germanic, Celtic and Italic cultures, and is associated mainly with the L11 subclade of R1b." ref

"The late Unetice culture expanded to Scandinavia, founding the Nordic Bronze Age. R1a-L664 and R1b (L11 and U106) presumably reached Scandinavia at this time. The people of the Nordic Bronze Age probably spoke a Proto-Germanic language. For over a thousand years while this culture existed, the Proto-Germanic R1b et R1a-L664 tribes would have acquired vocabulary from the pre-existing Corded Ware population that they assimilated, which was itself a blend

of Proto-Balto-Slavic languages (linked to haplogroup R1a-Z284) and languages of non-Indo-European origin (linked to haplogroups G2a, I1, and I2). The Nordic Bronze Age was a melting pot of these three populations, which intermingled both genetically and linguistically, little by little creating a new ethnicity and culture as time went by." ref

"The first genuinely Germanic language has been estimated by linguists to have come into existence around (or after) 500 BCE, just as the Nordic Bronze Age came to an end, giving way to the Pre-Roman Iron Age. The uniqueness of some of the Germanic vocabulary compared to other Indo-European languages suggests that borrowings from indigenous pre-Indo-European languages took place (Germanic substrate theory). The Celtic language itself is known to have borrowed words from Afro-Asiatic languages spoken by the descendants of Near-Eastern farmers who had settled in Central Europe. The fact that present-day Scandinavia is composed of roughly 40% of I1, 20% of R1a, and 40% of R1b reinforces the idea that the Germanic ethnicity and language had acquired a tri-hybrid character by the Iron Age." ref

The Slavic branch corresponding to haplogroup R1a

"The origins of the Slavs go back to circa 3500 BCE with the northern Yamna culture and its expansion across Central and Northeast Europe with the Corded Ware culture. The **M458** and **Z280** lineages spread around Poland, Belarus, Ukraine, and western Russia, and would form the core of the Proto-Balto-Slavic culture. The high prevalence of R1a in Baltic and Slavic countries nowadays is not only due to the Corded Ware expansion, but also to a long succession of later migrations from Russia, the last of which took place from the 5th to the 10th century CE. The Slavic branch differentiated itself when the Corded Ware culture absorbed the Cucuteni-Tripolye culture (5200-2600 BCE or 7,222-4,622 years ago) of western Ukraine and north-eastern Romania, which appears to have been composed primarily of G2a-U1 et I2a1b-M423 lineages descended directly from Paleolithic Europeans, with some other Near-Eastern farmer lineages (notably E-V13, J2a, and T1a)." ref

"It is surely during this period that I2a2, E-V13, and T spread (along with R1a) around Poland, Belarus, and western Russia, explaining why eastern and northern Slavs (and Lithuanians) have between 10 and 20% of I2a1b lineages and about 10% of Middle Eastern lineages (18% for Ukrainians). The Corded Ware period was followed in the steppes by the Srubna culture (1800-1200 BCE or 3,822-3222 years ago), and around Poland by the Trzciniec culture (1700-1200 BCE or 3,722-3,222 years ago). Mathieson et al. (2015) and Krzewinska et al. (2018) each retrieved the Y-DNA from six Srubna individuals, and all 12 of them

belonged to haplogroup R1a. Those tested for deep clades were positive for Z93, the Indo-Iranian branch." ref

"The last important Slavic migration is thought to have happened in the 6th century CE, from Ukraine to Poland, Slovakia and Slovenia, filling the vacuum left by eastern Germanic tribes who invaded the Roman Empire. Both the M458 and the Z280 branches are associated with this late Slavic migration, but more particularly Z280." ref

"Interestingly, the **Czechs** do not carry much Z280, a factor that strongly differentiates them from their Slovak, Hungarian and Slovene neighbors. Czechs R1a belongs in majority to M458, with subclades such as L1029>YP1703 (TMRCA 1800 years), L260>YP256>YP654 (TMRCA 2200 years), L260>YP256>YP254>Y2905 (TMRCA 1850 years) and L260>YP1337 (TMRCA 1750 years). Other R1a clades found in the Czech Republic include Z280>Y35>CTS3402>YP237>YP951 (TMRCA 2500 years) CTS1211>Y35>YP4278 (TMRCA 1850 years), some Z92 and Z93, as well as the Germanic L664 (S3479>S3485>S3477>YP942; TMRCA 1800 years). The age of these subclades concord with the historical Slavic expansion during the Late Antiquity and Early Middle Ages." ref

"Regional disparities also exist in ex-Yugoslavia, but among deeper clades. **Bosnian** and **Serbian** R1a belongs for the most part to a young clade of CTS1211 (Y33>CTS8816>Y3300>Y5647>YP611>YP3987>YP3992 subclade; TMRCA 950 years), with a minority of older M458 (CTS11962>L1029 subclade; TMRCA 2200 years) and Z92 (Y4459>YP617 subclade; TMRCA 3400 years). **Croatian** R1a falls almost exclusively within CTS1211, but to another clade (Y35>CTS3402>Y2613>Y2608 subclade, TMRCA 1950 years), with a small minority of YP340>P278.2 (TMRCA 2100 years). The R1a-Y3300 (aka L1280) found in Serbia and Bosnia seems to have expanded from Poland via Hungary during the early medieval period. The Croatian R1a-Y2608 also expanded from Poland during the same period, but via Czechia, Slovakia, Austria, and Slovenia." ref

"Bulgarian R1a is very diverse in comparison to Dinaric R1a. Subclades are equally divided between M458 (mostly the pan-Slavic L1029 subclade) and Z280, but with a huge diversity within the latter, (Y33>CTS8816, YP237>YP235>L366, YP343>YP39082>YP340, Z92>YP617 and Z92>Z685). There is also a little bit of very old R1a-M198 (M417-), and some R1a-Z93, notably the Y15121 subclade found in Iran, India, and the Middle East, and which could have come with the Scythians or other Iranic steppe tribes. Little data is available for neighboring **Macedonia**, but it includes at least L1029 (under M458) and L366 (under CTS1211)." ref

“Romanians have an even greater diversity of R1a clades than Bulgarians, despite not being speakers of a Slavic language. In fact, not all Romanian R1a is of Slavic origin. It includes Germanic clades (L664>S2894>YP285>YP282 and Z283), Iranian ones (Z93), and Jewish ones (CTS6). The Slavic clades represented include L1029 (under M458>CTS11962) and YP951 (under CTS1211>Y35>CTS3402>YP237>).” ref

Historically, no other part of Europe was invaded a higher number of times by steppe peoples than the Balkans. Chronologically, the first R1a invaders might have come with the westward expansion of the Sredny Stog culture (from 4200 BCE or 6,222 years ago), which led the way to a succession of steppe migrations that lasted for over 2,000 years until the end of the Yamna culture (3500-2000 BCE or 5,522-5,022 years ago). These early invasions from the Steppe were probably conducted in majority by R1b men, accompanied by a small number of R1a. Then came the Thracians (1500 BCE or 3,522 years ago), followed by the Illyrians (around 1200 BCE or 3,222 years ago), and much later the Huns and the Alans (400 CE), the Avars, the Bulgars and the Serbs (all around 600 CE), and the Magyars (900 CE), among others. These peoples originated from different parts of the Eurasian Steppe, anywhere between Eastern Europe and Central Asia, thus contributing to the relatively high diversity of R1a subclades observed in Carpathians and the Balkans today, especially in Bulgaria and Romania. Nevertheless, the vast majority of R1a in Southeast Europe today appears to be of Slavic origin.” ref

The Baltic branch corresponding to haplogroup R1a

“The Baltic branch is thought to have evolved from the Fatyanovo culture (3200-2300 BCE or 5,222-4,322 years ago), the northeastern extension of the Corded Ware culture. Early Bronze Age R1a nomads from the northern steppes and forest-steppes would have mixed with the Uralic-speaking inhabitants (N1c1 lineages) of the region. This is supported by a strong presence of both R1a and N1c1 haplogroups from southern Finland to Lithuania and in northwest Russia. Saag et al. (2021) analyzed the remains of 26 Bronze Age farmers from the Fatyanovo Culture and all 15 male individuals belonged to haplogroup R1a, including the subclades YP1301, M417 (x4), Z645 (x5), and Z93 (x6).” ref

“Latvian and Lithuanian clades of R1a include typical Balto-Slavic lineages like M458, CTS1211, and Z92, as well as some Ashkenazi Jewish (CTS6), Germanic (L664 and Z284), and even Indo-Iranian lineages (Z93>Z94>L657). The Balto-Slavic lineages include the following deep clades, most with a relatively recent TMRCA.” ref

The Indo-Iranian branch corresponding to haplogroup R1a

"Proto-Indo-Iranian speakers, the people who later called themselves 'Aryans' in the Rig Veda and the Avesta, originated in the Sintashta-Petrovka culture (2100-1750 BCE), in the Tobol and Ishim valleys, east of the Ural Mountains. It was founded by pastoralist nomads from the Abashevo culture (2500-1900 BCE), ranging from the upper Don-Volga to the Ural Mountains, and the Poltavka culture (2700-2100 BCE), extending from the lower Don-Volga to the Caspian depression. The Sintashta-Petrovka culture, associated with **R1a-Z93** and its subclades, was the first Bronze Age advance of the Indo-Europeans west of the Urals, opening the way to the vast plains and deserts of Central Asia to the metal-rich Altai mountains. The Aryans quickly expanded over all of Central Asia, from the shores of the Caspian to southern Siberia and the Tian Shan, through trading, seasonal herd migrations, and looting raids." ref

"Horse-drawn war chariots seem to have been invented by Sintashta people around 2100 BCE, and quickly spread to the mining region of Bactria-Margiana (modern border of Turkmenistan, Uzbekistan, Tajikistan and Afghanistan). Copper had been extracted intensively in the Urals, and the Proto-Indo-Iranians from Sintashta-Petrovka were exporting it in huge quantities to the Middle East. They appear to have been attracted by the natural resources of the Zeravshan valley for a Petrovka copper-mining colony was established in Tugai around 1900 BCE, and tin was extracted soon afterwards at Karnab and Mushiston. Tin was an especially valued resource in the late Bronze Age, when weapons were made of copper-tin alloy, stronger than the more primitive arsenical bronze. In the 1700's BCE, the Indo-Iranians expanded to the lower Amu Darya valley and settled in irrigation farming communities (Tazabagyab culture). By 1600 BCE, the old fortified towns of Margiana-Bactria were abandoned, submerged by the northern steppe migrants. The group of Central Asian cultures under Indo-Iranian influence is known as the Andronovo horizon, and lasted until 800 BCE." ref

"The Indo-Iranian migrations progressed further south across the Hindu Kush. By 1700 BCE, horse-riding pastoralists had penetrated into Balochistan (south-west Pakistan). The Indus valley succumbed circa 1500 BCE, and the northern and central parts of the Indian subcontinent were taken over by 500 BCE. Westward migrations led Old Indic Sanskrit speakers riding war chariots to Assyria, where they became the Mitanni rulers from circa 1500 BCE.
The Medes, Parthians, and Persians, all Iranian speakers from the Andronovo culture, moved into the Iranian plateau from 800 BCE. Those that stayed in Central Asia are remembered by history as the Scythians, while the Yamna descendants who remained in the Pontic-Caspian steppe became known as the Sarmatians to the ancient Greeks and Romans." ref

“The Indo-Iranian migrations have resulted in high R1a frequencies in southern Central Asia, Iran, and the Indian subcontinent. The highest frequency of R1a (about 65%) is reached in a cluster around Kyrgyzstan, Tajikistan, and northern Afghanistan. In India and Pakistan, R1a ranges from 15 to 50% of the population, depending on the region, ethnic group, and caste. R1a is generally stronger is the North-West of the subcontinent, and weakest in the Dravidian-speaking South (Tamil Nadu, Kerala, Karnataka, Andhra Pradesh) and from Bengal eastward. Over 70% of the Brahmins (highest caste in Hindusim) belong to R1a1, due to a founder effect.” ref

“Maternal lineages in South Asia are, however, overwhelmingly pre-Indo-European. For instance, India has over 75% of “native” mtDNA M and R lineages and 10% of East Asian lineages. In the residual 15% of haplogroups, approximately half are of Middle Eastern origin. Only about 7 or 8% could be of “Russian” (Pontic-Caspian steppe) origin, mostly in the form of haplogroup U2 and W (although the origin of U2 is still debated). European mtDNA lineages are much more common in Central Asia though, and even in Afghanistan and northern Pakistan. This suggests that the Indo-European invasion of India was conducted mostly by men through war. The first major settlement of Indo-Aryan women was in northern Pakistan, western India (Punjab to Gujarat) and northern India (Uttar Pradesh), where haplogroups U2 and W are the most common today.” ref

The Tarim mummies corresponding to haplogroup R1a

“In 1934 Swedish archaeologist Folke Bergman discovered some 200 mummies of fair-haired Caucasian people in the Tarim Basin in Northwest China (a region known as Xinjiang, East Turkestan, or Uyghurstan). The oldest of these mummies date back to 2000 BCE and all 7 male remains tested by Li et al. (2010), were positive for the R1a1 mutations. The modern inhabitants of the Tarim Basin, the Uyghurs, belong both to this R1b-M73 subclade (about 20%) and to R1a1 (about 30%).” ref

“The first theory about the origins of the Tarim mummies is that a group of early horse riders from the Repin culture (3700-3300 BCE) migrated from the Don-Volga region to the Altai mountain, founding the Afanasevo culture (c. 3600-2400 BCE), whence they moved south to the Tarim Basin. Another possibility is that the Tarim mummies descend from the Proto-Indo-Iranian people (see above) who expanded all over Central Asia around 2000 BCE from the Sintashta-Petrovka culture. An offshoot would have crossed the Tian Shan mountains, ending up in the Tarim Basin. This theory has the merit of matching the dating of the Tarim mummies. Either way, most of the mummies tested for mtDNA belonged to the Mongoloid haplogroup C4, and only a few to European or Middle Eastern haplogroups (H, K, and R).” ref

“There is some controversy regarding the possible link between the Tarim mummies and the Tocharian languages, a Centum branch of the Indo-European family which were spoken in the Tarim Basin from the 3rd to 9th centuries CE. It is easy to assume that the Tarim mummies were Proto-Tocharian speakers due to the corresponding location and the Indo-European connection. However, the Tarim mummies predate the appearance of Tocharian by over two millennia, and Tocharian is a Centum language that cannot be descended from the Satem Proto-Indo-Iranian branch. Other Centum branches being all related to haplogroup R1b, and Tocharian being the only eastern Centum language, it is possible that the Tocharian speakers is instead associated to the Central Asian R1b1b1 (M73) subclade, also found among the modern Uyghurs inhabiting the Tarim basin.” ref

Turkic speakers and R1a

“The present-day inhabitants of Central Asia, from Xinjiang to Turkey and from the Volga to the Hindu Kush, speak in overwhelming majority Turkic languages. This may be surprising as this corresponds to the region where the Indo-Iranian branch of Indo-European speakers expanded, the Bronze-Age Andronovo culture, and the Iron-Age Scythian territory. So why is it that Indo-European languages only survives in Slavic Russia or in the southern part of Central Asia, in places like Tajikistan, Afghanistan or some parts of Turkmenistan ? Why don’t the Uyghurs, Uzbeks, Kazakhs and Kyrgyzs, or the modern Pontic-Caspian steppe people (Crimean Tatars, Nogais, Bashkirs and Chuvashs) speak Indo-European vernaculars ? Genetically these people do carry Indo-European R1a, and to a lesser extent also R1b, lineages. The explanation is that Turkic languages replaced the Iranian tongues of Central Asia between the 4th and 11th century CE.” ref

Proto-Turkic originated in Mongolia and southern Siberia with such nomadic tribes as the Xiongnu. It belongs to the Altaic linguistic family, like Mongolian and Manchu (some also include Korean and Japanese, although they share very little vocabulary in common). It is unknown when Proto-Turkic first emerged, but its spread started with the Hunnic migrations westward through the Eurasian steppe and all the way to Europe, only stopped by the boundaries of the Roman Empire.” ref

“The Huns were the descendants of the Xiongnu. Ancient DNA tests have revealed that the Xiongnu were already a hybrid Eurasian people 2,000 years ago, with mixed European and North-East Asian Y-DNA and mtDNA. Modern inhabitants of the Xiongnu homeland have approximately 90% of Mongolian lineages against 10% of European ones. The oldest identified presence of European mtDNA around Mongolia and Lake Baikal dates back to over 6,000 years ago.” ref

“It appears that Turkic quickly replaced the Scythian and other Iranian dialects all over Central Asia. Other migratory waves brought more Turkic speakers to Eastern and Central Europe, like the Khazars, the Avars, the Bulgars, and the Turks (=> see 5000 years of migrations from the Eurasian steppes to Europe). All of them were in fact Central Asian nomads who had adopted Turkic language, but had little if any Mongolian blood. Turkic invasions, therefore, contributed more to the diffusion of Indo-European lineages (especially R1a1) than East Asian ones.” ref

“Turkic languages have not survived in Europe outside the Pontic-Caspian steppe. Bulgarian language, despite being named after a Turkic tribe, is actually a Slavic tongue with a mild Turkic influence. Hungarian, sometimes mistaken for the heir of Hunnic because of its name, is in reality an Uralic language (Magyar). The dozens of Turkic languages spoken in the world today have a high degree of mutual intelligibility due to their fairly recent common origin and the nomadic nature of their speakers (until recently). Its two main branches Oghuz and Oghur could be seen as two languages about as distant as Spanish and Italian, and languages within each branch like regional dialects of Spanish and Italian.” ref

The Greek branch corresponding to haplogroup R1a

“Little is known about the arrival of Proto-Greek speakers from the steppes. The Mycenaean culture commenced circa 1650 BCE and is clearly an imported steppe culture. The close relationship between Mycenaean and Proto-Indo-Iranian languages suggest that they split fairly late, some time between 2500 and 2000 BCE. Archeologically, Mycenaean chariots, spearheads, daggers and other bronze objects show striking similarities with the Seima-Turbino culture (c. 1900-1600 BCE) of the northern Russian forest-steppes, known for the great mobility of its nomadic warriors (Seima-Turbino sites were found as far away as Mongolia). It is therefore likely that the Mycenaean descended from Russia to Greece between 1900 and 1650 BCE, where they intermingled with the locals to create a new unique Greek culture.” ref

R1 populations spread genes for light skin, blond hair, and red hair

“There is now strong evidence that both R1a and R1b tribes during the Bronze Age contributed to the diffusion of the A111T mutation of the **SLC24A5** gene, which explains approximately 35% of skin tone difference between Europeans and Africans, and most variations within South Asia. The distribution pattern of the **A111T allele** (rs1426654) of matches almost perfectly the spread of Indo-European R1a and R1b lineages around Europe, the Middle East, Central Asia,

and South Asia. The mutation was probably passed on in the Early neolithic to other Near Eastern populations, which explains why Neolithic farmers in Europe already carried the A111T allele (e.g. Keller 2012 p.4, Lazaridis 2014 suppl. 7), although at lower frequency than modern Europeans and southern Central Asians." ref

"The light skin allele is also found at a range of 15 to 30% in various ethnic groups in northern sub-Saharan Africa, mostly in the Sahel and savannah zones inhabited by tribes of R1b-V88 cattle herders like the Fulani and the Hausa. This would presuppose that the A111T allele was already present among all R1b tribes before the Pre-Pottery Neolithic split between the V88 and P297 branches. R1a populations have an equally high incidence of this allele as R1b populations. On the other hand, the A111T mutation was absent from the 24,000-year-old R* sample (Mal'ta boy) from Siberia, and is absent from most modern R2 populations in Southeast India and Southeast Asia. Consequently, it can be safely assumed that the mutation arose among the R1* lineage during the late Upper Paleolithic, probably some time between 20,000 and 13,000 years ago." ref

"Fair hair was another physical trait associated with the Indo-Europeans. In contrast, the genes for blue eyes were already present among Mesolithic Europeans belonging to Y-haplogroup I. The genes for blond hair are more strongly correlated with the distribution of haplogroup R1a, but those for red hair have not been found in Western or Central Europe before the Bronze Age, and appear to have been spread primarily by R1b people (=> see The origins of red hair)." ref

The maternal lineages (mtDNA) corresponding to haplogroup R1a

"Comparing the regions where haplogroup R1a is found today with the modern mtDNA frequencies, it transpires that the maternal lineages that correlate the most with Y-haplogroup R1a are mt-haplogroups **C4a, H1b, H1c, H2a1, H6, H7, H11, T1a1a1, U2e, U4, U5a1a, and W**, as well as some subclades of I, J, K, T2, and V." ref

Haplogroup R1b

"**Haplogroup R1b** (**R-M343**), previously known as **Hg1** and **Eu18**, is a human Y-chromosome haplogroup. **According to ancient DNA studies, R1a and the majority of R1b would have expanded from the Caspian Sea along with the Indo-European languages." ref**

“It is the most frequently occurring paternal lineage in Western Europe, as well as some parts of Russia (e.g. the Bashkirs) and pockets of Central Africa (e.g. parts of Chad and among the Chadic-speaking minority ethnic groups of Cameroon). The clade is also present at lower frequencies throughout Eastern Europe, Western Asia, as well as parts of North Africa, South Asia, and Central Asia.” ref

“R1b has two primary branches: R1b1a-L754 and R1b1b-PH155. R1b-L754 has two subclades: R1b1a1a2-M269, which predominates in Western Europe, and R1b1a2-V88, which is common in parts of Central Africa and is ancestral to R1b1a1a2. The other branch, R1b1b-PH155, is so rare and widely dispersed that it is difficult to draw any conclusions about its origins. It has been found in Bahrain, India, Nepal, Bhutan, Ladakh, Tajikistan, Turkey, and Western China.” ref

“The age of R1 was estimated by Tatiana Karafet et al. (2008) at between 12,500 and 25,700 years ago, and most probably occurred about 18,500 years ago. Since the earliest known example has been dated at circa 14,000 years ago, and belongs to R1b1a (R-L754), R1b must have arisen relatively soon after the emergence of R1.” ref

“Haplogroup R* originated in North Asia just before the Last Glacial Maximum (26,500-19,000 years ago). This haplogroup has been identified in the remains of a 24,000-year-old boy from the Altai region, in south-central Siberia (Raghavan et al. 2013). This individual belonged to a tribe of **mammoth hunters** that may have roamed across Siberia and parts of Europe during the Paleolithic. Autosomally this Paleolithic population appears to have contributed mostly to the ancestry of modern Europeans and South Asians, the two regions where haplogroup R also happens to be the most common nowadays (R1b in Western Europe, R1a in Eastern Europe, Central and South Asia, and R2 in South Asia).” ref

“The oldest forms of R1b (M343, P25, L389) are found dispersed at very low frequencies from Western Europe to India, a vast region where could have roamed the nomadic R1b hunter-gatherers during the Ice Age. The three main branches of R1b1 (R1b1a, R1b1b, R1b1c) all seem to have stemmed from the Middle East. The southern branch, R1b1c (V88), is found mostly in the Levant and Africa. The northern branch, R1b1a (P297), seems to have originated around the Caucasus, eastern Anatolia, or northern Mesopotamia, then to have crossed over the Caucasus, from where they would have invaded Europe and Central Asia. R1b1b (M335) has only been found in Anatolia.” ref

Early human remains found to carry R1b include:

- "Villabruna 1 (individual I9030), a Western Hunter-Gatherer (WHG), found in an Epigravettian culture setting in the Cismon valley (modern Veneto, Italy), who lived circa around 14,000 years ago and belonged to R1b1a.
- Several males of the Iron Gates Mesolithic in the Balkans buried between 11200 and 8200 years ago carried R1b1a1a. These individuals were determined to be largely of WHG ancestry, with slight Eastern Hunter-Gatherer (EHG) admixture.
- Several males of the Mesolithic Kunda culture and Neolithic Narva culture buried in the Zvejnieki burial ground in modern-day Latvia c. 9500–6000 years ago carried R1b1b. These individuals were determined to be largely of WHG ancestry, with slight EHG admixture.
- Several Mesolithic and Neolithic males buried at Deriivka and Vasil'evka in modern-day Ukraine c. 9500-7000 years ago carried R1b1a. These individuals were largely of EHG ancestry, with significant WHG admixture.
- A WHG male buried at Ostrovul Corbuli, Romania c. 8700 years ago carried R1b1c.
- A male buried at Lepenski Vir, Serbia c. 8200-7900 years ago carried R1b1a.
- An EHG buried near Samara, Russia 7500 years ago carried R1b1a1a.
- An Eneolithic male buried at Khvalynsk, Russia c. 7200-6000 years ago carried R1b1a.
- A Neolithic male buried at Els Trocs, Spain c. 7178-7066 years ago, who may have belonged to the Epi-Cardial culture, was found to be a carrier of R1b1.
- A Late Chalcolithic male buried in Smyadovo, Bulgaria c. 6,500 years ago carried R1b1a.
- An Early Copper Age male buried in Cannas di Sotto, Carbonia, Sardinia c. 6,450 years ago carried R1b1b2.
- A male of the Baalberge group in Central Europe buried c. 5,600 years ago carried R1b1a.
- A male of the Botai culture in Central Asia buried c. 5,500 years ago carried R1b1a1 (R1b-M478).

- Males of the closely related Yamnaya culture (c. 5,300-4,800 years ago) Afanasievo culture (5300-4500 years ago), Catacomb culture (4800-3700 years ago), Poltavka culture (4,700-4,100 years ago), and Bell Beaker culture (4,800-3,800 years ago) of Eurasia overwhelmingly carry R1b1a1a2a2." ref

Villabruna 1 corresponding to haplogroup R1b

"A grave that contained a well-preserved skeleton was discovered at the base of the archaeological layers in 1988. Direct AMS dating of the skeletal remains revealed an age of 14,160 to 13,820 years ago. The burial took place during the first stages of the human settlement in the rock shelters. The corpse was placed into a narrow, shallow pit of 30 to 40 cm (12 to 16 in) depth, the head turned to the left with arms stretched touching the body. Six grave attachments were placed to the body's left. The typical equipment of a hunter-gatherer included a fire stone knife, a fire stone core, another stone as a hammer, a blade of firestone, a bone tip, a pellet of ochre, and Propolis (a resinous matter, produced by bees). Limestone platelets decorated with ochre drawings had been placed on top of the tomb." ref

"The excellent preservation of the Villabruna 1 skeleton helped to thoroughly investigate various aspects of skeletal biology, such as body size, craniofacial morphology, tooth wear, functional anatomy, and nutritional and pathological aspects. Comparing Villabruna 1 and similar finds with today's people widened the understanding of biocultural adjustments, the living conditions, and survival strategies of the Paleolithic population of Europe. Villabruna 1 is significant in terms of the history of population genetics: the remains were found to carry Y-DNA haplogroup R1b1a-L754* (xL389,V88). This is the oldest documented example of haplogroup R1b found anywhere." ref

"R1b is a subclade within the "macro-haplogroup" K (M9), the most common group of human male lines outside of Africa. K is believed to have originated in Asia (as is the case with an even earlier ancestral haplogroup, F (F-M89). Karafet T. et al. (2014) "rapid diversification process of K-M526 likely occurred in Southeast Asia, with subsequent westward expansions of the ancestors of haplogroups R and Q." ref

"Three genetic studies in 2015 gave support to the Kurgan hypothesis of Marija Gimbutas regarding the Proto-Indo-European homeland. According to those studies, haplogroups R1b-M269 and R1a, now the most common in Europe (R1a is also common in South Asia) would have expanded from the West Eurasian Steppe, along with the Indo-European languages; they also detected

an autosomal component present in modern Europeans which was not present in Neolithic Europeans, which would have been introduced with paternal lineages R1b and R1a, as well as Indo-European languages." ref

Neolithic Cattle Herders corresponding to haplogroup R1b

"It has been hypothesized that R1b people (perhaps alongside neighboring J2 tribes) were the first to **domesticate cattle** in northern Mesopotamia some 10,500 years ago. R1b tribes descended from mammoth hunters, and when mammoths went extinct, they started hunting other large game such as bisons and aurochs. With the increase of the human population in the Fertile Crescent from the beginning of the Neolithic (starting 12,000 years ago), selective hunting and culling of herds started replacing indiscriminate killing of wild animals. The increased involvement of humans in the life of aurochs, wild boars, and goats led to their progressive taming. Cattle herders probably maintained a nomadic or semi-nomadic existence, while other people in the Fertile Crescent (presumably represented by haplogroups E1b1b, G, and T) settled down to cultivate the land or keep smaller domesticates." ref

"The analysis of bovine DNA has revealed that all the taurine cattle (Bos taurus) alive today descend from a population of only 80 aurochs. The earliest evidence of cattle domestication dates from circa 8,500 BCE or 10,522 years ago in the Pre-Pottery Neolithic cultures in the Taurus Mountains. The two oldest archaeological sites showing signs of cattle domestication are the villages of Çayönü Tepesi in southeastern Turkey and Dja'de el-Mughara in northern Iraq, two sites only 250 km away from each others. This is presumably the area from which R1b lineages started expanding – or in other words the "original homeland" of R1b." ref

"The early R1b cattle herders would have split in at least three groups. One branch (M335) remained in Anatolia, but judging from its extreme rarity today wasn't very successful, perhaps due to the heavy competition with other Neolithic populations in Anatolia, or to the scarcity of pastures in this mountainous environment. A second branch migrated south to the Levant, where it became the V88 branch. Some of them searched for new lands south in Africa, first in Egypt, then colonizing most of northern Africa, from the Mediterranean coast to the Sahel. The third branch (P297), crossed the Caucasus into the vast Pontic-Caspian Steppe, which provided ideal grazing grounds for cattle. They split into two factions: R1b1a1 (M73), which went east along the Caspian Sea to Central Asia, and R1b1a2 (M269), which at first remained in the North Caucasus and the Pontic Steppe between the Dnieper and the Volga. It is not yet clear whether M73 actually migrated across the Caucasus and reached Central Asia via Kazakhstan,

or if it went south through Iran and Turkmenistan. In any case, M73 would be a pre-Indo-European branch of R1b, just like V88 and M335." ref

R1b-M269 (the most common form in Europe) is closely associated with the diffusion of Indo-European languages, as attested by its presence in all regions of the world where Indo-European languages were spoken in ancient times, from the Atlantic coast of Europe to the Indian subcontinent, which comprised almost all Europe (except Finland, Sardinia and Bosnia-Herzegovina), Anatolia, Armenia, European Russia, southern Siberia, many pockets around Central Asia (notably in Xinjiang, Turkmenistan, Tajikistan and Afghanistan), without forgetting Iran, Pakistan, northern India and Nepal. The history of R1b and R1a are intricately connected to each others." ref

The Levantine & African branch of R1b (V88)

"Like its northern counterpart (R1b-M269), R1b-V88 is associated with the domestication of cattle in northern Mesopotamia. Both branches of R1b probably split soon after cattle were domesticated, approximately 10,500 years ago (8,500 BCE). R1b-V88 migrated south towards the Levant and Egypt. The migration of R1b people can be followed archeologically through the presence of domesticated cattle, which appear in central Syria around 8,000-7,500 BCE (late Mureybet period), then in the Southern Levant and Egypt around 7,000-6,500 BCE (e.g. at Nabta Playa and Bir Kiseiba). Cattle herders subsequently spread across most of northern and eastern Africa. The Sahara desert would have been more humid during the Neolithic Subpluvial period (c. 7250-3250 BCE), and would have been a vast savannah full of grass, an ideal environment for cattle herding." ref

"Evidence of cow herding during the Neolithic has shown up at Uan Muhuggiag in central Libya around 5500 BCE, at the Capeletti Cave in northern Algeria around 4500 BCE. But the most compelling evidence that R1b people related to modern Europeans once roamed the Sahara is to be found at Tassili n'Ajjer in southern Algeria, a site famous petroglyphs (rock art) dating from the Neolithic era. Some painting dating from around 3000 BCE depict fair-skinned and blond or auburn haired women riding on cows. The oldest known R1b-V88 sample in Europe is a 6,200 year-old farmer/herder from Catalonia tested by Haak et al. (2015). Autosomally this individual was a typical Near Eastern farmer, possessing just a little bit of Mesolithic West European admixture. After reaching the Maghreb, R1b-V88 cattle herders could have crossed the Strait of Gibraltar to Iberia, probably accompanied by G2 farmers, J1 and T1a goat herders. These North African Neolithic farmers/herders could have been the ones who established the Almagra Pottery culture in Andalusia in the 6th millennium BCE." ref

“Nowadays small percentages (1 to 4%) of R1b-V88 are found in the Levant, among the Lebanese, the Druze, and the Jews, and almost in every country in Africa north of the equator. Higher frequency in Egypt (5%), among Berbers from the Egypt-Libya border (23%), among the Sudanese Copts (15%), the Hausa people of Sudan (40%), the the Fulani people of the Sahel (54% in Niger and Cameroon), and Chadic tribes of northern Nigeria and northern Cameroon (especially among the Kirdi), where it is observed at a frequency ranging from 30% to 95% of men. According to Cruciani et al. (2010) R1b-V88 would have crossed the Sahara between 9,200 and 5,600 years ago, and is most probably associated with the diffusion of Chadic languages, a branch of the Afroasiatic languages. V88 would have migrated from Egypt to Sudan, then expanded along the Sahel until northern Cameroon and Nigeria. However, R1b-V88 is not only present among Chadic speakers, but also among Senegambian speakers (Fula-Hausa) and Semitic speakers (Berbers, Arabs).” ref

“R1b-V88 is found among the native populations of Rwanda, South Africa, Namibia, Angola, Congo, Gabon, Equatorial Guinea, Ivory Coast, Guinea-Bissau. The wide distribution of V88 in all parts of Africa, its incidence among herding tribes, and the coalescence age of the haplogroup all support a Neolithic dispersal. In any case, a later migration out of Egypt would be improbable since it would have brought haplogroups that came to Egypt during the Bronze Age, such as J1, J2, R1a, or R1b-L23. The maternal lineages associated with the spread of R1b-V88 in Africa are mtDNA haplogroups J1b, U5, and V, and perhaps also U3 and some H subclades (=> see Retracing the mtDNA haplogroups of the original R1b people).” ref

The North Caucasus and the Pontic-Caspian steppe : the Indo-European link corresponding to haplogroup R1b

“Modern linguists have placed the Proto-Indo-European homeland in the Pontic-Caspian Steppe, a distinct geographic and archeological region extending from the Danube estuary to the Ural mountains to the east and North Caucasus to the south. The Neolithic, Eneolithic, and early Bronze Age cultures in Pontic-Caspian steppe has been called the Kurgan culture (4200-2200 BCE) by Marija Gimbutas, due to the lasting practice of burying the deads under mounds (“kurgan”) among the succession of cultures in that region. It is now known that kurgan-type burials only date from the 4th millenium BCE and almost certainly originated south of the Caucasus. The genetic diversity of R1b being greater around eastern Anatolia, it is hard to deny that R1b evolved there before entering the steppe world.” ref

“Horses were first domesticated around 4600 BCE in the Caspian Steppe, perhaps somewhere around the Don or the lower Volga, and soon became a defining element of steppe culture. Nevertheless, it is unlikely that R1b was

already present in the eastern steppes at the time, so the domestication of the horse should be attributed to the indigenous R1a people, or tribes belonging to the older R1b-P297 branch, which settled in eastern Europe during the Late Paleolithic or Mesolithic period. Samples from Mesolithic Samara (Haak 2015) and Latvia (Jones 2017) all belonged to R1b-P297. Autosomally these Mesolithic R1a and R1b individuals were nearly pure Mesolithic East European, sometimes with a bit of Siberian admixture, but lacked the additional Caucasian admixture found in the Chalcolithic Afanasevo, Yamna, and Corded Ware samples." ref

"It is not yet entirely clear when R1b-M269 crossed over from the South Caucasus to the Pontic-Caspian steppe. This might have happened with the appearance of the Dnieper-Donets culture (c. 5100-4300 BCE). This was the first truly Neolithic society in the Pontic-Caspian Steppe. Domesticated animals (cattle, sheep and goats) were herded throughout the steppes and funeral rituals were elaborate. Sheep wool would play an important role in Indo-European society, notably in the Celtic and Germanic (R1b branches of the Indo-Europeans) clothing traditions up to this day. However, many elements indicate a continuity in the Dnieper-Donets culture with the previous Mesolithic hunter-gatherers, and at the same time an influence from the Balkans and Carpathians, with regular imports of pottery and copper objects. It is therefore more likely that Dnieper-Donets marked the transition of indigenous R1a and/or I2a1b people to early agriculture, perhaps with an influx of Near Eastern farmers from 'Old Europe'. Over 30 DNA samples from Neolithic Ukraine (5500-4800 BCE) were tested by Mathieson et al. (2017)." ref

"They belonged to Y-haplogroups I, I2a2, R1a, R1b1a (L754), and one R1b1a2 (L388). None of them belonged to R1b-M269 or R1b-L23 clades, which dominated during the Yamna period. Mitochondrial lineages were also exclusively of Mesolithic European origin (U4a, U4b, U4d, U5a1, U5a2, U5b2, as well as one J2b1 and one U2e1). None of those maternal lineages include typical Indo-European haplogroups, like H2a1, H6, H8, H15, I1a1, J1b1a, W3, W4 or W5 that would later show up in the Yamna, Corded Ware, and Unetice cultures. Indeed, autosomally genomes from Neolithic Ukraine were purely Mesolithic European (about 90% EHG and 10% WHG) and completely lacked the Caucasian (CHG) admxiture later found in Yamna and subsequent Indo-European cultures during the Bronze Age." ref

"The first clearly Proto-Indo-European cultures were the Khvalynsk (5200-4500 BCE) and Sredny Stog (4600-3900 BCE) cultures in the Pontic-Caspian Steppe. This is when small kurgan burials begin to appear, with the distinctive posturing of the dead on the back with knees raised and oriented toward the northeast, which would be found in later steppe cultures as well. There is evidence of population blending from the variety of skull shapes. Towards the end of the 5th

millennium, an elite starts to develop with cattle, horses, and copper used as status symbols. It is at the turn of the Khvalynsk and Sredny Stog periods that R1b-M269's main subclade, L23, is thought to have appeared, around 4,500 BCE. 99% of Indo-European R1b descends from this L23 clade. The other branch descended from M269 is PF7562, which is found mostly in the Balkans, Turkey, and Armenia today, and may represent an early Steppe migration to the Balkans dating from the Sredny Stog period." ref

"Another migration across the Caucasus happened shortly before 3700 BCE, when the Maykop culture, the world's first Bronze Age society, suddenly materialised in the north-west Caucasus, apparently out of nowhere. The origins of Maykop are still uncertain, but archeologists have linked it to contemporary Chalcolithic cultures in Assyria and western Iran. Archeology also shows a clear diffusion of bronze working and kurgan-type burials from the Maykop culture to the Pontic Steppe, where the Yamna culture developed soon afterwards (from 3500 BCE). Kurgan (a.k.a. tumulus) burials would become a dominant feature of ancient Indo-European societies and were widely used by the Celts, Romans, Germanic tribes, and Scythians, among others." ref

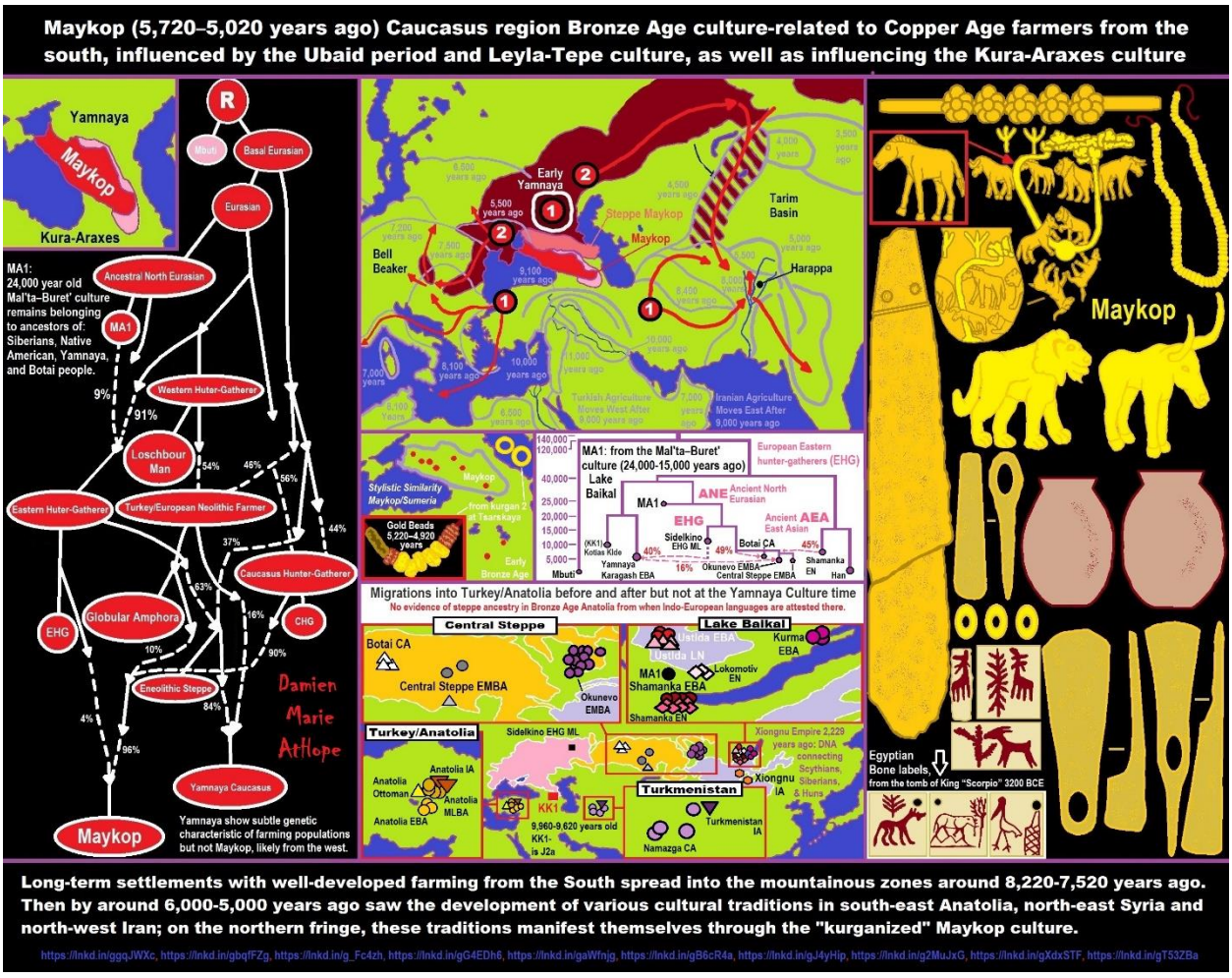
"The Yamna period (3500-2500 BCE) is the most important one in the creation of Indo-European culture and society. Middle Eastern R1b-M269 people had been living and blending to some extent with the local R1a foragers and herders for over a millennium, perhaps even two or three. The close cultural contact and interactions between R1a and R1b people all over the Pontic-Caspian Steppe resulted in the creation of a common vernacular, a new lingua franca, which linguists have called Proto-Indo-European (PIE). It is pointless to try to assign another region of origin to the PIE language. Linguistic similarities exist between PIE and Caucasian and Hurrian languages in the Middle East on the one hand, and Uralic languages in the Volga-Ural region on the other hand, which makes the Pontic Steppe the perfect intermediary region." ref

"During the Yamna period cattle and sheep herders adopted wagons to transport their food and tents, which allowed them to move deeper into the steppe, giving rise to a new mobile lifestyle that would eventually lead to the great Indo-European migrations. This type of mass migration in which whole tribes moved with the help of wagons was still common in Gaul at the time of Julius Caesar, and among Germanic peoples in the late Antiquity." ref

"The Yamna horizon was not a single, unified culture. In the south, along the northern shores of the Black Sea coast until the the north-west Caucasus, was a region of open steppe, expanding eastward until the Caspian Sea, Siberia and Mongolia (the Eurasian Steppe). The western section, between the Don and Dniester Rivers (and later the Danube), was the one most densely settled by R1b

people, with only a minority of R1a people (5-10%). The eastern section, in the Volga basin until the Ural mountains, was inhabited by R1a people with a substantial minority of R1b people (whose descendants can be found among the Bashkirs, Turkmans, Uyghurs, and Hazaras, among others).” ref

“The northern part of the Yamna horizon was forest-steppe occupied by R1a people, also joined by a small minority of R1b (judging from Corded Ware samples and from modern Russians and Belarussians, whose frequency of R1b is from seven to nine times lower than R1a). The western branch would migrate to the Balkans and Greece, then to Central and Western Europe, and back to their ancestral Anatolia in successive waves (Hittites, Phrygians, Armenians, etc.). The eastern branch would migrate to Central Asia, Xinjiang, Siberia, and South Asia (Iran, Pakistan, India). The northern branch would evolve into the Corded Ware culture and disperse around the Baltic, Poland, Germany, and Scandinavia.” ref



Damien Marie AtHope’s Art

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The Maykop culture, the R1b link to the Steppe?

“The Maykop culture (3700-2500 BCE) in the north-west Caucasus was culturally speaking a sort of southern extension of the Yamna horizon. Although not generally considered part of the Pontic-Caspian steppe culture due to its geography, the North Caucasus had close links with the steppes, as attested by numerous ceramics, gold, copper, and bronze weapons and jewelry in the contemporaneous cultures of Mikhaylovka, Sredny Stog, and Kemi Oba. The link between the northern Black Sea coast and the North Caucasus is older than the Maykop period. Its predecessor, the Svobodnoe culture (4400-3700 BCE), already had links to the Suvorovo-Novodanilovka and early Sredny Stog cultures. The even older Nalchik settlement (5000-4500 BCE) in the North Caucasus displayed a similar culture as Khvalynsk in the Caspian Steppe and Volga region. This may be the period when R1b started interacting and blending with the R1a population of the steppes.” ref

“The Yamna and Maykop people both used kurgan burials, placing their deads in a supine position with raised knees and oriented in a north-east/south-west axis. Graves were sprinkled with red ochre on the floor, and sacrificed domestic animal buried alongside humans. They also had in common horses, wagons, a heavily cattle-based economy with a minority of sheep kept for their wool, use of copper/bronze battle-axes (both hammer-axes and sleeved axes), and tanged daggers. In fact, the oldest wagons and bronze artefacts are found in the North Caucasus, and appear to have spread from there to the steppes.” ref

“Maykop was an advanced Bronze Age culture, actually one of the very first to develop metalworking, and therefore metal weapons. The world’s oldest sword was found at a late Maykop grave in Klady kurgan 31. Its style is reminiscent of the long Celtic swords, though less elaborated. Horse bones and depictions of horses already appear in early Maykop graves, suggesting that the Maykop culture might have been founded by steppe people or by people who had close link with them. However, the presence of cultural elements radically different from the steppe culture in some sites could mean that Maykop had a hybrid population. Without DNA testing it is impossible to say if these two populations were an Anatolian R1b group and a G2a Caucasian group, or whether R1a people had settled there too. The two or three ethnicities might even have cohabited side by side in different settlements. The one typical Caucasian Y-DNA lineage that does follow the pattern of Indo-European migrations is G2a-L13, which is found throughout Europe, Central Asia, and South Asia. In the Balkans, the Danube

basin, and Central Europe its frequency is somewhat proportional to the percentage of R1b." ref

"Maykop people are the ones credited for the introduction of primitive wheeled vehicles (wagons) from Mesopotamia to the Steppe. This would revolutionize the way of life in the steppe, and would later lead to the development of (horse-drawn) war chariots around 2000 BCE. Cavalry and chariots played an vital role in the subsequent Indo-European migrations, allowing them to move quickly and defeat easily anybody they encountered. Combined with advanced bronze weapons and their sea-based culture, the western branch (R1b) of the Indo-Europeans from the Black Sea shores are excellent candidates for being the mysterious Sea Peoples, who raided the eastern shores of the Mediterranean during the second millennium BCE." ref

"The rise of the IE-speaking Hittites in Central Anatolia happened a few centuries after the disappearance of the Maykop and Yamna cultures. Considering that most Indo-European forms of R1b found in Anatolia today belong to the R1b-Z2103 subclade, it makes little doubt that the Hittites came to Anatolia via the Balkans, after Yamna/Maykop people invaded Southeast Europe. The Maykop and Yamna cultures were succeeded by the Srubna culture (1600-1200 BCE), possibly representing an advance of R1a-Z282 people from the northern steppes towards the Black Sea shores, filling the vacuum left by the R1b tribes who migrated to Southeast Europe and Anatolia." ref

The Siberian & Central Asian branch corresponding to haplogroup R1b

"When R1b crossed the Caucasus in the Late Neolithic, it split into two main groups. The western one (L51) would settle the eastern and northern of the Black Sea. The eastern one (Z2103) migrated to the Don-Volga region, where horses were domesticated circa 4600 BCE. R1b probably mixed with indigenous R1a people and founded the Repin culture (3700-3300 BCE) a bit before the Yamna culture came into existence in the western Pontic Steppe. R1b would then have migrated with horses along the Great Eurasian Steppe until the Altai mountains in East-Central Asia, where they established the Afanasevo culture (c. 3600-2400 BCE). Afanasevo people might be the precursors of the Tocharian branch of Indo-European languages. In 2014, Clément Hollard of Strasbourg University tested three Y-DNA samples from the Afanasevo culture and all three turned out to belong to haplogroup R1b, including two to R1b-M269." ref

"The R1b people who stayed in the Volga-Ural region were probably the initiators of the Poltavka culture (2700-2100 BCE), then became integrated into the R1a-dominant Sintashta-Petrovka culture (2100-1750 BCE) linked to the Indo-Aryan

conquest of Central and South Asia (=> see R1a for more details). Nowadays in Russia R1b is found at higher frequencies among ethnic minorities of the Volga-Ural region (Udmurts, Komi, Mordvins, Tatars) than among Slavic Russians. R1b is also present in many Central Asian populations, the highest percentages being observed among the Uyghurs (20%) of Xinjiang in north-west China, the Yaghnobi people of Tajikistan (32%), and the Bashkirs (47%, or 62.5% in the Abzelilovsky district) of Bashkortostan in Russia (border of Kazakhstan). R1b-M73, found primarily in North Asia (Altai, Mongolia), Central Asia, and the North Caucasus is thought to have spread during the Neolithic from the Middle East to Central and North Asia, and therefore can be considered to be pre-Indo-European." ref

The European & Middle Eastern branch corresponding to haplogroup R1b

"The Indo-Europeans's bronze weapons and the extra mobility provided by horses would have given them a tremendous advantage over the autochthonous inhabitants of Europe, namely the native haplogroup C1a2, F, and I (descendants of Cro-Magnon) and the early Neolithic herders and farmers (G2a, H2, E1b1b, and T1a). This allowed R1a and R1b to replace most of the native male lineages (=> see How did R1b come to replace most of the older lineages in Western Europe?), although female lineages seem to have been less affected." ref

"A comparison with the Indo-Iranian invasion of South Asia shows that 40% of the male linages of northern India are R1a, but less than 10% of the female lineages could be of Indo-European origin. The impact of the Indo-Europeans was more severe in Europe because European society 4,000 years ago was less developed in terms of agriculture, technology (no bronze weapons), and population density than that of the Indus Valley civilization. This is particularly true of the native Western European cultures where farming arrived much later than in the Balkans or Central Europe. Greece, the Balkans and the Carpathians were the most advanced of European societies at the time and were the least affected in terms of haplogroup replacement. neolithic lineages survived better in regions that were more difficult to reach or less hospitable to horse breeders, like the Alps, the Dinaric Alps, the Apennines, and Sardinia." ref

The Conquest of "Old Europe" and Central Europe (4200-2500 BCE) corresponding to haplogroup R1b

"The first forays of Steppe people into the Balkans happened between 4200 BCE and 3900 BCE, when cattle herders equipped with horse-drawn wagons crossed the Dniester and Danube and apparently destroyed the towns of the Gumelnița, Varna, and Karanovo VI cultures in Eastern Romania and Bulgaria. A climatic

change resulting in colder winters during this exact period probably pushed steppe herders to seek milder pastures for their stock, while failed crops would have led to famine and internal disturbance within the Danubian and Balkanic communities. The ensuing Cernavodă culture (Copper Age, 4000-3200 BCE), Coțofeni/Usatovo culture (Copper to Bronze Age, 3500-2500 BCE), Ezero culture (Bronze Age, 3300-2700 BCE), in modern Romania, seems to have had a mixed population of steppe immigrants and people from the old tell settlements. These Steppe immigrants were likely a mixture of both R1a and R1b lineages, with a probably higher percentage of R1a than later Yamna-era invasions." ref

"The Steppe invaders would have forced many Danubian farmers to migrate to the Cucuteni-Trypillian towns in the eastern Carpathians, causing a population boom and a north-eastward expansion until the Dnieper valley, bringing Y-haplogroups G2a, I2a1 (probably the dominant lineage of the Cucuteni-Trypillian culture), E1b1b, J2a, and T1a in what is now central Ukraine. This precocious Indo-European advance westward was fairly limited, due to the absence of Bronze weapons and organized army at the time, and was indeed only possible thanks to climatic catastrophes which reduced the defenses of the towns of Old Europe. The Carphatian, Danubian, and Balkanic cultures were too densely populated and technologically advanced to allow for a massive migration." ref

"In comparison, the forest-steppe R1a people successfully penetrated into the heart of Europe with little hindrance, due to the absence of developed agrarian societies around Poland and the Baltic. The Corded Ware culture (3200-1800 BCE) was a natural northern and western expansion of the Yamna culture, reaching as far west as Germany and as far north as Sweden and Norway. DNA analysis from the Corded Ware confirmed the presence of R1a and R1b in Poland c. 2700 BCE and R1a central Germany around 2600 BCE. The Corded Ware tribes expanded from the northern fringe of the Yamna culture where R1a lineages were prevalent over R1b ones." ref

"The expansion of R1b people into Old Europe was slower, but proved inevitable. In 2800 BCE, by the time the Corded Ware had already reached Scandinavia, the Bronze Age R1b cultures had barely moved into the Pannonian Steppe. They established major settlements in the Great Hungarian Plain, the most similar habitat to their ancestral Pontic Steppes. Around 2500 BCE, the western branch of Indo-European R1b were poised for their next major expansion into modern Germany and Western Europe. By that time, the R1b immigrants had blended to a great extent with the indigenous Mesolithic and Neolithic populations of the Danubian basin, where they had now lived for 1,700 years." ref

"The strongly patriarchal Indo-European elite remained almost exclusively R1b on the paternal side, but absorbed a high proportion of non-Indo-European

maternal lineages. Hybridized, the new Proto-Indo-European R1b people would have lost most of their remaining Proto-Europoid or Mongolid features inherited from their Caspian origins (which were still clearly visible in numerous individuals from the Yamna period). Their light hair, eye and skin pigmentation, once interbred with the darker inhabitants of Old Europe, became more like that of modern Southern Europeans. The R1a people of the Corded Ware culture would come across far less populous societies in Northern Europe, mostly descended from the lighter Mesolithic population, and therefore retained more of their original pigmentation (although facial traits evolved considerably in Scandinavia, where the I1 inhabitants were strongly dolicocephalic and long-faced, as opposed to the brachycephalic and broad-faced Steppe people)." ref

The Conquest of Western Europe (2500-1200 BCE) corresponding to haplogroup R1b

"The R1b conquest of Europe happened in two phases. For nearly two millennia, starting from circa 4200 BCE, Steppe people limited their conquest to the rich Chalcolithic civilizations of the Carpathians and the Balkans. These societies possessed the world's largest towns, notably the tell settlements of the Cucuteni-Tripolye culture. Nothing incited the R1b conquerors to move further into Western Europe at such an early stage, because most of the land north and west of the Alps was still sparsely populated woodland. The Neolithic did not reach the British Isles and Scandinavia before circa 4000 BCE. Even northern France and most of the Alpine region had been farming or herding for less than a millennium and were still quite primitive compared to Southeast Europe and the Middle East." ref

"North-west Europe remained a tribal society of hunter-gatherers practicing only limited agriculture for centuries after the conquest of the Balkans by the Indo-Europeans. Why would our R1b "conquistadors" leave the comfort of the wealthy and populous Danubian civilizations for the harsh living conditions that lie beyond? Bronze Age people coveted tin, copper, and gold, of which the Balkans had plenty, but that no one had yet discovered in Western Europe." ref

"R1b-L51 is thought to have arrived in Central Europe (Hungary, Austria, Bohemia) around 2500 BCE, approximately two millennia after the shift to the Neolithic lifestyle in these regions. Agrarian towns had started to develop. Gold and copper had begun to be mined. The prospects of a conquest were now far more appealing." ref

"The archeological and genetic evidence (distribution of R1b subclades) point at several consecutive waves towards eastern and central Germany between 2800 BCE and 2300 BCE. The **Unetice culture** was probably the first culture in

which **R1b-L11** lineages played a major role. It is interesting to note that the Unetice period happen to correspond to the end of the Maykop (2500 BCE) and Kemi Oba (2200 BCE) cultures on the northern shores of the Black Sea, and their replacement by cultures descended from the northern steppes. It can therefore be envisaged that the (mostly) R1b population from the northern half of the Black Sea migrated westward due to pressure from other Indo-European people (R1a) from the north, for example that of the burgeoning Proto-Indo-Iranian branch, linked to the contemporary Poltavka and Abashevo cultures." ref

"It is doubtful that the Bell Beaker culture (2900-1800 BCE) in Western Europe was already Indo-European because its attributes are in perfect continuity with the native Megalithic cultures. The Beaker phenomenon started during the Late Neolithic and Early Chalcolithic in Portugal and propagated to the north-east towards Germany. During the same period Bronze Age Steppe cultures spread from Germany in the opposite direction towards Iberia, France and Britain, progressively bringing R1b lineages into the Bell Beaker territory. It is more likely that the beakers and horses found across Western Europe during that period were the result of trade with neighboring Indo-European cultures, including the first wave of R1b into Central Europe. It is equally possible that the Beaker people were R1b merchants or explorers who traveled across Western Europe and brought back tales of riches poorly defended by Stone Age people waiting to be to be conquered. This would have prompted a full-scale Indo-European (R1b) invasion from about 2500 BCE in Germany, reaching the Atlantic (north of the Pyrenees at least) around 2200 BCE." ref

"Ancient DNA tests conducted by Lee et al. (2012), Haak et al. (2015) and Allentoft et al. (2015) have all confirmed the presence of R1b-L51 (and deeper subclades such as P312 and U152) in Germany from the Bell Beaker period onwards, but none in earlier cultures. German Bell Beaker R1b samples only had about 50% of Yamna autosomal DNA and often possessed Neolithic non-Steppe mtDNA, which confirms that R1b invaders took local wives as they advanced westward. Another study by Olalde et al. (2017) confirmed that Iberian Bell Beakers were genetically distinct from the previously tested German samples. None of the Spanish or Portuguese individuals associated with Bell Beaker pottery possessed any Steppe admixture, and none belonged to the Indo-European haplogroup R1b-L23 or its subclades. Instead, they belonged to typical Megalithic lineages like G2a, I2a1, I2a2, and the Neolithic R1b-V88. The paper also confirmed a high frequency of R1b-L51 lineages in central Europe during the Beall Beaker period." ref

In Britain, Megalithic individuals belonged exclusively to Y-haplogroup I2 (mostly I2a2 and I2a1b-L161), but were entirely replaced by R1b-L51 (mosly L21 clade) in the Early Bronze Age. This means that the Bell Beaker culture was not

associated with one particular ethnic group. Beaker pottery originated in Megalithic Iberia, but then spread to France and central Europe and was used by invading R1b-L51 Steppe people, who brought it with them to the British Isles, while wiping out most of the indigenous Megalithic population. There was therefore no 'Bell Beaker people', but just various populations trading and using Beaker pots during that period." ref

"DNA samples from the Unetice culture (2300-1600 BCE) in Germany, which emerged less than two centuries after the appearance of the first R1b-L51 individuals in the late Bell Beaker Germany, had a slightly higher percentage of Yamna ancestry (60~65%) and of Yamna-related mtDNA lineages, which indicates a migration of both Steppe men and women. That would explain why archeological artifacts from the Unetice culture are clearly Yamna-related (i.e. Indo-European), as they abruptly introduced new technologies and a radically different lifestyle, while the Bell Beaker culture was in direct continuity with previous Neolithic or Chalcolithic cultures. R1b men may simply have conquered the Bell Beaker people and overthrown the local rulers without obliterating the old culture due to their limited numbers. Taking the analogy of the Germanic migrations in the Late Antiquity, the R1b invasion of the Bell Beaker period was more alike to that of the Goths, Burgunds, and Vandals, who all migrated in small numbers, created new kingdoms within the Roman empire, but adopted Latin language and Roman culture. In contrast, the Corded Ware and Unetice culture involved large-scale migrations of Steppe people, who imposed their Indo-European language and culture and conquered people, just like the Anglo-Saxons or the Bavarians did in the 5th century." ref

"The cultures that succeeded to Unetice in Central Europe, chronologically the Tumulus culture (1600-1200 BCE), Urnfield culture (1300-1200 BCE) and Hallstatt culture (1200-750 BCE) cultures remained typically Indo-European. The Hallstatt culture, centered around the Alps, is considered the first classical Celtic culture in Europe. It quickly expanded to France, Britain, Iberia, northern Italy, and the Danube valley, probably spreading for the first time Celtic languages, although not bronze technology nor R1b lineages, which had both already spread over much of western Europe during the Bell Beaker period. => See also Metal-mining and stockbreeding explain R1b dominance in Atlantic fringe" ref

Did the Indo-Europeans corresponding to haplogroup R1b really invade Western Europe?

"Proponents of the Paleolithic or Neolithic continuity model argue that bronze technology and horses could have been imported by Western Europeans from their Eastern European neighbors, and that no actual Indo-European invasion

need be involved. It is harder to see how Italic, Celtic and Germanic **languages** were adopted by Western and Northern Europeans without at least a small scale invasion. It has been suggested that Indo-European (IE) languages simply disseminated through contact, just like technologies, or because it was the language of a small elite and therefore its adoption conferred a certain perceived prestige. However, people don't just change language like that because it sounds nicer or more prestigious. Even nowadays, with textbooks, dictionaries, compulsory language courses at school, private language schools for adults, and multilingual TV programs, the majority of the people cannot become fluent in a completely foreign language, belonging to a different language family. The linguistic gap between pre-IE vernaculars and IE languages was about as big as between modern English and Chinese. English, Greek, Russian, and Hindi are all related IE languages and therefore easier to learn for IE speakers than non-IE languages like Chinese, Arabic, or Hungarian. From a linguistic point of view, only a wide-scale migration of IE speakers could explain the thorough adoption of IE languages in Western Europe – leaving only Basque as a remnant of the Neolithic languages." ref

"One important **archeological** argument in favor of the replacement of Neolithic cultures by Indo-European culture in the Bronze Age comes from **pottery** styles. The sudden appearance of bronze technology in Western Europe coincides with ceramics suddenly becoming more simple and less decorated, just like in the Pontic Steppe. Until then, pottery had constantly evolved towards greater complexity and details for over 3,000 years. People do not just decide like that to revert to a more primitive style. Perhaps one isolated tribe might experiment with something simpler at one point, but what are the chances that distant cultures from Iberia, Gaul, Italy, and Britain all decide to undertake such an improbable shift around the same time? The best explanation is that this new style was imposed by foreign invaders. In this case, it is not mere speculation; there is ample evidence that this simpler pottery is characteristic of the steppes associated with the emergence of Proto-Indo-European speakers." ref

"Besides pottery, archaeology provides ample evidence that the early Bronze Age in Central and Western Europe coincides with a radical shift in **food production**. Agriculture experiences an abrupt reduction in exchange for an increased emphasis on domesticates. This is also a period when horses become more common and cow milk is being consumed regularly. The overall change mimics the Steppic way of life almost perfectly. Even after the introduction of agriculture around 5200 BCE, the Bug-Dniester culture and later Steppe cultures were characterized by an economy dominated by herding, with only limited farming. This pattern expands into Europe exactly at the same time as bronze working." ref

“Religious beliefs and arts undergo a complete reversal in Bronze Age Europe. Neolithic societies in the Near East and Europe had always worshipped female figurines as a form of fertility cult. The Steppe cultures, on the contrary, did not manufacture female figurines. As bronze technology spreads from the Danube valley to Western Europe, symbols of fertility and fecundity progressively disappear and are replaced by cultures of domesticated animals.” ref

“Another clue that Indo-European Steppe people came in great number to Central and Western Europe is to be found in **burial practices**. Neolithic Europeans either cremated their dead (e.g. Cucuteni-Tripolye culture) or buried them in collective graves (this was the case of Megalithic cultures). In the Steppe, each person was buried individually, and high-ranking graves were placed in a funeral chamber and topped by a circular mound. The body was typically accompanied by weapons (maces, axes, daggers), horse bones, and a dismantled wagon (or later chariot). These characteristic burial mounds are known as kurgans in the Pontic Steppe.” ref

“Men were given more sumptuous tombs than women, even among children, and differences in hierarchy are obvious between burials. The Indo-Europeans had a strongly hierarchical and patrilinear society, as opposed to the more egalitarian and matrilinear cultures of Old Europe. The proliferation of ststus-conscious male-dominant kurgans (or tumulus) in Central Europe during the Bronze Age is a clear sign that the ruling elite had now become Indo-European. The practice also spread to central Asia and southern Siberia, two regions where R1a and R1b lineages are found nowadays, just like in Central Europe.” ref

“The ceremony of burial is one of the most emotionally charged and personal aspect of a culture. It is highly doubtful that people would change their ancestral practice “just to do like the neighbors”. In fact, different funerary practices have co-existed side by side during the European Neolithic and Chalcolithic. The ascendancy of yet another constituent of the Pontic Steppe culture in the rest of Europe, and in this case one that does not change easily through contact with neighbors, adds up to the likelihood of a strong Indo-European migration. The adoption of *some* elements of a foreign culture tends to happen when one civilization overawes the adjacent cultures by its superiority.” ref

“This process is called ‘acculturation’. However, there is nothing that indicates that the Steppe culture was so culturally superior as to motivate a whole continent, even Atlantic cultures over 2000 km away from the Pontic Steppe, to abandon so many fundamental symbols of their own ancestral culture, and even their own language. In fact, Old Europe was far more refined in its pottery and jewelry than the rough Steppe people. The Indo-European superiority was cultural but military, thanks to horses, bronze weapons, and an ethic code valuing

individual heroic feats in war (these ethic values are known from the old IE texts, like the Rig Veda, Avesta, or the Mycenaean and Hittite literature)." ref

"After linguistics and archaeology, the third category of evidence comes from **genetics** itself. It had first been hypothesized that R1b was native to Western Europe, because this is where it was most prevalent. It has since been proven that R1b haplotypes displayed higher microsatellite diversity in Anatolia and in the Caucasus than in Europe. European subclades are also more recent than Middle Eastern or Central Asian ones. The main European subclade, R-P312/S116, only dates back to approximately 3500 to 3000 BCE. It does not mean that the oldest common ancestor of this lineage arrived in Western Europe during this period, but that the first person who carried the mutation R-P312/S116 lived at least 5,000 years ago, assumably somewhere in the lower Danube valley or around the Black Sea. In any case, this timeframe is far too recent for a Paleolithic origin or a Neolithic arrival of R1b. The discovery of what was thought to be "European lineages" in Central Asia, Pakistan, and India hit the final nail on the coffin of a Paleolithic origin of R1b in Western Europe, and confirmed the Indo-European link." ref

"All the elements concur in favor of a large scale migration of Indo-European speakers (possibly riding on horses) to Western Europe between 2500 to 2100 BCE, contributing to the replacement of the Neolithic or Chalcolithic lifestyle by an inherently new Bronze Age culture, with simpler pottery, less farming, more herding, new rituals (single graves) and new values (patrilinear society, warrior heroes) that did not evolve from local predecessors." ref

The Atlantic Celtic branch (L21) corresponding to haplogroup R1b

"The Proto-Italo-Celto-Germanic R1b people had reached in what is now Germany by 2500 BCE. By 2300 BCE they had arrived in large numbers and founded the Unetice culture. Judging from the propagation of bronze working to Western Europe, those first Indo-Europeans reached France and the Low Countries by 2200 BCE, Britain by 2100 BCE and Ireland by 2000 BCE, and Iberia by 1800 BCE. This first wave of R1b presumably carried **R1b-L21** lineages in great number (perhaps because of a founder effect), as these are found everywhere in western, northern, and Central Europe. Cassidy et al. (2015) confirmed the presence of R1b-L21 (DF13 and DF21 subclades) in Ireland around 2000 BCE. Those genomes closely resembled those of the Unetice culture autosomally, but differed greatly from the earlier Neolithic Irish samples. This confirms that a direct migration of R1b-L21 from Central Europe was responsible for the introduction of the Bronze Age to Ireland." ref

“The early split of L21 from the main Proto-Celtic branch around Germany would explain why the Q-Celtic languages (Goidelic and Hispano-Celtic) diverged so much from the P-Celtic branch (La Tène, Gaulish, Brythonic), which appears to have expanded from the later Urnfield and Hallstat cultures. Some L21 lineages from the Netherlands and northern Germany later entered Scandinavia (from 1700 BCE) with the dominant subclade of the region, R1b-S21/U106 (see below). The stronger presence of L21 in Norway and Iceland can be attributed to the Norwegian Vikings, who had colonized parts of Scotland and Ireland and taken slaves among the native Celtic populations, whom they brought to their new colony of Iceland and back to Norway. Nowadays about 20% of all Icelandic male lineages are R1b-L21 of Scottish or Irish origin.” ref

“In France, R1b-L21 is mainly present in historical Brittany (including Mayenne and Vendée) and in Lower Normandy. This region was repopulated by massive immigration of insular Britons in the 5th century due to pressure from the invading Anglo-Saxons. However, it is possible that L21 was present in Armorica since the Bronze age or the Iron age given that the tribes of the Armorican Confederation of ancient Gaul already had a distinct identity from the other Gauls and had maintained close ties with the British Isles at least since the Atlantic Bronze Age.” ref

The Gallic & Iberian branch (DF27/S250) corresponding to haplogroup R1b

“The first Proto-Celtic R1b lineages to reach France and the Iberian peninsula from Central Europe were probably L21 and DF27. Whereas L21 might have taken a northern route through Belgium and northern France on its way to the British Isles, DF27 seems to have spread all over France but heading in greater number toward the south.” ref

“The Bronze Age did not appear in Iberia until 1800 BCE, and was mostly confined to the cultures of El Argar and Los Millares in south-east Spain, with sporadic sites showing up in Castile by 1700 BCE and in Extremadura and southern Portugal by 1500 BCE. These Early Bronze Age sites typically did not have more than some bronze daggers or axes and cannot be considered proper Bronze Age societies, but rather Copper Age societies with occasional bronze artifacts (perhaps imported). These cultures might have been founded by small groups of R1b adventurers looking for easy conquests in parts of Europe that did not yet have bronze weapons. They would have become a small ruling elite, would have had children with local women, and within a few generations their Indo-European language would have been lost, absorbed by the indigenous languages (=> see How did the Basques become R1b?).” ref

“Martiniano et al. (2017) sequenced the genomes of various skeletons from West Iberia dating from the Middle and Late Neolithic, Chalcolithic and Middle Bronze Age (since the Early Bronze Age did not reach that region). They found that Neolithic and Chalcolithic individuals belonged to Y-haplogroups I*, I2a1, and G2a. In contrast, all three Bronze Age Portuguese men tested belonged to R1b (one M269 and two P312), although they carried Neolithic Iberian maternal lineages (H1, U5b3, X2b) and lacked any discernible Steppe admixture. This is concordant with a scenario of Indo-European R1b men entering Iberia from 1800 BCE as a small group of adventurers and taking local wives, thus diluting their DNA at each generation, until hardly any Steppe admixture was left after a few centuries, by the time they reached Portugal. Nowadays, Spaniards and Portuguese do possess about 25% of Steppe admixture, which means that other more important Indo-European migrations took place later on, during the Late Bronze Age and the Iron Age.” ref

“Iberia did not become a fully-fledged Bronze Age society until the 13th century BCE, when the Urnfield culture (1300-1200 BCE) expanded from Germany to Catalonia via southern France, then the ensuing Hallstatt culture (1200-750 BCE) spread throughout most of the peninsula (especially the western half). This period belongs to the wider Atlantic Bronze Age (1300-700 BCE), when Iberia was connected to the rest of Western Europe through a complex trade network.” ref

“It is hard to say when exactly DF27 entered Iberia. Considering its overwhelming presence in the peninsula and in south-west France, it is likely that DF27 arrived early, during the 1800 to 1300 BCE period, and perhaps even earlier, if R1b adventurers penetrated the Bell Beaker culture, as they appear to have done all over Western Europe from 2300 BCE to 1800 BCE. The Atlantic Bronze Age could correspond to the period when DF27 radiated more evenly around Iberia and ended up, following Atlantic trade routes, all the way to the British Isles, the Netherlands, and Scandinavia.” ref

The Italo-Celtic branch (S28/U152/PF6570) corresponding to haplogroup R1b

“Furtwängler et al. (2020) analyzed 96 ancient genomes from Switzerland, Southern Germany, and the Alsace region in France, covering the Middle/Late Neolithic to Early Bronze Age. They confirmed that R1b arrived in the region during the transitory Bell Beaker period (2800-1800 BCE). The vast majority of Bell Beaker R1b samples belonged to the U152 > L2 clade (11 out of 14; the other being P312 or L51).” ref

“Starting circa 1300 BCE, a new Bronze Age culture flourished around the Alps thanks to the abundance of metal in the region, and laid the foundation for the classical Celtic culture. It was actually the succession of three closely linked culture: the **Urnfield culture**, which would evolve into the **Hallstatt culture** (from 1200 BCE) and eventually into the **La Tène culture** (from 450 BCE). After the Unetice expansion to Western Europe between 2300 and 1800 BCE, the Urnfield/Hallstatt/La Tène period represents the second major R1b expansion that took place from Central Europe, pushing west to the Atlantic, north to Scandinavia, east to the Danubian valley, and eventually as far away as Greece, Anatolia, Ukraine and Russia, perhaps even until the Tarim basin in north-west China (=> see Tarim mummies.” ref

“R1b-U152 would have entered Italy in successive waves from the northern side of the Alps, starting in 1700 BCE with the establishment of the Terramare culture in the Po Valley. From 1200 BCE, a larger group of Hallstatt-derived tribes founded the Villanova culture (see below). This is probably the migration that brought the Italic-speaking tribes to Italy, who would have belonged mainly the Z56 clade of R1b-U152. During the Iron Age, the expansion of the La Tène culture from Switzerland is associated with the diffusion of the Z36 branch, which would generate the Belgae around modern Belgium and in the Rhineland, the Gauls in France, and the Cisalpine Celts in Italy.” ref

“Antonio et al. (2019) analysed the genomes of Iron Age Latins dating between 900 and 200 BCE, and the samples tested belonged primarily to haplogroup R1b-U152 (including the clades L2, Z56 and Z193), as well as one R1b-Z2103 and one R1b-Z2118. One common linguistic trait between Italic and Gaulish/Brythonic Celtic languages linked to the Hallstatt expansion is that they shifted the original IE **kw* sound into **p*.” ref

They are known to linguists as the P-Celtic branch (as opposed to Q-Celtic). It is thought that this change occurred due to the inability to pronounce the **kw* sound by the pre-Indo-European population of Central Europe, Gaul, and Italy, who were speakers of Afro-Asiatic dialects that had evolved from Near-Eastern languages inherited from the Neolithic. The Etruscans, although later incomers from the eastern Mediterranean, also fit in this category. It has recently been acknowledged that Celtic languages borrowed part of their grammar from Afro-Asiatic languages.” ref

“This shift could have happened when the Proto-Italo-Celtic speakers moved from the steppes to the Danube basin and mixed with the population of Near-Eastern farmers belonging to haplogroups E1b1b, G2a, J, and T. However, such an early shift would not explain why Q-Celtic and Germanic languages did not undergo the same linguistic mutation. It is therefore more plausible that the shift

happened after the Proto-Italo-Celts and Proto-Germanics had first expanded across all western and northern Europe. The S28/U152 connection to P-Celtic (and Italic) suggests that the shift took place around the Alps after 1800 BCE, but before the invasion of Italy by the Italic tribes circa 1200 BCE." ref

"The expansion of the Urnfield/Hallstatt culture to Italy is evident in the form of the **Villanovan culture** (c. 1100-700 BCE), which shared striking resemblances with the Urnfield/Hallstatt sites of Bavaria and Upper Austria. The Villanova culture marks a clean break with the previous Terramare culture. Although both cultures practiced cremation, whereas Terramare people placed cremated remains in communal ossuaries like their Neolithic ancestors from the Near East, Villanovans used distinctive Urnfield-style double-cone shaped funerary urns, and elite graves containing jewelry, bronze armor and horse harness fittings were separated from ordinary graves, showing for the first time the development of a highly hierarchical society, so characteristic of Indo-European cultures." ref

"Quintessential Indo-European decorations, such as swastikas, also make their appearance. Originally a Bronze-age culture, the Villanova culture introduced iron working to the Italian peninsula around the same time as it appeared in the Hallstatt culture, further reinforcing the link between the two cultures. In all likelihood, the propagation of the Villanova culture represents the Italic colonization of the Italian peninsula. The highest proportion of R1b-U152 is found precisely where the Villanovans were the more strongly established, around modern Tuscany and Emilia-Romagna. The Villanova culture was succeeded by the Etruscan civilisation, which displayed both signs of continuity with Villanova and new hybrid elements of West Asian origins, probably brought by Anatolian settlers (who would have belonged to a blend of haplogroups G2a, J2, and R1b-Z2103)." ref

The Germanic branch (S21/U106/M405) corresponding to haplogroup R1b

"The principal Proto-Germanic branch of the Indo-European family tree is **R1b-S21 (a.k.a. U106 or M405)**. This haplogroup is found at high concentrations in the Netherlands and north-west Germany. It is likely that R1b-S21 lineages expanded in this region through a founder effect during the Unetice period, then penetrated into Scandinavia around 1700 BCE (probably alongside R1a-L664), thus creating a new culture, that of the Nordic Bronze Age (1700-500 BCE). R1b-S21 would then have blended for more than a millennium with preexisting Scandinavian populations, represented by haplogroups I1, I2-L801, R1a-Z284. When the Germanic Iron Age started c. 500 BCE, the Scandinavian population had developed a truly Germanic culture and language, but was divided in many tribes with varying levels of each haplogroup. R1b-S21 became the dominant

haplogroup among the West Germanic tribes, but remained in the minority against I1 and R1a in East Germanic and Nordic tribes, including those originating from Sweden such as the Goths, the Vandals, and Lombards." ref

"The presence of R1b-S21 in other parts of Europe can be attributed almost exclusively to the Germanic migrations that took place between the 3rd and the 10th century. The Frisians and Anglo-Saxons disseminated this haplogroup to England and the Scottish Lowlands, the Franks to Belgium and France, the Burgundians to eastern France, the Suebi to Galicia, and northern Portugal, and the Lombards to Austria and Italy. The Goths help propagate S21 around Eastern Europe, but apparently their Germanic lineages were progressively diluted by blending with Slavic and Balkanic populations, and their impact in Italy, France, and Spain was very minor. Later the Danish and Norwegian Vikings have also contributed to the diffusion of R1b-S21 (alongside I1, I2b1, and R1a) around much of Western Europe, but mainly in Iceland, in the British Isles, in Normandy, and in the southern Italy." ref

"From the Late Middle Ages until the early 20th century, the Germans expanded across much of modern Poland, pushing as far as Latvia to the north-east and Romania to the south-east. During the same period the Austrians built an empire comprising what is now the Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Serbia, and parts of Romania, western Ukraine, and southern Poland. Many centuries of German and Austrian influence in central and Eastern Europe resulted in a small percentage of Germanic lineages being found among modern populations. In Romania 4% of the population still consider themselves German. The low percentage of R1b-S21 in Finland, Estonia, and Latvia can be attributed to the Swedish or Danish rule from the late Middle Ages to the late 19th century." ref

"O'Sullivan et al. (2018) tested the genomes of Merovingian nobles from an early Medieval Alemannic graveyard in Baden-Württemberg. Apart from one individual belonging to haplogroup G2a2b1, all men were members of R1b, and all samples that yielded deep clade results fell under the R1b-U106 > Z381 > Z301 > L48 > Z9 > Z325 clade. The lineage of the Kings of France was inferred from the Y-DNA of several descendant branches (see famous members below) and also belongs to R1b-U106 > Z381. Their earliest-known male-line ancestor was from Robert II, Count of Hesbaye, a Frankish nobleman from present-day Belgium. The House of Wettin (see famous members below), one of the oldest dynasties in Europe, which ruled over many states at various times in history, was yet another well-known noble Germanic lineage part of R1b-U106 > Z381." ref

How did R1b come to replace most of the older lineages in Western Europe?

"Until recently it was believed that R1b originated in Western Europe due to its strong presence in the region today. The theory was that R1b represented the Paleolithic Europeans (Cro-Magnon) that had sought refuge in the Franco-Cantabrian region at the peak of the last Ice Age, then recolonised Central and Northern Europe once the ice sheet receded. The phylogeny of R1b proved that this scenario was not possible, because older R1b clades were consistently found in Central Asia and the Middle East, and the youngest in Western and Northern Europe. There was a clear gradient from East to West tracing the migration of R1b people (see map above). This age of the main migration from the shores of the Black Sea to Central Europe also happened to match the timeframe of the Indo-European invasion of Europe, which coincides with the introduction of the Bronze-Age culture in Western Europe, and the proliferation of Italo-Celtic and Germanic languages." ref

"Historians and archeologists have long argued whether the Indo-European migration was a massive invasion, or rather a cultural diffusion of language and technology spread only by a small number of incomers. The answer could well be "neither". Proponents of the diffusion theory would have us think that R1b is native to Western Europe, and R1a alone represents the Indo-Europeans. The problem is that haplogroup R did arise in Central Asia, and R2 is still restricted to Central and South Asia, while R1a and the older subclades of R1b are also found in Central Asia. The age of R1b subclades in Europe coincides with the Bronze-Age. R1b must consequently have replaced most of the native Y-DNA lineages in Europe from the Bronze-Age onwards." ref

"However, a massive migration and nearly complete annihilation of the Paleolithic population can hardly be envisaged. Western Europeans do look quite different in Ireland, Holland, Aquitaine, or Portugal, despite being all regions where R1b is dominant. Autosomal DNA studies have confirmed that the Western European population is far from homogeneous. A lot of maternal lineages (mtDNA) also appear to be of Paleolithic origin (e.g. H1, H3, U5, or V) based on ancient DNA tests. What a lot of people forget is that there is also no need of a large-scale exodus for patrilineal lineages to be replaced fairly quickly. Here is why." ref

1. **"Polygamy**. Unlike women, men are not limited in the number of children they can procreate. Men with power typically have more children. This was all the truer in primitive societies, where polygamy was often the norm for chieftains and kings.

2. **Status & Power**. Equipped with Bronze weapons and horses, the Indo-Europeans would have easily subjugated the Neolithic farmers and with even greater ease Europe's last hunter-gatherers. If they did not exterminate the indigenous men, the newcomers would have become the new ruling class, with a multitude of local kings, chieftains, and noblemen (Bronze-Age Celts and Germans lived in small village communities with a chief, each part of a small tribe headed by a king) with higher reproductive opportunities than average.
3. **Gender imbalance**. Invading armies normally have far more men than women. Men must therefore find women in the conquered population. Wars are waged by men, and the losers suffer heavier casualties, leaving more women available to the winners.
4. **Aggressive warfare**. The Indo-Europeans were a warlike people with a strong heroic code emphasizing courage and military prowess. Their superior technology (metal weapons, wheeled vehicles drawn by horses) and attitude to life would have allowed them to slaughter any population that did not have organized armies with metal weapons (i.e. anybody except the Middle-Eastern civilizations).
5. **Genetic predisposition to conceive boys**. The main role of the Y-chromosome in man's body is to create sperm. Haplogroups are determined based on mutations differentiating Y-chromosomes. Each mutation is liable to affect sperm production and sperm motility. Preliminary research has already established a link between certain haplogroups and increased or reduced sperm motility. The higher the motility, the higher the chances of conceiving a boy. It is absolutely possible that R1b could confer a bias toward more male offspring. Even a slightly higher percentage of male births would significantly contribute to the replacement of other lineages with the accumulation effect building up over a few millennia. Not all R1b subclades might have this boy bias. The bias only exist in relation to other haplogroups found in a same population. It is very possible that the fairly recent R1b subclades of Western Europe had a significant advantage compared to the older haplogroups in that region, notably haplogroup I2 and E-V13. Read more" ref

“Replacement of patrilineal lineages following this model quickly becomes exponential. Imagine 100 Indo-European men conquering a tribe of 1000 indigenous Europeans (a ratio of 1:10). War casualties have resulted in a higher proportion of women in the conquered population. Let’s say that the surviving population is composed of 700 women and 300 men. Let’s suppose that the victorious Indo-European men end up having twice as many children reaching adulthood as the men of the vanquished tribe. There is a number of reason for that. The winners would take more wives, or take concubines, or even rape women of the vanquished tribe. Their higher status would guarantee them greater wealth and therefore better nutrition for their offspring, increasing the chances of reaching adulthood and procreating themselves.” ref

“An offspring ratio of 2 to 1 for men is actually a conservative estimate, as it is totally conceivable that Bronze-Age sensibilities would have resulted in killing most of the men on the losing side, and raping their women (as attested by the Old Testament). Even so, it would only take a few generations for the winning Y-DNA lineages to become the majority. For instance, if the first generation of Indo-Europeans had two surviving sons per man, against only one per indigenous man, the number of Indo-European paternal lineages would pass to 200 individuals at the second generation, 400 at the third, 800 at the fourth, and 1600 at the fifth, and so on. During that time indigenous lineages would only stagnate at 300 individuals for each generation.” ref

“Based on such a scenario, the R1b lineages would have quickly overwhelmed the local lineages. Even if the Indo-European conquerors had only slightly more children than the local men, R1b lineages would become dominant within a few centuries. Celtic culture lasted for over 1000 years in Continental Europe before the Roman conquest putting an end to the privileges of the chieftains and nobility. This is more than enough time for R1b lineages to reach 50 to 80% of the population.” ref

“The present-day R1b frequency forms a gradient from the Atlantic fringe of Europe (highest percentage) to Central and Eastern Europe (lowest), the rises again in the Anatolian homeland. This is almost certainly because agriculture was better established in Eastern, then Central Europe, with higher densities of population, leaving R1b invaders more outnumbered than in the West. Besides, other Indo-Europeans of the Corded Ware culture (R1a) had already advanced from modern Russia and Ukraine as far west as Germany and Scandinavia. It would be difficult for R1b people to rival with their R1a cousins who shared similar technology and culture. The Pre-Celto-Germanic R1b would therefore have been forced to settled further west, first around the Alps, then overtaking the then sparsely populated Western Europe.” ref

The Balkanic and Asian branch (Z2103) corresponding to haplogroup R1b

"Haak et al. (2015) tested six Y-DNA samples from the eastern reaches of Yamna culture, in the Volga-Ural region, and all of them turned out to belong to haplogroup R1b. Four of them were positive for the Z2103 mutation. IN all likelihood, R1b-Z2103 was a major lineage of the Poltavka culture, which succeeded to the Yamna culture between the Volga River and the Ural mountains. It eventually merged with the Abashevo culture (presumably belonging chiefly to R1a-Z93) to form the Sintashta culture. Through a founder effect or through political domination, R1a-Z93 lineages would have outnumbered R1b-Z2103 after the expansion to Central and South Asia, although important pockets of Z2103 survived, notably in Bashkorostan, Turkmenistan, and Uyghurstan (Chinese Turkestan)." ref

"R1b-Z2103 would have become an Indo-Iranian lineage like R1a-Z93. This is true of two Z2103 subclades in particular: L277.1 and L584. The former is found in Russia to Central Asia then to India and the Middle East, just like the R1a-L657 subclade of Z93. It can be associated with the Andronovo culture and Bactria–Margiana Archaeological Complex, as well as the Indo-Aryan migrations. R1b-L584 is found especially in Iran, northern Iraq, the South Caucasus, and Turkey, and correlates more with the Iranian branch of Indo-Europeans, which includes Persians, Kurds, and Scythians." ref

Anatolian branch corresponding to haplogroup R1b

"The **Hittites** (c. 2000-1178 BCE) were the first Indo-Europeans to defy (and defeat) the mighty Mesopotamian and Egyptian empires. There are two hypotheses regarding the origins of the Hittites. The first is that they came from the eastern Balkans and invaded Anatolia by crossing the Bosphorus. That would mean that they belonged either to the L23* or the Z2103 subclade. The other plausible scenario is that they were an offshoot of the late Maykop culture, and that they crossed the Caucasus to conquer the Hattian kingdom (perhaps after being displaced from the North Caucasus by the R1a people of the Catacomb culture). In that case, the Hittites might have belonged to the R1b-Z2103 or the R1b-PF7562 subclade. The first hypothesis has the advantage of having a single nucleus, the Balkans, as the post-Yamna expansion of all Indo-European R1b. The Maykop hypothesis, on the other hand, would explain why the Anatolian branch of IE languages (Hittite, Luwian, Lydian, Palaic) is so archaic compared to other Indo-European languages, which would have originated in Yamna rather than Maykop." ref

“There is substantial archaeological and linguistic evidence that **Troy** was an Indo-European city associated with the Steppe culture and haplogroup R1b. The Trojans were Luwian speakers related to the Hittites (hence Indo-European), with attested cultural ties to the culture of the Pontic-Caspian Steppe. The first city of Troy dates back to 3000 BCE, right in the middle of the Maykop period. Troy might have been founded by Maykop people as a colony securing the trade routes between the Black Sea and the Aegean. The founding of Troy happens to coincide exactly with the time the first galleys were made. Considering the early foundation of Troy, the most likely of the two Indo-European paternal haplogroups would be R1b-M269 or L23.” ref

“The **Phrygians** and the **Proto-Armenians** are two other Indo-European tribes stemming from the Balkans. Both appear to have migrated to Anatolia around 1200 BCE, during the ‘great upheavals’ of the Eastern Mediterranean (see below). The Phrygians (or Bryges) founded a kingdom (1200-700 BCE) in west central Anatolia, taking over most of the crumbling Hittite Empire. The Armenians crossed all Anatolia until Lake Van and settled in the Armenian Highlands. Nowadays 30% of Armenian belong to haplogroup R1b, the vast majority to the L584 subclade of Z2103 (=> see The Indo-European migrations to Armenia).” ref

“Most of the R1b found in **Greece** today is of the Balkanic Z2103 variety. There is also a minority of Proto-Celtic S116/P312 and of Italic/Alpine Celtic S28/U152. Z2103 could have descended from Albania or Macedonia during the **Dorian invasion** (see below), thought to have happened in the 12th century BCE. Their language appears to have been close enough to Mycenaean Greek to be mutually intelligible and easy for locals to adopt. The Mycenaeans might have brought some R1b (probably also Z2103) to Greece, but their origins can be traced back through archaeology to the Catacomb culture and the Seima-Turbino phenomenon of the northern forest-steppe, which would make them primarily an R1a tribe.” ref

“Greek and Anatolian S116 and some S28 lineages could be attributed to the La Tène Celtic invasions of the 3rd century BCE. The Romans also certainly brought S28 lineages (=> see Genetics of the Italian people), and probably also the Venetians later on, notably on the islands. Older clades of R1b, such as P25 and V88, are only a small minority and would have come along E1b1b, G2a, and J2 from the Middle East.” ref

The great upheavals circa 1200 BCE corresponding to haplogroup R1b

“1200 BCE was a turning point in European and Near-Eastern history. In Central Europe, the Urnfield culture evolved into the Hallstatt culture, traditionally

associated with the classical Celtic civilization, which was to have a crucial influence on the development of ancient Rome. In the Pontic Steppe, the Srubna culture make way to the Cimmerians, a nomadic people speaking an Iranian or Thracian language. The Iron-age Colchian culture (1200-600 BCE) starts in the North Caucasus region. Its further expansion to the south of the Caucasus corresponds to the first historical mentions of the Proto-Armenian branch of Indo-European languages (circa 1200 BCE). In the central Levant the Phoenicians start establishing themselves as significant maritime powers and building their commercial empire around the southern Mediterranean." ref

"But the most important event of the period was incontestably the destruction of the Near-Eastern civilizations, possibly by the Sea Peoples. The great catastrophe that ravaged the whole Eastern Mediterranean from Greece to Egypt circa 1200 BCE is a subject that remains controversial. The identity of the Sea Peoples has been the object of numerous speculations. What is certain is that all the palace-based societies in the Near-East were abruptly brought to an end by tremendous acts of destruction, pillage, and razing of cities. The most common explanation is that the region was invaded by technologically advanced warriors from the north. They could have been either Indo-Europeans descended from the Steppe via the Balkans, or Caucasian people (G2a, J1, J2a, T1a) linked with the expansion of the earlier Kura-Araxes culture to eastern Anatolia and the Levant." ref

"The Hittite capital Hattusa was destroyed in 1200 BCE, and by 1160 BCE the empire had collapsed, probably under the pressure of the Phrygians and the Armenians coming from the Balkans. The Mycenaean cities were ravaged and abandoned throughout the 12th century BCE, leading to the eventual collapse of Mycenaean civilization by 1100 BCE. The kingdom of Ugarit in Syria was annihilated and its capital never resettled. Other cities in the Levant, Cyprus, and Crete were burned and left abandoned for many generations. The Egyptians had to repel assaults from the Philistines from the East and the Libyans from the West – two tribes of supposed Indo-European origin. The Lybians were accompanied by mercenaries from northern lands (the Ekwesh, Teresh, Lukka, Sherden, and Shekelesh), whose origin is uncertain, but has been placed in Anatolia, Greece, and/or southern Italy." ref

"The devastation of Greece followed the legendary Trojan War (1194-1187 BCE). It has been postulated that the Dorians, an Indo-European people from the Balkans (probably coming from modern Bulgaria or Macedonia), invaded a weakened Mycenaean Greece after the Trojan War, and finally settled in Greece as one of the three major ethnic groups. The Dorian regions of classical Greece, where Doric dialects were spoken, were essentially the southern and eastern

Peloponnese, Crete, and Rhodes, which is also the part of Greece with the highest percentage of R1b-Z2103." ref

"Another hypothesis is that the migration of the Illyrians from north-east Europe to the Balkans displaced previous Indo-European tribes, namely the Dorians to Greece, the Phrygians to north-western Anatolia, and the Libu to Libya (after a failed attempt to conquer the Nile Delta in Egypt). The Philistines, perhaps displaced from Anatolia, finally settled in Palestine around 1200 BCE, unable to enter Egypt." ref

Other migrations of R1b

"Other migrations occurred from Europe to the Near East and Central Asia during the Antiquity and Middle Ages. R1b-S28 (U152) was found in Romania, Turkey, northern Bashkortostan (a staggering 71.5% of the local population according to Myres et al.), and at the border of Kazakhstan and Kyrgyzstan. Some of it was surely brought by the La Tène Celts, known to have advanced along the Danube, and created the Galatian kingdom in central Anatolia. The rest could just as well be Roman, given that R1b-S28 is the dominant form of R1b in the Italian peninsula." ref

"Some have hypothesized that some "lost" Roman legions went as far as Central Asia or China and never came back, marrying local women and leaving their genetic marker in isolated pockets in Asia. A more prosaic version is that Roman merchants ended up in China via the Silk Road, which existed since the 2nd century BCE. A small percentage of Western European R1b subclades were also found among Christian communities in Lebanon. They are most likely descendants of the crusaders." ref

The lactase persistence allele and R1b cattle pastoralists

"Lactose (milk sugar) is an essential component of breast milk consumed by infants. Its digestion is made possible by an enzyme, called lactase, which breaks down lactose in simple sugars that can be absorbed through the intestinal walls and into the bloodstream. In most mammals (humans included), the production of the lactase enzyme is dramatically reduced soon after weaning. As a result, older children and adults become lactose intolerant. That is true of a big part of the world population. Some people possess a genetic mutation that allows the production of lactase through adulthood. This is called lactase persistence (LP). Lactase persistence is particularly common among Northwest Europeans, descended from the ancient Celtic and Germanic people, and in parts of Africa where cattle herding has been practiced for thousands of years. The highest incidence for the lactase persistence alleles, known to geneticists as -13,910*T

(rs4988235) and -22018*A (rs182549), are found among Scandinavian, Dutch, British, Irish, and Basque people. Sub-Saharan populations with lactase persistence have different mutations, such as -14010*C, -13915*G, and -13907*G." ref

"R1b men are thought to be the first people on earth to successfully domesticate cattle and to develop a lifestyle based on cattle husbandry and herding during the Pre-Pottery Neolithic (see Neolithic section). Looking for pasture for their cows, R1b tribes migrated from the Near East to the savannah of North Africa (which has since underwent desertification and become the Sahara) and to the Pontic Steppe in southern Russia and Ukraine. For several millennia no other human population was so dependent on cattle for their survival as these R1b tribes." ref

"It is known that most Neolithic herding societies consumed at least some animal milk and even made cheese from it (since cheese contains less lactose and is easier to digest for people who are lactose intolerant). In most of Europe, the Middle East, and South Asia, people essentially herded goats and sheep, better suited to mountainous environment of the Mediterranean basin, Anatolia, and Iran. Goats and sheep could also be kept easily inside villages by sedentary cereal cultivators, while cows needed vast pastures for grazing, which were particularly scarce in the Middle East. Domesticated cattle were sometimes found in small number among other Neolithic populations, but the ones that relied almost entirely on them were the R1b tribes of the Pontic Steppe and North Africa. To this very day, semi-nomadic pastoralists in the Sahel, such as the Fulani and the Hausa, who are descended from Neolithic R1b-V88 migrants from the Near East, still maintain primarily herds of cattle. It is among these cattle herders that selective pressure for lactase persistence would have been the strongest." ref

"There has been speculations among geneticists and evolutionary biologists regarding the origin of the lactase persistence allele in Europeans. Over 100 ancient DNA samples have been tested from Mesolithic, Neolithic, and Bronze Age Europe and Syria, and the -13910*T allele has been found only in Late Neolithic/Chalcolithic and Bronze Age individuals. The origin of the mutation does not really matter, since it could have been present at low frequencies in the human gene pool for tens of thousands of years before it underwent postive selective pressure among cattle-herding societies. What is certain is that individuals from Bronze Age cultures associated with the arrival of Indo-European speakers from the Pontic Steppe already possessed relatively high percentages of the LP allele. For example, the LP allele was found at a frequency of 27% (see Schilz 2006) among the 13 individuals from the Lichtenstein Cave in Germany, who belonged to the Urnfield culture, and were a mix of Y-haplogroups R1b, R1a, and I2a2b." ref

“Nowadays, the LP allele is roughly proportional to the percentage of R1b, and to a lower extent R1a, found in a population. In the British Isles, the Low Countries and south-west Scandinavia, where LP is the highest in the world, the combined percentage of R1a and R1b exceeds 70% of the population. In Iberia, the highest percentage of LP is observed among the Basques, who have the highest percentage of R1b. In Italy, LP is most common in the north, like R1b. The lowest incidence of LP in Europe are found in South Italy, Greece, and the Balkans, the regions that have the least R1b lineages.” ref

“Tishkoff et al. (2017) confirmed that the Hausa and the Fulani, two Sahel tribes with high incidence of R1b-V88, possessed the same LP allele as Europeans, but that East African pastoralist populations with a high prevalence of the lactase persistence trait possess a completely different mutation, which arose independently. This finding is the strongest evidence so far that the -13,910*T allele originated with the first R1b cattle herders in the Near East, who are the ancestors of both the Indo-Europeans and of African R1b-V88 tribes.” ref

R1 populations spread genes for light skin, blond hair, and red hair

“There is now strong evidence that both R1a and R1b people contributed to the diffusion of the A111T mutation of the **SLC24A5**, which explains approximately 35% of skin tone difference between Europeans and Africans, and most variations within South Asia. The distribution pattern of the **A111T allele** (rs1426654) of matches almost perfectly the spread of Indo-European R1a and R1b lineages around Europe, the Middle East, Central Asia, and South Asia. The mutation was probably passed on in the Early neolithic to other Near Eastern populations, which explains why Neolithic farmers in Europe already carried the A111T allele (e.g. Keller 2012 p.4, Lazaridis 2014 suppl. 7), although at lower frequency than modern Europeans and southern Central Asians.” ref

“The light skin allele is also found at a range of 15 to 30% in various ethnic groups in northern sub-Saharan Africa, mostly in the Sahel and savannah zones inhabited by tribes of R1b-V88 cattle herders like the Fulani and the Hausa. This would presuppose that the A111T allele was already present among all R1b people before the Pre-Pottery Neolithic split between V88 and P297. R1a populations have an equally high incidence of this allele as R1b populations. On the other hand, the A111T mutation was absent from the 24,000-year-old R* sample from Siberia, and is absent from most modern R2 populations in Southeast India and Southeast Asia.” ref

“Consequently, it can be safely assumed that the mutation arose among the R1* lineage during the late Upper Paleolithic, probably some time between 20,000 and 13,000 years ago. Fair hair was another physical trait associated with the

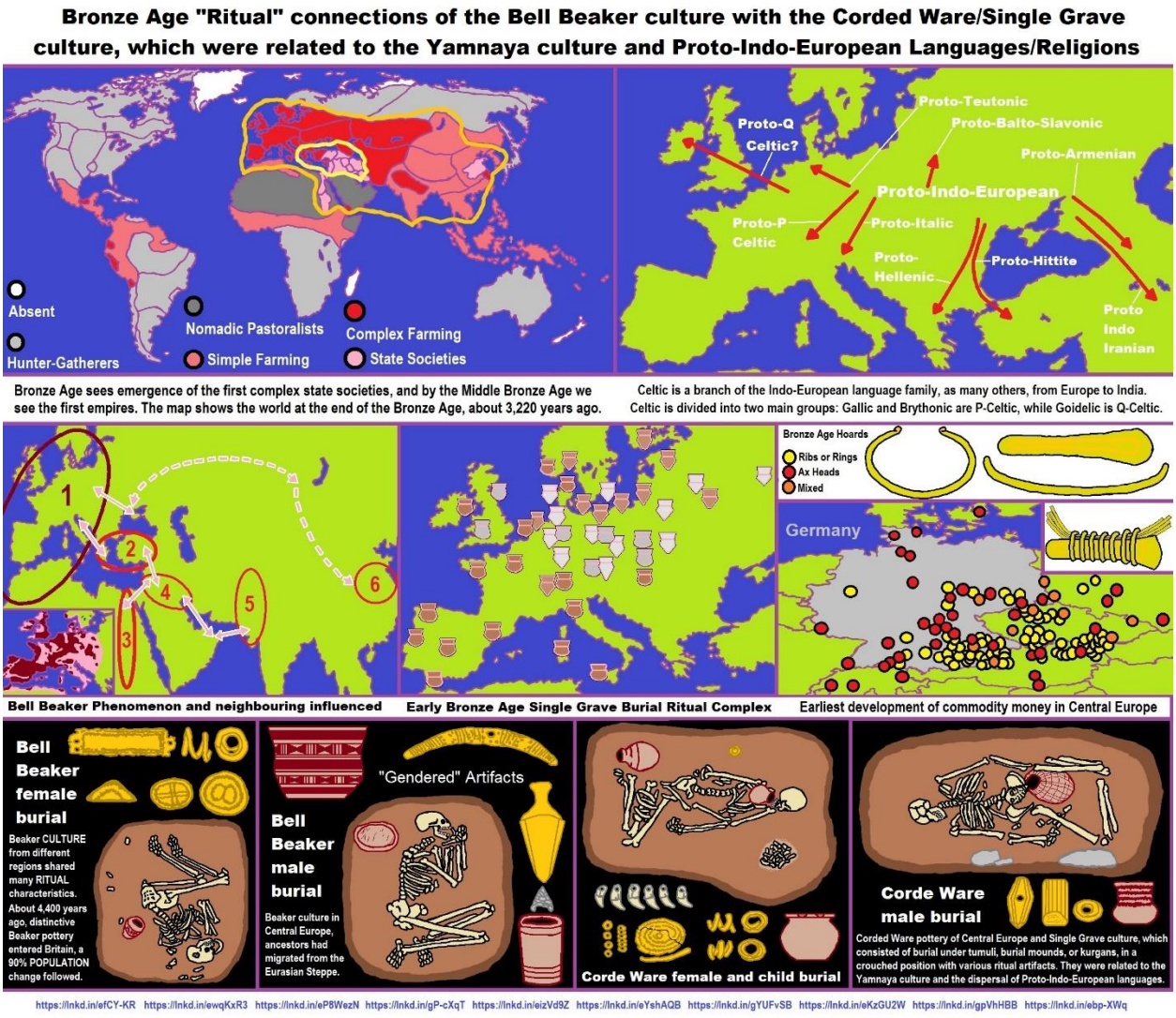
Indo-Europeans. In contrast, the genes for blue eyes were already present among Mesolithic Europeans belonging to Y-haplogroup I. The genes for blond hair are more strongly correlated with the distribution of haplogroup R1a, but those for red hair have not been found in Europe before the Bronze Age, and appear to have been spread primarily by R1b people (=> see The origins of red hair)." ref

What were the original mtDNA lineages of Neolithic R1b tribes in the Near East?

"R1b tribes are thought to have domesticated cattle in that region 10,500 years ago, yet only moved across the Caucasus some time between 7,500 and 6,500 years ago. For three or four millennia, semi-nomadic R1b herders were bound to have intermingled with some of the Near Eastern or Caucasian neighbors. One way of determining what mt-haplogroups R1b tribes carried at the very beginning of the Neolithic, is to compare the above haplogroups with those of African ethnic groups known to possess elevated percentages of R1b-V88. The best studied group are the Fulani, whose mtDNA includes three European-looking haplogroups **H, J1b1a, U5, and V** making up about 15% of their total maternal lineages." ref

"These haplogroups have been identified in all four Central African countries sampled, confirming a strong correlation with haplogroup R1b. However, their H, V, and U5 could have come from the Berbers of Northwest Africa. The Berbers also carry R1b-V88, but it's possible that some of it came from different Neolithic migrations, including a re-expansion from Iberia, as Berbers carry H1, H3, V1a1a, V5, and U5b1b1, lineages that are all found in the Iberian peninsula. U5b1b1 descends from Mesolithic West Europeans, but at present, it is not yet clear how the other haplogroups reached Iberia or Northwest Africa. One hypothesis is that they came from the Near East during the Neolithic, perhaps with R1b-V88 tribes." ref

"African R1b-V88 and Eurasian haplogroup R1b-P297 split roughly 10,000 years ago, almost certainly in Eastern Europe, where they carried mostly mt-haplogroup U5. Toward the end of the last glaciation, some R1b men would have migrated from Eastern Europe to the region of modern Kurdistan accompanied by women belonging to mtDNA U5. Soon after they arrived J1b1a (and maybe V) would have been the first indigenous Near Eastern lineages assimilated by R1b tribes. R1b-V88 might have assimilated H1 and H3 women in the Levant before moving to North Africa, but that remains highly hypothetical." ref



Damien Marie AtHope's Art

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Proto-Indo-European society

"**Proto-Indo-European society** is the reconstructed culture of Proto-Indo-Europeans, the ancient speakers of the Proto-Indo-European language, ancestor of all modern Indo-European languages. Archaeologist David W. Anthony and linguist Donald Ringe distinguish three different cultural stages in the evolution of the Proto-Indo-European language:

- Early (4500–4000 BCE), the common ancestor of all attested Indo-European languages, before the Anatolian split (Cernavodă culture; 4000 BCE); associated with the early Khvalynsk culture,
- Classic, or "post-Anatolian" (4000–3500 BCE), the last common ancestor of the non-Anatolian languages, including Tocharian; associated with the late Khvalynsk and Repin cultures,
- Late (3500–2500 BCE), in its dialectal period due to the spread of the Yamnaya horizon over a large area." ref

Early Khvalynsk (4900–3900) and Proto-Indo-European society

Khvalynsk culture

"Domesticated cattle were introduced around 4700 BCE from the Danube valley to the Volga–Ural steppes where the Early Khvalynsk culture (4900–3900 BCE) had emerged, associated by Anthony with the Early Proto-Indo-European language. Cattle and sheep were more important in ritual sacrifices than in diet, suggesting that a new set of cults and rituals had spread eastward across the Pontic-Caspian steppes, with domesticated animals at the root of the Proto-Indo-European conception of the universe. Anthony attributes the first and progressive domestication of horses, from taming to actually working with the animal, to this period. Between 4500–4200 BCE, copper, exotic ornamental shells, and polished stone maces were exchanged across the Pontic–Caspian steppes from Varna, in the eastern Balkans, to Khvalynsk, near the Volga river. Around 4500, a minority of richly decorated single graves, partly enriched by imported copper items, began to appear in the steppes, contrasting with the remaining outfitted graves." ref

"The Anatolian distinctive sub-family may have emerged from a first wave of Indo-European migration into southeastern Europe around 4200–4000 BCE, coinciding with the Suvorovo–to–Cernavoda I migration, in the context of a progression of the Khvalynsk culture westwards towards the Danube area, from which had also emerged the Novodanilovka (4400–3800) and Late Sredny Stog (4000–3500 BCE) cultures." ref

Late Khvalynsk/Repin (3900–3300) and Proto-Indo-European society

"Steppe economies underwent a revolutionary change between 4200 to 3300 BCE, in a shift from a partial reliance on herding, when domesticated animals

were probably used principally as a ritual currency for public sacrifices, to a later regular dietary dependence on cattle, and either sheep or goat meat and dairy products. The Late Khvalynsk and Repin cultures (3900–3300 BCE), associated with the classic (post-Anatolian) Proto-Indo-European language, showed the first traces of cereal cultivation after 4000 BCE, in the context of a slow and partial diffusion of farming from the western parts of the steppes to the east. Around 3700–3300 BCE, a second migration wave of proto-Tocharian speakers towards South Siberia led to the emergence of the Afanasievo culture (3300–2500 BCE)." ref

"The spoke-less wheeled wagon was introduced to the Pontic-Caspian steppe around 3500 BCE from the neighboring North Caucasian Maykop culture (3700–3000 BCE), with which Proto-Indo-Europeans traded wool and horses. Interactions with the hierarchical Maykop culture, itself influenced by the Mesopotamian Uruk culture, had notable social effects on the Proto-Indo-European way of life. Meanwhile, the Khvalynsk-influenced cultures that had emerged in the Danube-Donets region after the first migration gave way to the Cernavodă (4000–3200 BCE), Usatovo (3500–2500 BCE), Mikhaylovka (3600–3000 BCE) and Kemi Oba (3700—2200 BCE) cultures, from west to east respectively." ref

Yamnaya period (3300–2600) and Proto-Indo-European society

"The Yamnaya horizon, associated with the Late Proto-Indo-European language (following both the Anatolian and Tocharian splits), originated in the Don–Volga region before spreading westwards after 3300 BCE, establishing a cultural horizon founded on kurgan funerals that stretched over a vast steppe area between the Dnieper and Volga rivers. It was initially a herding-based society, with limited crop cultivation in the eastern part of the steppes, while the Dnieper–Donets region was more influenced by the agricultural Tripolye culture. Paleolinguistics likewise postulates Proto-Indo-European speakers as a semi-nomadic and pastoral population with subsidiary agriculture." ref

"Bronze was introduced to the Pontic-Caspian steppes during this period. Following the Yamnaya expansion, long-distance trade in metals and other valuables, such as salt in the hinterlands, probably brought prestige and power to Proto-Indo-European societies. However, the native tradition of pottery making was weakly developed. The Yamnaya funeral sacrifice of wagons, carts, sheep, cattle, and horses was likely related to a cult of ancestors requiring specific rituals and prayers, a connection between language and cult that introduced the Late Proto-Indo-European language to new speakers. Yamnaya chiefdoms had institutionalized differences in prestige and power, and their society was organized along patron-client reciprocity, a mutual exchange of gifts and favors

between their patrons, the gods, and human clients. The average life expectancy was fairly high, with many individuals living to 50–60 years old. The language itself appeared as a dialect continuum during this period, meaning that neighboring dialects differed only slightly between each other, whereas distant language varieties were probably no longer mutually intelligible due to accumulated divergences over space and time." ref

"As the steppe became dryer and colder between 3500–3000 BCE, herds needed to be moved more frequently in order to feed them sufficiently. Yamnaya distinctive identity was thus founded on mobile pastoralism, permitted by two earlier innovations: the introduction of the wheeled wagon and the domestication of the horse. Yamnaya herders likely watched over their cattle and raided on horseback, while they drove wagons for the bulk transport of water or food. Light-framework dwellings could be easily assembled and disassembled to be transported on pack animals." ref

"Another climate change that occurred after around 3000 BCE led to a more favorable environment allowing for grassland productivity. Yamnaya new pastoral economy then experienced a third wave of rapid demographic expansion, that time towards Central and Northern Europe. Migrations of Usatovo people towards southeastern Poland, crossing through the Old European Tripolye culture from around 3300 BCE, followed by Yamnya migrations towards the Pannonian Basin between 3100–2800 BCE, are interpreted by some scholars as movements of pre-Italic, pre-Celtic and pre-Germanic speakers." ref

"The Proto-Indo-European language probably ceased to be spoken after 2500 BCE as its various dialects had already evolved into non-mutually intelligible languages that began to spread across most of western Eurasia during the third wave of Indo-European migrations (3300–1500 BCE). Indo-Iranian languages were introduced to Central Asia, present-day Iran, and South Asia after 2000 BCE." ref

Class Structure and Proto-Indo-European society

"It is generally agreed that Proto-Indo-European society was hierarchical, with some form of social ranking and various degrees of social status. It is unlikely however that they had a rigidly stratified structure, or castes such as are found in historical India. There was a general distinction between free persons and slaves, typically prisoners of war or debtors unable to repay a debt. The free part of society was composed of an elite class of priests, kings, and warriors, along with the commoners, with each tribe following a chief (**wiḱpots*) sponsoring feasts and ceremonies, and immortalized in praise poetry." ref

“The presence of kurgan graves prominently decorated with dress, body ornaments, and weaponry, along with well-attested roots for concepts such as “wealth” (**h₂ép-*), “to be in need” (**h₁eg-*) or “servant” (**h₂entbʰi-kʷolos*, “one who moves about on both sides”; and **h₂upo-sth₂-i/o-*, “one standing below”), indicate that a hierarchy of wealth and poverty was recognized. Some graves, larger than the average and necessitating a considerable number of people to be built, likewise suggest a higher status given to some individuals. These prestigious funerals were not necessarily reserved to the wealthiest person. Smiths in particular were given sumptuous graves, possibly due to the association of smithery with magic during the early Bronze Age. In general, such graves were mostly occupied by males in the eastern Don-Volga steppes, while they were more egalitarian in the western Dnieper-Donets region.” ref

Kinship and Proto-Indo-European society

“Linguistics has allowed for the reliable reconstruction of a large number of words relating to kinship relations. These all agree in exhibiting a patriarchal, patrilocal and patrilineal social fabric. Patrilocality is confirmed by lexical evidence, including the word **h₂u̯edh-*, ‘to lead (away)’, being the word that denotes a male wedding a female. Rights, possessions, and responsibilities were consequently reckoned to the father, and wives were to reside after marriage near the husband’s family, after the payment of a bride-price.” ref

“The household (**domos*) was generally ruled by the senior male of the family, the **dems-potis* (‘master of the household’), and could also consist of his children, grandchildren, and perhaps unrelated slaves or servants. His wife probably also played a complementary role: some evidence suggest that she would have kept her position as the mistress (**pot-n-ih₂*) of the household in the event her husband dies, while the eldest son would have become the new master. The Proto-Indo-European expansionist kinship system was likely supported by both marital exogamy (the inclusion of foreign women through marriage) and the exchange of foster children with other families and clans, as suggested by genetic evidence and later attestations from Indo-European-speaking groups.” ref

“Once established, the family lasted as long as the male stock of its founder endured, and clan or tribal founders were often portrayed as mythical beings stemming from a legendary past in Indo-European traditions. In this form of kinship organization, the individual’s genetic distance from the clan’s founding ancestor determined his social status. But if he was of exceptional prowess or virtue, the same individual could in his turn gain social prestige among the community and eventually found his own descent-group.” ref

“In the reconstructed lexicon linking the individual to the clan, **h₂erós* means a ‘member of one’s own group’, ‘one who belongs to the community’ (in contrast to an outsider). It gave way to the Indo-Iranian **árya* (an endonym), and probably to the Celtic **aryos* (‘noble, freeman’), the Hittite *arā-* (‘peer, companion’), and the Germanic **arjaz* (‘noble, distinguished’). It is unlikely however that the term had an ethnic connotation, and we do not know if Proto-Indo-European speakers had a term to designate themselves as a group. Another word, **h₁leudhos*, means ‘people’, ‘freemen’ in a more general way.” ref

Patron-client and Proto-Indo-European society

“Proto-Indo-European had several words for ‘leader’: **tagós* was a general term derived from **tā̆g-* (‘set in place, arrange’); **h₃rḗgs* meant a ruler who also had religious functions, with the Roman *rex sacrorum* (‘king of the sacred’) as a heritage of the priestly function of the king; **w(n)nákts* designated a ‘lord’ and possessed a feminine equivalent, **wnáktih₂* (a ‘queen’); while the **wiḱpots* (or **wiḱ-potis*) was the chief of the settlement (**weiḱs*), the seat of a tribe, clan or family.” ref

“Public feasts sponsored by such patrons were a way for them to promote and secure a political hierarchy built on the unequal mobilization of labor and resources, by displaying their generosity towards the rest of the community. Rivals competed publicly through the size and complexity of their feasts, and alliances were confirmed by gift-giving and promises made during those public gatherings. The host of the feast was called the **ghosti-potis*, the ‘lord of the guests’, who honored the immortal gods and his mortal guests with gifts of food, drink, and poetry.” ref

Guest-Host and Proto-Indo-European society

“Vertical social inequalities were partly balanced by horizontal mutual obligations of hospitality between guests and hosts. According to Anthony, the domestication of horses and the introduction of the wagon in the Pontic-Caspian steppe between 4500 to 3500 BCE led to an increase in mobility across the Yamnaya horizon, and eventually to the emergence of a guest-host political structure. As various herding clans began to move across the steppes, especially during harsh seasons, it became necessary to regulate local migrations on the territories of tribes that had likely restricted these obligations to their kins or co-residents (**h₂erós*) until then. In Proto-Indo-European, the term **ghós-ti-*, whose original meaning must have been “table companion”, could either mean a *host* or a *guest*. The connotation of an obligatory reciprocity between both guests and hosts has persisted in descendant cognates, such as

Latin *hospēs* (“foreigner, guest; host”), Old English *ġiest* (“stranger, guest”), or Old Church Slavonic *gostĭ* (“guest”) and *gospodĭ* (“master”).” ref

“Guests and hosts were indeed involved in a mutual and reciprocal relationship bound by oaths and sacrifices. The giving and receiving of favors was accompanied by a set of ritual actions that indebted the guest to show hospitality to his host at any time in the future. The obligation could even be heritable: Homer’s warriors, Glaukos and Diomedes, stopped fighting and presented gifts to each other when they learned that their *grandfathers* had shared a guest-host relationship. Violations of the guest-host obligations were considered immoral, illegal, and unholy: in Irish law, refusing hospitality was deemed a crime as serious as murder. The killing of a guest was also greeted with a singular revulsion, as was the abuse of hospitality.” ref

Legal System and Proto-Indo-European society

“Because of the archaic nature of traditional legal phraseology—which preserves old forms and meaning for words—and the necessity for legal sentences to be uttered precisely the same way each time to remain binding, it is possible to securely reconstruct some elements of the Proto-Indo-European legal system. For instance, the word **serk–* (‘to make a circle, complete’) designated a type of compensation where the father (or master) had to either pay for the damages caused by his son (or slave), or surrender the perpetrator to the offended party. It is attested by a common legal and linguistic origin in both Roman and Hittite laws. Another root denoting a compensation, **kwey-*, had the meanings of ‘blood-price‘, ‘vengeance’ or ‘guilt’ in daughter languages, suggesting that it was specifically applied to the restitution for theft or violence.” ref

“Law was apparently designed to preserve the ‘order’ (**h₂értus*) of the universe, with the underlying idea that the cosmic harmony should be maintained, be it in the physical universe or the social world. There was however probably no public enforcement of justice, nor were there formal courts as we know them today. Contractual obligations were protected by private individuals acting as sureties: they pledged to be responsible for payments of debts incurred by someone else if the latter defaulted. In case of litigation, one could either take matter into their own hands, for instance by barring someone from accessing their property to compel payment, or bring the case before judges (perhaps kings) that included witnesses. The word for ‘oath’, **óitos*, derives from the verb **h₁ei-* (‘to go’), after the practice of walking between slaughtered animals as part of taking an oath.” ref

“The root **h₂értus* (from **h₂er-*, ‘to fit’) is associated with the concept of a cosmic order, that is which is ‘fitting, right, ordered’. It is one of most securely

reconstructed Proto-Indo-European words, with cognates attested in most sub-families: Latin *artus* (‘joint’); Middle High German *art* (‘innate feature, nature, fashion’); Greek *artús* (ἀρτύς, ‘arrangement’), possibly *arete* (ἀρετή, ‘excellence’); Armenian *ard* (արդ, ‘ornament, shape’); Avestan *arəta-* (‘order’) and *ṛtá* (‘truth’); Sanskrit *ṛtú-* (ऋतु, ‘right time, order, rule’); Hittite *āra* (????????????, ‘right, proper’); Tocharian A *ārt-* (‘to praise, be pleased with’).” ref

Trifunctional Hypothesis and Proto-Indo-European society

“The trifunctional hypothesis, proposed by Georges Dumézil, postulates a tripartite ideology reflected in a threefold division between a clerical class (encompassing both the religious and social functions of the priests and rulers), a warrior class (connected with the concepts of violence and braveness), and a class of farmers or husbandmen (associated with fertility and craftsmanship), on the basis that many historically-known groups speaking Indo-European languages show such a division. Dumézil initially contended that it derived from an actual division in Indo-European societies, but later toned down his approach by representing the system as *functions* or general organizing principles. Dumézil’s theory has been influential and some scholars continue to operate under its framework, although it has also been criticized as aprioristic and too inclusive, and thus impossible to be proved or disproved.” ref

Rituals and Proto-Indo-European society

Proto-Indo-Europeans practiced a polytheistic religion centered on sacrificial rites of cattle and horses, probably administered by a class of priests or shamans. Animals were slaughtered (**gʷʰn̥tós*) and dedicated to the gods (**déiwos*) in the hope of winning their favor. The king as the high priest would have been the central figure in establishing good relations with the other world. The Khvalynsk culture, associated with early Proto-Indo-European, had already shown archeological evidence for the sacrifice of domesticated animals. Proto-Indo-Europeans also had a sacred tradition of horse sacrifice for the renewal of kinship involving the ritual mating of a queen or king with a horse, which was then sacrificed and cut up for distribution to the other participants in the ritual.” ref

“Although we know little about the role of magic in Proto-Indo-European society, there is no doubt that it existed as a social phenomenon, as several branches attest the use of similarly worded charms and curses, such as ones against worms. Furthermore, incantations and spells were frequently regarded as one of the three categories of medicine, along with the use of surgical instruments and herbs or drugs. Since the earliest evidence for the burning of the plant was found in Romanian kurgans dated 3,500 BCE, some scholars suggest that cannabis was

first used as a psychoactive drug by Proto-Indo-Europeans during ritual ceremonies, a custom they eventually spread throughout western Eurasia during their migrations. Descendant cognates of the root **kanna-* ("cannabis") have been proposed
in Sanskrit *śaná*, Greek *kánnabis* (κάνναβις), Germanic **hanipa* (German *Hanf*, English *hemp*), Russian *konopljá*, Albanian *kanëp*, Armenian *kanap* and Old Prussian *knapios*. Other linguists suggest that the common linguistic inheritance does not date back to the Indo-European period and contend that the word *cannabis* likely spread later across Eurasia as a *Wanderwort* ('wandering word'), ultimately borrowed into Ancient Greek and Sanskrit from a non-Indo-European language." ref

Poetry and Proto-Indo-European society

"Poetry and songs were central to Proto-Indo-European society. The poet-singer was the society's highest-paid professional, possibly a member of a hereditary profession that ran in certain families, the art passing from father to son as the poet had to acquire all the technical aspects of the art and to master an extensive body of traditional subject matter. He performed against handsome rewards—such as gifts of horses, cattle, wagons, and women—and was held in high esteem. In some cases, the poet-singer had a stable relationship with a particular noble prince or family. In other cases, he traveled about with his dependants, attaching himself to one court after another." ref

"A transmitter of inherited cultural knowledge, the poet sang as a *recall* of the old heroic times, entrusted with telling the praises of heroes, kings, and gods. Composing sacred hymns ensured the gods would in turn bestow favorable fate to the community, and for kings that their memory would live on many generations. A lexeme for a special song, the **erkw* ("praise of the gift") has been identified in early Proto-Indo-European. Such praise poems proclaimed the generosity of the gods (or a patron) and enumerated their gifts, expanding the patron's fame, the path to immortality otherwise only attainable for mortals through conspicuous acts of war or piety." ref

"The concept of *fame* (**kléwos*) was central to Proto-Indo-European poetry and culture. Many poetic dictions built on this term can be reconstituted, including **kléwos wéru* ("wide fame"), **kléwos meǵh₂* ("great fame"), **kléuesh₂ h₂nróm* ("the famous deeds of men, heroes"), or **dus-klewes* ("having bad repute"). Indo-European poetic tradition was probably oral-formulaic: stock formulas, such as the *imperishable fame* (**kléwos n̥dʰgʷʰitom*), the *swift horses* (**h₁ōḱéwes h₁éḱwōs*), the *eternal life* (**h₂iu-gʷih₃*), the metaphor of the *wheel of the sun* (**sh₂uens kʷekʷlos*), or the epithet *man-killer* (**hₐnr̥-gʷhen*), attached to Hektor and Rudra alike, were transmitted among poet-singers to fill

out traditional verse-lines in epic song lyrics. The task of the Indo-European poet was to preserve over the generations the famous deeds of heroes. He would compose and retell poems based on old and sometimes obscure formulations, reconnecting the motifs with his own skills and improvisations. Poetry was therefore associated with the acts of *weaving words* (**wékʷos webh-*) and *crafting speech* (**wékʷos teḱs-*)." ref

Warfare: Kóryos and Proto-Indo-European society

"Although Proto-Indo-Europeans have been often cast as warlike conquerors, their reconstructed arsenal is not particularly extensive. There is no doubt that they possessed archery, as several words with the meaning of "spear" (**gʷéru* ; **ḱúh₁los*), "pointed stick" (**h₂eiḱsmo*), or "throwing spear" (**ǵʰai-só-s*) are attested. The term **wēben* meant a "cutting weapon", probably a knife, and **h₂/₃ŋ̍sis* a "large offensive knife", likely similar to bronze daggers found across Eurasia around 3300–3000 BCE. Proto-Indo-Europeans certainly did not know swords, which appeared later around 2000–1500 BCE. The ax was known as **h₄edʰés*, while the word **spelo/eh₂* designated a wooden or leather shield. The term **leh₂wós* meant "military unit" or "military action", while **teutéh₂-* might have referred to the "adult male with possession" who would mobilize during warfare, perhaps originally a Proto-Indo-European term meaning "the people under arms." ref

"A number of scholars propose that Proto-Indo-European rituals included the requirement that young unmarried men initiate into manhood by joining a warrior-band named **kóryos*. They were led by a senior male and lived off the country by hunting and engaging in raiding and pillaging foreign communities. Kóryos members served in such brotherhoods (*Männerbunden*) for a number of years before returning home to adopt more respectable identities as mature men. During their initiation period, the young males wore the skin and bore the names of wild animals, especially wolves (**wl̥kʷo*) and dogs (**ḱwōn*), in order to assume their nature and escape the rules and taboos of their host society." ref

"Most kurgan stelae found in Pontic-Caspian steppe feature a man wearing with a belt and weapons carved on the stone. In later Indo-European traditions, notably the (half-)naked warrior figures of Germanic and Celtic art, **kóryos* raiders wore a belt that bound them to their leader and the gods, and little else. The tradition of kurgan stelae featuring warriors with a belt is also common in Scythian cultures. A continuity of an "animal-shaped raid culture" has been also postulated based on various elements attested in later Indo-European-speaking cultures, such as the Germanic Berserkers, the Italic *Ver Sacrum*, and the Spartan Crypteia, as well as in the mythical Celtic fianna and Vedic Maruts, and

in the legend of the werewolf ("man-wolf"), found in Greek, Germanic, Baltic and Slavic traditions alike." ref

"In a mostly patriarchal economy based on bride competition, the escalation of the bride-price in periods of climate change could have resulted in an increase in cattle raiding by unmarried men. Scholars also suggest that, alongside the attractiveness of the patron-client and the guest-host relationships, the **kóryos* could have played a key role in diffusing Indo-European languages across most of Eurasia." ref

Personal names and Proto-Indo-European society

"The use of two-word compound words for personal names, typically but not always ascribing some noble or heroic feat to their bearer, is so common in Indo-European languages that it is certainly an inherited feature. These names often belonged in early dialects to the class of compound words that in the Sanskrit tradition are called *bahuvrihi*. As in Vedic *bahuvrihi* (literally "much-rice", meaning "one who has much rice"), those compounds are formed as active structures indicating possession and do not require a verbal root. From the Proto-Indo-European personal name **Kléwos-wésu* (lit. "good-fame", meaning "possessing good fame") derive the Liburnian *Vescleves*, the Greek *Eukleés* (Εὐκλεής), the Old Persian *Huçavah*, the Avestan *Haosravah-*, and the Sanskrit *Suśráva*." ref

"A second type of compound consists of a noun followed by a verbal root or stem, describing an individual performing an action. Compounds more similar to synthetics are found in the Sanskrit *Trasá-dasyus* ("one who causes enemies to tremble"), the Greek *Archelaus* (Ἀρχέλαος, "one who rules people"), and the Old Persian *Xšayāršan* ("one who rules men")." ref

"Many Indo-European personal names are associated with the horse (**h₁ékwos*) in particular, which expressed both the wealth and nobility of their bearer, including the Avestan *Hwaspa* ("owning good horses"), the Greek *Hippónikos* ("winning by his horses"), or the Gaulish *Epomeduos* ("master of horses"). Since domestic animals also served to sacrifice, there were often used as exocentric structures in compound names (the bearers are not 'horses' themselves but 'users of horses' in some way), in contrast to endocentric personal names rather associated with wild animals like the wolf, for instance in the German *Adolf* ("a noble wolf") or the Serbian *Dobrovuk* ("a good wolf")." ref

Economy and Proto-Indo-European society

“Proto-Indo-Europeans possessed a Neolithic mixed economy based on livestock and subsidiary agriculture, with a wide range of economic regimes and various degrees of mobility that could be expected across the large Pontic-Caspian steppe. Tribes were typically more influenced by farming in the western Dnieper–Donets region, where cereal cultivation was practiced, while the eastern Don–Volga steppes were inhabited by semi-nomadic and pastoral populations mostly relying on herding. Proto-Indo-European distinguished between unmovable and movable wealth (**péḱu*, the “livestock”). As for the rest of society, the economy was founded on reciprocity. A gift always entailed a counter-gift, and each party was bound to the other in a mutual relationship cemented by trust.” ref

Trade and Proto-Indo-European society

“The early Khvalynsk culture, located in the Volga–Ural steppes and associated with early Proto-Indo-European, had trade relationship with Old European cultures. Domesticated cattle, sheep, and goats, as well as copper, were introduced eastward from the Danube valley around 4700–4500 BCE. Copper objects show an artistic influence from Old Europe, and the appearance of sacrificed animals suggests that a new set of rituals emerged following the introduction of herding from the west. The Old European Tripolye culture continued to influence the western part of the steppes, in the Dnieper–Donets region, where the Yamnaya culture was more agricultural and less male-centered.” ref

“Proto-Indo-European speakers also had indirect contacts with Uruk around 3700–3500 through the North Caucasian Maikop culture, a trade route that introduced the wheeled wagon into the Caspian-Pontic steppes. Wheel-made pottery imported from Mesopotamia were found in the Northern Caucasus, and Maikop chieftain was buried wearing Mesopotamian symbols of power—the lion paired with the bull. The late Khvalynsk and Repin cultures probably traded wool and domesticated horses in exchange, as suggested by the widespread appearance of horses in archeological sites across Transcaucasia after 3300 BCE. Socio-cultural interactions with Northwest Caucasians have been proposed, on the ground that the Proto-Indo-European language shows a number of lexical parallels with Proto-Northwest Caucasian. Proto-Indo-European also exhibits lexical loans to or from other Caucasian languages, particularly Proto-Kartvelian.” ref

“Proto-Indo-European probably also had trade relationships with Proto-Uralic speakers around the Ural Mountains. Words for “sell” and “wash” were borrowed in Proto-Uralic, and words for “price” and “draw, lead” were introduced in the Proto-Finno-Ugric language. James P. Mallory suggested that the expansion of the Uralic languages across the northern forest zone might have

been stimulated by organizational changes within Uralic forager societies, resulting partly from interaction with more complex, hierarchical Proto-Indo-European and (later) Indo-Iranian pastoral societies at the steppe/forest-steppe ecological border." ref

Technology and Proto-Indo-European society

"From the reconstructable lexicon, it is clear that Proto-Indo-Europeans were familiar with wheeled vehicles—certainly horse-drawn wagons (**weǵʰnos*)—as they knew the wheel (**kʷekʷlóm*), the axle (**h₂eḱs-*), the shaft (**h₂/₃éih₁os*), and the yoke (**yugóm*). Although wheels were most likely not invented by Proto-Indo-Europeans, the word **kʷekʷlóm* is a native derivation of the root **kʷel–* ("to turn") rather than a borrowing, suggesting short contacts with the people who introduced the concept to them." ref

"The technology used was a solid wheel made of three planks joined together with their outer edges trimmed to a circle. The swift chariot with spoked wheels, which made the mode of transport much more rapid and lighter, appeared later within the Sintashta culture (2100–1800 BCE), associated with the Indo-Iranians. As the word for "boat" (**néh₂us*) is widely attested across the language groups, the means of transport (likely a dugout canoe) was certainly known by Proto-Indo-Europeans." ref

"The vocabulary associated with metallurgy is very restricted and at best we can attest the existence of copper/bronze, gold, and silver. The basic word for "metal" (**h₂ey-es*) is generally presumed to mean "copper" or a copper-tin alloy of "bronze". "Gold" is reliably reconstructed as **h₂eusom*, and **h₂erǵ-ṇt-om* designated a "white metal" or "silver". Proto-Indo-Europeans were also familiar with the sickle (**srp-o/eh₂*), the awl (**h₁óleh₂*) for working leather or drilling wood, and used a primitive plough (**h₂érh₃ye/o*) made of a curved and forked branch." ref

"The term for "oven" or "cooking vessel" (**h₂/₃ukʷ*) has been reconstructed based on four branches, as for "baking" (**bʰōg-*) and "boiling" (**yes-*). They certainly drank beer (**h₂elut*) and mead (**médʰu*), and the word for "wine" (**wóinom*) has been proposed, although this remains a debated issue. Proto-Indo-Europeans produced textile, as attested by the reconstructed roots for wool (**wĺh₂neh₂*), flax (**linom*), sewing (**syuh₁-*), spinning (**(s)pen-*), weaving (**h₂/₃webʰ-*) and plaiting (**pleḱ-*), as well as needle (**skʷēis*) and thread (**pe/oth₂mo*). They were also familiar with combs (**kes*) and ointments with salve (**h₃engʷ-*)." ref

Animals and Proto-Indo-European society

“Animals (mammals in particular) are fairly abundant in the reconstructed lexicon. We can ascribe about seventy-five names to various animal species, but it hardly recovers all the animals to have been distinguished in the proto-language. While **kʷetwor-pod* designated a four-footed animal (tetrapod), **gʷyéh₃wyom* seems to have been the general term for animals, derived from the root **gʷyeh₃-*, “to live”. Proto-Indo-European speakers also made a distinction between wild animals (**ǵʰwḗr*) and the livestock (**péḱu*).” ref

Domesticated Animals and Proto-Indo-European society

“The reconstructed lexicon suggests a Neolithic economy with extensive references to domesticated animals. They were familiar with cows (**gʷṓus*), sheep (**h₃ówis*), goats (**díks*, or **h₂eiĝs*), and pigs (**sūs* ; also **pórḱos*, “piglet”). They knew dogs (**ḱwṓn*), milk (**ǵl̥ákt*; also **h₂melǵ-*, “to milk”) and dairy foods, wool (**wĺh₂neh₂*) and woolen textiles, agriculture, wagons, and honey (**mélit*). The domestication of the horse (**h₁éḱwos*), thought to be an extinct Tarpan species, probably originated with these peoples, and scholars invoke this innovation as a factor contributing to their increased mobility and rapid expansion.” ref

“The dog was perceived as a symbol of death and depicted as the guardian of the Otherworld in Indo-European cultures (Greek Cerberus, Indic Śarvarā, Norse Garmr). The mytheme possibly stems from an older Ancient North Eurasian belief, as evidenced by similar motifs in Native American and Siberian mythology, in which case it might be one of the oldest mythemes recoverable through comparative mythology. In various Indo-European traditions, the worst throw at the game of dice was named the “dog”, and the best throw was known as the “dog-killer”. Canine teeth of dogs were frequently worn as pendants in Yamnaya graves in the western Pontic steppes, particularly in the Ingul valley.” ref

Wild Animals and Proto-Indo-European society

“Linguistic evidence suggests that Proto-Indo-European speakers were also in contact with various wild animals, such as red foxes (**wl(o)p*), wolves (**wl̥kʷo*), bears (**h₂ŕ̥tḱos*), red deers (**h₁elh₁ēn*), elks (moose) (**h₁ólḱis*), eagles (**h₃or),* otters (**udrós*), snakes (**h₁óǵʷʰis*), mice (**mūs* ; from **mus-*, “to steal”), or trouts (**lóḱs*). Some of them were featured in mythological and folkloric motifs. Goats draw the chariots of the Norse and Indic gods Thor and Pushan, and they are associated with the Baltic god Perkūnas and the Greek god Pan. The words for both the wolf and

the bear underwent taboo deformation in a number of branches, suggesting that they were feared as symbols of death in Proto-Indo-European culture." ref

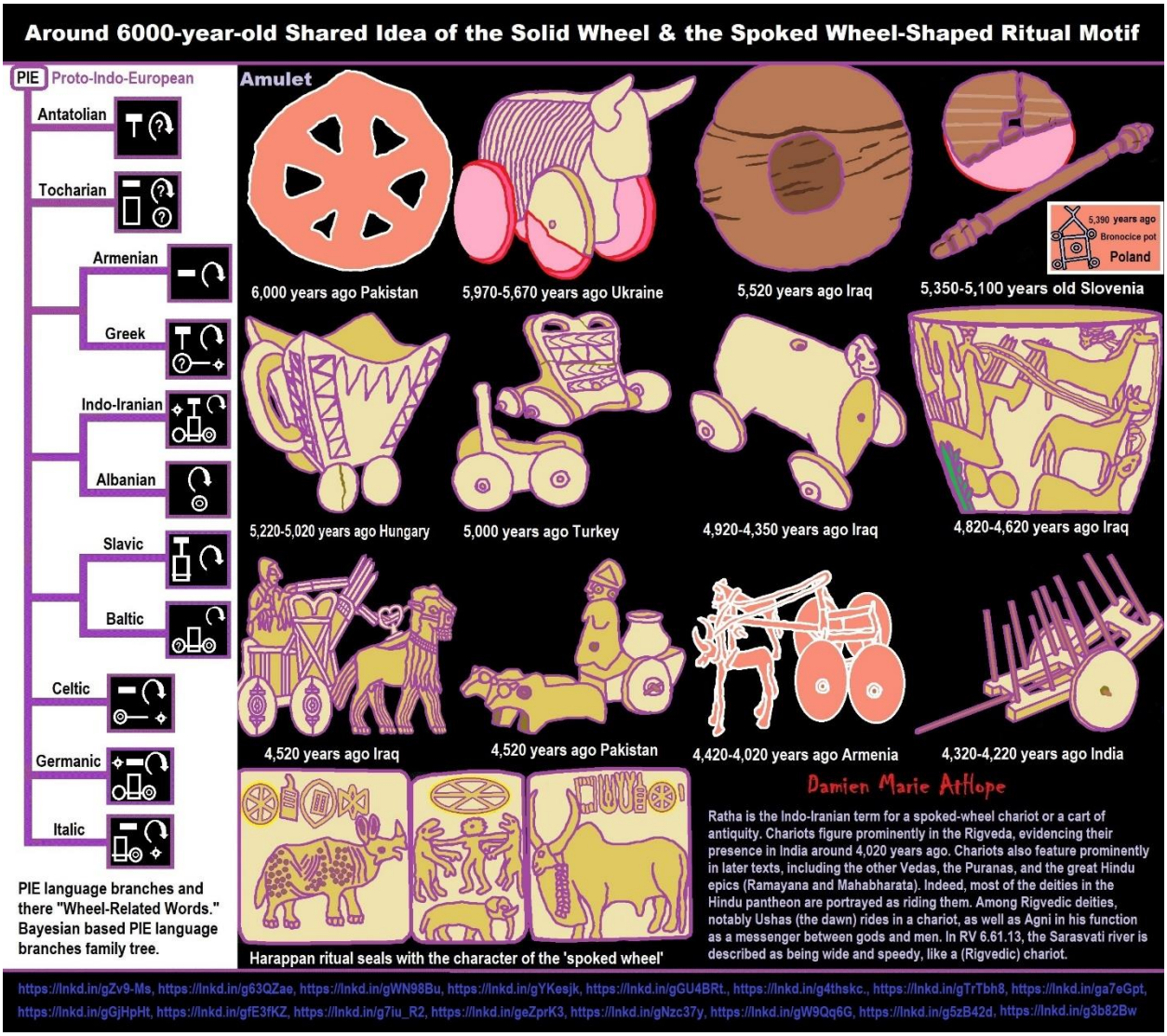
"In Indo-European culture, the term "wolf" is generally applied to brigands and outlaws who live in the wild. Ritual and mythological concepts connected with wolves, in some cases similar with Native American beliefs, may represent a common Ancient North Eurasian heritage: *mai-coh* meant both "wolf" and "witch" among Navajos, and *shunk manita tanka* a "doglike powerful spirit" among Sioux, while the Proto-Indo-European root **u̯eid* ("knowledge, clairvoyance") designated the wolf in both Hittite (*u̯etna*) and Old Norse (*witnir*), and a "werewolf" in Slavic languages (Serb *vjedo-gonja*, Slovenian *vedanec*, Ukrainian *viščun*)." ref

Beliefs: Proto-Indo-European mythology

"The reconstructed cosmology of the proto-Indo-Europeans shows that the ritual sacrifice of cattle, cows in particular, was at the root of their beliefs, as the primordial condition of the world order. The myth of **Trito*, the first warrior, involves the liberation of cattle stolen by a three-headed serpent named **Ngwhi*. After recovering the wealth of the people, Trito eventually offered the cattle to the priest in order to ensure the continuity of the cycle of giving between gods and humans. The creation myth could have rationalized raiding as the recovery of cattle that the gods had intended for the people who sacrificed properly. Many Indo-European cultures preserved the tradition of cattle raiding, which they often associated with epic myths. Georges Dumézil suggested that the religious function was represented by a duality, one reflecting the magico-religious nature of the priesthood, while the other is involved in religious sanction to human society (especially contracts), a theory supported by common features in Iranian, Roman, Scandinavian and Celtic traditions. The study of astronomy was not much developed among Proto-Indo-Europeans, and they probably had established names for only a few individual stars and star-groups (e.g. Sirius, Ursa Major)." ref

"The basic word for "god" in proto-Indo-European is **deiwós* ("celestial"), itself a derivative of **dei–* ("to shine, be bright"). On the other hand, the word for "earth" (**dʰégʰōm)* is at root of both "earthly" and "human", as it is notably attested in the Latin cognates *humus* and *homo*. This suggests a hierarchical conception of the status of mankind regarding the gods, confirmed by the use of the term "mortal" (**mr̥tós*) as a synonym of "human" as opposed to the never-dying gods in Indo-European traditions. The idea is expressed in the Homeric phrase "of the immortal gods and of men who walk on earth"." ref

Proto-Indo-European beliefs were influenced by a resistant animistic substratum, and the few names that can be reconstructed based upon both linguistic (*cognates*) and thematic (*reflexes*) evidence are the cosmic and elemental deities: the 'Daylight-Sky' (**Dyḗus*), his partner 'Earth' (**Dʰégʰōm*), his daughter the 'Dawn' (**H₂éwsōs*), and his Twin Sons, the 'Sun' (**Séh₂ul*) and the Sun-Maiden, and deities of winds, waters, fire, rivers and springs. The Proto-Indo-European creation myth tells of a primordial sacrifice performed by the first man **Manu* ("Man") on his twin brother **Yemo* ("Twin"), from whom emerged the cosmological elements. Other deities, such as the weather-god **Perkʷunos* and the guardian of roads and herds, **Péh₂usōn*, are probably late innovations since they are attested in a restricted number of traditions, Western (European) and Graeco-Aryan, respectively." ref



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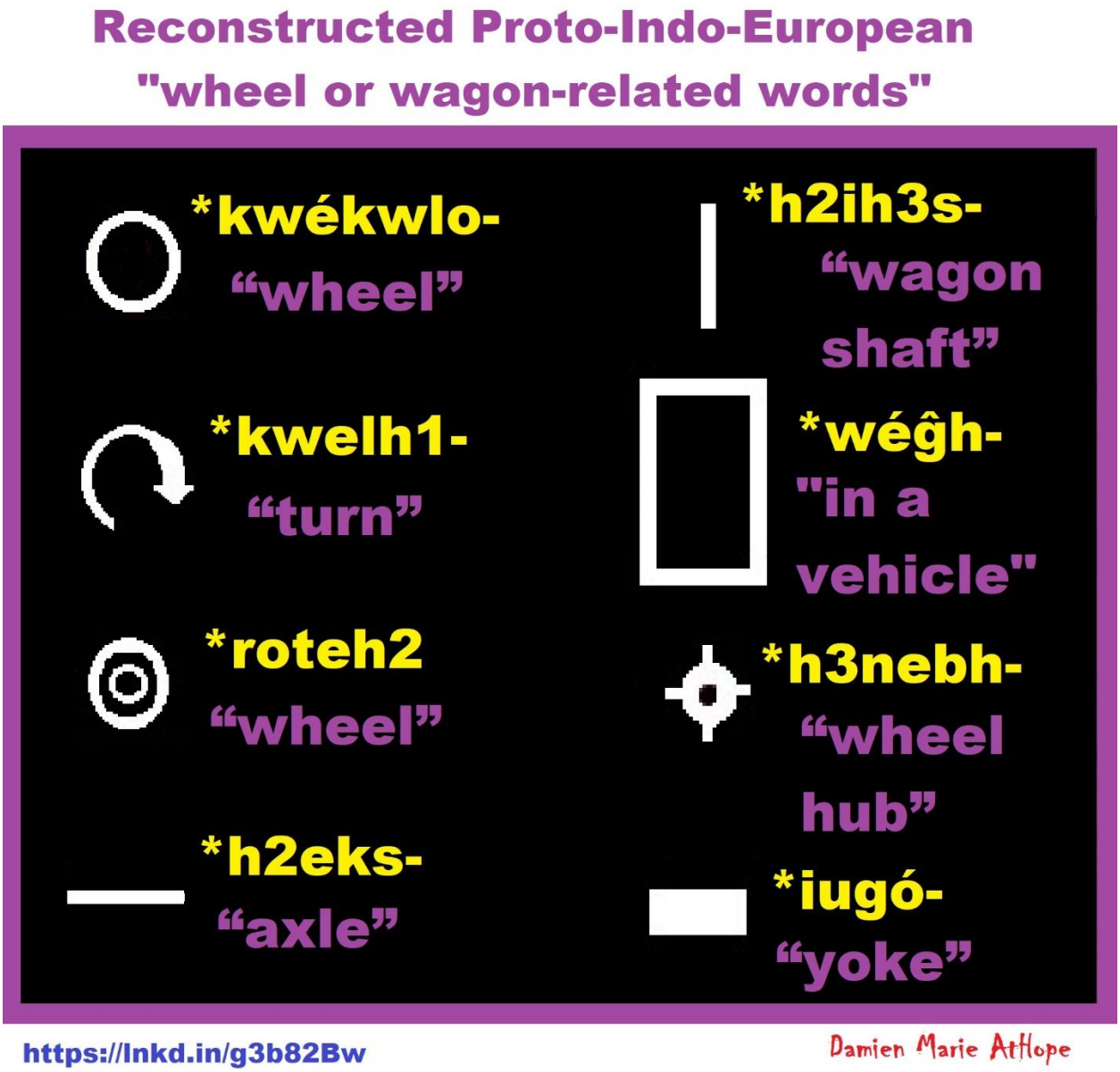

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The "wheel" related word list

“Most linguists argue that the PIEs (Proto-Indo-Europeans) did have words for wheel. The candidates put forward for wheel or wagon-related words are nine reconstructed PIE word forms. These are:

- **hurki* , argued to mean “wheel”
- **roteh2*, argued to mean “wheel”
- **kwékwlo-*, argued to mean “wheel”
- **kwelh1-*, argued to mean “turn” perhaps in the sense of a turning wheel.
- **h2eks-*, argued to mean “axle”
- **h2ih3s-*, argued to mean “thill” or “wagon shaft”
- **wéĝh-*, argued to mean “convey in a vehicle”
- **h3nebh-*, argued to mean “nave” or “wheel hub”
- **iugó-*, argued to mean “yoke” ref

Proto-Indo-European language

“**Proto-Indo-European** (**PIE**) is the reconstructed common ancestor of the Indo-European language family. Its proposed features have been derived by linguistic reconstruction from documented Indo-European languages. No direct record of Proto-Indo-European exists. Far more work has gone into reconstructing PIE than any other proto-language, and it is the best understood of all proto-languages of its age. The majority of linguistic work during the 19th century was devoted to the reconstruction of PIE or its daughter languages, and many of the modern techniques of linguistic reconstruction (such as the comparative method) were developed as a result.” ref

“PIE is hypothesized to have been spoken as a single language from 4500 to 2500 BCE during the Late Neolithic to Early Bronze Age, though estimates vary by more than a thousand years. According to the prevailing Kurgan hypothesis, the original homeland of the Proto-Indo-Europeans may have been in the Pontic–Caspian steppe of eastern Europe. The linguistic reconstruction of PIE has provided insight into the pastoral culture and patriarchal religion of its speakers.” ref

“As speakers of Proto-Indo-European became isolated from each other through the Indo-European migrations, the regional dialects of Proto-Indo-European spoken by the various groups diverged, as each dialect underwent shifts in pronunciation (the Indo-European sound laws), morphology, and vocabulary.

Over many centuries, these dialects transformed into the known ancient Indo-European languages. From there, further linguistic divergence led to the evolution of their current descendants, the modern Indo-European languages. Today, the descendant languages of PIE with the most native speakers are Spanish, English, Portuguese, Hindustani (Hindi and Urdu), Bengali, Russian , Punjabi, German, Persian, French, Marathi, Italian, and Gujarati." ref

"PIE is believed to have had an elaborate system of morphology that included inflectional suffixes (analogous to English *child, child's, children, children's*) as well as ablaut (vowel alterations, as preserved in English *sing, sang, sung, song*) and accent. PIE nominals and pronouns had a complex system of declension, and verbs similarly had a complex system of conjugation. The PIE phonology, particles, numerals, and copula are also well-reconstructed. Asterisks are used as a conventional mark of reconstructed words, such as **wódr̥*, **ḱwṓ*, or **tréyes*; these forms are the reconstructed ancestors of the modern English words *water*, *hound*, and *three*, respectively." ref

"Commonly proposed subgroups of Indo-European languages include Italo-Celtic, Graeco-Aryan, Graeco-Armenian, Graeco-Phrygian, Daco-Thracian, and Thraco-Illyrian. There are numerous lexical similarities between the Proto-Indo-European and Proto-Kartvelian languages due to early language contact, though some morphological similarities—notably the Indo-European ablaut, which is remarkably similar to the root ablaut system reconstructible for Proto-Kartvelian—may suggest a higher-level phylogenetic relationship." ref

"The Lusitanian language was a marginally attested language spoken in areas near the border between present-day Portugal and Spain.
The Venetic and Liburnian languages known from the North Adriatic region are sometimes classified as Italic. Albanian and Greek are the only surviving Indo-European descendants of a Paleo-Balkan language area, named for their occurrence in or in the vicinity of the Balkan peninsula. Most of the other languages of this area—including Illyrian, Thracian, and Dacian—do not appear to be members of any other subfamilies of PIE, but are so poorly attested that proper classification of them is not possible. Forming an exception, Phrygian is sufficiently well-attested to allow proposals of a particularly close affiliation with Greek, and a Graeco-Phrygian branch of Indo-European is becoming increasingly accepted." ref

List of Indo-European languages

"The Indo-European languages include some 449 (SIL estimate, 2018 edition) language families spoken by about or more than 3.5 billion people (roughly half of the world population). Most of the major languages belonging to language

branches and groups of Europe, and western and southern Asia, belong to the Indo-European language family. Therefore, Indo-European is the biggest language family in the world by number of mother-tongue speakers (but not by number of languages in which it is the 3rd or 5th biggest). Eight of the top ten biggest languages, by number of native speakers, are Indo-European. One of these languages, English, is the *de facto* World Lingua Franca with an estimate of over one billion second-language speakers." ref

"Each subfamily or linguistic branch in this list contains many subgroups and individual languages. Indo-European language family has 10 known branches or subfamilies, of which eight are living and two are extinct. The relation of Indo-European branches, how they are related to one another and branched from the ancestral proto-language is a matter of further research and not yet well known. There are some individual Indo-European languages that are unclassified within the language family, they are not yet classified in a branch and could be members of their own branch. The 449 Indo-European languages identified in the SIL estimate, 2018 edition, are mostly living languages, however, if all the known extinct Indo-European languages are added, they number more than 800 or close to one thousand. This list includes all known Indo-European languages, living and extinct." ref

"A distinction between a language and a dialect is not clear-cut and simple because there is, in many cases, several dialect continuums, transitional dialects, and languages and also because there is no consensual standard to what amount of vocabulary, grammar, pronunciation, and prosody differences there is a language or there is a dialect. (Mutual intelligibility can be a standard but there are closely related languages that are also mutual intelligible to some degree, even if it is an asymmetric intelligibility.) Because of this, in this list, several dialect groups and some individual dialects of languages are shown (in italics), especially if a language is or was spoken by a large number of people and over a big land area, but also if it has or had divergent dialects. The contact between different peoples and languages, especially as a result of European colonization, also gave origin to the many pidgins, creoles, and mixed languages that are mainly based in Indo-European languages (many of which are spoken in island groups and coastal regions)." ref

The ancestral population and language, Proto-Indo-Europeans that spoke Proto-Indo-European, estimated to have lived about 4500 BCE (around 6500 years ago), at some time in the past, starting about 4000 BCE (around 6000 years ago) expanded through migration and cultural influence. This started a complex process of population blend or population replacement, acculturation, and language change of peoples in many regions of western and southern Eurasia. This process gave origin to many languages and branches of

this language family. At the end of the second millennium BCE Indo-European speakers were many millions and lived in a vast geographical area in most of western and southern Eurasia (including western Central Asia). In the following two millennia, the number of speakers of Indo-European languages increased even further." ref

"By geographical area, Indo-European languages remained spoken in big land areas, although most of western Central Asia and Asia Minor was lost to another language family (mainly Turkic) due to Turkic expansion, conquests, and settlement (after the middle of the first millennium AD and the beginning and middle of the second millennium CE respectively) and also to Mongol invasions and conquests (that changed Central Asia ethnolinguistic composition). Another land area lost to non-Indo-European languages was today's Hungary due to Magyar/Hungarian (Uralic language speakers) conquest and settlement. However, in the second half of the second millennium CE, Indo-European languages expanded their territories to North Asia (Siberia), through Russian expansion, and North America, South America, Australia, and New Zealand as the result of the age of European discoveries and European conquests through the expansions of the Portuguese, Spanish, French, English and the Dutch. (These peoples had the biggest continental or maritime empires in the world and their countries were major powers.)" ref

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Proto-Indo-European mythology

Sumerian religion/ Mesopotamian mythology

Egyptian mythology

Greek mythology

Hindu mythology

Buddhist mythology

Proto-Indo-European mythology

"**Proto-Indo-European mythology** is the body of myths and deities associated with the Proto-Indo-Europeans, the hypothetical speakers of the reconstructed Proto-Indo-European language. Although the mythological motifs are not directly attested – since Proto-Indo-European speakers lived in preliterate societies – scholars of comparative mythology have reconstructed details from inherited similarities found among Indo-European languages, based on the assumption that parts of the Proto-Indo-Europeans' original belief systems survived in the daughter traditions." ref

"The Proto-Indo-European pantheon includes a number of securely reconstructed deities, since they are both cognates – linguistic siblings from a common origin –, and associated with similar attributes and body of myths: such as **Dyḗws Ph₂tḗr*, the daylight-sky god; his consort **Dʰéǵʰōm*, the earth mother; his daughter **H₂éwsōs*, the dawn goddess; his sons the Divine Twins; and **Seh₂ul*, a solar goddess. Some deities, like the weather god **Perkʷunos* or the herding-god **Péh₂usōn*, are only attested in a limited number of traditions – Western (European) and Graeco-Aryan, respectively – and could therefore represent late additions that did not spread throughout the various Indo-European dialects." ref

"Some myths are also securely dated to Proto-Indo-European times, since they feature both linguistic and thematic evidence of an inherited motif: a story portraying a mythical figure associated with thunder and slaying a multi-headed serpent to release torrents of water that had previously been pent up; a creation myth involving two brothers, one of whom sacrifices the other in order to create the world; and probably the belief that the Otherworld was guarded by a watchdog and could only be reached by crossing a river." ref

"Various schools of thought exist regarding possible interpretations of the reconstructed Proto-Indo-European mythology. The main mythologies used in comparative reconstruction are Indo-Iranian, Baltic, Roman, and Norse, often supported with evidence from the Celtic, Greek, Slavic, Hittite, Armenian, Illyrian, and Albanian traditions as well." ref

"The mythology of the Proto-Indo-Europeans is not directly attested and it is difficult to match their language to archaeological findings related to any specific culture from the Chalcolithic. Nonetheless, scholars of comparative mythology have attempted to reconstruct aspects of Proto-Indo-European mythology based on the existence of linguistic and thematic similarities among the deities, religious practices, and myths of various Indo-European peoples. This method is

known as the comparative method. Different schools of thought have approached the subject of Proto-Indo-European mythology from different angles." ref

"The Meteorological or Naturist School holds that Proto-Indo-European myths initially emerged as explanations for natural phenomena, such as the Sky, the Sun, the Moon, and the Dawn. Rituals were therefore centered around the worship of those elemental deities. This interpretation was popular among early scholars, such as Friedrich Max Müller, who saw all myths as fundamentally solar allegories. Although recently revived by some scholars like Jean Haudry and Martin L. West,] this school lost most of its scholarly support in the late nineteenth and early twentieth centuries." ref

"The Ritual School, which first became prominent in the late nineteenth century, holds that Proto-Indo-European myths are best understood as stories invented to explain various rituals and religious practices. Scholars of the Ritual School argue that those rituals should be interpreted as attempts to manipulate the universe in order to obtain its favors. This interpretation reached the height of its popularity during the early twentieth century, and many of its most prominent early proponents, such as James George Frazer and Jane Ellen Harrison, were classical scholars. Bruce Lincoln, a contemporary member of the Ritual School, argues for instance that the Proto-Indo-Europeans believed that every sacrifice was a reenactment of the original sacrifice performed by the founder of the human race on his twin brother." ref

"The Functionalist School, by contrast, holds that myths served as stories reinforcing social behaviors through the meta-narrative justification of a traditional order. Scholars of the Functionalist School were greatly influenced by the trifunctional system proposed by Georges Dumézil, which postulates a tripartite ideology reflected in a threefold division between a clerical class (encompassing both the religious and social functions of the priests and rulers), a warrior class (connected with the concepts of violence and bravery), and a class of farmers or husbandmen (associated with fertility and craftsmanship), on the basis that many historically known groups speaking Indo-European languages show such a division. Dumézil's theory had a major influence on Indo-European studies from the mid-20th century onwards, and some scholars continue to operate under its framework, although it has also been criticized as aprioristic and too inclusive, and thus impossible to be proved or disproved." ref

"The Structuralist School argues that Proto-Indo-European mythology was largely centered around the concept of dualistic opposition. They generally hold that the mental structure of all human beings is designed to set up opposing patterns in order to resolve conflicting elements. This approach tends to focus on cultural universals within the realm of mythology rather than the genetic origins

of those myths, such as the fundamental and binary opposition rooted in the nature of marriage proposed by Tamaz V. Gamkrelidze and Vyacheslav Ivanov. It also offers refinements of the trifunctional system by highlighting the oppositional elements present within each function, such as the creative and destructive elements both found within the role of the warrior." ref

Proto-Indo-European mythology and Source mythologies

"One of the earliest attested and thus one of the most important of all Indo-European mythologies is Vedic mythology, especially the mythology of the *Rigveda*, the oldest of the Vedas. Early scholars of comparative mythology such as Friedrich Max Müller stressed the importance of Vedic mythology to such an extent that they practically equated it with Proto-Indo-European myths. Modern researchers have been much more cautious, recognizing that, although Vedic mythology is still central, other mythologies must also be taken into account." ref

"Another of the most important source mythologies for comparative research is Roman mythology. The Romans possessed a very complex mythological system, parts of which have been preserved through the characteristic Roman tendency to rationalize their myths into historical accounts. Despite its relatively late attestation, Norse mythology is still considered one of the three most important of the Indo-European mythologies for comparative research, due to the vast bulk of surviving Icelandic material." ref

"Baltic mythology has also received a great deal of scholarly attention, as it is linguistically the most conservative and archaic of all surviving branches, but has so far remained frustrating to researchers because the sources are so comparatively late. Nonetheless, Latvian folk songs are seen as a major source of information in the process of reconstructing Proto-Indo-European myth. Despite the popularity of Greek mythology in western culture, Greek mythology is generally seen as having little importance in comparative mythology due to the heavy influence of Pre-Greek and Near Eastern cultures, which overwhelms what little Indo-European material can be extracted from it. Consequently, Greek mythology received minimal scholarly attention until the first decade of the 21st century." ref

"Although Scythians are considered relatively conservative in regards to Proto-Indo-European cultures, retaining a similar lifestyle and culture, their mythology has very rarely been examined in an Indo-European context and infrequently discussed in regards to the nature of the ancestral Indo-European mythology. At least three deities, Tabiti, Papaios, and Api, are generally interpreted as having Indo-European origins, while the remaining have seen

more disparate interpretations. Influence from Siberian, Turkic, and even Near Eastern beliefs, on the other hand, are more widely discussed in literature." ref

Proto-Indo-European mythology and Cosmology

"There was a fundamental opposition between the never-aging gods dwelling above in the skies, and the mortal humans living beneath on earth. The earth *$d^{h}\acute{e}g^{h}\bar{o}m$ was perceived as a vast, flat, and circular continent surrounded by waters ("the Ocean"). Although they may sometimes be identified with mythical figures or stories, the stars (*$h_2st\acute{e}r$) were not bound to any particular cosmic significance and were perceived as ornamental more than anything else. According to Martin L. West, the idea of the world-tree (*axis mundi*) is probably a later import from north Asiatic cosmologies: "The Greek myth might be derived from the Near East, and the Indic and Germanic ideas of a pillar from the shamanistic cosmologies of the Finnic and other peoples of central and northern Asia." ref

Cosmogony: Indo-European cosmogony

Reconstruction

"There is no scholarly consensus as to which of the variants is the most accurate reconstruction of the Proto-Indo-European cosmogonic myth. Bruce Lincoln's reconstruction of the Proto-Indo-European motif known as "Twin and Man" is supported by a number of scholars such as Jaan Puhvel, J. P. Mallory, Douglas Q. Adams, David W. Anthony, and, in part, Martin L. West. Although some thematic parallels can be made with traditions of the Ancient Near East (the twins Abel and Cain and their brother Seth), and even Polynesian or South American legends, Lincoln argues that the linguistic correspondences found in descendant cognates of **Manu* and **Yemo* make it very likely that the myth has a Proto-Indo-European origin. According to Edgar C. Polomé, "some elements of the [Scandinavian myth of Ymir] are distinctively Indo-European", but the reconstruction proposed by Lincoln "makes too [many] unprovable assumptions to account for the fundamental changes implied by the Scandinavian version". David A. Leeming also notes that the concept of the Cosmic Egg, symbolizing the primordial state from which the universe arises, is found in many Indo-European creation myths." ref

Creation myth

"Lincoln reconstructs a creation myth involving twin brothers, **Manu-* ("Man") and **Yemo-* ("Twin"), as the progenitors of the world and humankind, and a hero named **Trito* ("Third") who ensured the continuity of the original sacrifice.

Regarding the primordial state that may have preceded the creation process, West notes that the Vedic, Norse, and, at least partially, the Greek traditions give evidence of an era when the cosmological elements were absent, with similar formula insisting on their non-existence: "neither non-being was nor being was at that time; there was not the air, nor the heaven beyond it..." (*Rigveda*), "...there was not sand nor sea nor the cool waves; earth was nowhere nor heaven above; Ginnunga Gap there was, but grass nowhere..." (*Völuspá*), "...there was Chasm and Night and dark Erebos at first, and broad Tartarus, but earth nor air nor heaven there was..." (*The Birds*)." ref

In the creation myth, the first man Manu and his giant twin Yemo are crossing the cosmos, accompanied by the primordial cow. To create the world, Manu sacrifices his brother and, with the help of heavenly deities (the Sky-Father, the Storm-God, and the Divine Twins), forges both the natural elements and human beings from his remains. Manu thus becomes the first priest after initiating sacrifice as the primordial condition for the world order, and his deceased brother Yemo the first king as social classes emerge from his anatomy (priesthood from his head, the warrior class from his breast and arms, and the commoners from his sexual organs and legs). Although the European and Indo-Iranian versions differ on this matter, Lincoln argues that the primeval cow was most likely sacrificed in the original myth, giving birth to the other animals and vegetables, since the pastoral way of life of Proto-Indo-Iranian speakers was closer to that of Proto-Indo-European speakers." ref

"To the third man Trito, the celestial gods then offer cattle as a divine gift, which is stolen by a three-headed serpent named **Ngʷhi* ("serpent"; and the Indo-European root for negation). Trito first suffers at his hands, but the hero eventually manages to overcome the monster, fortified by an intoxicating drink and aided by the Sky-Father. He eventually gives the recovered cattle back to a priest for it to be properly sacrificed. Trito is now the first warrior, maintaining through his heroic actions the cycle of mutual giving between gods and mortals." ref

Proto-Indo-European mythology Interpretations

"According to Lincoln, Manu and Yemo seem to be the protagonists of "a myth of the sovereign function, establishing the model for later priests and kings", while the legend of Trito should be interpreted as "a myth of the warrior function, establishing the model for all later men of arms". The myth indeed recalls the Dumézilian tripartition of the cosmos between the priest (in both his magical and legal aspects), the warrior (the Third Man), and the herder (the cow)." ref

“The story of Trito served as a model for later cattle raiding epic myths and most likely as a moral justification for the practice of raiding among Indo-European peoples. In the original legend, Trito is only taking back what rightfully belongs to his people, those who sacrifice properly to the gods. The myth has been interpreted either as a cosmic conflict between the heavenly hero and the earthly serpent, or as an Indo-European victory over non-Indo-European people, the monster symbolizing the aboriginal thief or usurper.” ref

“Some scholars have proposed that the primeval being Yemo was depicted as a two-fold hermaphrodite rather than a twin brother of Manu, both forming indeed a pair of complementary beings entwined together. The Germanic names *Ymir* and *Tuisto* were understood as *twin*, *bisexual* or *hermaphrodite*, and some myths give a sister to the Vedic Yama, also called *Twin* and with whom incest is discussed. In this interpretation, the primordial being may have self-sacrificed, or have been divided in two, a male half and a female half, embodying a prototypal separation of the sexes.” ref

Proto-Indo-European mythology and Legacy

“Cognates deriving from the Proto-Indo-European First Priest **Manu* (“Man“, “ancestor of mankind”) include the Indic Manu, legendary first man in Hinduism, and Manāvī, his sacrificed wife; the Germanic Mannus (PGmc **Mannaz*), mythical ancestor of the West Germanic tribes; and the Persian Manūščihr (from Aves. *Manūš.čiθra*), a Zoroastrian high priest of the 9th century CE. From the name of the sacrificed First King **Yemo* (“Twin”) derive the Indic Yama, god of death and the underworld; the Avestan Yima, king of the golden age and guardian of hell; the Norse Ymir (from PGmc **Jumijaz*), ancestor of the giants (*jötnar*); and most likely Remus (from Proto-Latin **Yemos* or **Yemonos*, with the initial *y–* shifting to *r–* under the influence of *Rōmulus*), killed in the Roman foundation myth by his twin brother Romulus. Cognates stemming from the First Warrior **Trito* (“Third”) include the Vedic Trita, the Avestan Thrita, and the Norse þriði.” ref

“Many Indo-European beliefs explain the origin of natural elements as the result of the original dismemberment of Yemo: his flesh usually becomes the earth, his hair grass, his bone yields stone, his blood water, his eyes the sun, his mind the moon, his brain the clouds, his breath the wind, and his head the heavens. The traditions of sacrificing an animal to disperse its parts according to socially established patterns, a custom found in Ancient Rome and India, has been interpreted as an attempt to restore the balance of the cosmos ruled by the original sacrifice. The motif of Manu and Yemo has been influential throughout Eurasia following the Indo-European migrations. The Greek, Old Russian (*Poem on the Dove King*) and Jewish versions depend on the Iranian, and a Chinese

version of the myth has been introduced from Ancient India. The Armenian version of the myth of the First Warrior Trito depends on the Iranian, and the Roman reflexes were influenced by earlier Greek versions." ref

Proto-Indo-European mythology and Cosmic order

"Linguistic evidence has led scholars to reconstruct the concept of **h₂értus*, denoting 'what is fitting, rightly ordered', and ultimately deriving from the verbal root **h₂er-*, 'to fit'. Descendant cognates include Hittite *āra* ('right, proper'); Sanskrit *ṛta* ('divine/cosmic law, force of truth, or order'); Avestan *arəta-* ('order'); Greek *artús* ('arrangement'), possibly *arete* ('excellence') via the root **h₂erh₁* ('please, satisfy'); Latin *artus* ('joint'); Tocharian A *ārtt-* ('to praise, be pleased with'); Armenian *ard* ('ornament, shape'); Middle High German *art* ('innate feature, nature, fashion'). Interwoven with the root **h₂er-* ('to fit') is the verbal root **dʰeh₁-*, which means 'to put, lay down, establish', but also 'speak, say; bring back'. The Greek *thémis* and the Sanskrit *dhāman* both derive from the PIE noun for the 'Law', **dʰeh₁-men-*, literally 'that which is established'. This notion of 'Law' includes an *active* principle, denoting an *activity in obedience* to the cosmic order **h₂értus*, which in a social context is interpreted as a *lawful conduct*: in the Greek daughter culture, the titaness Themis personifies the cosmic order and the rules of lawful conduct which derived from it, and the Vedic code of lawful conduct, the *Dharma*, can also be traced back to the PIE root **dʰeh₁-*." ref

"According to Martin L. West, the root **dʰeh₁-* also denotes a divine or cosmic creation, as attested by the Hittite expression *nēbis dēgan dāir* ("...established heaven (and) earth"), the Young Avestan formula *kə huvāpå raocåscā dāt təmåscā?* ("What skilful artificer made the regions of light and dark?"), the name of the Vedic creator god *Dhātr*, and possibly by the Greek nymph *Thetis*, presented as a demiurgical goddess in Alcman's poetry. Another root **yew(e)s-* appears to be connected with ritualistic laws, as suggested by the Latin *iūs* ('law, right, justice, duty'), Avestan *yaož-dā-* ('make ritually pure'), and Sanskrit *śáṃca yóśca* ('health and happiness'), with a derived adjective **yusi(iy)os* seen in Old Irish *uisse* ('just right, fitting') and possibly Old Church Slavonic *istŭ* ('actual, true')." ref

Proto-Indo-European mythology and the Otherworld: Otherworld

"The realm of death was generally depicted as the Lower Darkness and the land of no return. Many Indo-European myths relate a journey across a river, guided by an old man (**ǵerh₂ont-*), in order to reach the Otherworld. The Greek tradition of the dead being ferried across the river Styx by Charon is probably a reflex of this belief, and the idea of crossing a river to reach the Underworld is

also present throughout Celtic mythologies. Several Vedic texts contain references to crossing a river (river Vaitarna) in order to reach the land of the dead, and the Latin word *tarentum* ("tomb") originally meant "crossing point". In Norse mythology, Hermóðr must cross a bridge over the river Giöll in order to reach Hel and, in Latvian folk songs, the dead must cross a marsh rather than a river. Traditions of placing coins on the bodies of the deceased in order to pay the ferryman are attested in both ancient Greek and early modern Slavic funerary practices; although the earliest coins date to the Iron Age, this may provide evidence of an ancient tradition of giving offerings to the ferryman." ref

Proto-Indo-European mythology and the Canine Guardian

"In a recurrent motif, the Otherworld contains a gate, generally guarded by a multi-headed (sometimes multi-eyed) dog who could also serve as a guide and ensured that the ones who entered could not get out. The Greek Cerberus and the Hindu Śárvara most likely derive from the common noun **Kérberos* ("spotted"). Bruce Lincoln has proposed a third cognate in the Norse Garmr, although this has been debated as linguistically untenable." ref

"The motif of a canine guardian of the entrance to the Otherworld is also attested in Persian mythology, where two four-eyed dogs guard the Chinvat Bridge, a bridge that marks the threshold between the world of the living and the world of the dead. The *Videvdat* (Vendidad) 13,9 describes them as 'spâna pəšu.pâna' ("two bridge-guarding dogs"). A parallel imagery is found in Historical Vedic religion: Yama, ruler of the underworld realm, is said to own two four-eyed dogs who also act as his messengers and fulfill the role of protectors of the soul in the path to heaven. These hounds, named *Shyama* (*Śyāma*) and *Sabala*, are described as the brood of Sarama, a divine female dog: one is black and the other spotted." ref

"Slovene deity and hero Kresnik is also associated with a four-eyed dog, and a similar figure in folk belief (a canine with white or brown spots above its eyes – thus, "four-eyed") is said to be able to sense the approach of death. In Nordic mythology, a dog stands on the road to Hel; it is often assumed to be identical with Garmr, the howling hound bound at the entrance to Gnipahellir. In Albanian folklore, a never-sleeping three-headed dog is also said to live in the world of the dead. Another parallel may be found in the Cŵn Annwn ("Hounds of Annwn"), creatures of Welsh mythology said to live in Annwn, a name for the Welsh Otherworld. They are described as hell hounds or spectral dogs that take part in the Wild Hunt, chasing after the dead and pursuing the souls of men." ref

"Remains of dogs found in grave sites of the Iron Age Wielbark culture, and dog burials of Early Medieval North-Western Slavs (in Pomerania) would suggest the

longevity of the belief. Another dog-burial in Góra Chełmska and a Pomeranian legend about a canine figure associated with the otherworld seem to indicate the existence of the motif in Slavic tradition. In a legend from Lokev, a male creature named Vilež ("fairy man"), who dwells in Vilenica Cave, is guarded by two wolves and is said to take men into the underworld. Belarusian scholar Siarhiej Sanko suggests that characters in a Belarusian ethnogenetic myth, Prince Bai and his two dogs, Staury and Gaury (Haury), are related to Vedic Yama and his two dogs. To him, *Gaury* is connected to Lithuanian *gaurai* 'mane, shaggy (of hair)'." ref

"An archeological find by Russian archeologist Alexei Rezepkin at Tsarskaya showed two dogs of different colors (one of bronze, the other of silver), each siding the porthole of a tomb. This imagery seemed to recall the Indo-Aryan myth of Yama and his dogs. The mytheme possibly stems from an older Ancient North Eurasian belief, as evidenced by similar motifs in Native American and Siberian mythology, in which case it might be one of the oldest mythemes recoverable through comparative mythology. The King of the Otherworld may have been Yemo, the sacrificed twin of the creation myth, as suggested by the Indo-Iranian and, to a lesser extent, by the Germanic, Greek, and Celtic traditions." ref

Proto-Indo-European mythology and Eschatology

"Several traditions reveal traces of a Proto-Indo-European eschatological myth that describes the end of the world following a cataclysmic battle. The story begins when an archdemon, usually coming from a different and inimical paternal line, assumes the position of authority among the community of the gods or heroes (Norse Loki, Roman Tarquin, Irish Bres). The subjects are treated unjustly by the new ruler, forced to erect fortifications while the archdemon favors instead outsiders, on whom his support relies. After a particularly heinous act, the archdemon is exiled by his subjects and takes refuge among his foreign relatives. A new leader (Norse Víðarr, Roman Lucius Brutus, Irish Lug), known as the "silent" one and usually the nephew or grandson (**népōt*) of the exiled archdemon, then springs up and the two forces come together to annihilate each other in a cataclysmic battle. The myth ends with the interruption of the cosmic order and the conclusion of a temporal cyclic era. In the Norse and Iranian traditions, a cataclysmic "cosmic winter" precedes the final battle." ref

"In the cosmological model proposed by Jean Haudry, the Proto-Indo-European sky is composed of three "heavens" (diurnal, nocturnal, and liminal) rotating around an *axis mundi*, each having its own deities, social associations, and colors (white, dark, and red, respectively). Deities of the diurnal sky could not transgress the domain of the nocturnal sky, inhabited by its own sets of gods and by the spirits of the dead. For instance, Zeus cannot extend his power to the

nightly sky in the *Iliad*. In this vision, the liminal or transitional sky embodies the gate or frontier (dawn and twilight) binding the two other heavens." ref

"Proto-Indo-Europeans may have believed that the peripheral part of the earth was inhabited by a people exempt from the hardships and pains that affect us. The common motif is suggested by the legends of the Indic *Śvetadvīpam* ("White Island"), whose inhabitants shine white like the moon and need no food; the Greek *Hyperborea* ("Beyond the North Wind"), where the sun shines all the time and the men know "neither disease nor bitter old age"; the Irish *Tír na nÓg* ("Land of the Young"), a mythical region located in the western sea where "happiness lasts forever and there is no satiety"; or the Germanic *Ódáinsakr* ("Glittering Plains"), a land situated beyond the Ocean where "no one is permitted to die." ref

Proto-Indo-European mythology and Deities

"The archaic Proto-Indo-European language (4500–4000 BCE) had a two-gender system which originally distinguished words between animate and inanimate, a system used to separate a common term from its deified synonym. For instance, *fire* as an active principle was **h₁n̥gʷnis* (Latin *ignis*; Sanskrit *Agní*), while the inanimate, physical entity was **péh₂ur* (Greek *pyr*; English *fire*). During this period, Proto-Indo-European beliefs were still animistic and their language did not yet make formal distinctions between masculine and feminine, although it is likely that each deity was already conceived as either male or female. Most of the goddesses attested in later Indo-European mythologies come from pre-Indo-European deities eventually assimilated into the various pantheons following the migrations, like the Greek Athena, the Roman Juno, the Irish Medb, or the Iranian Anahita. Diversely personified, they were frequently seen as fulfilling multiple functions, while Proto-Indo-European goddesses shared a lack of personification and narrow functionalities as a general characteristic. The most well-attested female Indo-European deities include **H₂éwsōs*, the Dawn, **Dʰégʰōm*, the Earth, and **Seh₂ul*, the Sun." ref

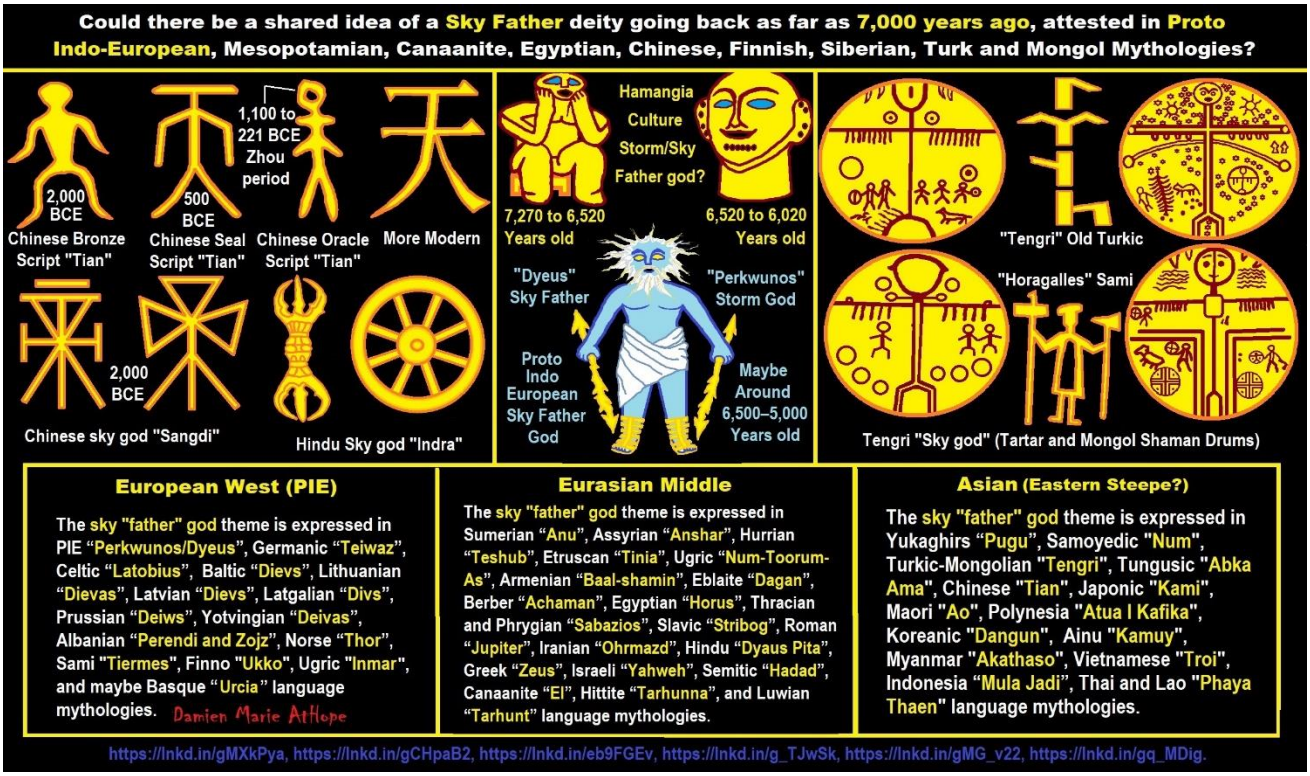
"It is not probable that the Proto-Indo-Europeans had a fixed canon of deities or assigned a specific number to them. The term for "a god" was **deywós* ("celestial"), derived from the root **dyew*, which denoted the bright sky or the light of day. It has numerous reflexes in Latin *deus,* Old Norse Týr (< Germ. **tīwaz*), Sanskrit *devá,* Avestan *daeva,* Irish *día,* or Lithuanian *Dievas*. In contrast, human beings were synonymous of "mortals" and associated with the "earthly" (**dʰégʰōm*), likewise the source of words for "man, human being" in various languages. Proto-Indo-Europeans believed the gods to be exempt from death and disease because they were nourished by special

aliments, usually not available to mortals: in the *Chāndogya Upaniṣad*, "the gods, of course, neither eat nor drink. They become sated by just looking at this nectar", while the Edda tells us that "on wine alone the weapon-lord Odin ever lives ... he needs no food; wine is to him both drink and meat". Sometimes concepts could also be deified, such as the Avestan *mazdā* ("wisdom"), worshipped as Ahura Mazdā ("Lord Wisdom"); the Greek god of war Ares (connected with ἀρή, "ruin, destruction"); or the Vedic protector of treaties Mitráh (from *mitrám*, "contract")." ref

"Gods had several titles, typically "the celebrated", "the highest", "king", or "shepherd", with the notion that deities had their own idiom and true names which might be kept secret from mortals in some circumstances. In Indo-European traditions, gods were seen as the "dispensers" or the "givers of good things" (**déh₃tōr h₁uesuom*). Compare the Irish god *Dagda* / *Dagdae*, "Good God" or "Shining God" from Proto-Celtic **Dago-deiwos*, from Proto-Indo-European **dʰagʰo-* ("shining") (< **dʰegʷʰ-* ("to burn")) +**deywós* ("divinity"), also Old Irish *deg-*, *dag-*, from Proto-Celtic **dagos* (compare Welsh *da* 'good', Scottish Gaelic *deagh* 'good'). Although certain individual deities were charged with the supervision of justice or contracts, in general, the Indo-European gods did not have an ethical character. Their immense power, which they could exercise at their pleasure, necessitated rituals, sacrifices, and praise songs from worshipers to ensure they would in return bestow prosperity to the community. The idea that gods were in control of the nature was translated in the suffix **-nos* (feminine *-nā*), which signified "lord of". According to West, it is attested in Greek Ouranos ("lord of rain") and Helena ("mistress of sunlight"), Germanic **Wōðanaz* ("lord of frenzy"), Gaulish Epona ("goddess of horses"), Lithuanian Perkūnas ("lord of oaks"), and in Roman Neptunus ("lord of waters"), Volcanus ("lord of fire-glare") and Silvanus ("lord of woods")." ref

Pantheon in Proto-Indo-European mythology

"Linguists have been able to reconstruct the names of some deities in the Proto-Indo-European language (PIE) from many types of sources. Some of the proposed deity names are more readily accepted among scholars than others. According to philologist Martin L. West, "the clearest cases are the cosmic and elemental deities: the Sky-god, his partner Earth, and his twin sons; the Sun, the Sun Maiden, and the Dawn; gods of storm, wind, water, fire; and terrestrial presences such as the Rivers, spring and forest nymphs, and a god of the wild who guards roads and herds." ref



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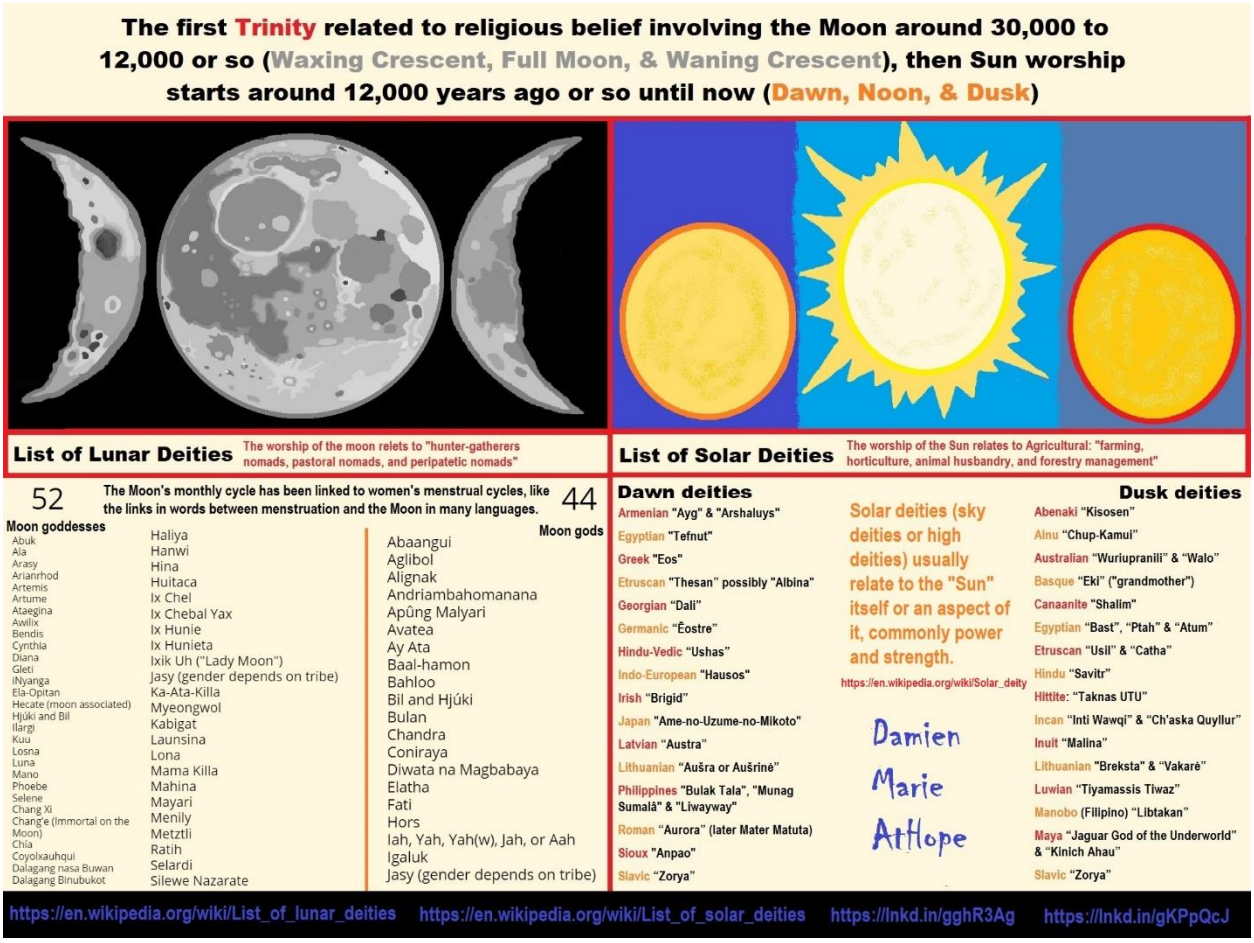
Proto-Indo-European mythology and the Sky Father: Dyēus

"The head deity of the Proto-Indo-European pantheon was the god **Dyḗws Ph₂tḗr*, whose name literally means "Sky Father". Regarded as the Sky or Day conceived as a divine entity, and thus the dwelling of the gods, the Heaven, Dyēus is, by far, the most well-attested of all the Proto-Indo-European deities. As the gateway to the gods and the father of both the Divine Twins and the goddess of the dawn (Hausos), Dyēws was a prominent deity in the pantheon. He was however likely not their ruler, or the holder of the supreme power like Zeus and Jupiter." ref

"Due to his celestial nature, Dyēus is often described as "all-seeing", or "with wide vision" in Indo-European myths. It is unlikely however that he was in charge of the supervision of justice and righteousness, as it was the case for the Zeus or the Indo-Iranian Mithra–Varuna duo; but he was suited to serve at least as a witness to oaths and treaties." ref

"The Greek god Zeus, the Roman god Jupiter, and the Illyrian god Dei-Pátrous all appear as the head gods of their respective pantheons. **Dyḗws Ph₂tḗr* is also

attested in the Rigveda as Dyáus Pitā, a minor ancestor figure mentioned in only a few hymns. The ritual expressions *Debess tēvs* in Latvian and *attas Isanus* in Hittite are not exact descendants of the formula **Dyḗws Ph₂tḗr*, but they do preserve its original structure." ref



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List of Lunar Deities

"In mythology, a **lunar deity** is a god or goddess of the Moon, sometimes as a personification. These deities can have a variety of functions and traditions depending upon the culture, but they are often related. Some forms of moon worship can be found in most ancient religions. The Moon features prominently in art and literature, often with a purported influence in human affairs. Many cultures are oriented chronologically by the Moon, as opposed to the Sun. The Hindu calendar maintains the integrity of the lunar month and the moon

god Chandra has religious significance during many Hindu festivals (e.g. Karwa Chauth, Sankashti Chaturthi, and during eclipses). The ancient Germanic tribes were also known to have a lunar calendar." ref

"Many cultures have implicitly linked the 29.5-day lunar cycle to women's menstrual cycles, as evident in the shared linguistic roots of "menstruation" and "moon" words in multiple language families. This identification was not universal, as demonstrated by the fact that not all moon deities are female. Still, many well-known mythologies feature moon goddesses, including the Greek goddess Selene, the Roman goddess Luna, and the Chinese goddess Chang'e. Several goddesses including Artemis, Hecate, and Isis did not originally have lunar aspects, and only acquired them late in antiquity due to syncretism with the de facto Greco-Roman lunar deity Selene/Luna. In traditions with male gods, there is little evidence of such syncretism, though the Greek Hermes has been equated with the male Egyptian lunar god Thoth." ref

"Male lunar gods are also common, such as Sin of the Mesopotamians, Mani of the Germanic tribes, Tsukuyomi of the Japanese, Igaluk/Alignak of the Inuit, and the Hindu god Chandra. The original Proto-Indo-European lunar deity appears to have been male, with many possible derivatives including the Homeric figure of Menelaus. Cultures with male moon gods often feature sun goddesses. An exception is Hinduism, featuring both male and female aspects of the solar divine. The ancient Egyptians had several moon gods including Khonsu and Thoth, although Thoth is a considerably more complex deity. Set represented the moon in the Egyptian Calendar of Lucky and Unlucky Days." ref

List of Solar Deities

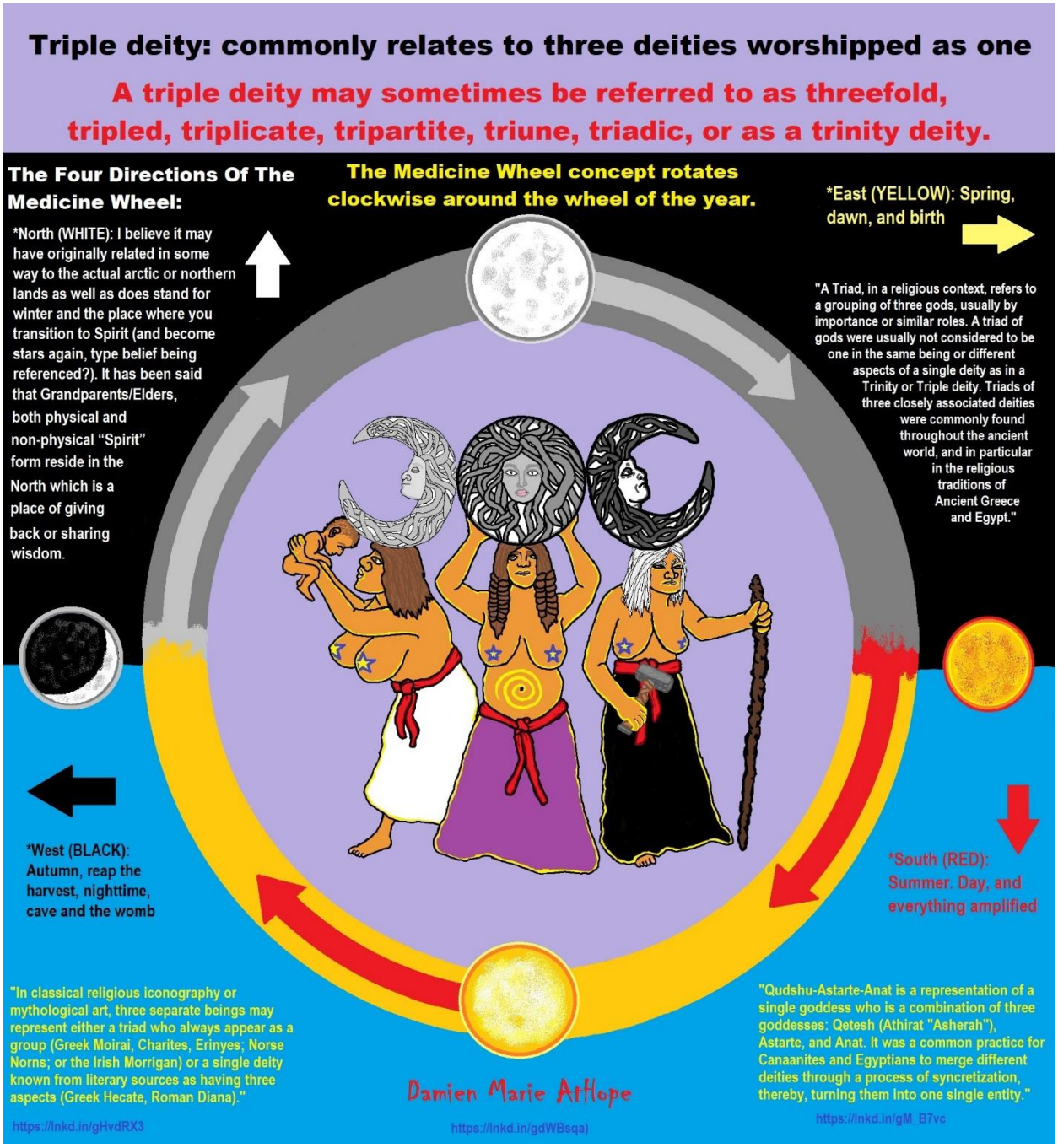
"A solar deity is a god or goddess who represents the Sun, or an aspect of it, usually by its perceived power and strength. Solar deities and Sun worship can be found throughout most of recorded history in various forms. The following is a **list of solar deities.** A **dawn god** or **goddess** is a deity in a polytheistic religious tradition who is in some sense associated with the dawn. These deities show some relation with the morning, the beginning of the day, and, in some cases, become syncretized with similar solar deities." ref, ref

Proto-Indo-European mythology and the Dawn Goddess*:* Hausos

"**H2éusōs* has been reconstructed as the Proto-Indo-European goddess of the dawn. In three traditions (Indic, Greek, Baltic), the Dawn is the "daughter of heaven", **Dyḗws*. In these three branches plus a fourth (Italic), the reluctant dawn-goddess is chased or beaten from the scene for tarrying. An ancient epithet

designating the Dawn appears to have been **Dʰuǵh₂tér Diwós*, “Sky Daughter”. Depicted as opening the gates of Heaven when she appears at the beginning of the day, Hausōs is generally seen as never-aging or born again each morning. Associated with red or golden clothes, she is often portrayed as dancing.” ref

“Twenty-one hymns in the Rigveda are dedicated to the dawn goddess Uṣás and a single passage from the Avesta honors the dawn goddess Ušå. The dawn goddess Eos appears prominently in early Greek poetry and mythology. The Roman dawn goddess Aurora is a reflection of the Greek Eos, but the original Roman dawn goddess may have continued to be worshipped under the cultic title Mater Matuta. The Anglo-Saxons worshipped the goddess Ēostre, who was associated with a festival in spring which later gave its name to a month, which gave its name to the Christian holiday of Easter in English. The name *Ôstarmânôth* in Old High German has been taken as an indication that a similar goddess was also worshipped in southern Germany. The Lithuanian dawn goddess Aušra was still acknowledged in the sixteenth century.” ref



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Proto-Indo-European mythology and the Sun as well as the Moon

"*Seh2ul* and *Meh1not* are reconstructed as the Proto-Indo-European goddess of the Sun and god of the Moon respectively. *Seh2ul* is reconstructed based on the Greek god Helios, the Greek mythological figure Helen of Troy, the Roman god Sol, the Celtic goddess Sulis / Sul/Suil, the North Germanic goddess Sól, the Continental Germanic goddess *Sowilō, the Hittite goddess "UTU-liya", the Zoroastrian Hvare-khshaeta and the Vedic god Surya. *Meh1not-* is reconstructed based on the Norse god Máni, the Slavic god Myesyats, and the Lithuanian god *Meno, or Mėnuo (Mėnulis). Remnants of the lunar deity may exist in Latvian moon god Mēness, Anatolian (Phrygian) deity Men; Mene, another name for Selene, and in Zoroastrian lunar deity Mah (Måŋha)." ref

"The daily course of *Seh2ul* across the sky on a horse-driven chariot is a common motif among Indo-European myths. While it is probably inherited, the motif certainly appeared after the introduction of the wheel in the Pontic–Caspian steppe about 3500 BCE, and is, therefore, a late addition to Proto-Indo-European culture. Although the sun was personified as an independent, female deity, the Proto-Indo-Europeans also visualized the sun as the "lamp of Dyēws" or the "eye of Dyēws", as seen in various reflexes: "the god's lamp" in *Medes* by Euripides, "heaven's candle" in *Beowulf*, or "the land of Hatti's torch", as the Sun-goddess of Arinna is called in a Hittite prayer; and Helios as the eye of Zeus, Hvare-khshaeta as the eye of Ahura Mazda, and the sun as "God's eye" in Romanian folklore. The names of Celtic sun goddesses like Sulis and Grian may also allude to this association: the words for "eye" and "sun" are switched in these languages, hence the name of the goddesses." ref

Proto-Indo-European mythology and the Divine Twins: Divine Twins

"The Horse Twins are a set of twin brothers found throughout nearly every Indo-European pantheon who usually have a name that means 'horse', *h1ékwos*, although the names are not always cognate, and no Proto-Indo-European name for them can be reconstructed. In most traditions, the Horse Twins are brothers of the Sun Maiden or Dawn goddess, and the sons of the sky god, *Dyḗws Ph2tḗr*. The Greek *Dioscuri* (Castor and Pollux) are the "sons of Zeus"; the Vedic *Divó nápātā* (Aśvins) are the "sons of Dyaús", the sky-god; the Lithuanian *Dievo sūneliai* (Ašvieniai) are the "sons of the God" (Dievas); and the Latvian *Dieva dēli* are likewise the "sons of the God" (Dievs)." ref

"Represented as young men and the steeds who pull the sun across the sky, the Divine Twins rode horses (sometimes they were depicted as horses themselves) and rescued men from mortal peril in battle or at sea. The Divine Twins are often differentiated: one is represented as a young warrior while the other is seen as a healer or concerned with domestic duties. In most tales where they appear, the Divine Twins rescue the Dawn from a watery peril, a theme that emerged from

their role as the solar steeds. At night, the horses of the sun returned to the east in a golden boat, where they traversed the sea to bring back the Sun each morning. During the day, they crossed the sky in pursuit of their consort, the morning star." ref

"Other reflexes may be found in the Anglo-Saxon Hengist and Horsa (whose names mean "stallion" and "horse"), the Celtic "Dioskouroi" said by Timaeus to be venerated by Atlantic Celts as a set of horse twins, the Germanic Alcis, a pair of young male brothers worshipped by the Naharvali, or the Welsh Brân and Manawydan. The horse twins could have been based on the morning and evening star (the planet Venus) and they often have stories about them in which they "accompany" the Sun goddess, because of the close orbit of the planet Venus to the sun." ref

"Some scholars have proposed a consort goddess named **Diwōnā* or **Diuōneh₂,* a spouse of Dyēws with a possible descendant in the Greek goddess Dione. A thematic echo may also occur in Vedic India, as both Indra's wife Indrānī and Zeus's consort Dione display a jealous and quarrelsome disposition under provocation. A second descendant may be found in Dia, a mortal said to unite with Zeus in a Greek myth. The story leads ultimately to the birth of the Centaurs after the mating of Dia's husband Ixion with the phantom of Hera, the spouse of Zeus. The reconstruction is however only attested in those two traditions and therefore not secured. The Greek Hera, the Roman Juno, the Germanic Frigg, and the Indic Shakti are often depicted as the protectress of marriage and fertility, or as the bestowal of the gift of prophecy. James P. Mallory and Douglas Q. Adams note however that "these functions are much too generic to support the supposition of a distinct PIE 'consort goddess' and many of the 'consorts' probably represent assimilations of earlier goddesses who may have had nothing to do with marriage." ref

"Although the etymological association is often deemed untenable, some scholars (such as Georges Dumézil and S. K. Sen) have proposed **Worunos* or **Werunos* (also the eponymous god in the reconstructed dialogue The king and the god) as the nocturnal sky and benevolent counterpart of Dyēws, with possible cognates in Greek Ouranos and Vedic Varuna, from the PIE root **woru-* ("to encompass, cover"). Worunos may have personified the firmament, or dwelled in the night sky. In both Greek and Vedic poetry, Uranos and Varuna are portrayed as "wide-looking", bounding or seizing their victims, and having or being a heavenly "seat". In the three-sky cosmological model, the celestial phenomena linking the nightly and daily skies are embodied by a "Binder-god": the Greek Kronos, a transitional deity between Ouranos and Zeus in Hesiod's *Theogony*, the Indic Savitr, associated with the rising and setting of

the sun in the *Vedas*, and the Roman Saturnus, whose feast marked the period immediately preceding the winter solstice." ref

Proto-Indo-European mythology and Nature deities

"The substratum of Proto-Indo-European mythology is animistic. This native animism is still reflected in the Indo-European daughter cultures. In Norse mythology, the Vættir are for instance reflexes of the native animistic nature spirits and deities. Trees have a central position in Indo-European daughter cultures, and are thought to be the abode of tree spirits. In Indo-European tradition, the storm is deified as a highly active, assertive, and sometimes aggressive element; the fire and water are deified as cosmic elements that are also necessary for the functioning of the household; the deified earth is associated with fertility and growth on the one hand, and with death and the underworld on the other." ref

Damien Marie AtHope's Art

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Seated Woman of Çatalhöyük

"The **Seated Woman of Çatalhöyük** (also **Çatal Höyük**) is a baked-clay, nude female form, seated between feline-headed arm-rests. It is generally thought to depict a corpulent and fertile Mother goddess in the process of giving birth while seated on her throne, which has two hand rests in the form of feline (lioness, leopard, or panther) heads in a Mistress of Animals motif. The statuette, one of several iconographically similar ones found at the site, is associated to other corpulent prehistoric goddess figures, of which the most famous is the Venus of Willendorf. It is a neolithic sculpture shaped by an unknown artist, and was completed in approximately 6000 BCE." ref

Kubaba

"Kubaba is the only queen on the *Sumerian King List*, which states she reigned for 100 years – roughly in the Early Dynastic III period (ca. 2500–2330 BCE) of Sumerian history. A connection between her and a goddess known from Hurro–Hittite and later Luwian sources cannot be established on the account of spatial and temporal differences. Kubaba is one of very few women to have ever ruled in their own right in Mesopotamian history. Most versions of the king list place her alone in her own dynasty, the 3rd Dynasty of Kish, following the defeat of Sharrumiter of Mari, but other versions combine her with the 4th dynasty, that followed the primacy of the king of Akshak. Before becoming monarch, the king list says she was an **alewife**, **brewess** or **brewster,** terms for a woman who brewed alcohol." ref

"Kubaba was a Syrian goddess associated particularly closely with Alalakh and Carchemish. She was adopted into the Hurrian and Hittite pantheons as well. After the fall of the Hittite empire, she continued to be venerated by Luwians. A connection between her and the similarly named legendary Sumerian queen Kubaba of Kish, while commonly proposed, cannot be established due to spatial and temporal differences. Emmanuel Laroche proposed in 1960 that Kubaba and Cybele were one and the same. This view is supported by Mark Munn, who argues that the Phrygian name Kybele developed from Lydian adjective *kuvavli*, first changed into *kubabli* and then simplified into *kuballi,* and finally *kubelli*. However, such an adjective is a purely speculative construction." ref

Cybele

“Cybele (Phrygian: “Kubileya/Kubeleya Mother”, perhaps “Mountain Mother”) is an Anatolian mother goddess; she may have a possible forerunner in the earliest neolithic at Çatalhöyük, where statues of plump women, sometimes sitting, have been found in excavations. Phrygia‘s only known goddess, she was probably its national deity. Greek colonists in Asia Minor adopted and adapted her Phrygian cult and spread it to mainland Greece and to the more distant western Greek colonies around the 6th century BCE. In Greece, Cybele met with a mixed reception. She became partially assimilated to aspects of the Earth-goddess Gaia, of her possibly Minoan equivalent Rhea, and of the harvest–mother goddess Demeter. Some city-states, notably Athens, evoked her as a protector, but her most celebrated Greek rites and processions show her as an essentially foreign, exotic mystery-goddess who arrives in a lion-drawn chariot to the accompaniment of wild music, wine, and a disorderly, ecstatic following.” ref

“Uniquely in Greek religion, she had a eunuch mendicant priesthood. Many of her Greek cults included rites to a divine Phrygian castrate shepherd-consort Attis, who was probably a Greek invention. In Greece, Cybele became associated with mountains, town and city walls, fertile nature, and wild animals, especially lions. In Rome, Cybele became known as **Magna Mater** (“Great Mother”). The Roman State adopted and developed a particular form of her cult after the Sibylline oracle in 205 BCE recommended her conscription as a key religious ally in Rome’s second war against Carthage (218 to 201 BCE). Roman mythographers reinvented her as a Trojan goddess, and thus an ancestral goddess of the Roman people by way of the Trojan prince Aeneas. As Rome eventually established hegemony over the Mediterranean world, Romanized forms of Cybele’s cults spread throughout Rome’s empire. Greek and Roman writers debated and disputed the meaning and morality of her cults and priesthoods, which remain controversial subjects in modern scholarship.” ref

Proto-Indo-European mythology and the Earth Mother: Dhéǵhōm

“The earth goddess, *$D^{h}\acute{e}\acute{g}^{h}\bar{o}m$, is portrayed as the vast and dark house of mortals, in contrast with Dyēws, the bright sky, and seat of the immortal gods. She is associated with fertility and growth, but also with death as the final dwelling of the deceased. She was likely the consort of the sky father, *$Dy\acute{e}ws\ Ph_2t\acute{e}r$. The duality is associated with fertility, as the crop grows from her moist soil, nourished by the rain of Dyēws. The Earth is thus portrayed as the giver of good things: she is exhorted to become pregnant in an Old English prayer; and Slavic peasants described Zemlja-matushka, Mother Earth, as a prophetess that shall offer a favorable harvest to the community. The unions of Zeus with Semele and Demeter are likewise associated with fertility and growth in Greek mythology. This pairing is further attested in the Vedic pairing of Dyáus Pitā and Prithvi Mater, the Greek pairing of Ouranos and Gaia, the Roman pairing of Jupiter

and Tellus Mater from Macrobius's *Saturnalia*, and the Norse pairing of Odin and Jörð. Although Odin is not a reflex of **Dyḗws Ph₂tḗr*, his cult may have subsumed aspects of an earlier chief deity who was. The Earth and Heaven couple is however not at the origin of the other gods, as the Divine Twins and Hausos were probably conceived by Dyēws alone." ref

"Cognates include Žemyna, a Lithuanian goddess of earth celebrated as the bringer of flowers; the Avestan Zām, the Zoroastrian concept of 'earth'; Zemes Māte ("Mother Earth"), one of the goddesses of death in Latvian mythology; the Hittite Dagan-zipas ("Genius of the Earth"); the Slavic Mati Syra Zemlya ("Mother Moist Earth"); the Greek Chthôn (Χθών), the partner of Ouranos in Aeschylus' *Danaids*, and the chthonic deities of the underworld. The possibilities of a Thracian goddess Zemelā (**gʰem-elā*) and a Messapic goddess Damatura (**dʰǵʰem-māter*), at the origin of the Greek Semele and Demeter respectively, are less secured. The commonest epithets attached to the Earth goddess are **Pleth₂-wih₁* (the "Broad One"), attested in the Vedic Pṛthvī, the Greek Plataia, and Gaulish Litavis, and **Pleth₂-wih₁ Méh₂tēr* ("Mother Broad One"), attested in the Vedic and Old English formulas *Pṛthvī Mātā* and *Fīra Mōdor*. Other frequent epithets include the "All-Bearing One", the one who bears all things or creatures, and the "mush-nourishing" or the "rich-pastured." ref

Proto-Indo-European mythology and the Weather deity: Perkwunos

"**Perkʷunos* has been reconstructed as the Proto-Indo-European god of lightning and storms. It either meant "the Striker" or "the Lord of Oaks", and he was probably represented as holding a hammer or a similar weapon. Thunder and lightning had both a destructive and regenerative connotations: a lightning bolt can cleave a stone or a tree, but is often accompanied with fructifying rain. This likely explains the strong association between the thunder-god and oaks in some traditions. He is often portrayed in connection with stone and (wooded) mountains, probably because the mountainous forests were his realm. The striking of devils, demons, or evildoers by Perkʷunos is a motif encountered in the myths surrounding the Lithuanian Perkūnas and the Vedic Parjanya, a possible cognate, but also in the Germanic Thor, a thematic echo of Perkʷunos." ref

"The deities generally agreed to be cognates stemming from **Perkʷunos* are confined to the European continent, and he could have been a motif developed later in Western Indo-European traditions. The evidence includes the Norse goddess Fjǫrgyn (the mother of Thor), the Lithuanian god Perkūnas, the Slavic god Perúnú, and the Celtic Hercynian (*Herkynío*) mountains or forests. Perëndi, an Albanian thunder-god (from the stem *per-en-*, "to strike", attached to *–di*,

"sky", from *dyews-) is also a probable cognate. The evidence could extend to the Vedic tradition if one adds the god of rain, thunder, and lightning Parjánya, although Sanskrit sound laws rather predict a **parkūn(y)a form. From another root *(s)tenh₂ ("thunder") stems a group of cognates found in the Germanic, Celtic, and Roman thunder-gods Thor, Taranis, and (Jupiter) Tonans. According to Jackson, "they may have arisen as the result of fossilization of an original epithet or epiclesis", as the Vedic Parjanya is also called *stanayitnú-* ("Thunderer"). The Roman god Mars may be a thematic echo of Perkʷunos, since he originally had thunderer characteristics." ref

Proto-Indo-European mythology and Fire deities: H₁ngʷnis

"Although the linguistic evidence is restricted to the Vedic and Balto-Slavic traditions, scholars have proposed that Proto-Indo-Europeans conceived the fire as a divine entity called *h₁n̥gʷnis. "Seen from afar" and "untiring", the Indic deity *Agni* is pictured in the *Rigveda* as the god of both terrestrial and celestial fires. He embodied the flames of the sun and the lightning, as well as the forest fire, the domestic hearth fire, and the sacrificial altar, linking heaven and earth in a ritual dimension. Another group of cognates deriving from the Balto-Slavic *ungnis ("fire") is also attested. Early modern sources report that Lithuanian priests worshipped a "holy Fire" named *Ugnis (szwenta)*, which they tried to maintain in perpetual life, while *Uguns (māte)* was revered as the "Mother of Fire" by the Latvians. Tenth-century Persian sources give evidence of the veneration of fire among the Slavs, and later sources in Old Church Slavonic attest the worship of fire (*ogonĭ*), occurring under the divine name *Svarožič*, who has been interpreted as the son of Svarog." ref

"The name of an Albanian fire deity, *Enji, has also been reconstructed from the Albanian name of Thursday, *enj-të*, which is also attested in older texts as *egni* or a similar variant. This fire deity is thought to have been worshiped by the Illyrians in antiquity, among whom he was the most prominent god of the pantheon during Roman times. In other traditions, as the sacral name of the dangerous fire may have become a word taboo, the root served instead as an ordinary term for fire, as in the Latin *ignis*." ref

"Scholars generally agree that the cult of the hearth dates back to Proto-Indo-European times. The domestic fire had to be tended with care and given offerings, and if one moved house, one carried fire from the old to the new home. The Avestan *Ātar* was the sacral and hearth fire, often personified and honored as a god. In Albanian beliefs, *Nëna e Vatrës* ("the Hearth Mother") is the goddess protector of the domestic hearth (*vatër*). Herodotus reported a Scythian goddess of hearth named *Tabiti*, a term likely given under a slightly distorted guise, as she might represent a feminine participial form corresponding to an Indo-

Iranian god named **Tapatī,* "the Burning one". The sacral or domestic hearth can likewise be found in the Greek and Roman hearth goddesses Hestia and Vesta, two names that may derive from the PIE root **h₁w-es-* ("burning"). Both the ritual fires set in the temples of Vesta and the domestic fires of ancient India were circular, rather than the square form reserved for public worship in India and for the other gods in Roman antiquity. Additionally, the custom that the bride circles the hearth three times is common to Indian, Ossetian, Slavic, Baltic, and German traditions, while a newly born child was welcomed into a Greek household when the father circled the hearth carrying it in the Amphidromia ceremony." ref

Proto-Indo-European mythology and Water deities

"Based on the similarity of motifs attested over a wide geographical extent, it is very likely that Proto-Indo-European beliefs featured some sorts of beautiful and sometimes dangerous water goddesses who seduced mortal men, akin to the Greek naiads, the nymphs of fresh waters. The Vedic Apsarás are said to frequent forest lakes, rivers, trees, and mountains. They are of outstanding beauty, and Indra sends them to lure men. In Ossetic mythology, the waters are ruled by Donbettyr ("Water-Peter"), who has daughters of extraordinary beauty and with golden hair. In Armenian folklore, the Parik take the form of beautiful women who dance amid nature. The Slavonic water nymphs *víly* are also depicted as alluring maidens with long golden or green hair who like young men and can do harm if they feel offended. The Albanian mountain nymphs, Perit and Zana, are portrayed as beautiful but also dangerous creatures. Similar to the Baltic nymph-like Laumes, they have the habit of abducting children. The beautiful and long-haired Laumes also have sexual relations and short-lived marriages with men. The Breton Korrigans are irresistible creatures with golden hair wooing mortal men and causing them to perish for love. The Norse Huldra, Iranian Ahuraīnīs, and Lycian Eliyãna can likewise be regarded as reflexes of the water nymphs." ref

"A wide range of linguistic and cultural evidence attests to the holy status of the terrestrial (potable) waters **h₂ep-*, venerated collectively as "the Waters" or divided into "Rivers and Springs". The cults of fountains and rivers, which may have preceded Proto-Indo-European beliefs by tens of thousands of years, were also prevalent in their tradition. Some authors have proposed **Neptonos* or **H₂epom Nepōts* as the Proto-Indo-European god of the waters. The name literally means "Grandson [or *Nephew*] of the Waters". Philologists reconstruct his name from that of the Vedic god Apám Nápát, the Roman god Neptūnus, and the Old Irish god Nechtain. Although such a god has been solidly reconstructed in Proto-Indo-Iranian religion, Mallory and Adams nonetheless still reject him as a Proto-Indo-European deity on linguistic grounds." ref

Proto-Indo-European mythology and Wind deities

"We find evidence for the deification of the wind in most Indo-European traditions. The root **h₂weh₁* ("to blow") is at the origin of the two words for the wind: **H₂weh₁-yú-* and **H₂w(e)h₁-nt-*. The deity is indeed often depicted as a couple in the Indo-Iranian tradition. Vayu-Vāta is a dual divinity in the *Avesta*, Vāta being associated with the stormy winds and described as coming from everywhere ("from below, from above, from in front, from behind"). Similarly, the Vedic Vāyu, the lord of the winds, is connected in the *Vedas* with Indra—the king of Svarga Loka (also called Indraloka)—while the other deity Vāta represents a more violent sort of wind and is instead associated with Parjanya—the god of rain and thunder. Other cognates include Hitt. *huwant-*, Lith. *vėjas*, Toch. B *yente*, Lat. *uentus*, Ger. **windaz,* or Welsh *gwynt*." ref

Proto-Indo-European mythology and the Guardian deity

"The association between the Greek god Pan and the Vedic god Pūshān was first identified in 1924 by German linguist Hermann Collitz. Both were worshipped as pastoral deities, which led scholars to reconstruct **Péh₂usōn* ("Protector") as a pastoral god guarding roads and herds. He may have had an unfortunate appearance, a bushy beard, and a keen sight. He was also closely affiliated with goats or bucks: Pan has goat's legs while goats are said to pull the car of Pūshān (the animal was also sacrificed to him on occasion). The minor discrepancies between the two deities could be explained by the possibility that many of Pan's original attributes were transferred over to his father Hermes." ref

According to West, the reflex may be at least of Graeco-Aryan origin: "Pūshān and Pan agree well enough in name and nature—especially when Hermes is seen as a hypostasis of Pan—to make it a reasonable conclusion that they are parallel reflexes of a prototypical god of ways and byways, a guide on the journey, a protector of flocks, a watcher of who and what goes where, one who can scamper up any slope with the ease of a goat." ref

"In 1855, Adalbert Kuhn suggested that the Proto-Indo-Europeans may have believed in a set of helper deities, whom he reconstructed based on the Germanic elves and the Hindu ribhus. Although this proposal is often mentioned in academic writings, very few scholars actually accept it since the cognate relationship is linguistically difficult to justify. While stories of elves, satyrs, goblins, and giants show recurrent traits in Indo-European traditions, West notes that "it is difficult to see so coherent an overall pattern as with the nymphs. It is unlikely that the Indo-Europeans had no concept of such creatures, but we cannot define with any sharpness of outline what their conceptions were." A wild god named **Rudlos* has also been proposed, based on the Vedic Rudrá and

the Old Russian Rŭglŭ. Problematic is whether the name derives from **rewd-* ("rend, tear apart"; akin to Lat. *rullus,* "rustic"), or rather from **rew-* ("howl")." ref

"Although the name of the divinities are not cognates, a horse goddess portrayed as bearing twins and in connection with fertility and marriage has been proposed based on the Gaulish Epona, Irish Macha, and Welsh Rhiannon, with other thematic echos in the Greek and Indic traditions. Demeter transformed herself into a mare when she was raped by Poseidon appearing as a stallion, and she gave birth to a daughter and a horse, Areion. Similarly, the Indic tradition tells of Saranyu fleeing from her husband Vivásvat when she assumed the form of a mare. Vivásvat metamorphosed into a stallion and of their intercourse were born the twin horses, the Aśvins. The Irish goddess Macha gave birth to twins, a mare and a boy, and the Welsh figure Rhiannon bore a child who was reared along with a horse." ref

"A river goddess **Deh₂nu-* has been proposed based on the Vedic goddess Dānu, the Irish goddess Danu, the Welsh goddess Don and the names of the rivers Danube, Don, Dnieper, and Dniester. Mallory and Adams however note that while the lexical correspondence is probable, "there is really no evidence for a specific river goddess" in Proto-Indo-European mythology "other than the deification of the concept of 'river' in Indic tradition". Some have also proposed the reconstruction of a sea god named **Trih₂tōn* based on the Greek god Triton and the Old Irish word *trïath*, meaning "sea". Mallory and Adams also reject this reconstruction as having no basis, asserting that the "lexical correspondence is only just possible and with no evidence of a cognate sea god in Irish." ref

Proto-Indo-European mythology and Fate goddesses

"It is highly probable that the Proto-Indo-Europeans believed in three fate goddesses who spun the destinies of mankind. Although such fate goddesses are not directly attested in the Indo-Aryan tradition, the Atharvaveda does contain an allusion comparing fate to a warp. Furthermore, the three Fates appear in nearly every other Indo-European mythology. The earliest attested set of fate goddesses are the Gulses in Hittite mythology, who were said to preside over the individual destinies of human beings. They often appear in mythical narratives alongside the goddesses Papaya and Istustaya, who, in a ritual text for the foundation of a new temple, are described sitting holding mirrors and spindles, spinning the king's thread of life. In the Greek tradition, the Moirai ("Apportioners") are mentioned dispensing destiny in both the *Iliad* and the *Odyssey*, in which they are given the epithet Κλῶθες (*Klothes*, meaning "Spinners")." ref

"In Hesiod's *Theogony*, the Moirai are said to "give mortal men both good and ill" and their names are listed as Klotho ("Spinner"), Lachesis ("Apportioner"), and Atropos ("Inflexible"). In his *Republic*, Plato records that Klotho sings of the past, Lachesis of the present, and Atropos of the future. In Roman legend, the Parcae were three goddesses who presided over the births of children and whose names were Nona ("Ninth"), Decuma ("Tenth"), and Morta ("Death"). They too were said to spin destinies, although this may have been due to influence from Greek literature." ref

"In the Old Norse *Völuspá* and *Gylfaginning*, the Norns are three cosmic goddesses of fate who are described sitting by the well of Urðr at the foot of the world tree Yggdrasil. In Old Norse texts, the Norns are frequently conflated with Valkyries, who are sometimes also described as spinning. Old English texts, such as *Rhyme Poem* 70, and *Guthlac* 1350 f., reference Wyrd as a singular power that "weaves" destinies." ref

"Later texts mention the Wyrds as a group, with Geoffrey Chaucer referring to them as "the Werdys that we clepyn Destiné" in *The Legend of Good Women*. A goddess spinning appears in a bracteate from southwest Germany and a relief from Trier shows three mother goddesses, with two of them holding distaffs. Tenth-century German ecclesiastical writings denounce the popular belief in three sisters who determined the course of a man's life at his birth. An Old Irish hymn attests to seven goddesses who were believed to weave the thread of destiny, which demonstrates that these spinster fate-goddesses were present in Celtic mythology as well." ref

"A Lithuanian folktale recorded in 1839 recounts that a man's fate is spun at his birth by seven goddesses known as the *deivės valdytojos* and used to hang a star in the sky; when he dies, his thread snaps, and his star falls as a meteor. In Latvian folk songs, a goddess called the Láima is described as weaving a child's fate at its birth. Although she is usually only one goddess, the Láima sometimes appears as three. The three spinning fate goddesses appear in Slavic traditions in the forms of the Russian Rožanicy, the Czech Sudičky, the Bulgarian Narenčnice or Urisnice, the Polish Rodzanice, the Croatian Rodjenice, the Serbian Sudjenice, and the Slovene Rojenice. Albanian folk tales speak of the Fatit, three old women who appear three days after a child is born and determine its fate, using language reminiscent of spinning." ref

Proto-Indo-European mythology and the Welfare god

"The god **h₂eryo-men* has been reconstructed as a deity in charge of welfare and the community, connected to the building and maintenance of roads or pathways, but also with healing and the institution of marriage. It derives from the

noun **h₂eryos* (a "member of one's own group", "one who belongs to the community", in contrast to an outsider), also at the origin of the Indo-Iranian **árya*, "noble, hospitable", and the Celtic **aryo-*, "free man" (Old Irish: *aire,* "noble, chief"; Gaulish: *arios*, "free man, lord"). The Vedic god Aryaman is frequently mentioned in the *Vedas*, and associated with social and marital ties. In the *Gāthās*, the Iranian god Airyaman seems to denote the wider tribal network or alliance, and is invoked in a prayer against illness, magic, and evil. In the mythical stories of the founding of the Irish nation, the hero Érimón became the first king of the Milesians (the mythical name of the Irish) after he helped conquer the island from the Tuatha Dé Danann. He also provided wives to the Cruithnig (the mythical Celtic Britons or Picts), a reflex of the marital functions of **h₂eryo-men*. The Gaulish given name Ariomanus, possibly translated as "lord-spirited" and generally borne by Germanic chiefs, is also to be mentioned." ref

Proto-Indo-European mythology and the Smith god

"Although the name of a particular smith god cannot be linguistically reconstructed, it is highly probable that the Proto-Indo-Europeans had a smith deity of some kind, since smith gods occur in nearly every Indo-European culture, with examples including the Hittite Hasammili, the Vedic Tvastr, the Greek Hephaestus, the Germanic Wayland the Smith, the Irish Goibniu, the Lithuanian Teliavelis, and the Ossetian Kurdalagon and the Slavic Svarog. Mallory notes that "deities specifically concerned with particular craft specializations may be expected in any ideological system whose people have achieved an appropriate level of social complexity". Nonetheless, two motifs recur frequently in Indo-European traditions: the making of the chief god's distinctive weapon (Indra's and Zeus' bolt; Lugh's spear) by a special artificer, and the craftsman god's association with the immortals' drinking. Smith mythical figures share other characteristics in common. Hephaestus, the Greek god of blacksmiths, and Wayland the Smith, a nefarious blacksmith from Germanic mythology, are both described as lame. Additionally, Wayland the Smith and the Greek mythical inventor Daedalus both escape imprisonment on an island by fashioning sets of mechanical wings and using them to fly away." ref

"The Proto-Indo-Europeans may also have had a goddess who presided over the trifunctional organization of society. Various epithets of the Iranian goddess Anahita and the Roman goddess Juno provide sufficient evidence to solidly attest that she was probably worshipped, but no specific name for her can be lexically reconstructed. Vague remnants of this goddess may also be preserved in the Greek goddess Athena. A decay goddess has also been proposed on the basis of the Vedic Nirṛti and the Roman Lūa Mater. Her names derive from the

verbal roots “decay, rot”, and they are both associated with the decomposition of human bodies.” ref

“Michael Estell has reconstructed a mythical craftsman named **H₃r̥bʰew* based on the Greek Orpheus and the Vedic Ribhus. Both are the son of a cudgel-bearer or an archer, and both are known as “fashioners” (**tetḱ-*). A mythical hero named **Promāth₂ew* has also been proposed, from the Greek hero Prometheus (“the one who steals”), who took the heavenly fire away from the gods to bring it to mankind, and the Vedic Mātariśvan, the mythical bird who “robbed” (found in the myth as *pra math-*, “to steal”) the hidden fire and gave it to the Bhrigus. A medical god has been reconstructed based on a thematic comparison between the Indic god Rudra and the Greek Apollo. Both inflict disease from afar thanks to their bow, both are known as healers, and both are specifically associated with rodents: Rudra’s animal is the “rat mole” and Apollo was known as a “rat god.” ref

“Some scholars have proposed a war god named **Māwort-* based on the Roman god Mars and the Vedic Marutás, the companions of the war-god Indra. Mallory and Adams reject this reconstruction on linguistic grounds. Likewise, some researchers have found it more plausible that Mars was originally a storm deity, while the same cannot be said of Ares.” ref

Proto-Indo-European mythology and the Serpent-slaying myth: Chaoskampf

“One common myth found in nearly all Indo-European mythologies is a battle ending with a hero or god slaying a serpent or dragon of some sort. Although the details of the story often vary widely, several features remain remarkably the same in all iterations. The protagonist of the story is usually a thunder-god, or a hero somehow associated with thunder. His enemy the serpent is generally associated with water and depicted as multi-headed, or else “multiple” in some other way. Indo-European myths often describe the creature as a “blocker of waters”, and his many heads get eventually smashed up by the thunder-god in an epic battle, releasing torrents of water that had previously been pent up. The original legend may have symbolized the *Chaoskampf*, a clash between forces of order and chaos. The dragon or serpent loses in every version of the story, although in some mythologies, such as the Norse Ragnarök myth, the hero or the god dies with his enemy during the confrontation. Historian Bruce Lincoln has proposed that the dragon-slaying tale and the creation myth of **Trito* killing the serpent **Ngʷhi* may actually belong to the same original story.” ref

“Reflexes of the Proto-Indo-European dragon-slaying myth appear in most Indo-European poetic traditions, where the myth has left traces of the formulaic

sentence *(h₁e) gʷʰent h₁ógʷʰim, meaning "[he] slew the serpent". In Hittite mythology, the storm god Tarhunt slays the giant serpent Illuyanka, as does the Vedic god Indra to the multi-headed serpent Vritra, which had been causing a drought by trapping the waters in his mountain lair. Several variations of the story are also found in Greek mythology. The original motif appears inherited in the legend of Zeus slaying the hundred-headed Typhon, as related by Hesiod in the *Theogony*, and possibly in the myth of Heracles slaying the nine-headed Lernaean Hydra and in the legend of Apollo slaying the earth-dragon Python." ref

"The story of Heracles's theft of the cattle of Geryon is probably also related. Although he is not usually thought of as a storm deity in the conventional sense, Heracles bears many attributes held by other Indo-European storm deities, including physical strength and a knack for violence and gluttony. The original motif is also reflected in Germanic mythology. The Norse god of thunder Thor slays the giant serpent Jörmungandr, which lived in the waters surrounding the realm of Midgard. In the *Völsunga saga*, Sigurd slays the dragon Fafnir and, in *Beowulf*, the eponymous hero slays a different dragon. The depiction of dragons hoarding a treasure (symbolizing the wealth of the community) in Germanic legends may also be a reflex of the original myth of the serpent holding waters." ref

"In Zoroastrianism and in Persian mythology, Fereydun (and later Garshasp) slays the serpent Zahhak. In Albanian mythology, the drangue, semi-human divine figures associated with thunders, slay the kulshedra, huge multi-headed fire-spitting serpents associated with water and storms. The Slavic god of storms Perun slays his enemy the dragon-god Veles, as does the bogatyr hero Dobrynya Nikitich to the three-headed dragon Zmey. A similar execution is performed by the Armenian god of thunders Vahagn to the dragon Vishap, by the Romanian knight hero Făt-Frumos to the fire-spitting monster Zmeu, and by the Celtic god of healing Dian Cecht to the serpent Meichi." ref

"In Shinto, where Indo-European influences through Vedic religion can be seen in mythology, the storm god Susanoo slays the eight-headed serpent Yamata no Orochi. The Genesis narrative of Judaism and Christianity can be interpreted as a more allegorical retelling of the serpent-slaying myth. The Deep or Abyss from or on top of which God is said to make the world is translated from the Biblical Hebrew Tehom (Hebrew: תְּהוֹם). Tehom is a cognate of the Akkadian word *tamtu* and Ugaritic *t-h-m* which have a similar meaning. As such it was equated with the earlier Babylonian serpent Tiamat. Folklorist Andrew Lang suggests that the serpent-slaying myth morphed into a folktale motif of a frog or toad blocking the flow of waters." ref

Proto-Indo-European mythology and the Fire in water myth

"Another reconstructed myth is the story of the fire in the waters. It depicts a fiery divine being named **H₂epom Nepōts* ('Descendant of the Waters') who dwells in waters, and whose powers must be ritually gained or controlled by a hero who is the only one able to approach it. In the *Rigveda*, the god Apám Nápát is envisioned as a form of fire residing in the waters. In Celtic mythology, a well belonging to the god Nechtain is said to blind all those who gaze into it. In an old Armenian poem, a small reed in the middle of the sea spontaneously catches fire and the hero Vahagn springs forth from it with fiery hair and a fiery beard, and eyes that blaze as suns. In a ninth-century Norwegian poem by the poet Thiodolf, the name *sævar niþr*, meaning "grandson of the sea", is used as a kenning for fire. Even the Greek tradition contains possible allusions to the myth of a fire-god dwelling deep beneath the sea. The phrase *"νέποδες καλῆς Ἁλοσύδνης"*, meaning "descendants of the beautiful seas", is used in *The Odyssey* 4.404 as an epithet for the seals of Proteus." ref

Proto-Indo-European mythology and the King and virgin myth

"The legend of the King and Virgin involves a ruler saved by the offspring of his virgin daughter after seeing his future threatened by rebellious sons or male relatives. The virginity likely symbolizes in the myth the woman that has no loyalty to any man but her father, and the child is likewise faithful only to his royal grandfather. The legends of the Indic king Yayāti, saved by his virgin daughter Mādhāvi; the Roman king Numitor, rescued by his chaste daughter Rhea Silvia; the Irish king Eochaid, father of the legendary queen Medb, and threatened by his sons the *findemna*; as well as the myth of the Norse virgin goddess Gefjun offering lands to Odin, are generally cited as possible reflexes of an inherited Proto-Indo-European motif. The Irish Queen Medb could be cognate with the Indic Mādhāvi (whose name designates either a spring flower, rich in honey, or an intoxicating drink), both deriving from the root **medʰ-* ("mead, intoxicating drink")." ref

Proto-Indo-European mythology and the War of the foundation myth

"A myth of the War of the Foundation has also been proposed, involving a conflict between the first two functions (the priests and warriors) and the third function (fertility), which eventually make peace in order to form a fully integrated society. The Norse *Ynglingasaga* tells of a war between the Æsir (led by Oðinn and Thor) and the Vanir (led by Freyr, Freyja, and Njörðr) that finally ends with the Vanir coming to live among the Æsir. Shortly after the mythical founding of Rome, Romulus fights his wealthy neighbors the Sabines, the

Romans abducting their women to eventually incorporate the Sabines into the founding tribes of Rome. In Vedic mythology, the Aśvins (representing the third function as the Divine Twins) are blocked from accessing the heavenly circle of power by Indra (the second function), who is eventually coerced into letting them in. The Trojan War has also been interpreted as a reflex of the myth, with the wealthy Troy as the third function and the conquering Greeks as the first two functions." ref

Proto-Indo-European mythology and the Binding of evil myth

"Jaan Puhvel notes similarities between the Norse myth in which the god Týr inserts his hand into the wolf Fenrir's mouth while the other gods bind him with Gleipnir, only for Fenrir to bite off Týr's hand when he discovers he cannot break his bindings, and the Iranian myth in which Jamshid rescues his brother's corpse from Ahriman's bowels by reaching his hand up Ahriman's anus and pulling out his brother's corpse, only for his hand to become infected with leprosy. In both accounts, an authority figure forces the evil entity into submission by inserting his hand into the being's orifice (in Fenrir's case the mouth, in Ahriman's the anus) and losing it. Fenrir and Ahriman fulfill different roles in their own mythological traditions and are unlikely to be remnants of a Proto-Indo-European "evil god"; nonetheless, it is clear that the "binding myth" is of Proto-Indo-European origin." ref

"The motif of the "death of a son", killed by his father who is unaware of the relationship, is so common among the attested traditions that some scholars have ascribed it to Proto-Indo-European times. In the Ulster Cycle, Connla, son of the Irish hero Cú Chulainn, who was raised abroad in Scotland, unknowingly confronts his father and is killed in the combat; Ilya Muromets must kill his own son, who was also raised apart, in Russian epic poems; the Germanic hero Hildebrant inadvertently kills his son Hadubrant in the *Hildebrandslied*; and the Iranian Rostam unknowingly confronts his son Sohrab in the eponymous epic of the *Shāhnāmeh*. King Arthur is forced to kill his son Mordred in battle who was raised far away on the Orkney Islands; and in greek mythology an intrigue leads the hero Theseus to kill his son Hippolytus; when the lie is finally exposed, Hippolytus is already dead. According to Mallory and Adams, the legend "places limitations on the achievement of warrior prowess, isolates the hero from time by cutting off his generational extension, and also re-establishes the hero's typical adolescence by depriving him of a role (as father) in an adult world." ref

"Although the concept of elevation through intoxicating drink is a nearly universal motif, a Proto-Indo-European myth of the "cycle of the mead", originally proposed by Georges Dumézil and further developed by Jarich G. Oosten (1985), is based on the comparison of Indic and Norse mythologies. In

both traditions, gods and demons must cooperate to find a sacred drink providing immortal life. The magical beverage is prepared from the sea, and a serpent (Vāsuki or Jörmungandr) is involved in the quest. The gods and demons eventually fight over the magical potion and the former, ultimately victorious, deprive their enemy of the elixir of life." ref

Proto-Indo-European mythology and Rituals

"Proto-Indo-European religion was centered on sacrificial rites of cattle and horses, probably administered by a class of priests or shamans. Animals were slaughtered (**gʷʰn̥tós*) and dedicated to the gods (**deywós*) in the hope of winning their favor. The Khvalynsk culture, associated with the archaic Proto-Indo-European language, had already shown archeological evidence for the sacrifice of domesticated animals." ref

Proto-Indo-European mythology and the Priesthood

"The king as the high priest would have been the central figure in establishing favorable relations with the other world. Georges Dumézil suggested that the religious function was represented by a duality, one reflecting the magico-religious nature of the priesthood, while the other is involved in religious sanction to human society (especially contracts), a theory supported by common features in Iranian, Roman, Scandinavian and Celtic traditions." ref

Proto-Indo-European mythology and Sacrifices

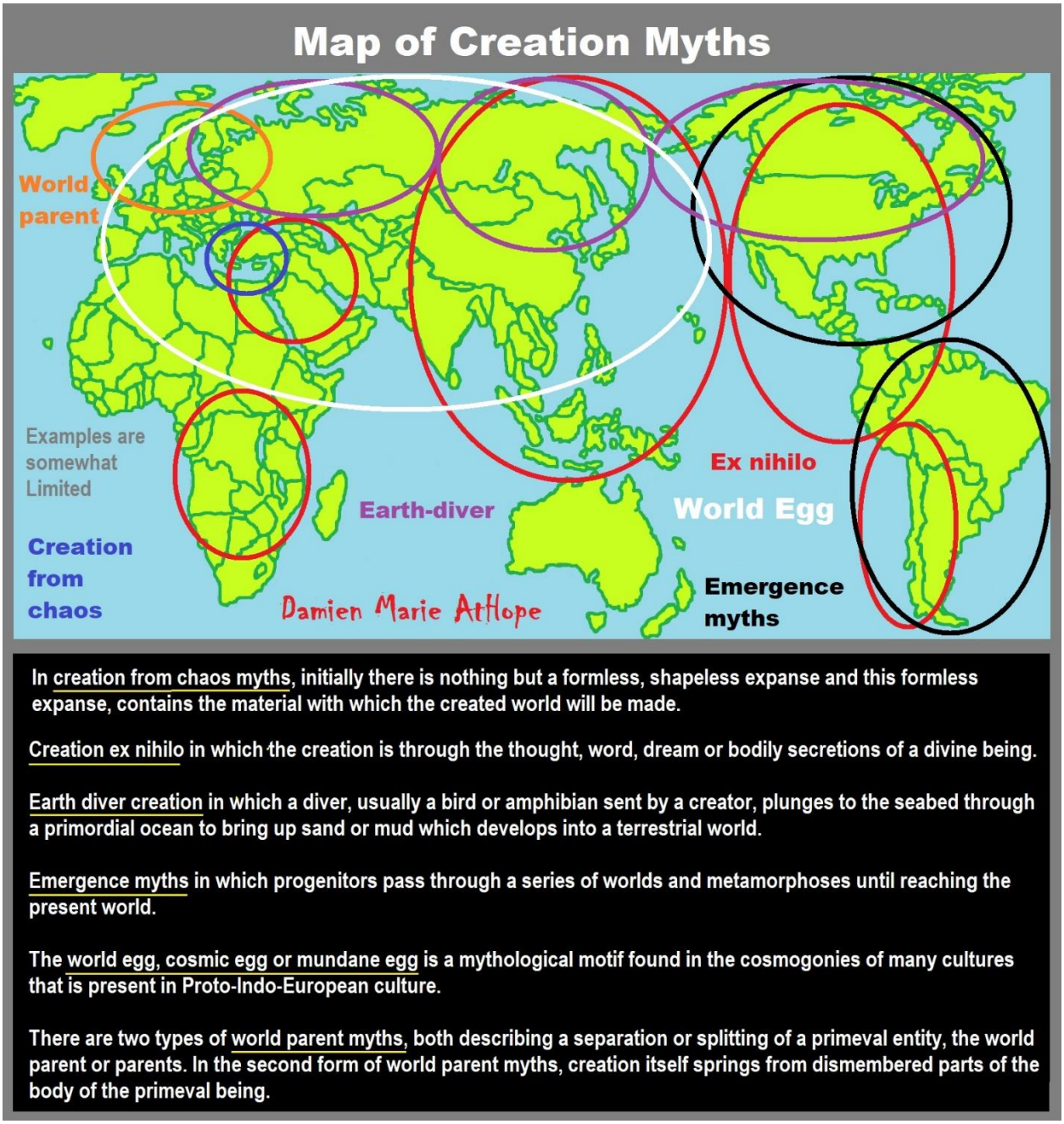
"The reconstructed cosmology of the Proto-Indo-Europeans shows that ritual sacrifice of cattle, the cow in particular, was at the root of their beliefs, as the primordial condition of the world order. The myth of **Trito*, the first warrior, involves the liberation of cattle stolen by a three-headed entity named **Ngʷʰi*. After recovering the wealth of the people, Trito eventually offers the cattle to the priest in order to ensure the continuity of the cycle of giving between gods and humans. The word for "oath", **h₁óitos*, derives from the verb **h₁ey-* ("to go"), after the practice of walking between slaughtered animals as part of taking an oath." ref

"Proto-Indo-Europeans likely had a sacred tradition of horse sacrifice for the renewal of kinship involving the ritual mating of a queen or king with a horse, which was then sacrificed and cut up for distribution to the other participants in the ritual. In both the Roman *Equus October* and the Indic *Aśvamedhá*, the horse sacrifice is performed on behalf of the warrior class or to a warrior deity, and the dismembered pieces of the animal eventually goes to different locations or deities. Another reflex may be found in a medieval Irish tradition involving a

king-designate from County Donegal copulating with a mare before bathing with the parts of the sacrificed animal. The Indic ritual likewise involved the symbolic marriage of the queen to the dead stallion. Further, if Hittite laws prohibited copulation with animals, they made an exception of horses or mules. In both the Celtic and Indic traditions, an intoxicating brewage played a part in the ritual, and the suffix in *aśva-medhá* could be related to the Old Indic word *mad-* ("boil, rejoice, get drunk"). Jaan Puhvel has also compared the Vedic name of the tradition with the Gaulish god *Epomeduos*, the "master of horses." ref

Proto-Indo-European mythology and Cults

"Scholars have reconstructed a Proto-Indo-European cult of the weapons, especially the dagger, which holds a central position in various customs and myths. In the Ossetic Nart saga, the sword of Batradz is dragged into the sea after his death, and the British King Arthur throws his legendary sword Excalibur back into the lake from which it initially came. The Indic Arjuna is also instructed to throw his bow Gandiva into the sea at the end of his career, and weapons were frequently thrown into lakes, rivers, or bogs as a form of prestige offering in Bronze and Iron Age Europe. Reflexes of an ancestral cult of the magical sword have been proposed in the legends of Excalibur and Durandal (the weapon of Roland, said to have been forged by the mythical Wayland the Smith). Among North Iranians, Herodotus described the Scythian practice of worshiping swords as manifestations of "Ares" in the 5th century BCE, and Ammianus Marcellinus depicted the Alanic custom of thrusting swords into the earth and worshiping them as "Mars" in the 4th century CE." ref



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Creation myths: From chaos, Ex nihilo, Earth-diver, Emergence, World egg, and World parent

Here is a list of creation myths, as neither the Bible's nor the Quran's god as proposed creation myths are not special at all:

Creation from chaos creation myths:
*Cheonjiwang Bonpuri (a Korean creation myth)
*Enûma Eliš (Babylonian creation myth)
*Greek cosmogonical myth
*Jamshid
*Kumulipo
*Leviathan (Book of Job 38-41 creation myth)
*Mandé creation myth
*Pangu
*Raven in Creation
*Serer creation myth
*Sumerian creation myth
*Tungusic creation myth
*Unkulunkulu
*Väinämöinen
*Viracocha

Earth diver creation myths:
*Ainu creation myth
*Cherokee creation myth
*Väinämöinen
*Yoruba creation myth
*Emergence[edit]
*Hopi creation myth
*Maya creation of the world myth
*Diné Bahaneʾ (Navajo)
*Zuni creation myth

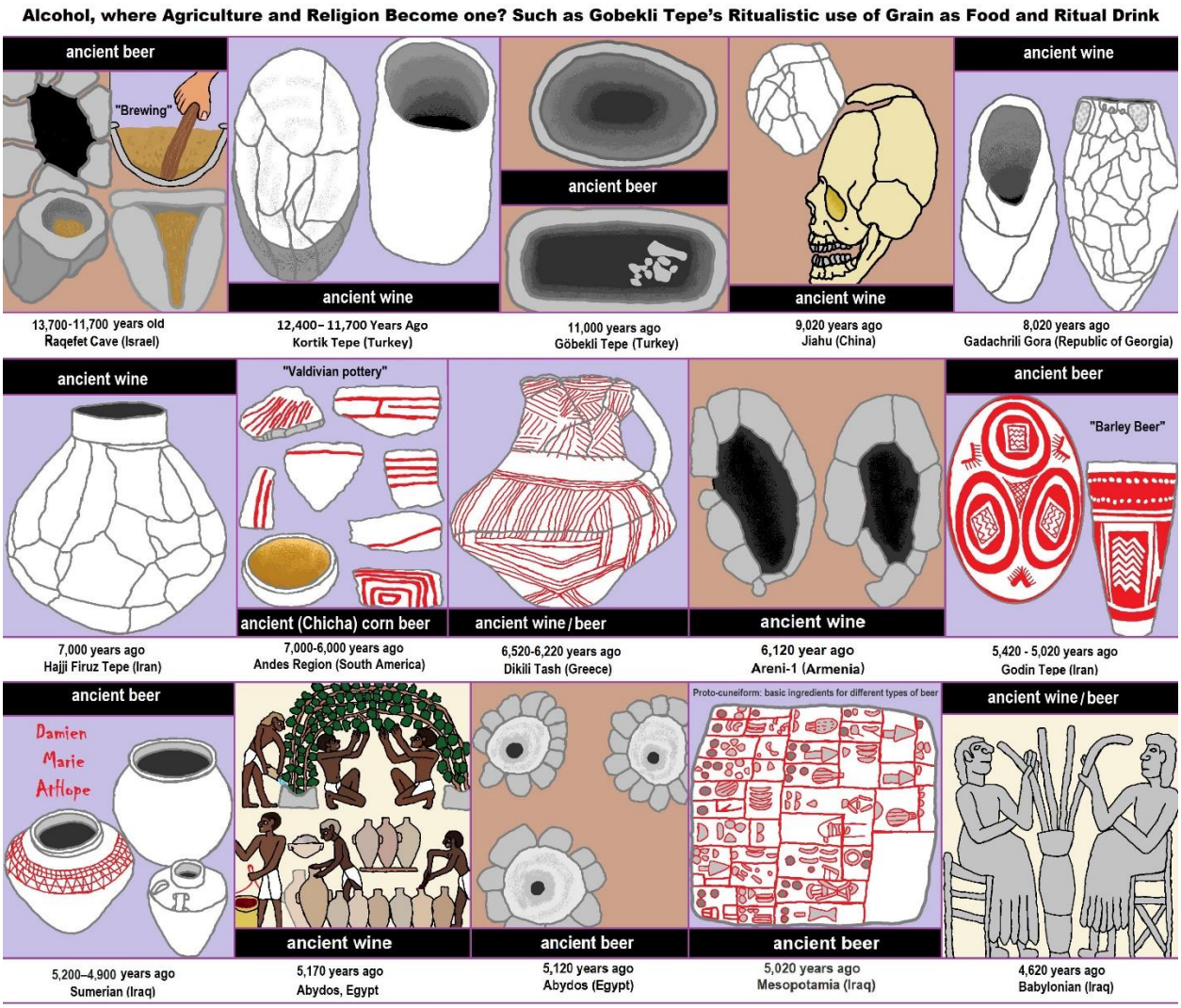
Ex nihilo (out of nothing) creation myths:
*Debate between sheep and grain
*Barton cylinder
*Ancient Egyptian creation myths
*Genesis creation myth (Christianity, Islam and Judaism)
*Kabezya-Mpungu
*Māori myths
*Mbombo
*Ngai
*Popol Vuh

World Parent creation myths:

*Coatlicue
*Enûma Eliš
*Greek cosmogonical myth
*Heliopolis creation myth
*Hiranyagarbha creation myth
*Kumulipo
*Rangi and Papa
*Völuspá Ref

"Mythologists have applied various schemes to classify creation myths found throughout human cultures. Eliade and his colleague Charles Long developed a classification based on some common motifs that reappear in stories the world over. The classification identifies five basic types: Brahmā, the Hindu *deva* of creation, emerges from a lotus risen from the navel of Viṣṇu, who lies with Lakshmi on the serpent Ananta Shesha." ref

- "Creation *ex nihilo* in which the creation is through the thought, word, dream, or bodily secretions of a divine being.
- Earth diver creation in which a diver, usually a bird or amphibian sent by a creator, plunges to the seabed through a primordial ocean to bring up sand or mud which develops into a terrestrial world.
- Emergence myths in which progenitors pass through a series of worlds and metamorphoses until reaching the present world.
- Creation by the dismemberment of a primordial being.
- Creation by the splitting or ordering of a primordial unity such as the cracking of a cosmic egg or a bringing order from chaos." ref



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Raqefet Cave

13,000-year-old stone mortars offers the earliest known physical evidence of an extensive ancient beer-brewing operation.

"The find comes on the heels of a July report that archaeologists working in northeastern Jordan discovered the charred remains of bread baked by Natufians some 11,600 to 14,600 years ago. According to the Stanford scientists, the ancient

beer residue comes from 11,700 to 13,700 years old. Through laboratory analysis, other archaeological evidence found in the cave, and the wear of the stones, the team discovered that the ancient Natufians used species from seven plant families, "including wheat or barley, oat, legumes and bast fibers (including flax)," according to the article. "They packed plant-foods, including malted wheat/barley, in fiber-made containers and stored them in boulder mortars. They used bedrock mortars for pounding and cooking plant-foods, including brewing wheat/barley-based beer likely served in ritual feasts ca. 13,000 years ago," the scientists write. "It has long been speculated that the thirst for beer may have been the stimulus behind cereal domestication, which led to a major social-technological change in human history; but this hypothesis has been highly controversial," the Stanford authors say. "We report here of the earliest archaeological evidence for cereal-based beer brewing by a semi-sedentary, foraging people." ref

"Beer making was an integral part of rituals and feasting, a social regulatory mechanism in hierarchical societies," said Stanford's Wang. The Raqefet Cave discovery of the first man-made alcohol production, the cave also provides one of the earliest pieces of evidence of the use of flower beds on gravesites, discovered under human skeletons. "The Natufian remains in Raqefet Cave never stop surprising us," co-author Prof. Dani Nadel, of the University of Haifa's Zinman Institute of Archaeology, said in a press release. "We exposed a Natufian burial area with about 30 individuals, a wealth of small finds such as flint tools, animal bones and ground stone implements, and about 100 stone mortars and cupmarks. Some of the skeletons are well-preserved and provided direct dates and even human DNA, and we have evidence for flower burials and wakes by the graves." ref

"And now, with the production of beer, the Raqefet Cave remains provide a very vivid and colorful picture of Natufian lifeways, their technological capabilities, and inventions," he said. Stanford's Liu posited that the beer production was of a religious nature because its production was found near a graveyard. "This discovery indicates that making alcohol was not necessarily a result of agricultural surplus production, but it was developed for ritual purposes and spiritual needs, at least to some extent, prior to agriculture," she said. "Alcohol making and food storage were among the major technological innovations that eventually led to the development of civilizations in the world, and archaeological science is a powerful means to help reveal their origins and decode their contents," said Liu. "We are excited to have the opportunity to present our findings, which shed new light on a deeper history of human society." ref

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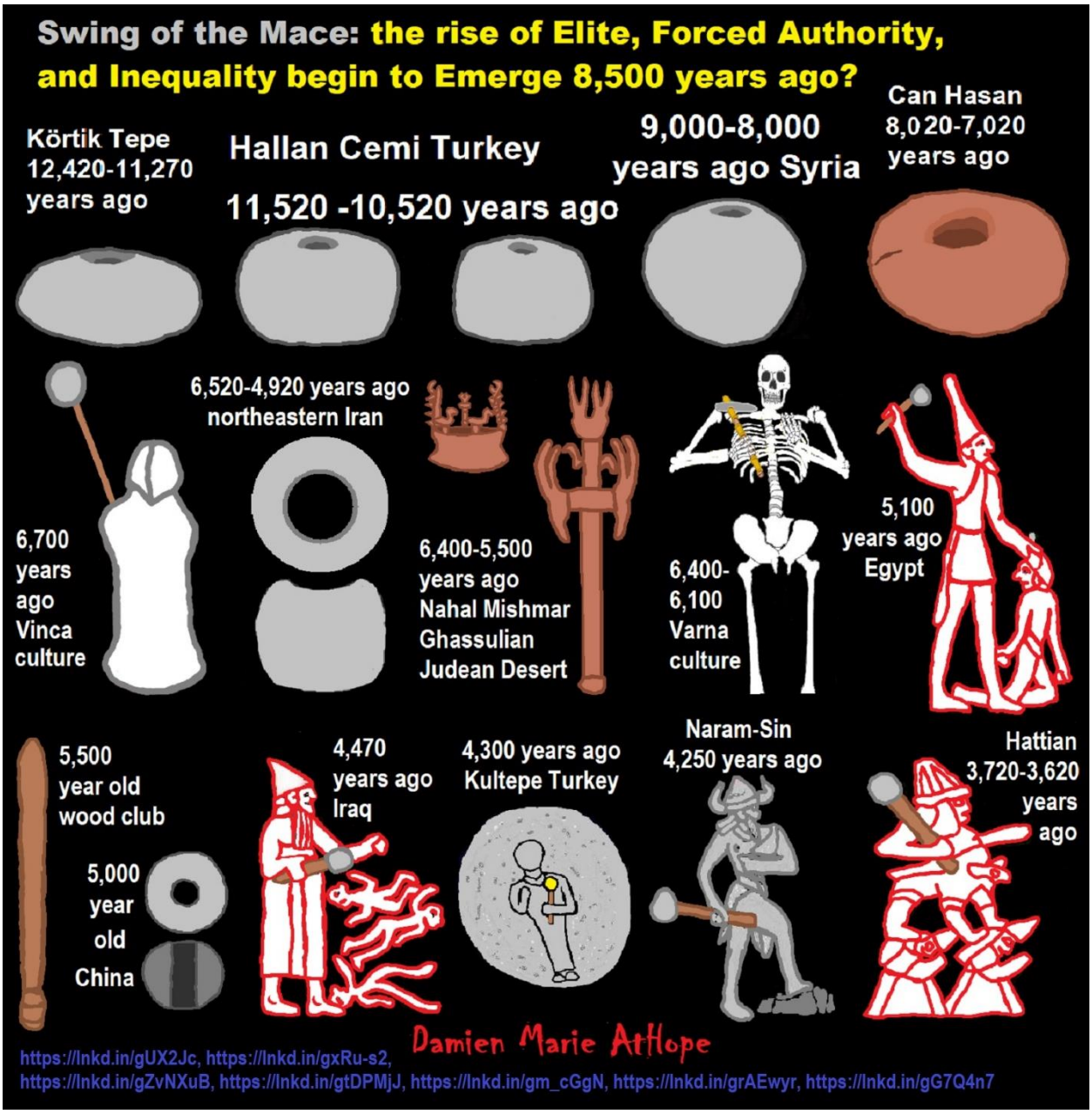

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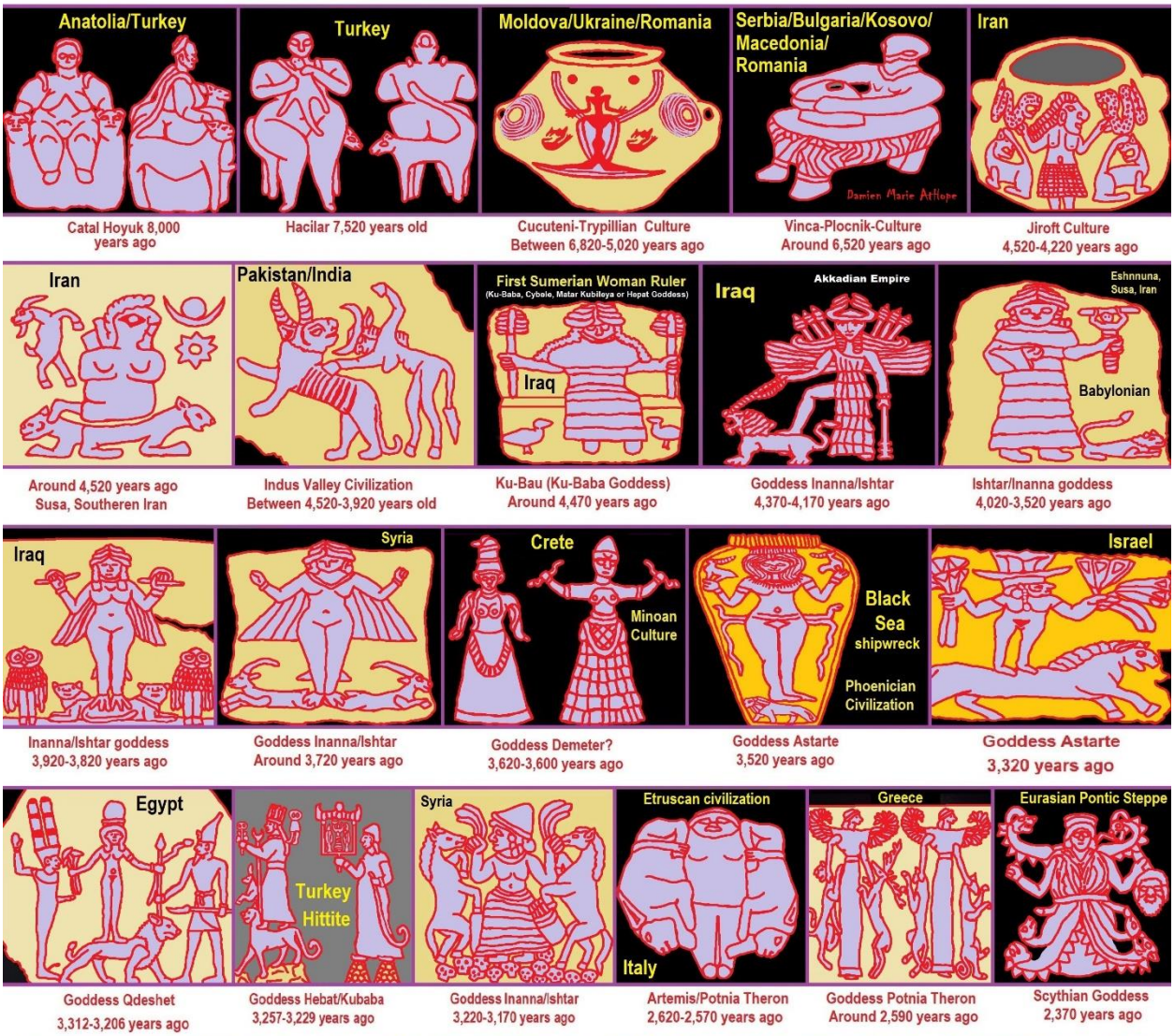
Around 8,000-year-old Shared Idea of the Mistress of Animals, "Ritual" Motif



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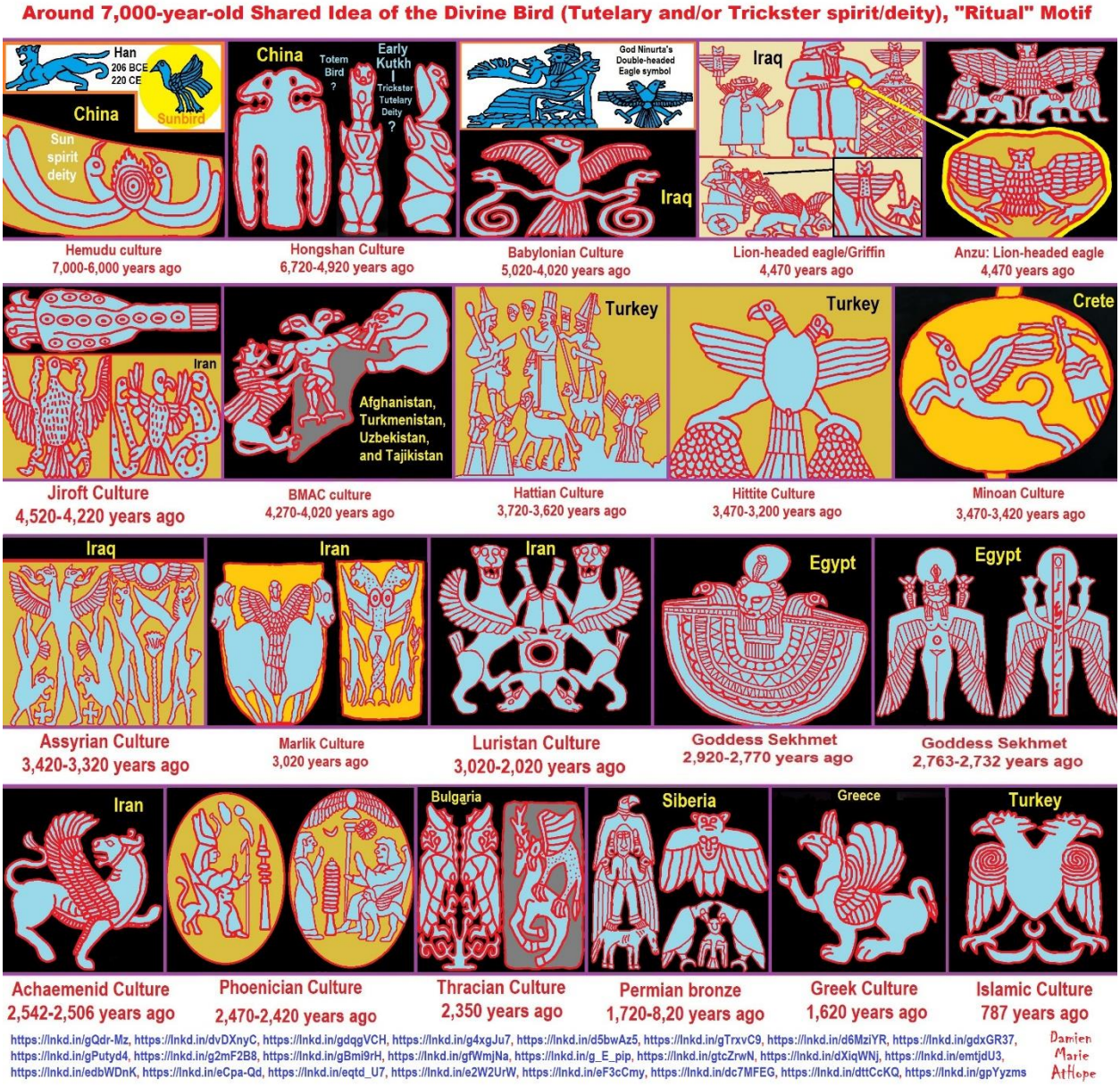

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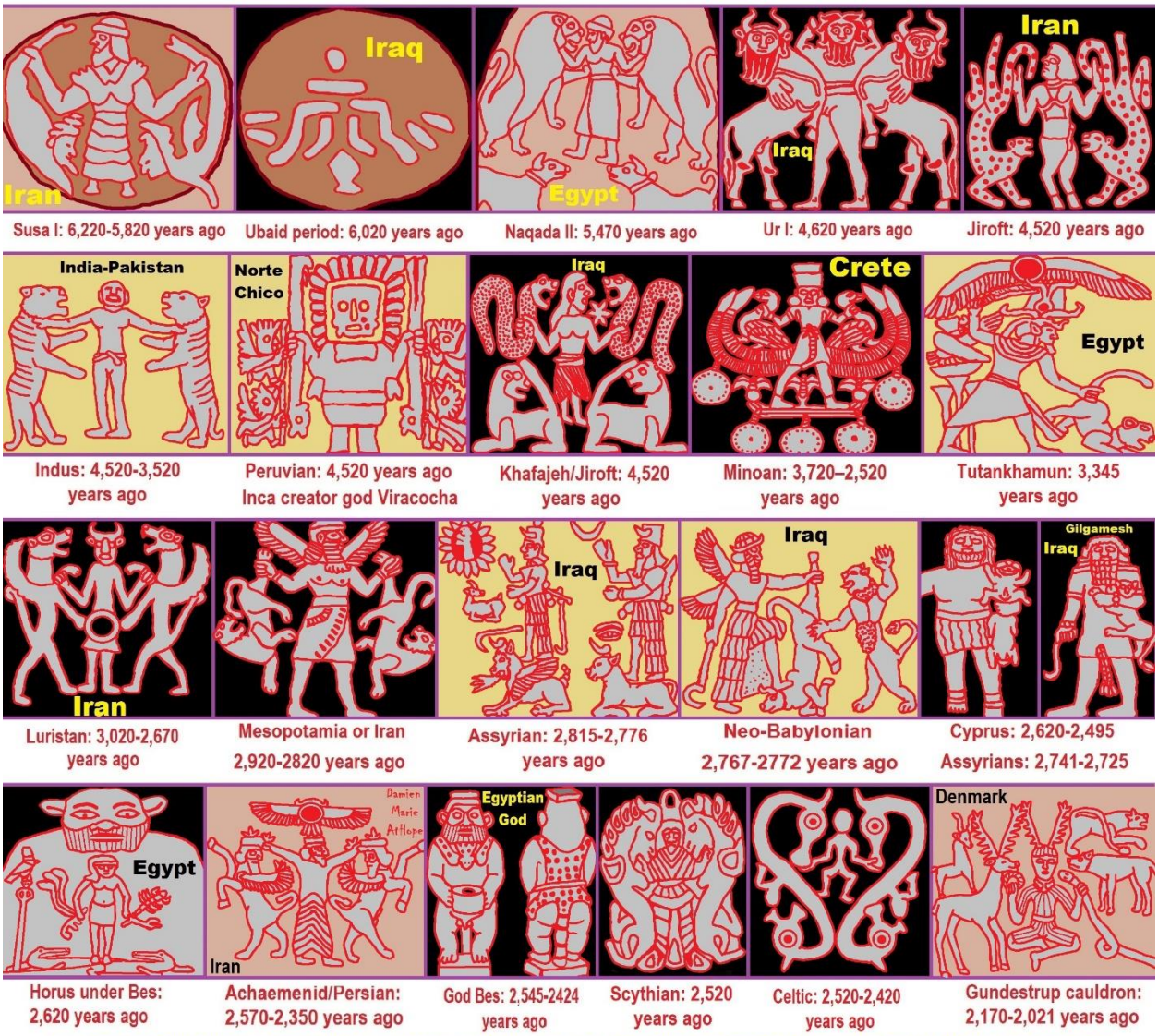
Around 6,000 year old Shared Idea of the Master of Animals, "Ritual" Motif



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Around 5,000 year old Shared Idea of the "Tree of Life" Ritual Motif

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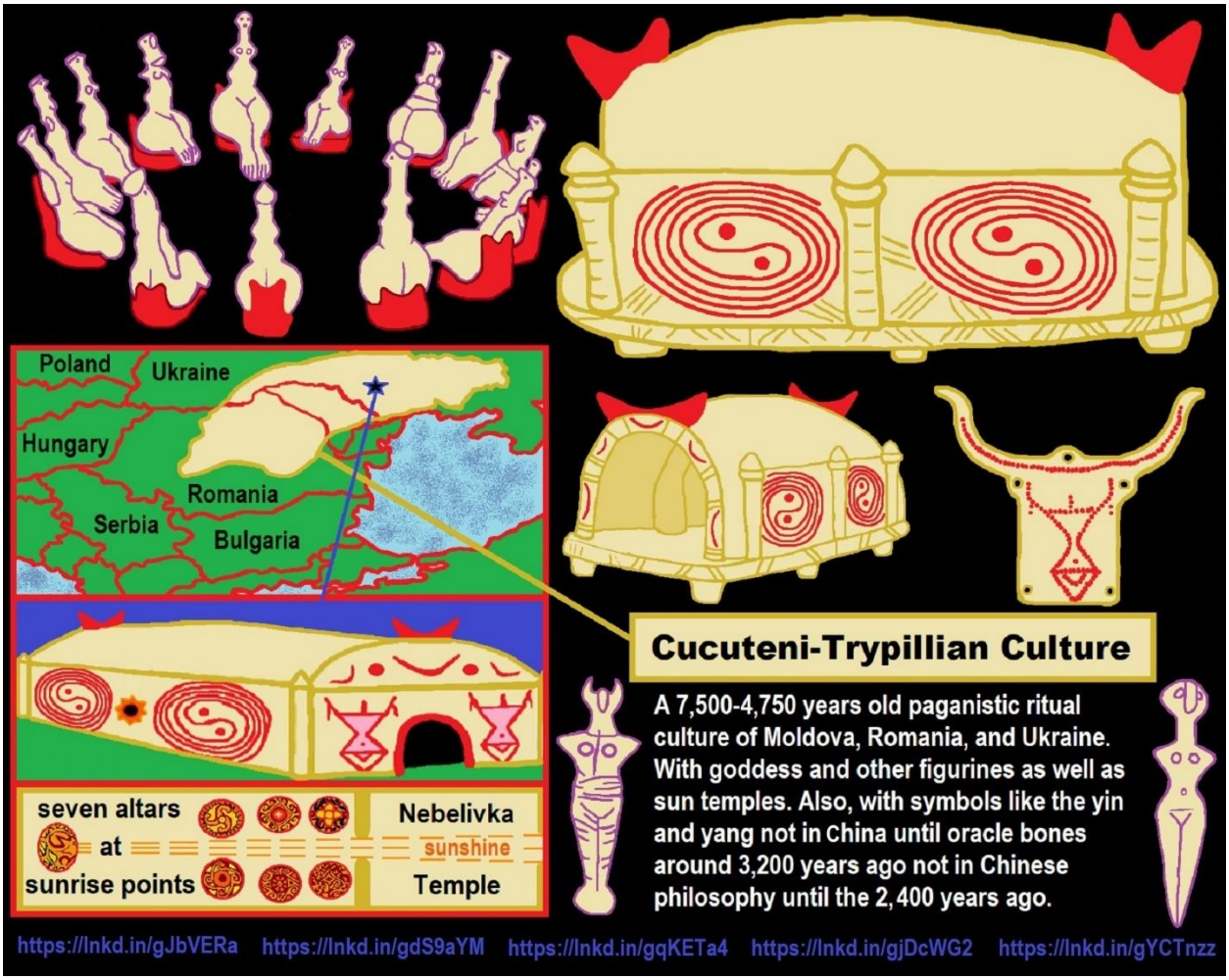

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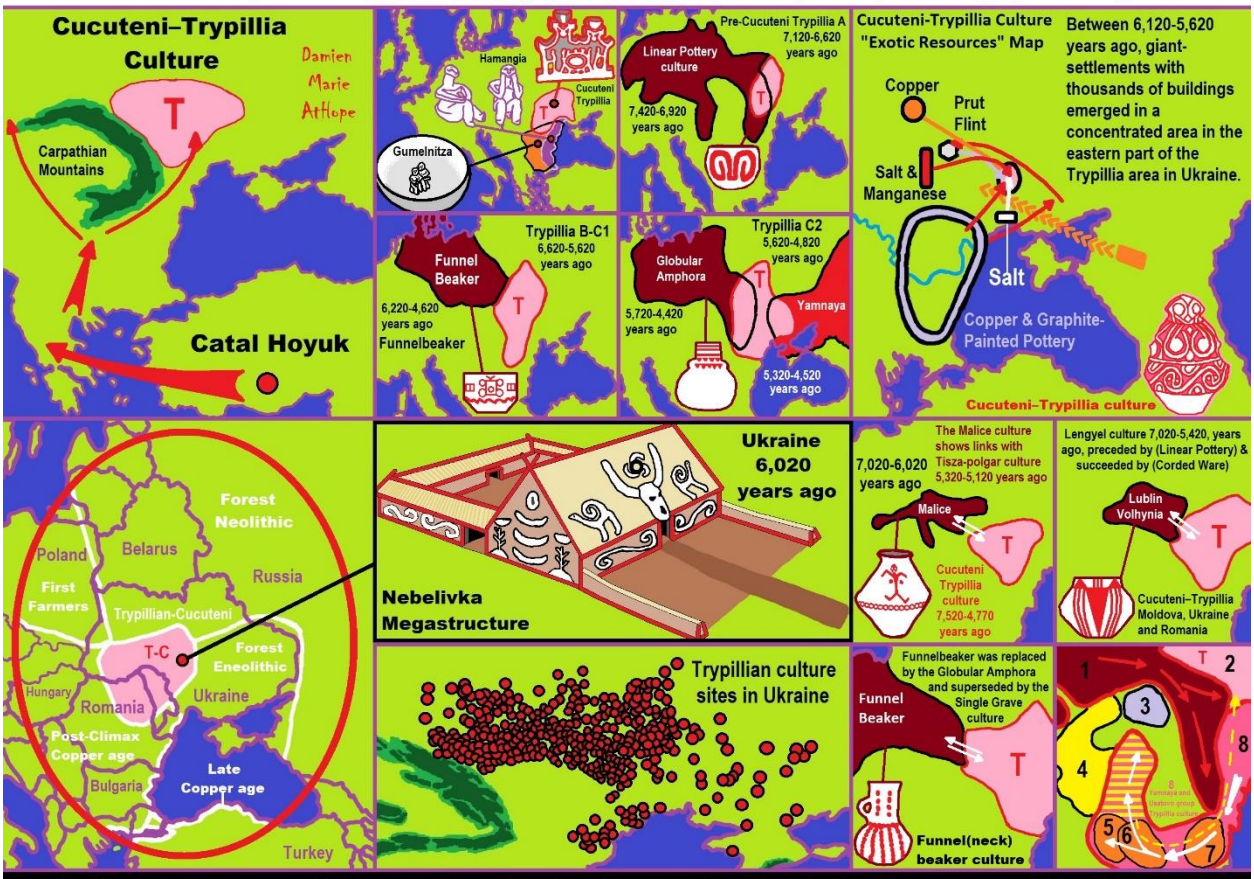
The exchange of people, ideas, and material-culture including, to me, the new god (Sky Father) and goddess (Earth Mother) religion between the Cucuteni-Trypillians and others which is then spread far and wide by the Proto-Indo-Europeans, Yamnaya, and beyond



Both the Balkan Neolithic and especially Copper Age communities played important roles in often long-distance exchange networks featuring copper, gold, obsidian, and flint, polished stone of many kinds, marine shells as well as other finished objects such as pottery, ornaments, along with other prestige goods.

Cultural interactions around Carpathians around 5,020-4,820 years ago: 1 – Globular Amphora culture; 2 – Sofievka group of Trypillia culture; 3 – Funnel Beaker culture; 4 – Baden culture; 5 – Kostolac culture; 6 – Coţofeni culture; 7 – Cernavoda II culture; 8 – Yamnaya culture and the Usatovo group of Trypillia culture.

No other group in Old Europe has such a long tradition, based upon three aspects of material culture, such as pottery, figurines, and houses.

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Damien Marie AtHope's Art

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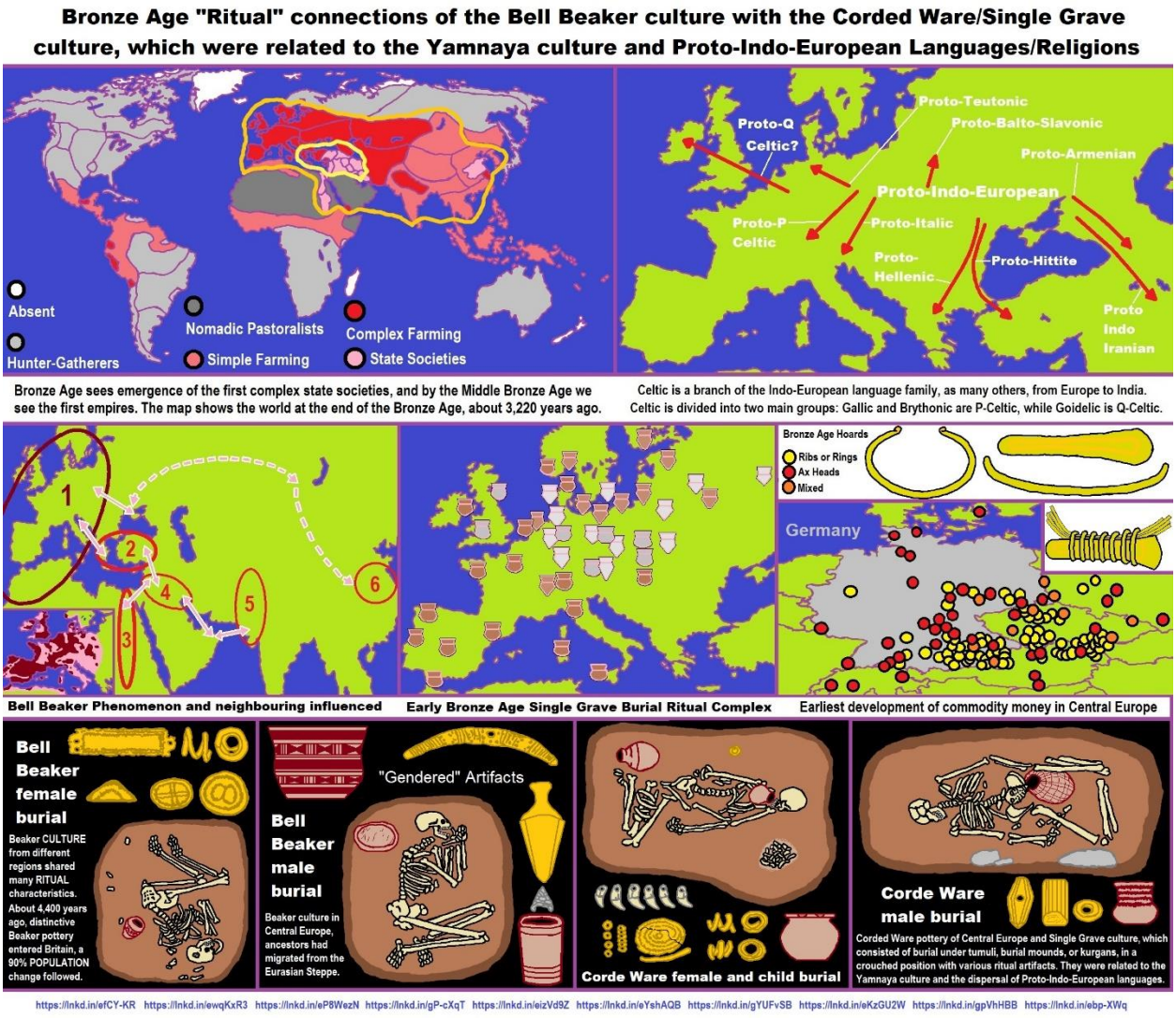

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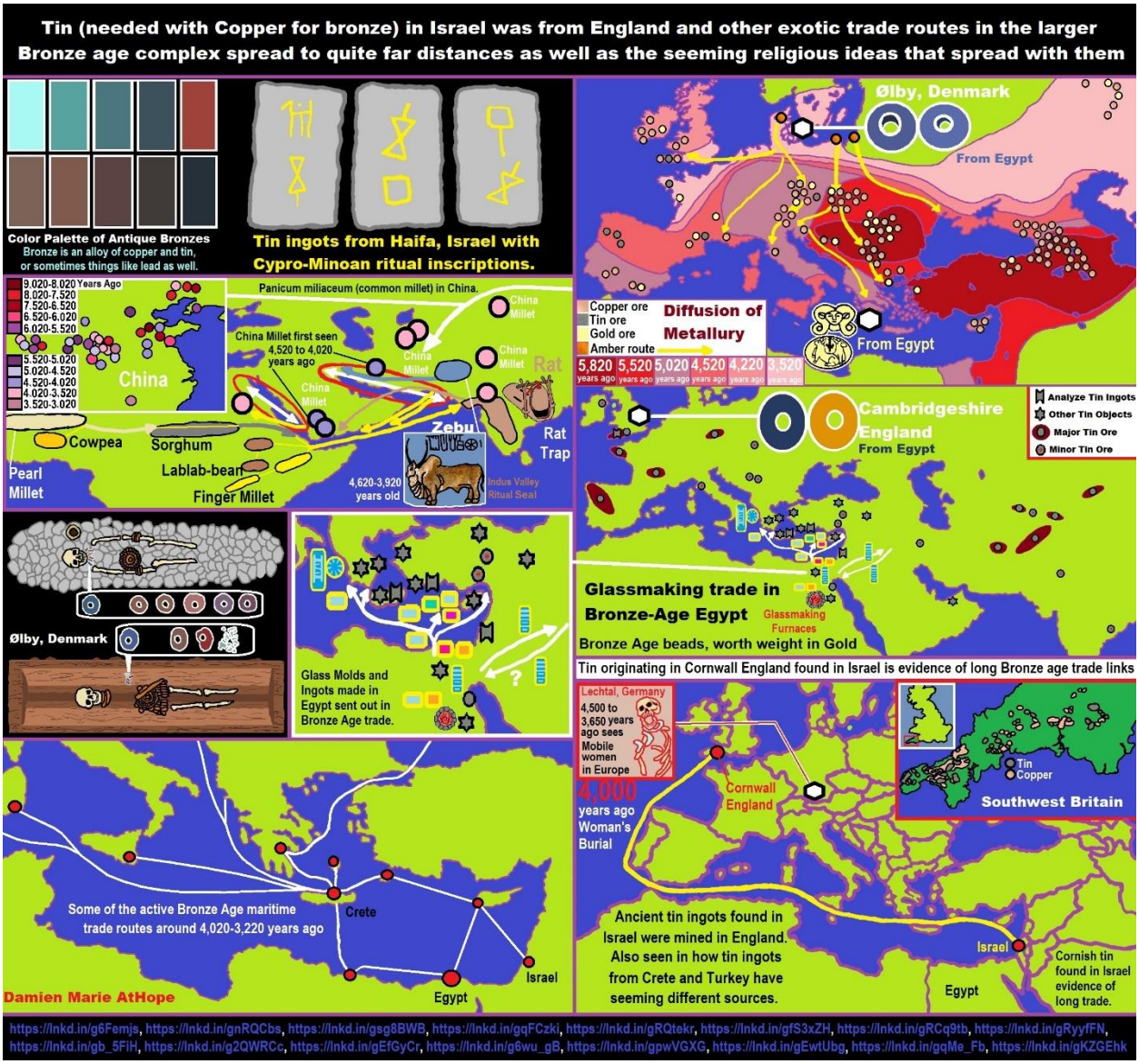

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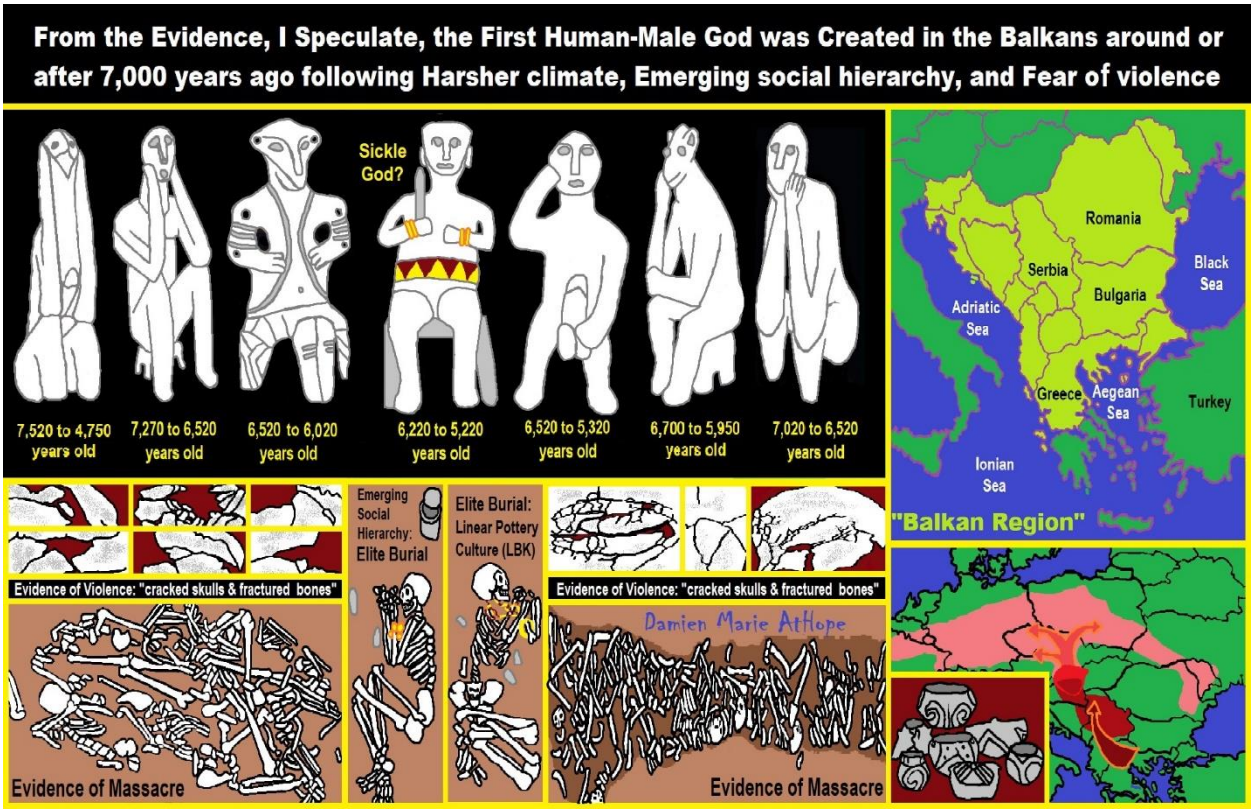

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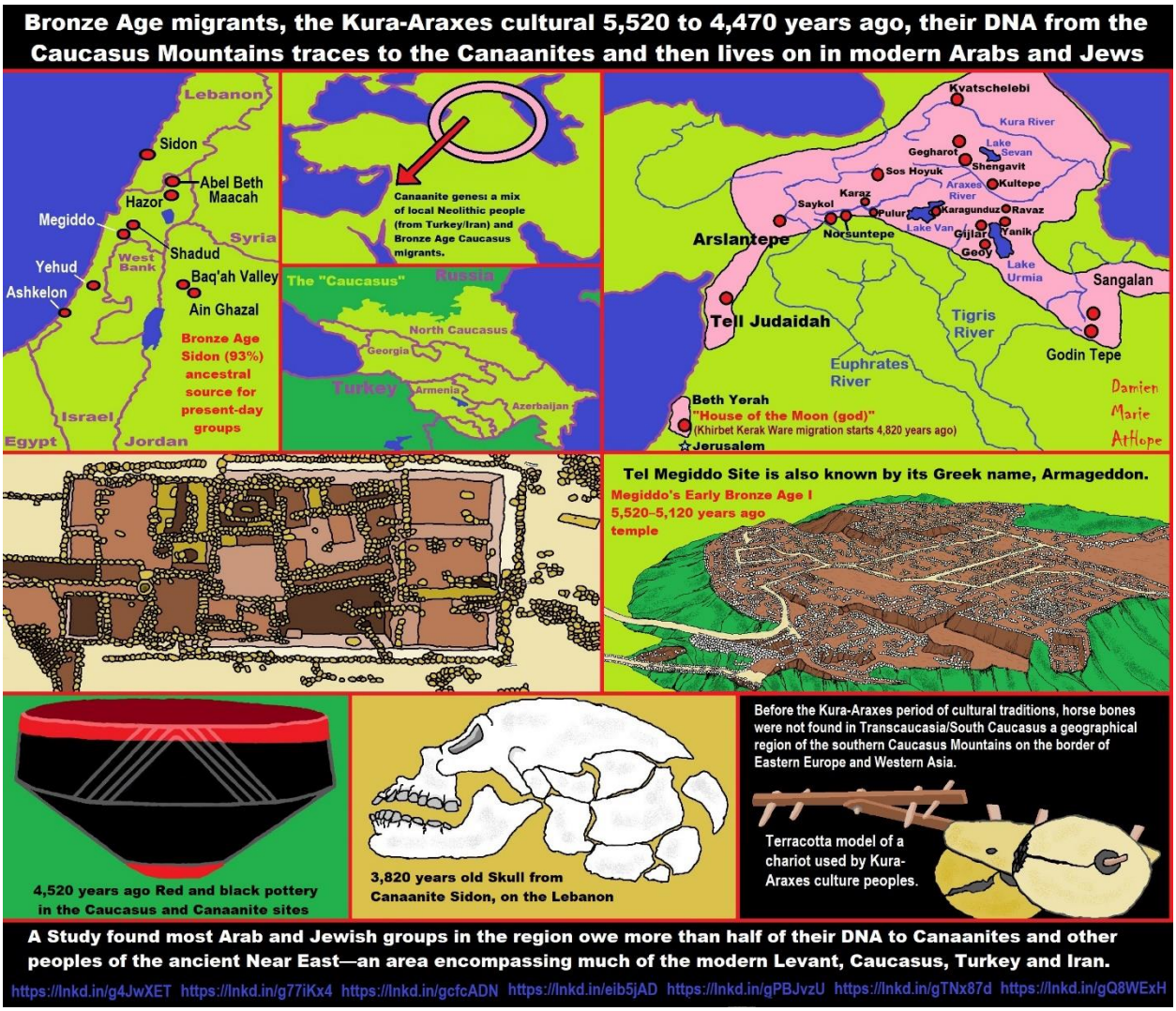

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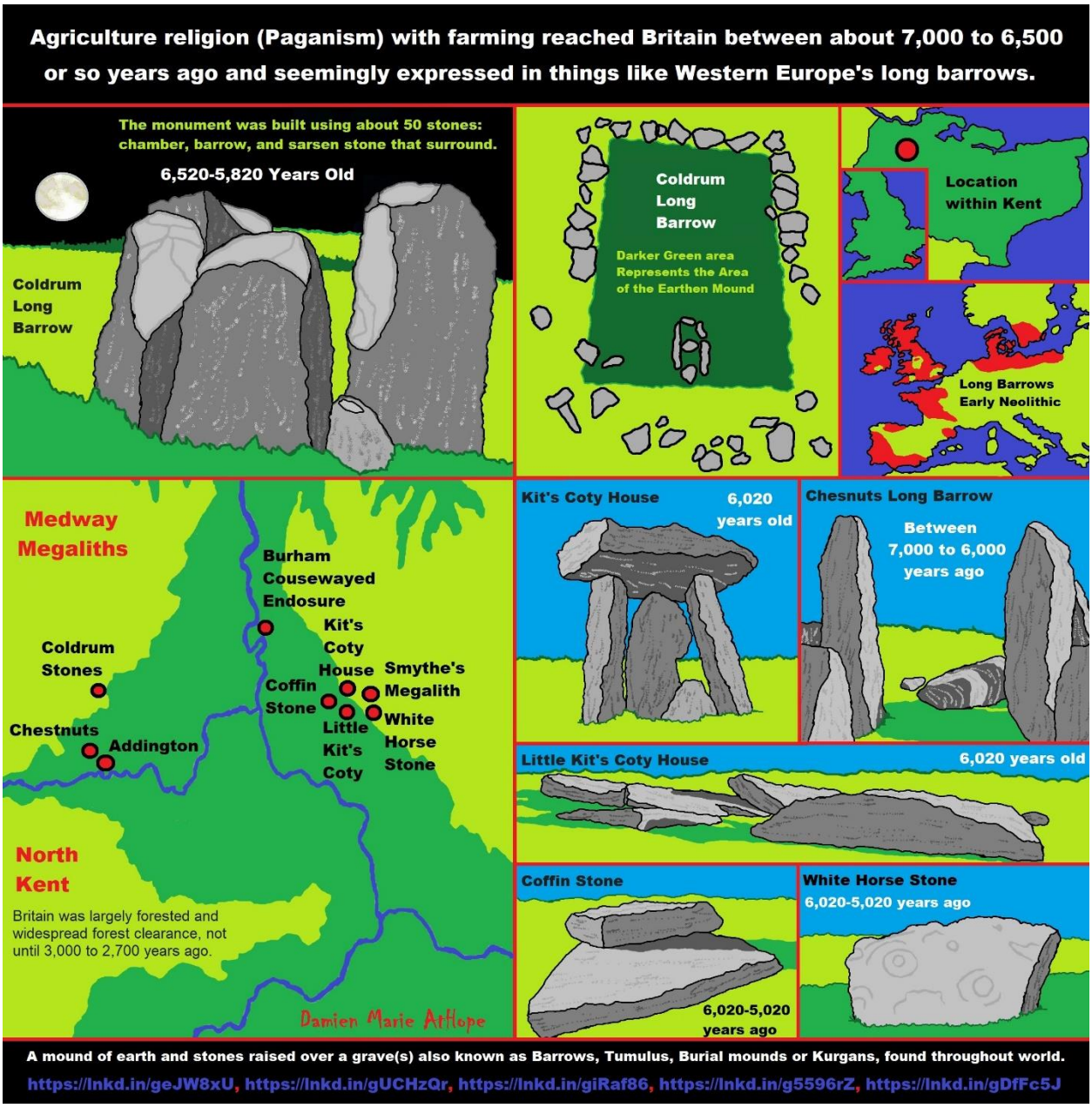

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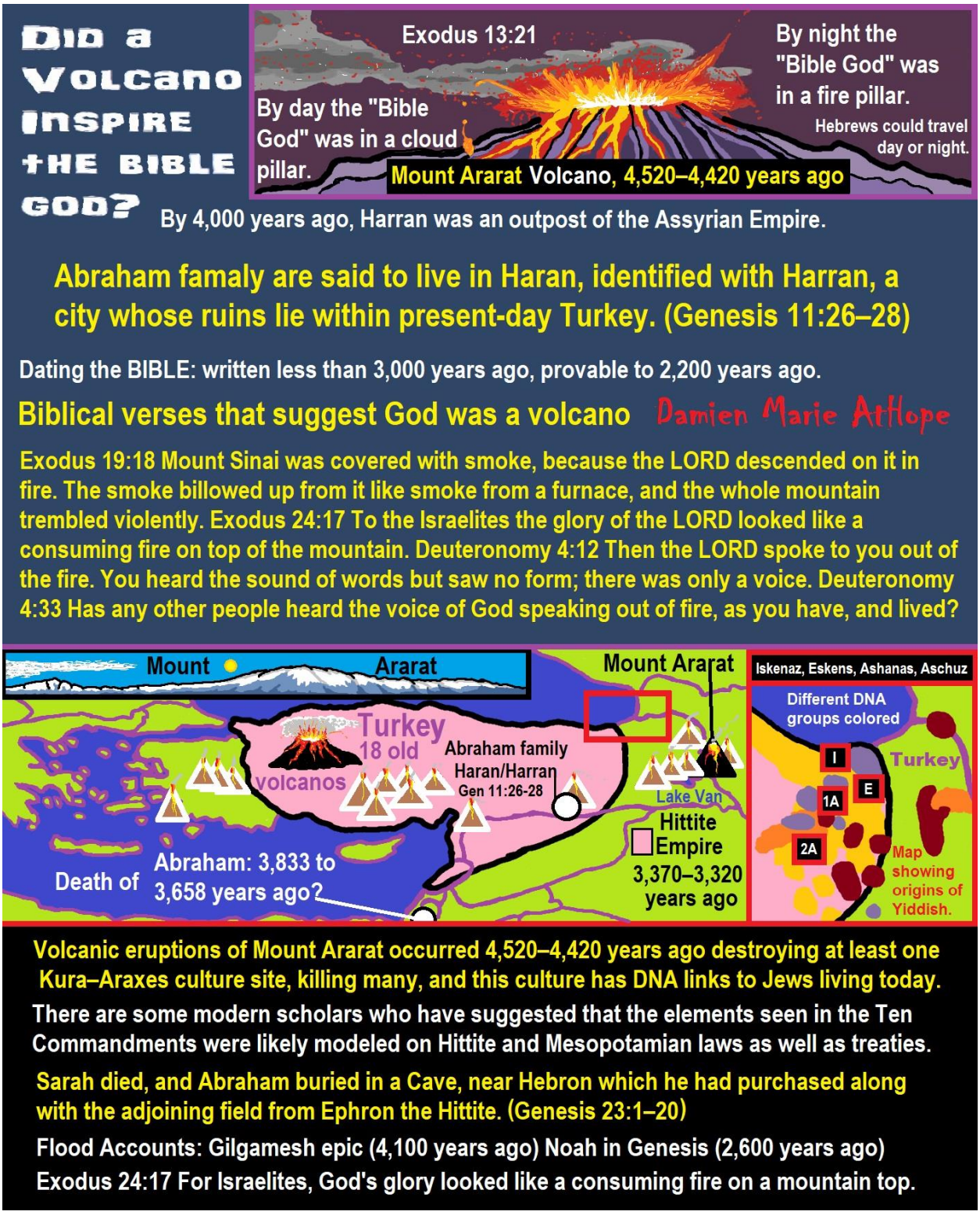

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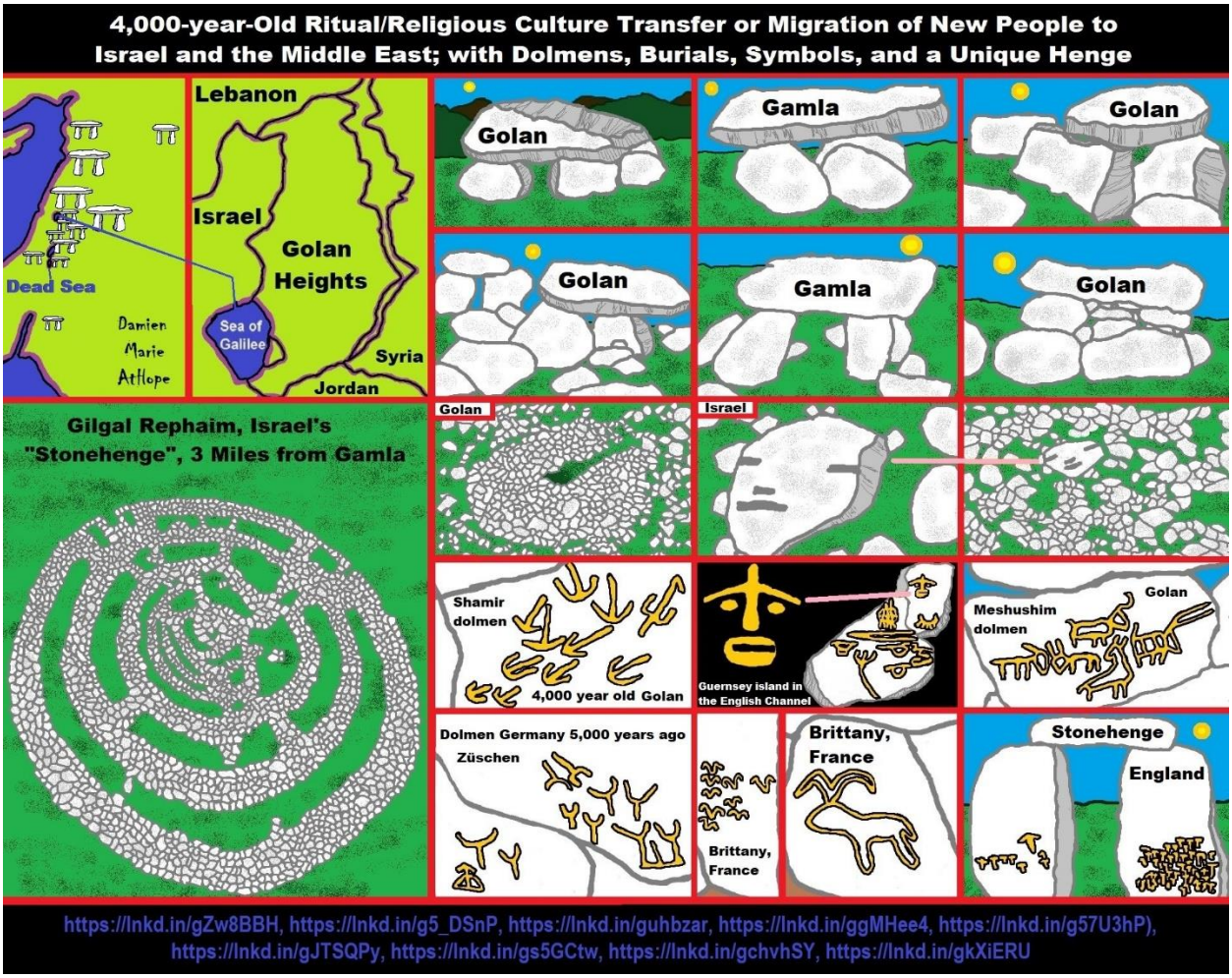
By day the LORD went ahead of them in a pillar of cloud to guide them on their way and by night in a pillar of fire to give them light, so that they could travel by day or night.

- **By day the "Bible God" was in a cloud pillar.**
- **By night the "Bible God" was in a fire pillar.**



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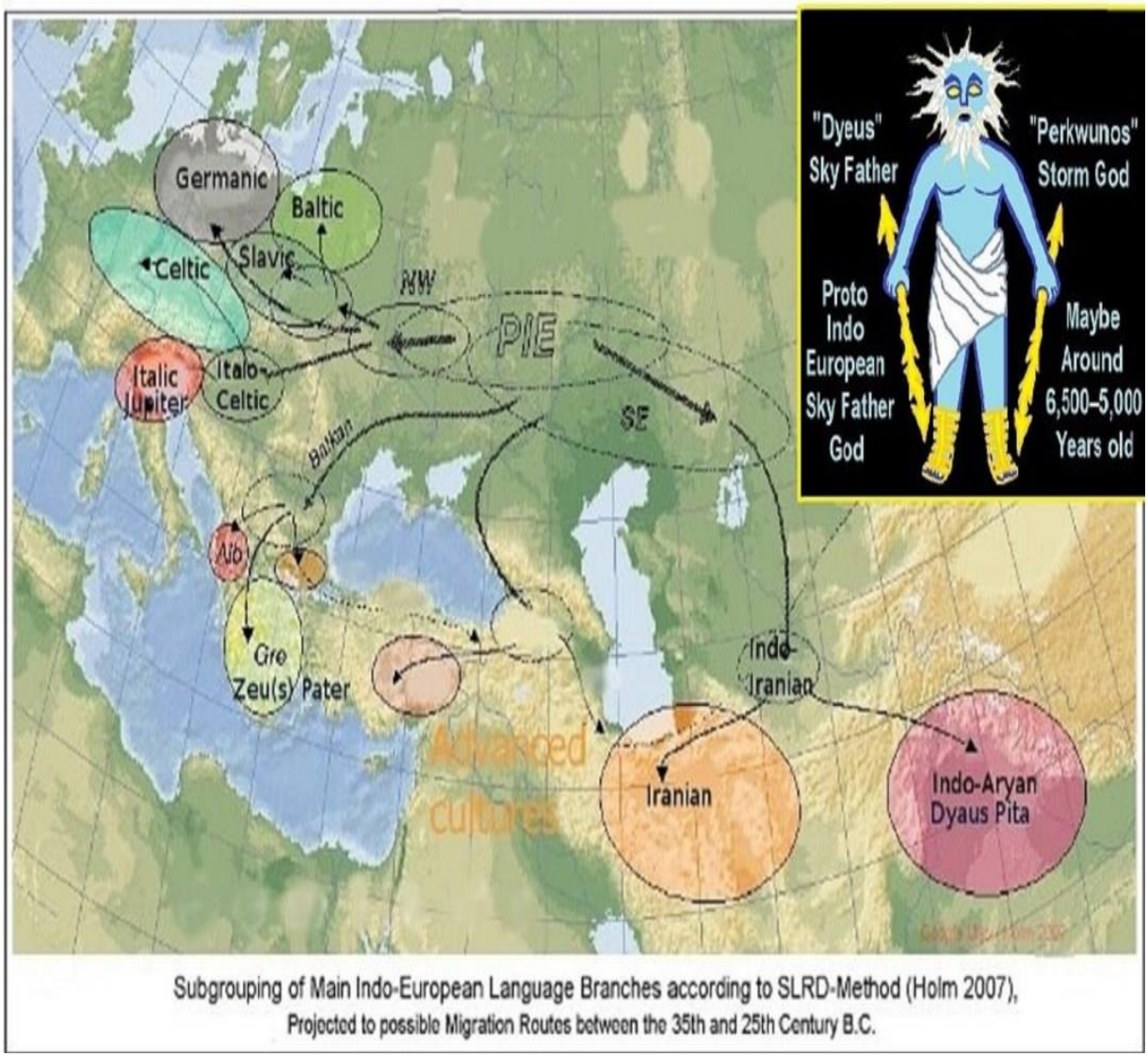
Proto-Indo-European gods:

"Sky-Father"



Subgrouping of Main Indo-European Language Branches according to SLRD-Method (Holm 2007),
Projected to possible Migration Routes between the 35th and 25th Century B.C.

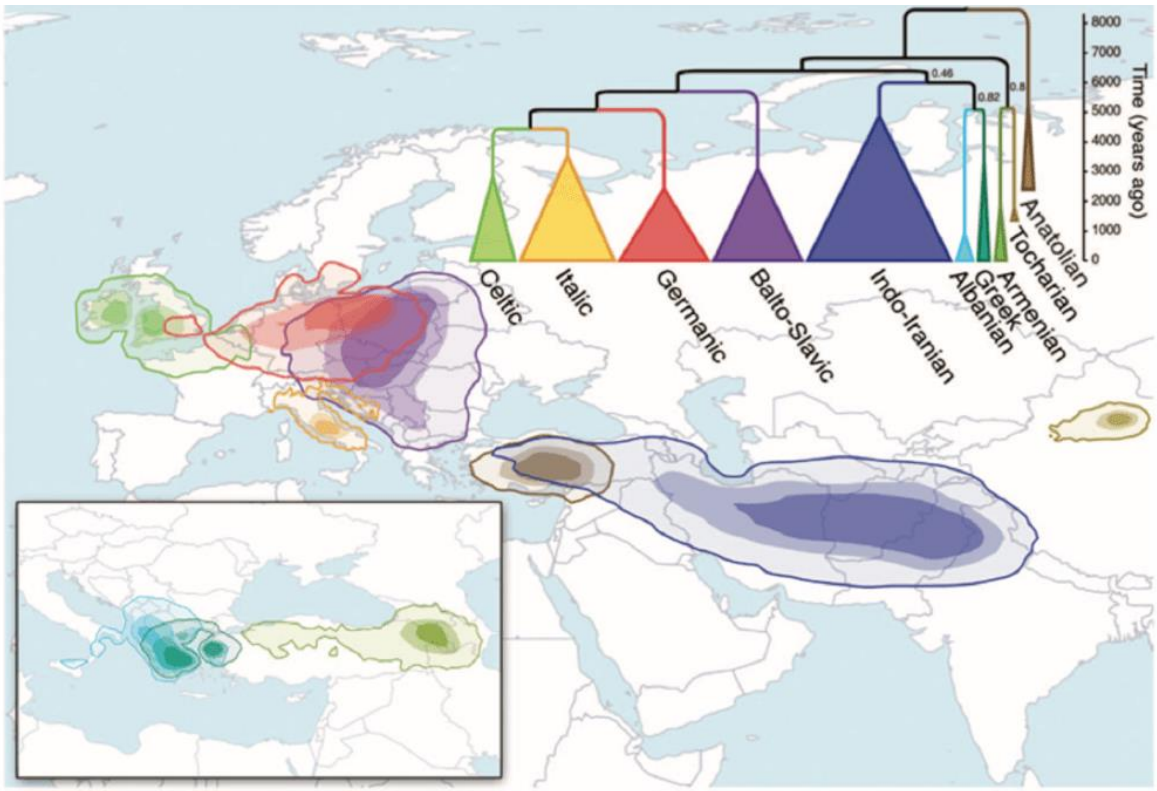
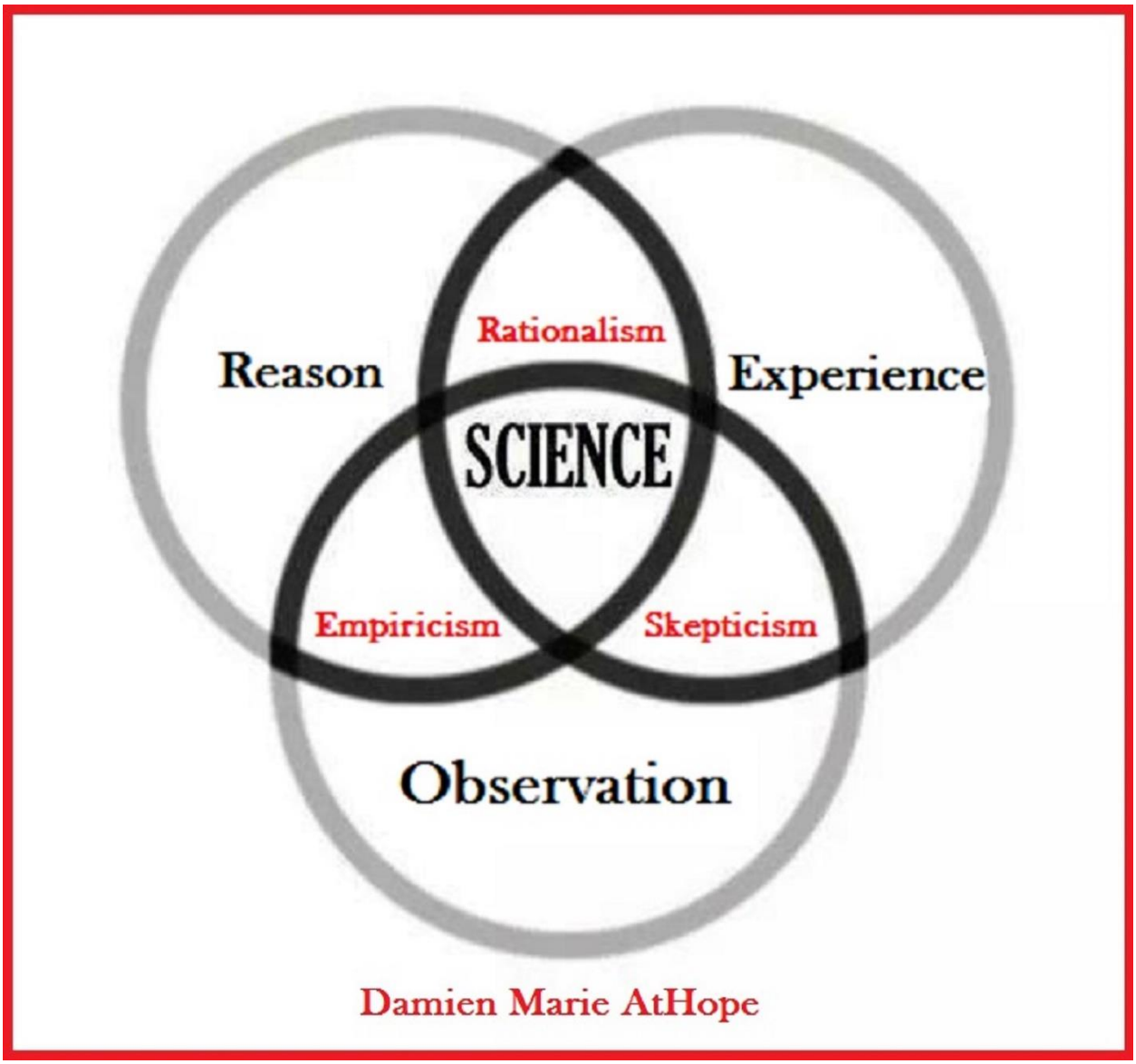
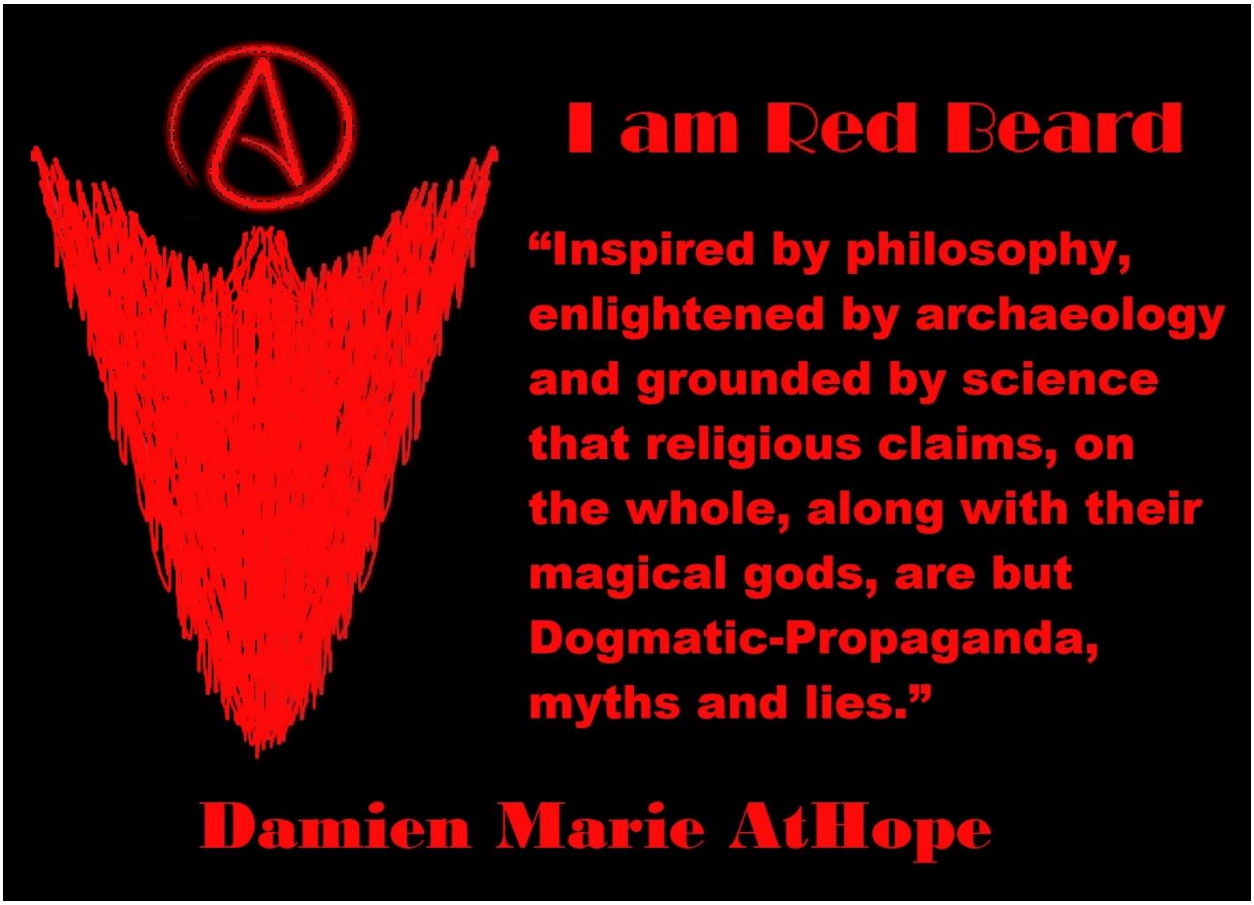


Fig. 2. Map and maximum clade credibility tree showing the diversification of the major Indo-European subfamilies. The tree shows the timing of the emergence of the major branches and their subsequent diversification. The inferred location at the root of each subfamily is shown on the map, colored to match the corresponding branches on the tree. Albanian, Armenian, and Greek subfamilies are shown separately for clarity (**inset**). Contours represent the 95% (largest), 75%, and 50% HPD regions, based on kernel density estimates (*15*).



I am for listening to whatever the FACTS best explain.



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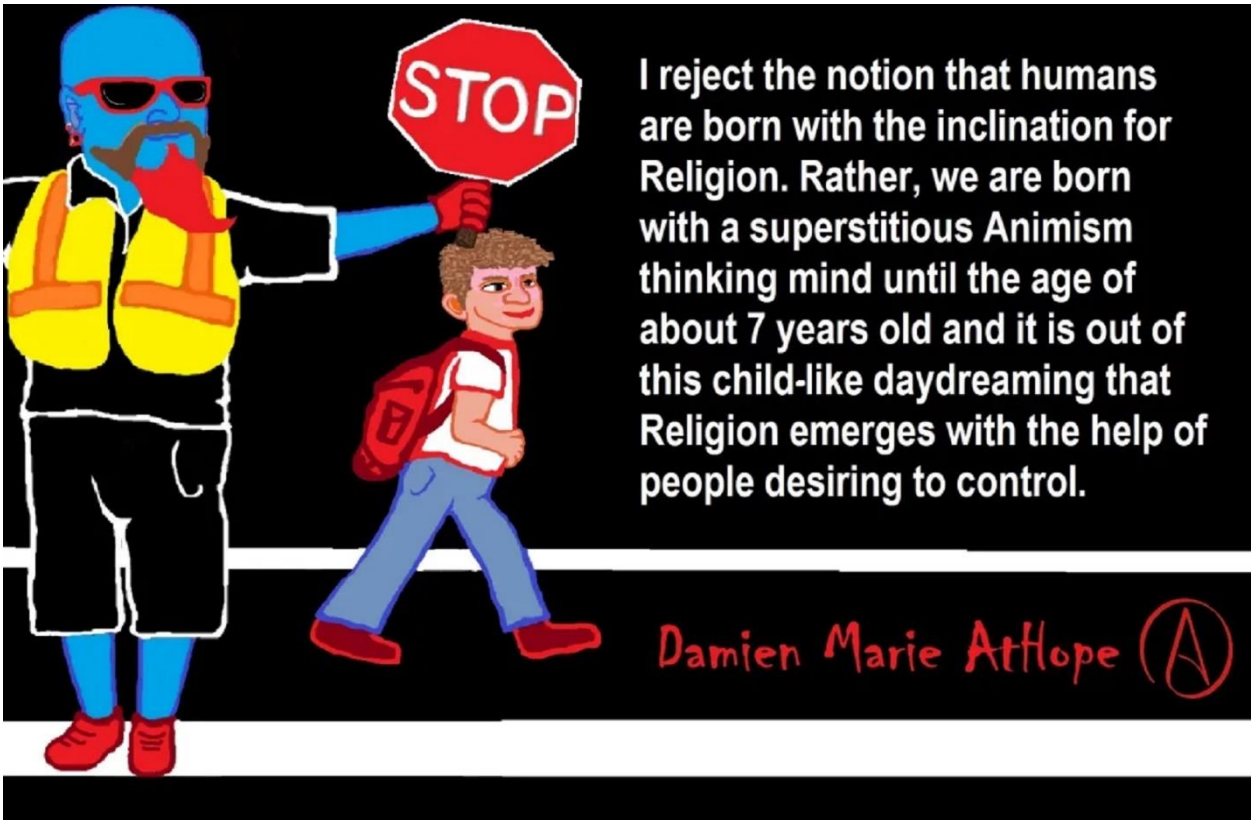
People don't commonly teach religious history, even that of their own claimed religion. No, rather they teach a limited "pro their religion" history of their religion from a religious perspective favorable to the religion of choice.



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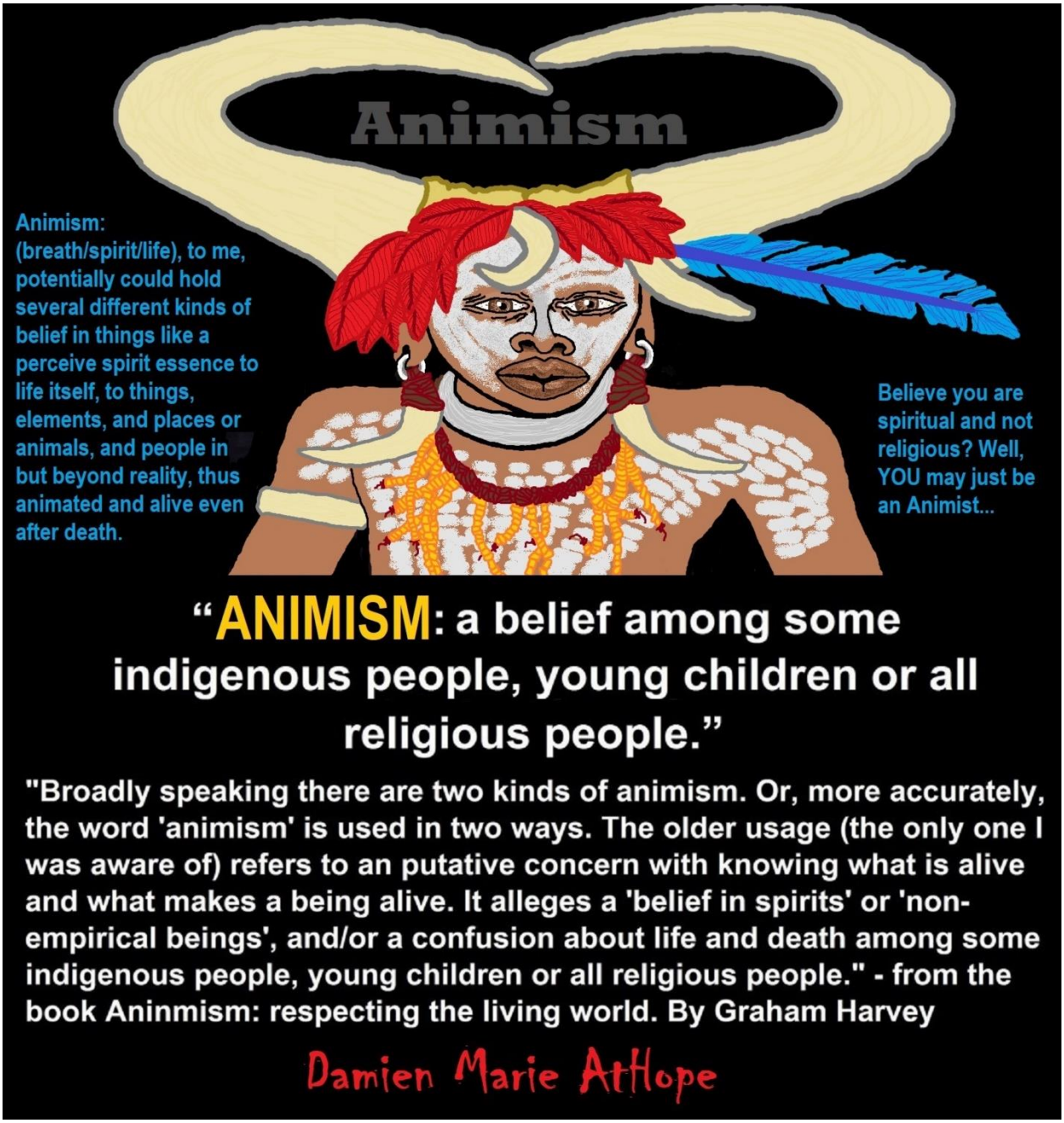
Do you truly think "Religious Belief" is only a matter of some personal choice?

Do you not see how coercive one's world of choice is limited to the obvious hereditary belief, in most religious choices available to the child of religious parents or caregivers? Religion is more commonly like a family, culture, society, etc. available belief that limits the belief choices of the child and that is when "Religious Belief" is not only a matter of some personal choice and when it becomes hereditary faith, not because of the quality of its alleged facts or proposed truths but because everyone else important to the child believes similarly so they do as well simply mimicking authority beliefs handed to them. Because children are raised in religion rather than being presented all possible choices but rather one limited dogmatic brand of "Religious Belief" where children only have a choice of following the belief as instructed, and then personally claim the faith hereditary belief seen in the confirming to the belief they have held themselves all their lives. This is obvious in statements asked and answered by children claiming a faith they barely understand but they do understand that their family believes "this or that" faith, so they feel obligated to

believe it too. While I do agree that “Religious Belief” should only be a matter of some personal choice, it rarely is… End Hereditary Religion!

Opposition to Imposed Hereditary Religion



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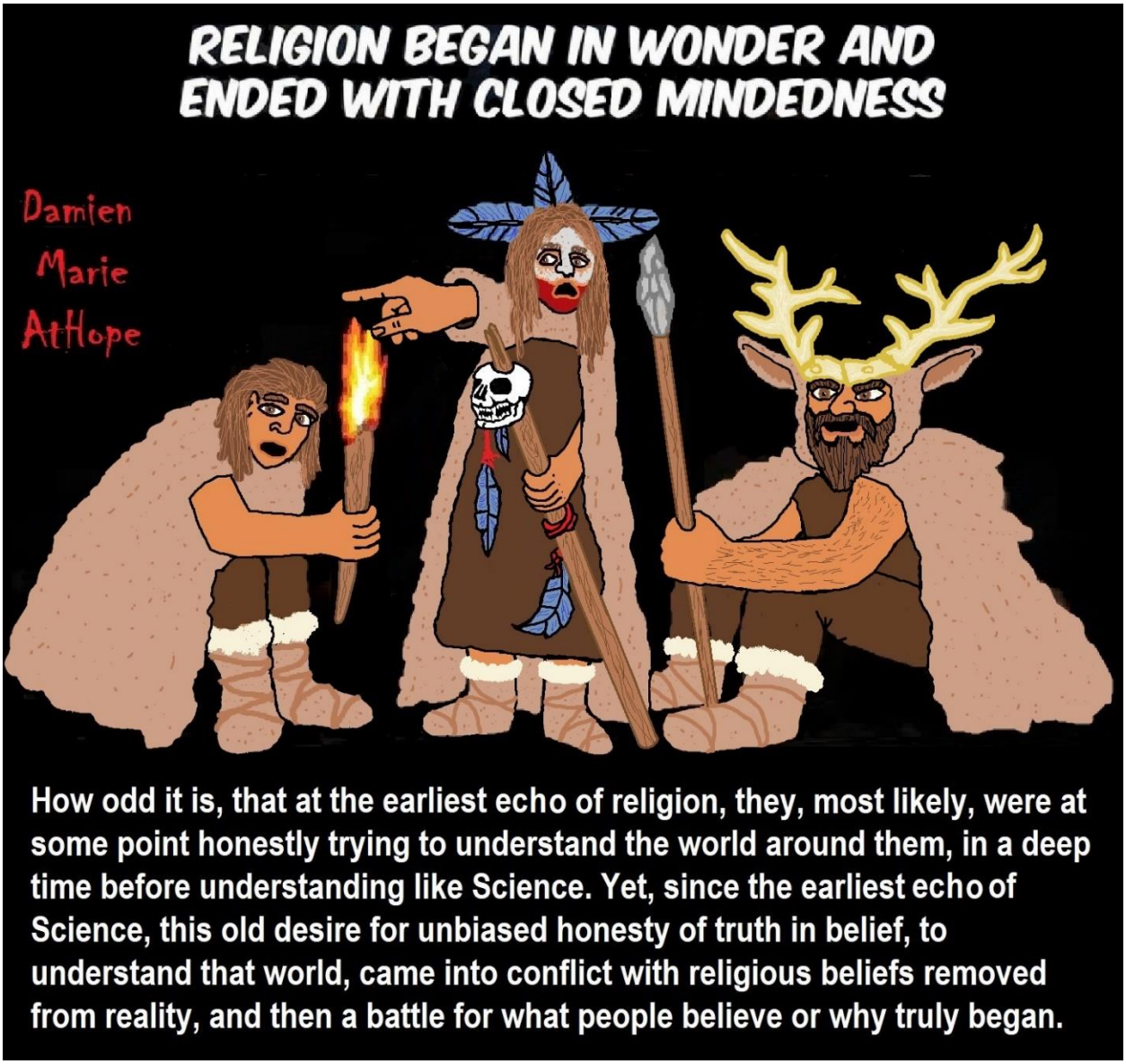
Animism: Respecting the Living World by Graham Harvey

“How have human cultures engaged with and thought about animals, plants, rocks, clouds, and other elements in their natural surroundings? Do animals and other natural objects have a spirit or soul? What is their relationship to humans? In this new study, Graham Harvey explores current and past animistic beliefs and practices of Native Americans, Maori, Aboriginal Australians, and eco-pagans. He considers the varieties of animism found in these cultures as well as their shared desire to live respectfully within larger natural communities. Drawing on his extensive casework, Harvey also considers the linguistic, performative, ecological, and activist implications of these different animisms.” ref



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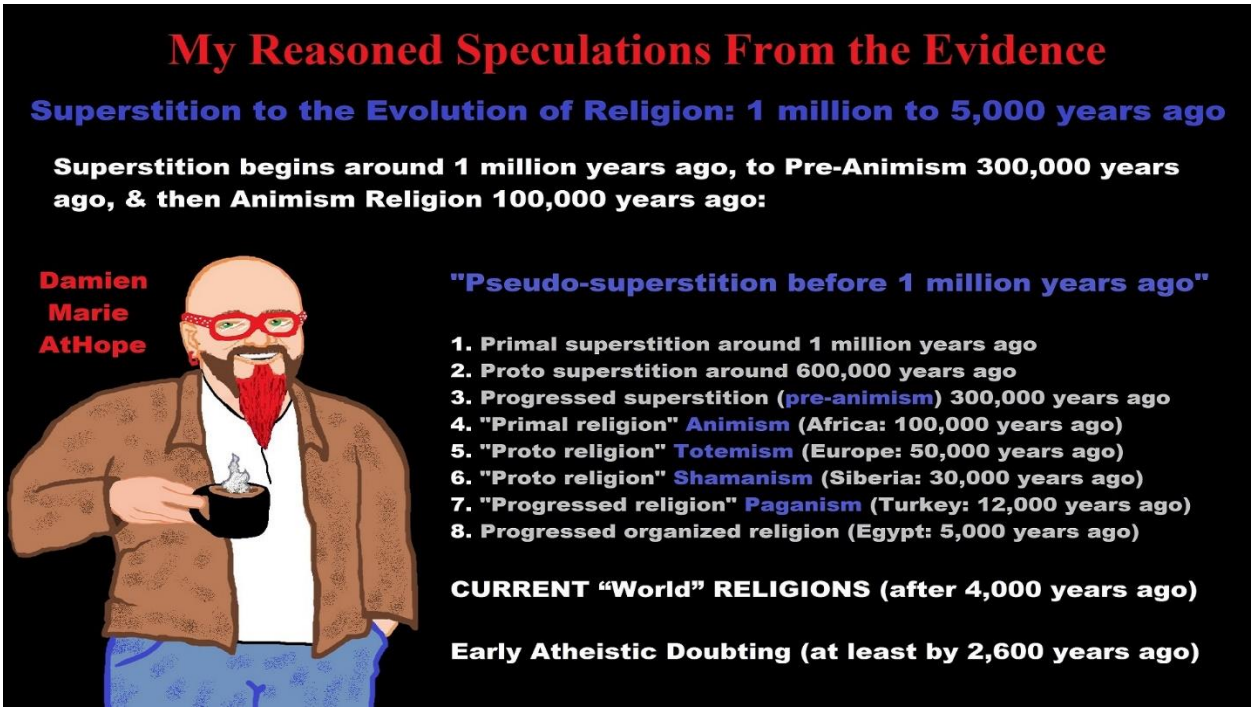
We are like believing machines we vacuum up ideas, like Velcro sticks to almost everything. We accumulate beliefs that we allow to negatively influence our lives, often without realizing it. Our willingness must be to alter skewed beliefs that impend our balance or reason, which allows us to achieve new positive thinking and accurate outcomes.



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My thoughts on Religion Evolution with external links for more info:

- **(Pre-Animism** Africa mainly, but also Europe, and Asia at least 300,000 years ago**),** (Pre-Animism – Oxford Dictionaries)
- **(Animism** Africa around 100,000 years ago**),** (Animism – Britannica.com)
- **(Totemism** Europe around 50,000 years ago**),** (Totemism – Anthropology)
- **(Shamanism** Siberia around 30,000 years ago**),** (Shamanism – Britannica.com)

- **(Paganism** Turkey around 12,000 years ago**),** (Paganism – BBC Religion)
- **(Progressed Organized Religion "Institutional Religion"** Egypt around 5,000 years ago**),** (Ancient Egyptian Religion – Britannica.com)
- **(CURRENT "World" RELIGIONS** after 4,000 years ago**)** (Origin of Major Religions – Sacred Texts)
- **(Early Atheistic Doubting** at least by 2,600 years ago**)** (History of Atheism – Wikipedia)

"Religion is an Evolved Product" and Yes, Religion is Like Fear Given Wings…

Atheists talk about gods and religions for the same reason doctors talk about cancer, they are looking for a cure, or a firefighter talks about fires because they burn people and they care to stop them. We atheists too often feel a need to help the victims of mental slavery, held in the bondage that is the false beliefs of gods and the conspiracy theories of reality found in religions.

"Understanding Religion Evolution: Animism, Totemism, Shamanism, Paganism & Progressed organized religion"

Understanding Religion Evolution:

- **Pre-Animism (at least 300,000 years ago)**
- **Animism (Africa: 100,000 years ago)**
- **Totemism (Europe: 50,000 years ago)**
- **Shamanism (Siberia: 30,000 years ago)**
- **Paganism (Turkey: 12,000 years ago)**
- **Progressed organized religion (Egypt: 5,000 years ago),** (Egypt, the First Dynasty 5,150 years ago)
- **CURRENT "World" RELIGIONS (after 4,000 years ago)**
- **Early Atheistic Doubting (at least by 2,600 years ago)**

"An Archaeological/Anthropological Understanding of Religion Evolution"

It seems ancient peoples had to survived amazing threats in a “dangerous universe (by superstition perceived as good and evil),” and human “immorality or imperfection of the soul” which was thought to affect the still living, leading to ancestor worship. This ancestor worship presumably led to the belief in supernatural beings, and then some of these were turned into the belief in gods. This feeble myth called gods were just a human conceived “made from nothing into something over and over, changing, again and again, taking on more as they evolve, all the while they are thought to be special,” but it is just supernatural animistic spirit-belief perceived as sacred.

Quick Evolution of Religion?

Pre-Animism (at least 300,000 years ago) pre-religion is a beginning that evolves into later Animism. So, Religion as we think of it, to me, all starts in a general way with Animism (Africa: 100,000 years ago) (theoretical belief in supernatural powers/spirits), then this is physically expressed in or with Totemism (Europe: 50,000 years ago) (theoretical belief in mythical relationship with powers/spirits through a totem item), which then enlists a full-time specific person to do this worship and believed interacting Shamanism (Siberia/Russia: 30,000 years ago) (theoretical belief in access and influence with spirits through ritual), and then there is the further employment of myths and gods added to all the above giving you Paganism (Turkey: 12,000 years ago) (often a lot more nature-based than most current top world religions, thus hinting to their close link to more ancient religious thinking it stems from). My hypothesis is expressed with an explanation of the building of a theatrical house (modern religions development). Progressed organized religion (Egypt: 5,000 years ago) with CURRENT “World” RELIGIONS (after 4,000 years ago).

Historically, in large city-state societies (such as Egypt or Iraq) starting around 5,000 years ago culminated to make religion something kind of new, a sociocultural-governmental-religious monarchy, where all or at least many of the people of such large city-state societies seem familiar with and committed to the existence of “religion” as the integrated life identity package of control dynamics with a fixed closed magical doctrine, but this juggernaut integrated religion identity package of Dogmatic-Propaganda certainly did not exist or if developed to an extent it was highly limited in most smaller prehistoric societies as they seem to lack most of the strong control dynamics with a fixed closed magical doctrine (magical beliefs could be at times be added or removed). Many people just want to see developed religious dynamics everywhere even if it is not. Instead, all that is found is largely fragments until the domestication of religion. Religions, as we think of them today, are a new fad, even if they go back to around 6,000 years in the timeline of human existence, this amounts to almost nothing when seen in the long slow evolution of religion at least around 70,000

years ago with one of the oldest ritual worship. Stone Snake of South Africa: “first human worship” 70,000 years ago. This message of how religion and gods among them are clearly a man-made thing that was developed slowly as it was invented and then implemented peace by peace discrediting them all. Which seems to be a simple point some are just not grasping how devastating to any claims of truth when we can see the lie clearly in the archeological sites.

I wish people fought as hard for the actual values as they fight for the group/clan names political or otherwise they think support values. Every amount spent on war is theft to children in need of food or the homeless kept from shelter.

Here are several of my blog posts on history:

- **To Find Truth You Must First Look**
- **Archaeology Knowledge Challenge?**
- **Beware of Pseudo-History like the Claims of a Hammer in a 400 Million-Year-Old Rock**
- **The Evolution of Fire Sacralizing and/or Worship 1.5 million to 300,000 years ago and beyond?**
- **Proto Religion: Superstition around 1 million years ago, to Pre-Animism 300,000 years ago, & then Animism Religion 100,000 years ago**
- **Stone Age Art: 500,000 – 233,000 Years Old**
- **Around 500,000 – 233,000 years ago, Oldest Anthropomorphic art (Pre-animism) is Related to Female**
- **400,000 Years Old Sociocultural Evolution**
- **Burial-pits, Cave-tombs, and/or Shallow-graves begin with Homo**
- **The Emergence of Pre-Religion 300,000 years ago, with Pre-Animism?**
- **Pre-Animism: Portable Rock Art at least 300,000-year-old**
- **Pre-animism 300,000 years old and animism 100,000 years old: related to “Anarchism and Socialism”**
- **Prehistory: related to “Anarchism and Socialism” the division of labor, power, rights, and recourses.**
- **Homo Naledi and an Intentional Cemetery “Pre-Animism” dating to around 250,000 years ago?**

- **Neanderthals “Primal Religion (Pre-Animism/Animism?)” Mystery Cave Rings 175,000 Years Ago**
- **130,000 years ago – Earliest evidence for burial and it’s Neanderthals…**
- **Did Neanderthals teach us “Primal Religion (Pre-Animism/Animism?)” 120,000 Years Ago?**
- **What about Neanderthals and Religion?**
- **Animism: an approximately 100,000-year-old belief system?**
- **Animism: a belief among some indigenous people, young children, or all religious people!**
- **The Origin of Language: Starts in Symbolism Around 100,000 years ago, to Early Proto-Writing 44,000-5,000 years ago with Unrealized Connections**
- **Rock crystal stone tools 75,000 Years Ago – (Spain) made by Neanderthals**
- **Prehistoric Child Burials Begin at Least Around 78,000 Years Ago**
- **Stone Snake of South Africa: “first human worship” 70,000 years ago**
- **Similarities and differences in Animism and Totemism**
- **Did Neanderthals Help Inspire Totemism? Because there is Art Dating to Around 65,000 Years Ago in Spain?**
- **History of Drug Use with Religion or Sacred Rituals possibly 58,000 years ago?**
- **Totemism: an approximately 50,000-year-old belief system?**
- **Totemism 50,000 years old: related to “Anarchism and Socialism”**
- **Australia & Aboriginal Religion at least around 50,000 years old**
- **Modern Humans start around 50,000 years ago Helped by Feminisation**
- **Out of Africa: “the evolution of religion seems tied to the movement of people”**
- **Totemism and Shamanism Dispersal Theory Expressed around 50,000 to 30,000 years ago**
- **Back-migrations to Africa, Starting with Eurasia to North Africa around 45,000 years ago**
- **Possible Religion Motivations in the First Cave Art at around 43,000 years ago?**
- **43,000-33,000 years old Aurignacian Figurine Marks, like at the Swabian Jura caves in Germany**
- **41,000-20,000-year-old Upper Paleolithic Tally sticks**
- **40,000 years old Aurignacian Lion Figurine Early Totemism?**

- **40,000-35,000 years ago “first seeming use of a Totem” ancestor, animal, and possible pre-goddess worship?**
- **Prehistoric Egypt 40,000 years ago to The First Dynasty 5,150 years ago**
- **38,000 Years Old Engraving of an Aurochs with Seeming Totemism Expression?**
- **Aurignacian Period female ‘Venus’ carvings start at 35,000 years ago, then Transfer on to Other Cultures?**
- **Sacred Bulls, the Moon, and Fertility begins at least around 35,000 years ago?**
- **Women were the focus of religion, from at least around 35,000 years ago, until 2,000 years ago?**
- **Stars: Ancestors, Spirit Animals, and Deities (around 6,000 years ago, with connections to shamanism at 30,000 years ago and possibly further back to 40,000 years ago with totemism)**
- **Sacred Bulls, the Moon, and Fertility begins at least around 35,000 years ago?**
- **34,000 years ago Lunar Calendar Cave art around the Time Shift From Totemism to Early Shamanism**
- **34,000 years old Russan “Sungir” Early Totemistic-Shamanism**
- **31,000-25,000 years old Dolni Vestonice, Czech Republic Totemistic-Shamanism**
- **Shamanism: an approximately 30,000-year-old belief system**
- **Could the Phallus Phenomena (A Bull Horn) and the Shamanism Phenomena beginning around 30,000 years ago**
- **Lenticular Cloud Formations may connect to Ancient “House of Gods” Mythology**
- **“Sky Burial” and its possible origins at least 12,000 years ago to likely 30,000 years ago or older.**
- **The Peopling of the Americas Pre-Paleoindians/Paleoamericans around 30,000 to 12,000 years ago**
- **Hunter-Gatherer/Indigenous Peoples Religiosity, Beliefs, and Practices**
- **Starting 30,000 Years Ago is the Sitting Venus Phenomena**
- **Shamanism 30,000 years old: related to “Anarchism and Socialism”**
- **Trinity Evolution Started over 30,000 years ago, Maybe?**
- **Paleolithic Totem Venuses become the later Goddesses of the Neolithic and beyond?**
- **The “Inner Asian Mountain Corridor” as well as the “Eurasian Steppe Corridor” and Repetitious Migrations**
- **Who were the Groups migrating and merging with the previous Groups of Europe?**

- **27,000 to 25,000 Years ago Oldest Shaman was Female, Buried with the Oldest Portrait Carving**
- **Could a Gravettian carving around 25,000 years old relate to Later Goddess and the Bull cults like Catal Huyuk**
- **Gravettian burial of Caviglione Woman, (shaman?) dated to around 24,000 years ago**
- **The Gravettian culture (Europe) shared ritual ideas and The Ancient North Eurasian culture (Asia) 24,000 years ago**
- **24,000 Years Old Sacred Burial of a Siberian Mal'ta Boy**
- **Mal'ta–Buret' culture of Siberia and Basal Haplogroup R* or R-M207**
- **Groups partially derived from the Ancient North Eurasians**
- **Leda and the Swan: possibly relates back to 24,000–15,000 years old Mal'ta–Buret' culture, Lake Baikal, Siberia?**
- **Similarities in Shamanism?**
- **Black, White, and Yellow Shamanism?**
- **Shamanistic rock art from central Aboriginal Siberians and Aboriginal drums in the Americas**
- **Horned female shamans and Pre-satanism Devil/horned-god Worship?**
- **Epipalaeolithic Near East 20,000 to 9,000 years ago and the Emergence of Advanced Culture as well as New Religion?**
- **Sifting through the relation of Bird spirits/deities of the sky (20,000 to 5,000 years ago)**
- **(Magdalenian/Iberomaurusian) Connections to the First Paganists of the early Neolithic Near East Dating from around 17,000 to 12,000 Years Ago**
- **16,000 to 12,000 years ago Magdalenian Sacred Ritual and Symbols**
- **Are the Natufians of Israel around 15,000 to 11,500 years ago who you thought they were?**
- **Natufians: an Ancient People at the Origins of Agriculture and Sedentary Life**
- **Possible Clan Leader/Special "MALE" Ancestor Totem Poles At Least 13,500 years ago?**
- **Jewish People with DNA at least 13,200 years old, Judaism, and the Origins of Some of its Ideas**

- **Genetic studies on Jewish DNA is not 6,000 years old but has origin links to about 20,000 to 30,000 years ago?**
- **Baltic Reindeer Hunters: Swiderian, Lyngby, Ahrensburgian, and Krasnosillya cultures 12,020 to 11,020 years ago are evidence of powerful migratory waves during the last 13,000 years and a genetic link to Saami and the Finno-Ugric peoples.**
- **My Reasoned Speculations on the Early Migrations of Paganism 13,000 to 3,000 years ago, Cultural Transfer**
- **13,000-12,000 years ago Culture Leading to New Oppression changed everything and it was not always this way.**
- **The Rise of Inequality: patriarchy and state hierarchy inequality**
- **Fertile Crescent 12,500 – 9,500 Years Ago: fertility and death cult belief system?**
- **12,400 – 11,700 Years Ago – Kortik Tepe (Turkey) Pre/early-Agriculture Cultic Ritualism**
- **Paganism: spread of Haplogroup J and its Seeming connection of Bull Worship**
- **Pre-Pottery Neolithic (10000 – 6500 BCE) and Pottery Neolithic (7000–5000 BCE)**
- **12,000-year-old Gobekli Tepe: "first human-made pagan temple"**
- **Gobekli Tepe is more like Shamanistic early Paganism, Not Adam, Eve, and Cain or Bible anything!**
- **Ritualistic Bird Symbolism at Gobekli Tepe and its "Ancestor Cult"**
- **Male-Homosexual (female-like) / Trans-woman (female) Seated Figurine from Gobekli Tepe**
- **Could a 12,000-year-old Bull Geoglyph at Göbekli Tepe relate to older Bull and Female Art 25,000 years ago and Later Goddess and the Bull cults like Catal Huyuk?**
- **Sedentism and the Creation of goddesses around 12,000 years ago as well as male gods after 7,000 years ago.**
- **Alcohol, where Agriculture and Religion Become one? Such as Gobekli Tepe's Ritualistic use of Grain as Food and Ritual Drink**
- **Epigravettians Join the Religious Partying at Gobekli Tepe?**
- **Neolithic Ritual Sites with T-Pillars and other Cultic Pillars**
- **Paganism: Goddesses around 12,000 years ago then Male Gods after 7,000 years ago**

- **First Patriarchy: Split of Women's Status around 12,000 years ago & First Hierarchy: fall of Women's Status around 5,000 years ago.**
- **Natufians: an Ancient People at the Origins of Agriculture and Sedentary Life**
- **J DNA and the Spread of Agricultural Religion (paganism)**
- **Paganism: an approximately 12,000-year-old belief system**
- **Paganism 12,000 years old: related to "Anarchism and Socialism" (Pre-Capitalism)**
- **Shaman burial in Israel 12,000 years ago and the Shamanism Phenomena**
- **Need to Mythicized: gods and goddesses**
- **12,000 – 7,000 Years Ago – Paleo-Indian Culture (The Americas)**
- **Ancient Egypt: Epipaleolithic, Neolithic, and Predynastic from 12,000 to 5,000 years ago**
- **12,000 – 2,000 Years Ago – Indigenous-Scandinavians (Nordic)**
- **Norse did not wear helmets with horns?**
- **Pre-Pottery Neolithic Skull Cult around 11,500 to 8,400 Years Ago?**
- **Masked Head Hunters of "Karahan Tepe" 11,400-year-old monumental site from the Pre-Pottery Neolithic A to B**
- **10,400 – 10,100 Years Ago, in Turkey the Nevail Cori Religious Settlement**
- **Evolution of human skin color, white-skin is really under 10,000 years old?**
- **Indo-European language Trees fit an Agricultural expansion from Anatolia beginning 8,000 – 9,500 years ago**
- **9,000-6,500 Years Old Submerged Pre-Pottery/Pottery Neolithic Ritual Settlements off Israel's Coast**
- **Catal Huyuk "first religious designed city" around 9,500 to 7,700 years ago (Turkey)**
- **Goddesses/Demigoddesses/Grandmother-Mother Ancestor Spirits from Catal Huyuk?**
- **Cultic Hunting at Catal Huyuk "first religious designed city"**
- **Special Items and Art as well as Special Elite Burials at Catal Huyuk**
- **New Rituals and Violence with the appearance of Pottery and People?**
- **Haplogroup N and its related Uralic Languages and Cultures**
- **Ainu people, Sámi people, Native Americans, the Ancient North Eurasians, and Paganistic-Shamanism with Totemism**
- **Ideas, Technology and People from Turkey, Europe, to China and Back again 9,000 to 5,000 years ago?**

- **First Pottery of Europe and the Related Cultures**
- **9,000 years old Neolithic Artifacts Judean Desert and Hills Israel**
- **9,000-7,000 years-old Sex and Death Rituals: Cult Sites in Israel, Jordan, and the Sinai**
- **9,000-8500 year old Horned Female shaman Bad Dürrenberg Germany**
- **Neolithic Jewelry and the Spread of Farming in Europe Emerging out of West Turkey**
- **8,600-year-old Tortoise Shells in Neolithic graves in central China have Early Writing and Shamanism**
- **Swing of the Mace: the rise of Elite, Forced Authority, and Inequality begin to Emerge 8,500 years ago?**
- **Migrations and Changing Europeans Beginning around 8,000 Years Ago**
- **My "Steppe-Anatolian-Kurgan hypothesis" 8,000/7,000 years ago**
- **Around 8,000-year-old Shared Idea of the Mistress of Animals, "Ritual" Motif**
- **Pre-Columbian Red-Paint (red ochre) Maritime Archaic Culture 8,000-3,000 years ago**
- **7,522-6,522 years ago Linear Pottery culture which I think relates to Arcane Capitalism's origins**
- **Arcane Capitalism: Primitive socialism, Primitive capital, Private ownership, Means of production, Market capitalism, Class discrimination, and Petite bourgeoisie (smaller capitalists)**
- **7,500-4,750 years old Ritualistic Cucuteni-Trypillian culture of Moldova, Romania, and Ukraine**
- **Roots of a changing early society 7,200-6,700 years ago Jordan and Israel**
- **Agriculture religion (Paganism) with farming reached Britain between about 7,000 to 6,500 or so years ago and seemingly expressed in things like Western Europe's Long Barrows**
- **My Thoughts on Possible Migrations of "R" DNA and Proto-Indo-European?**
- **"Millet" Spreading from China 7,022 years ago to Europe and related Language may have Spread with it leading to Proto-Indo-European**
- **Proto-Indo-European (PIE), ancestor of Indo-European languages: DNA, Society, Language, and Mythology**

- **The Dnieper–Donets culture and Asian varieties of Millet from China to the Black Sea region of Europe by 7,022 years ago**
- **Kurgan 6,000 years ago/dolmens 7,000 years ago: funeral, ritual, and other?**
- **7,020 to 6,020-year-old Proto-Indo-European Homeland of Urheimat or proposed home of their Language and Religion**
- **Ancient Megaliths: Kurgan, Ziggurat, Pyramid, Menhir, Trilithon, Dolman, Kromlech, and Kromlech of Trilithons**
- **The Mytheme of Ancient North Eurasian Sacred-Dog belief and similar motifs are found in Indo-European, Native American, and Siberian comparative mythology**
- **Elite Power Accumulation: Ancient Trade, Tokens, Writing, Wealth, Merchants, and Priest-Kings**
- **Sacred Mounds, Mountains, Kurgans, and Pyramids may hold deep connections?**
- **Between 7,000-5,000 Years ago, rise of unequal hierarchy elite, leading to a "birth of the State" or worship of power, strong new sexism, oppression of non-elites, and the fall of Women's equal status**
- **Paganism 7,000-5,000 years old: related to "Anarchism and Socialism" (Capitalism) (World War 0) Elite & their slaves**
- **Hell and Underworld mythologies starting maybe as far back as 7,000 to 5,000 years ago with the Proto-Indo-Europeans?**
- **The First Expression of the Male God around 7,000 years ago?**
- **White (light complexion skin) Bigotry and Sexism started 7,000 years ago?**
- **Around 7,000-year-old Shared Idea of the Divine Bird (Tutelary and/or Trickster spirit/deity), "Ritual" Motif**
- **Nekhbet an Ancient Egyptian Vulture Goddess and Tutelary Deity**
- **6,720 to 4,920 years old Ritualistic Hongshan Culture of Inner Mongolia with 5,000-year-old Pyramid Mounds and Temples**
- **First proto-king in the Balkans, Varna culture around 6,500 years ago?**
- **6,500–5,800 years ago in Israel Late Chalcolithic (Copper Age) Period in the Southern Levant Seems to Express Northern Levant Migrations, Cultural and Religious Transfer**
- **KING OF BEASTS: Master of Animals "Ritual" Motif, around 6,000 years old or older…**

- **Around 6000-year-old Shared Idea of the Solid Wheel & the Spoked Wheel-Shaped Ritual Motif**
- **“The Ghassulian Star,” a mysterious 6,000-year-old mural from Jordan; a Proto-Star of Ishtar, Star of Inanna or Star of Venus?**
- **Religious/Ritual Ideas, including goddesses and gods as well as ritual mounds or pyramids from Northeastern Asia at least 6,000 years old, seemingly filtering to Iran, Iraq, the Mediterranean, Europe, Egypt, and the Americas?**
- **Maykop (5,720–5,020 years ago) Caucasus region Bronze Age culture-related to Copper Age farmers from the south, influenced by the Ubaid period and Leyla-Tepe culture, as well as influencing the Kura-Araxes culture**
- **5-600-year-old Tomb, Mummy, and First Bearded Male Figurine in a Grave**
- **Kura-Araxes Cultural 5,520 to 4,470 years old DNA traces to the Canaanites, Arabs, and Jews**
- **Minoan/Cretan (Keftiu) Civilization and Religion around 5,520 to 3,120 years ago**
- **Evolution Of Science at least by 5,500 years ago**
- **5,500 Years old birth of the State, the rise of Hierarchy, and the fall of Women’s status**
- **“Jiroft culture” 5,100 – 4,200 years ago and the History of Iran**
- **Stonehenge: Paganistic Burial and Astrological Ritual Complex, England (5,100-3,600 years ago)**
- **Around 5,000-year-old Shared Idea of the “Tree of Life” Ritual Motif**
- **Complex rituals for elite, seen from China to Egypt, at least by 5,000 years ago**
- **Around 5,000 years ago: “Birth of the State” where Religion gets Military Power and Influence**
- **The Center of the World “Axis Mundi” and/or “Sacred Mountains” Mythology Could Relate to the Altai Mountains, Heart of the Steppe**
- **Progressed organized religion starts, an approximately 5,000-year-old belief system**
- **China’s Civilization between 5,000-3,000 years ago, was a time of war and class struggle, violent transition from free clans to a Slave or Elite society**
- **Origin of Logics is Naturalistic Observation at least by around 5,000 years ago.**
- **Paganism 5,000 years old: progressed organized religion and the state: related to “Anarchism and Socialism” (Kings and the Rise of the State)**

- **Ziggurats (multi-platform temples: 4,900 years old) to Pyramids (multi-platform tombs: 4,700 years old)**
- **Did a 4,520–4,420-year-old Volcano In Turkey Inspire the Bible God?**
- **Finland's Horned Shaman and Pre-Horned-God at least 4,500 years ago?**
- **4,000-year-Old Dolmens in Israel: A Connected Dolmen Religious Phenomenon?**
- **Creation myths: From chaos, Ex nihilo, Earth-diver, Emergence, World egg, and World parent**
- **Bronze Age "Ritual" connections of the Bell Beaker culture with the Corded Ware/Single Grave culture, which were related to the Yamnaya culture and Proto-Indo-European Languages/Religions**
- **Low Gods (Earth/ Tutelary deity), High Gods (Sky/Supreme deity), and Moralistic Gods (Deity enforcement/divine order)**
- **The exchange of people, ideas, and material-culture including, to me, the new god (Sky Father) and goddess (Earth Mother) religion between the Cucuteni-Trypillians and others which is then spread far and wide**
- **Koryaks: Indigenous People of the Russian Far East and Big Raven myths also found in Tlingit, Haida, Tsimshian, and other Indigenous People of North America**
- **42 Principles Of Maat (Egyptian Goddess of the justice) around 4,400 years ago, 2000 Years Before Ten Commandments**
- **"Happy Easter" Well Happy Eostre/Ishter**
- **4,320-3,820 years old "Shimao" (North China) site with Totemistic-Shamanistic Paganism and a Stepped Pyramid**
- **4,250 to 3,400 Year old Stonehenge from Russia: Arkaim?**
- **4,100-year-old beaker with medicinal & flowering plants in a grave of a woman in Scotland**
- **Early European Farmer ancestry, Kelif el Boroud people with the Cardial Ware culture, and the Bell Beaker culture Paganists too, spread into North Africa, then to the Canary Islands off West Africa**
- **Flood Accounts: Gilgamesh epic (4,100 years ago) Noah in Genesis (2,600 years ago)**
- **Paganism 4,000 years old: related to "Anarchism and Socialism" (First Moralistic gods, then the Origin time of Monotheism)**

- **When was the beginning: TIMELINE OF CURRENT RELIGIONS, which start around 4,000 years ago.**
- **Early Religions Thought to Express Proto-Monotheistic Systems around 4,000 years ago**
- **Kultepe? An archaeological site with a 4,000 years old women's rights document.**
- **Single God Religions (Monotheism) = "Man-o-theism" started around 4,000 years ago with the Great Sky Spirit/God Tiān (天)?**
- **Confucianism's Tiān (Shangdi god 4,000 years old): Supernaturalism, Pantheism or Theism?**
- **Yes, Your Male God is Ridiculous**
- **Mythology, a Lunar Deity is a Goddess or God of the Moon**
- **Sacred Land, Hills, and Mountains: Sami Mythology (Paganistic Shamanism)**
- **Horse Worship/Sacrifice: mythical union of Ruling Elite/Kingship and the Horse**
- **The Amorite/Amurru people's God Amurru "Lord of the Steppe", relates to the Origins of the Bible God?**
- **Bronze Age Exotic Trade Routes Spread Quite Far as well as Spread Religious Ideas with Them**
- **Sami and the Northern Indigenous Peoples Landscape, Language, and its Connection to Religion**
- **Prototype of Ancient Analemmatic Sundials around 3,900-3,150 years ago and a Possible Solar Connection to gods?**
- **Judaism is around 3,450 or 3,250 years old. ("Paleo-Hebrew" 3,000 years ago and Torah 2,500 years ago)**
- **The Weakening of Ancient Trade and the Strengthening of Religions around 3000 years ago?**
- **Are you aware that there are religions that worship women gods, explain now religion tears women down?**
- **Animistic, Totemistic, and Paganistic Superstition Origins of bible god and the bible's Religion.**
- **Myths and Folklore: "Trickster gods and goddesses"**
- **Jews, Judaism, and the Origins of Some of its Ideas**
- **An Old Branch of Religion Still Giving Fruit: Sacred Trees**

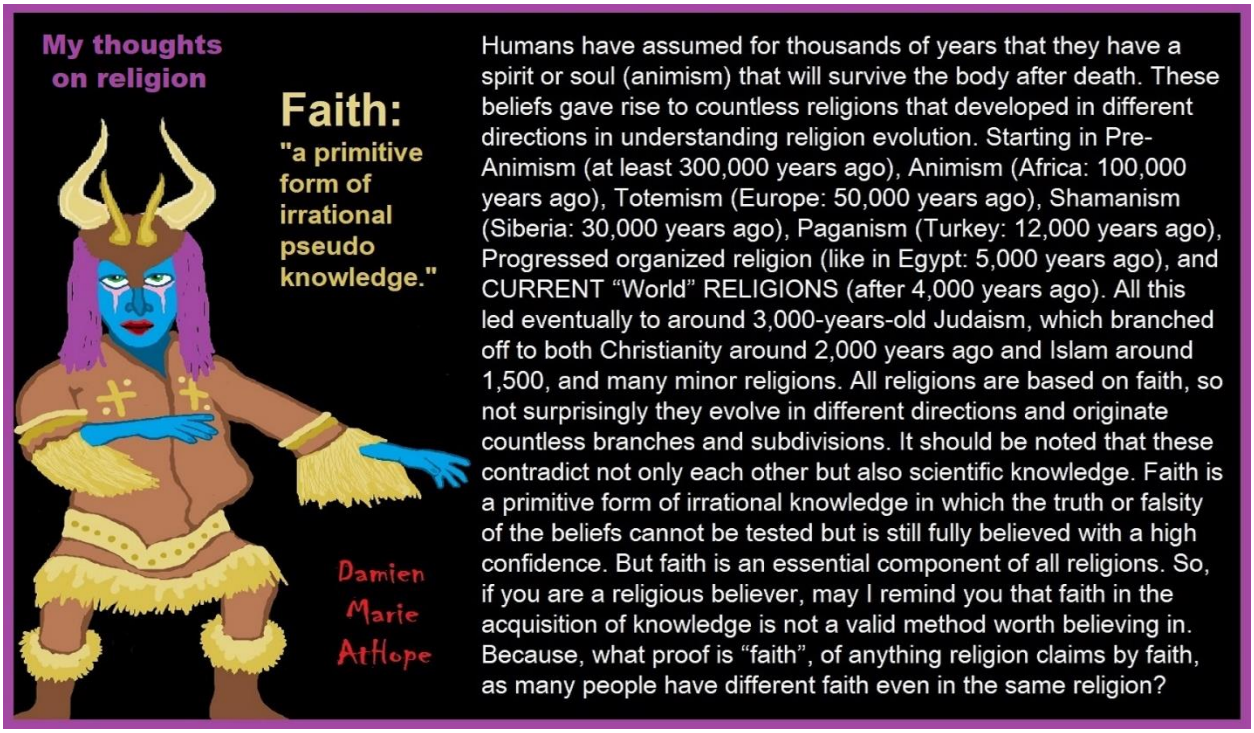
- **Dating the BIBLE: naming names and telling times (written less than 3,000 years ago, provable to 2,200 years ago)**
- **Did a Volcano Inspire the bible god?**
- **Yamnaya culture or at least Proto-Indo-European Languages/Religions may actually relate back to North Asia?**
- **The Amorite/Amurru people's God Amurru "Lord of the Steppe", relates to the Origins of the Bible God?**
- **Dené–Yeniseian language, Old Copper Complex, and Pre-Columbian Mound Builders?**
- **No "dinosaurs and humans didn't exist together just because some think they are in the bible itself"**
- **Sacred Shit and Sacred Animals?**
- **Everyone Killed in the Bible Flood? "Nephilim" (giants)?**
- **Hey, Damien dude, I have a question for you regarding "the bible" Exodus.**
- **Archaeology Disproves the Bible**
- **Bible Battle, Just More, Bible Babble**
- **The Jericho Conquest lie?**
- **Canaanites and Israelites?**
- **Accurate Account on how did Christianity Began?**
- **Let's talk about Christianity.**
- **So the 10 commandments isn't anything to go by either right?**
- **Misinformed christian**
- **Debunking Jesus?**
- **Paulism vs Jesus**
- **Ok, you seem confused so let's talk about Buddhism.**
- **Unacknowledged Buddhism: Gods, Savior, Demons, Rebirth, Heavens, Hells, and Terrorism**
- **His Foolishness The Dalai Lama**
- **Yin and Yang is sexist with an ORIGIN around 2,300 years ago?**
- **I Believe Archaeology, not Myths & Why Not, as the Religious Myths Already Violate Reason!**
- **Archaeological, Scientific, & Philosophic evidence shows the god myth is man-made nonsense.**

- **Aquatic Ape Theory/Hypothesis? As Always, Just Pseudoscience.**
- **Ancient Aliens Conspiracy Theorists are Pseudohistorians**
- **The Pseudohistoric and Pseudoscientific claims about "Bakoni Ruins" of South Africa**
- **Why do people think Religion is much more than supernaturalism and superstitionism?**
- **Religion is an Evolved Product**
- **Was the Value of Ancient Women Different?**
- **1000 to 1100 CE, human sacrifice Cahokia Mounds a pre-Columbian Native American site**
- **Feminist atheists as far back as the 1800s?**
- **Promoting Religion as Real is Mentally Harmful to a Flourishing Humanity**
- **Screw All Religions and Their Toxic lies, they are all fraud**
- **Forget Religions' Unfounded Myths, I Have Substantiated "Archaeology Facts."**
- **Religion Dispersal throughout the World**
- **I Hate Religion Just as I Hate all Pseudoscience**
- **Exposing Scientology, Eckankar, Wicca and Other Nonsense?**
- **Main deity or religious belief systems**
- **Quit Trying to Invent Your God From the Scraps of Science.**
- **Archaeological, Scientific, & Philosophic evidence shows the god myth is man-made nonsense.**
- **Ancient Alien Conspiracy Theorists: Misunderstanding, Rhetoric, Misinformation, Fabrications, and Lies**
- **Misinformation, Distortion, and Pseudoscience in Talking with a Christian Creationist**
- **Judging the Lack of Goodness in Gods, Even the Norse God Odin**
- **Challenging the Belief in God-like Aliens and Gods in General**
- **A Challenge to Christian use of Torture Devices?**
- **Yes, Hinduism is a Religion**
- **Trump is One of the Most Reactionary Forces of Far-right Christian Extremism**
- **Was the Bull Head a Symbol of God? Yes!**
- **Primate Death Rituals**
- **Christian – "God and Christianity are objectively true"**

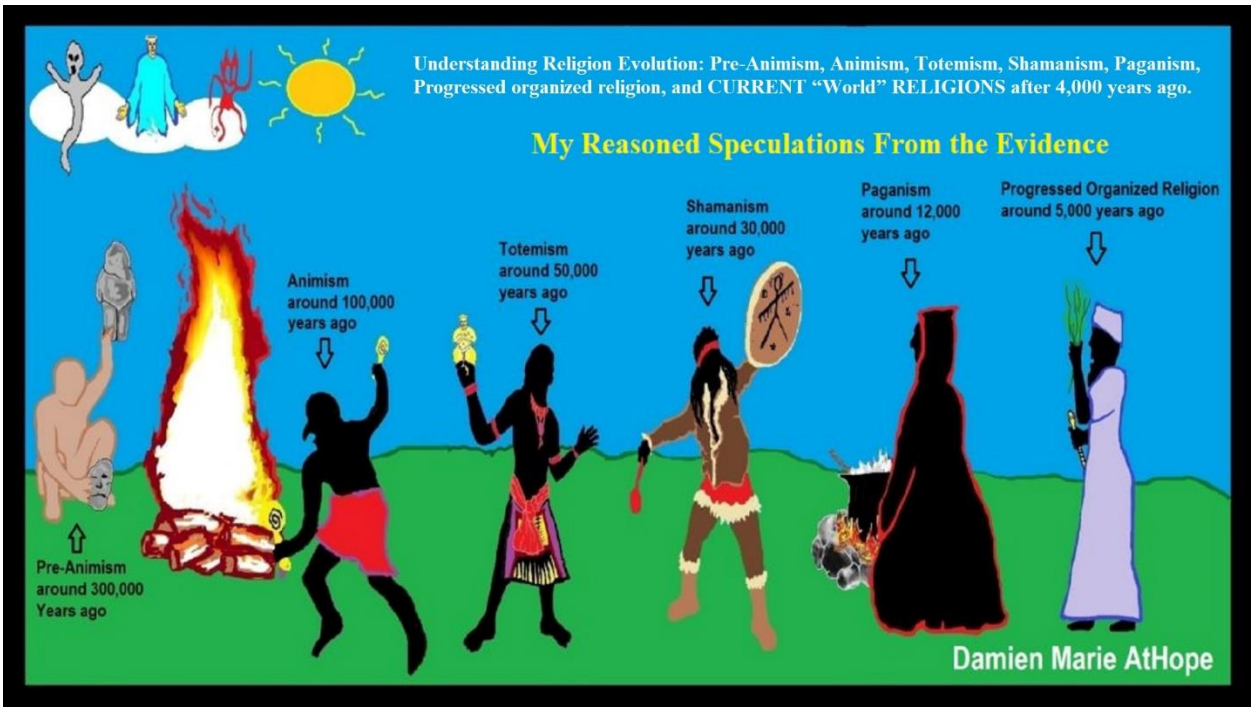
- **Australopithecus afarensis Death Ritual?**
- **You Claim Global Warming is a Hoax?**
- **Doubter of Science and Defamer of Atheists?**
- **I think that sounds like the Bible?**
- **History of the Antifa ("anti-fascist") Movements**
- **Indianapolis Anti-Blasphemy Laws #Free Soheil Rally**
- **Damien, you repeat the golden rule in so many forms then you say religion is dogmatic?**
- **Science is a Trustable Methodology whereas Faith is not Trustable at all!**
- **Was I ever a believer, before I was an atheist?**
- **Atheists rise in reason**
- **Mistrust of science?**
- **Open to Talking About the Definition of 'God'? But first, we address Faith.**
- **'United Monarchy' full of splendor and power – Saul, David, and Solomon? Most likely not.**
- **Is there EXODUS ARCHAEOLOGY? The short answer is "no."**
- **Lacking Proof of Bigfoots, Unicorns, and Gods is Just a Lack of Research?**
- **Religion and Politics: Faith Beliefs vs. Rational Thinking**
- **Hammer of Truth that lying pig RELIGION: challenged by an archaeologist**
- **"The Hammer of Truth" -ontology question- What do You Mean by That?**
- **Navigation of a bad argument: Ad Hominem vs. Attack**
- **Why is it Often Claimed that Gods have a Gender?**
- **Why are basically all monotheistic religions ones that have a male god?**
- **Shifting through the Claims in support of Faith**
- **Dear Mr. AtHope, The 20th Century is an Indictment of Secularism and a Failed Atheist Century**
- **An Understanding of the Worldwide Statistics and Dynamics of Terrorist Incidents and Suicide Attacks**
- **Intoxication and Evolution? Addressing and Assessing the "Stoned Ape" or "Drunken Monkey" Theories as Catalysts in Human Evolution**
- **Sacred Menstrual cloth? Inanna's knot, Isis knot, and maybe Ma'at's feather?**
- **Damien, why don't the Hebrews accept the bible stories?**
- **Dealing with a Troll and Arguing Over Word Meaning**

- **Knowledge without Belief? Justified beliefs or disbeliefs worthy of Knowledge?**
- **Afrocentrism and African Religions**
- **Crecganford @crecganford offers history & stories of the people, places, gods, & culture**
- **Empiricism-Denier?**

I am not an academic. I am a revolutionary that teaches in public, in places like social media, and in the streets. I am not a leader by some title given but from my commanding leadership style of simply to start teaching everywhere to everyone, all manner of positive education.



Damien Marie AtHope's Art



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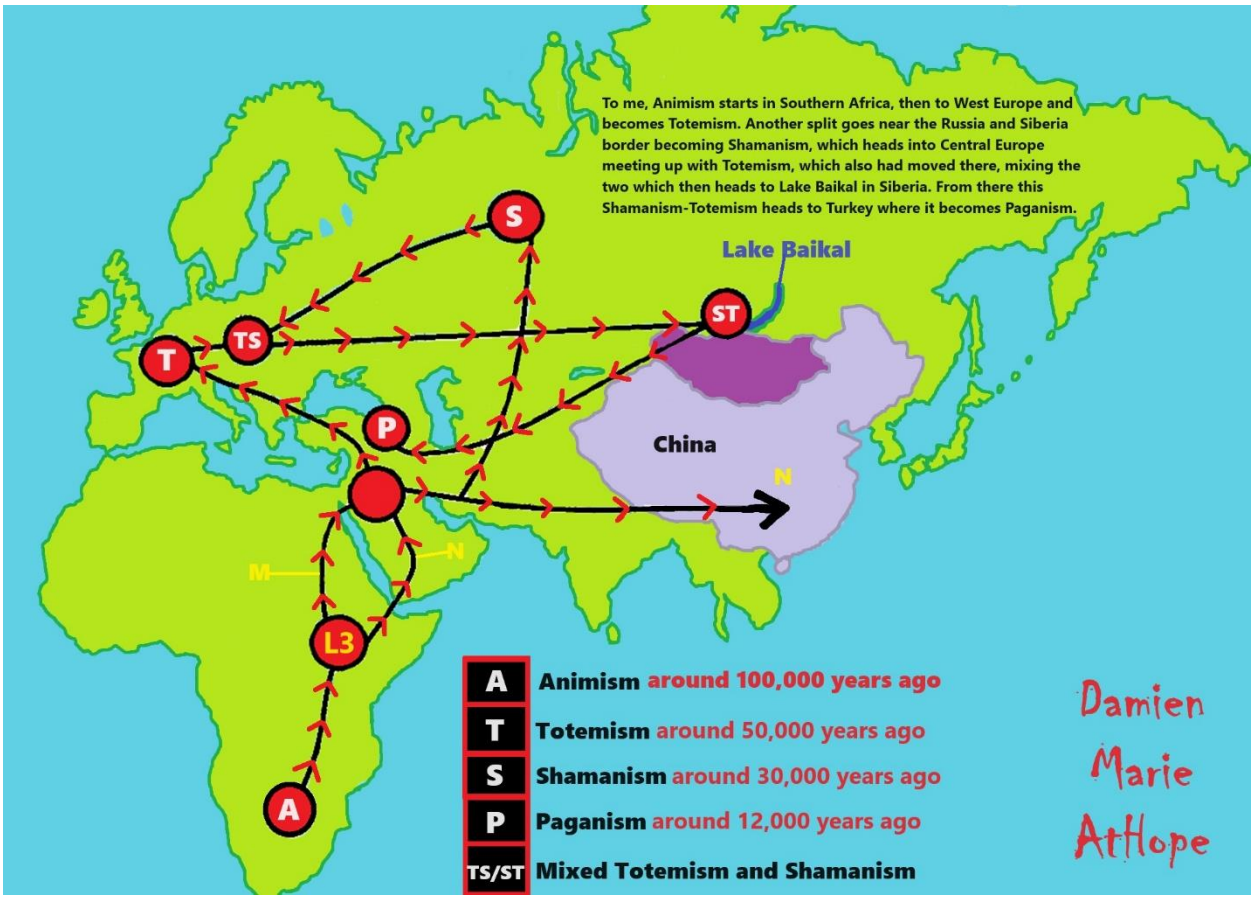


Damien Marie AtHope's Art

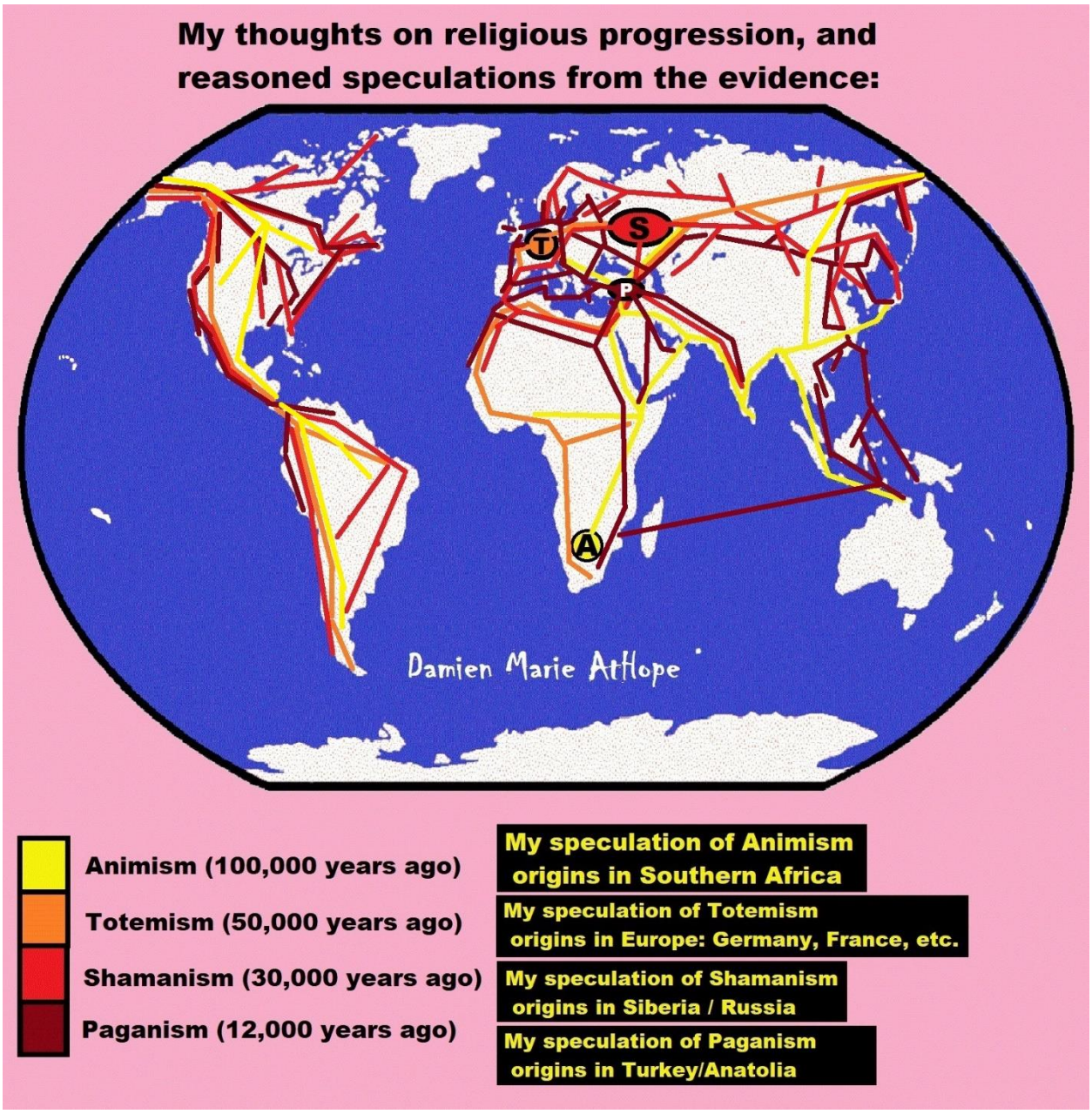
To me, Animism starts in Southern Africa, then to West Europe, and becomes Totemism. Another split goes near the Russia and Siberia border becoming Shamanism, which heads into Central Europe meeting up with Totemism, which also had moved there, mixing the two which then heads to Lake Baikal in Siberia. From there this Shamanism-Totemism heads to Turkey where it becomes Paganism.

My thoughts on the Evolution of Religion: from Animism to Paganism

Philosophy to the Rescue: explaining Reason, Logic, Evidence, Truth, Certainty, Reality, and Science

Talking about "Religion and Deity Evolution" on Twitter (X) Questions and Answers

You can't change people, by reason and evidence. WRONG, I do it all the time.



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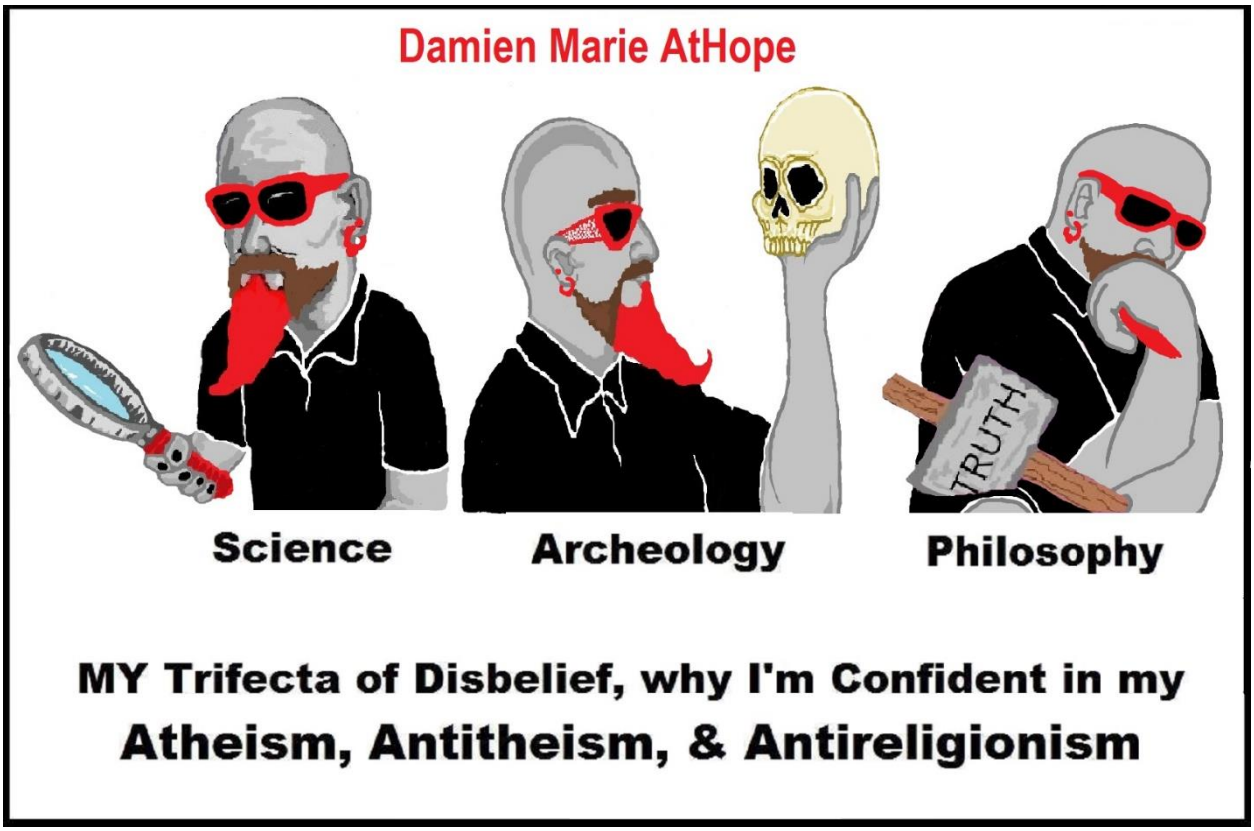

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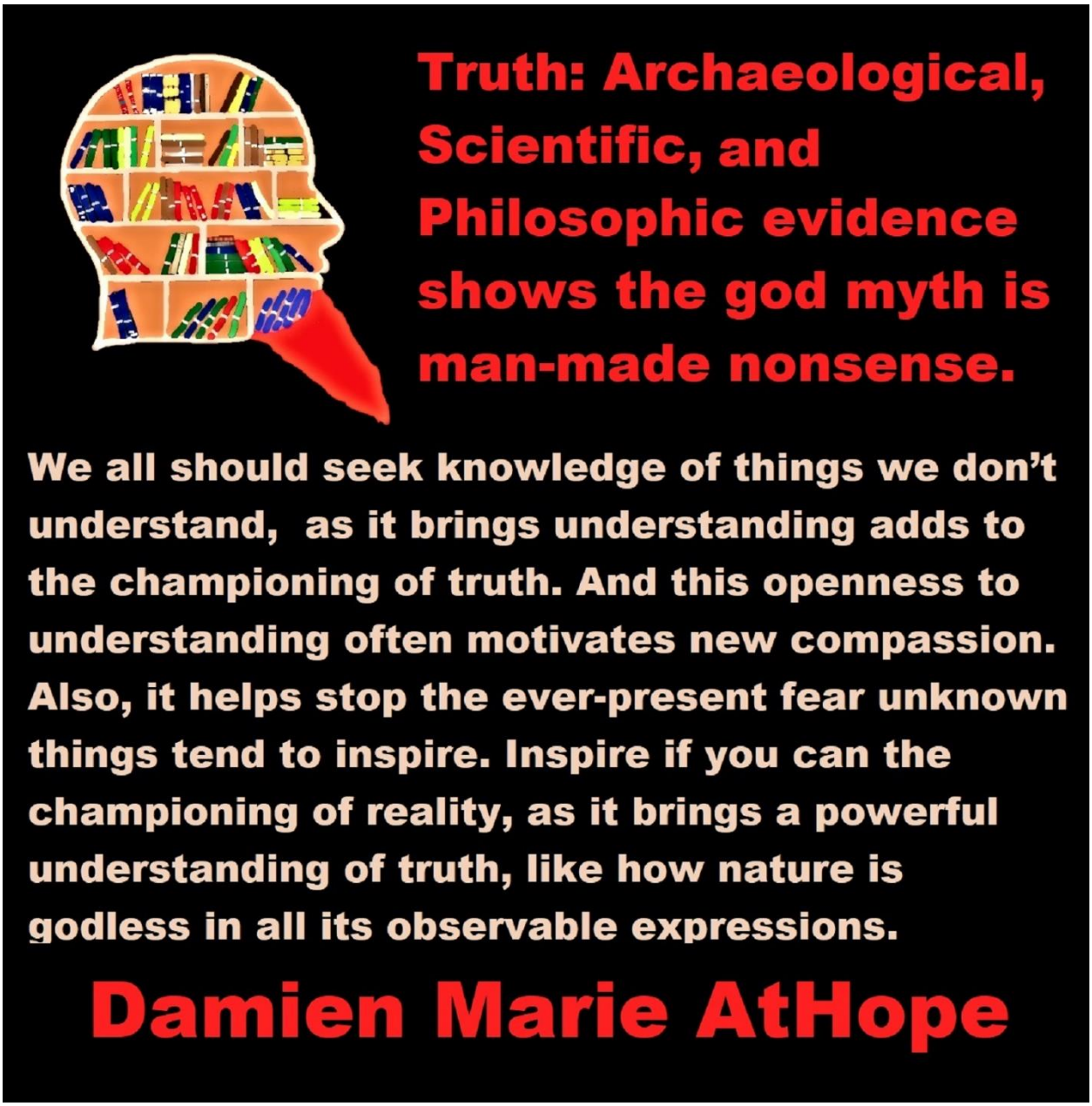

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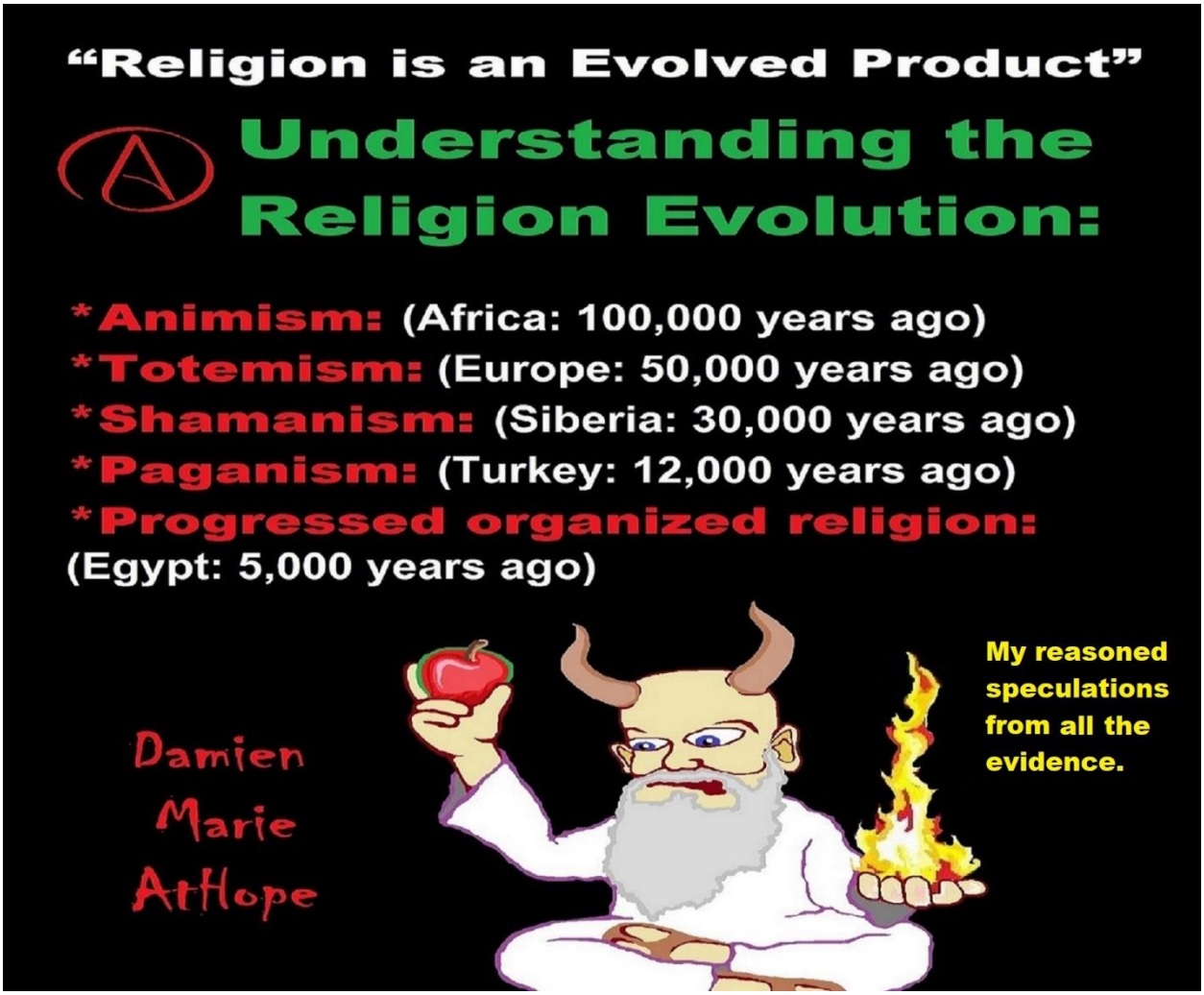

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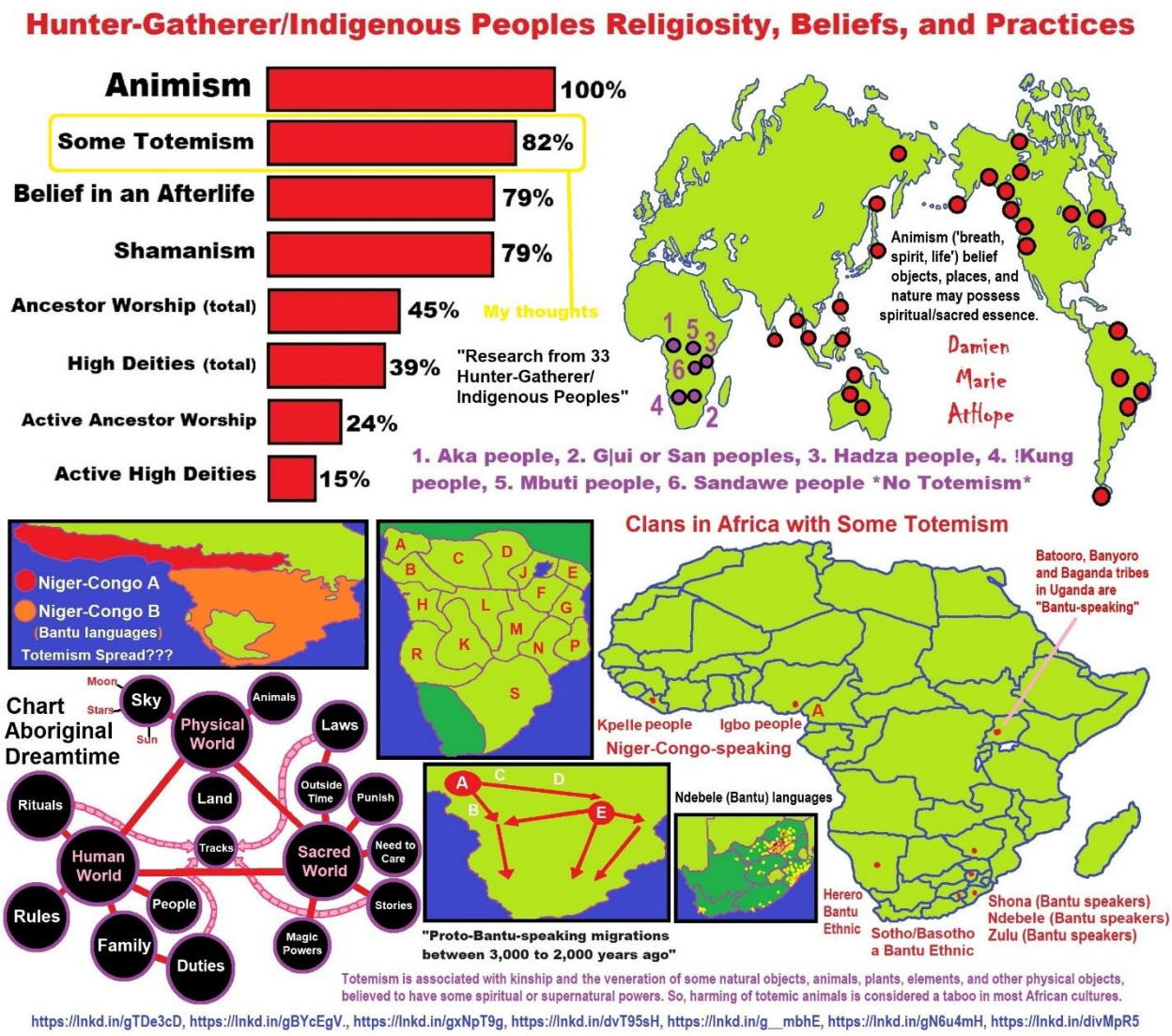

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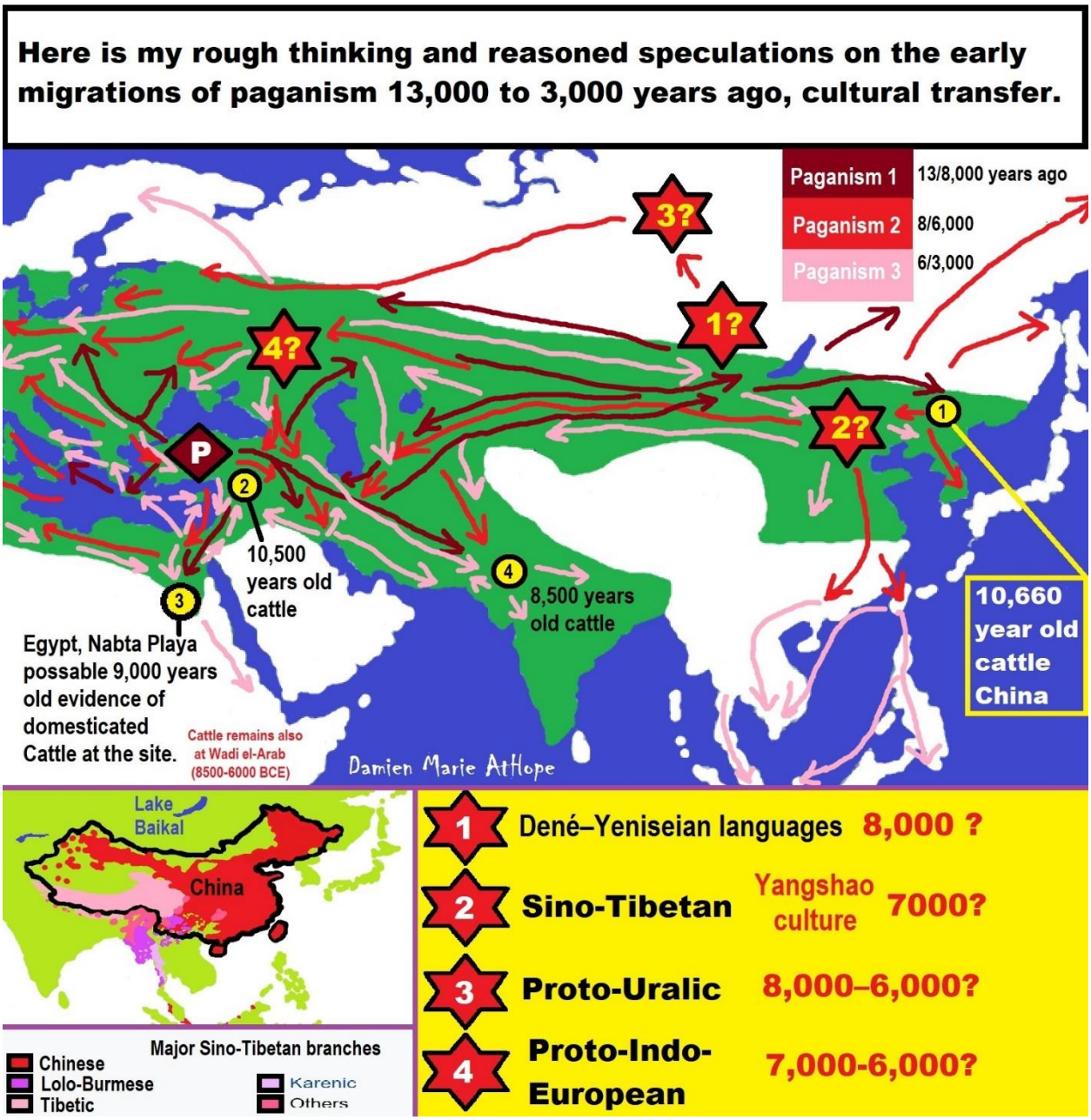
Not all "Religions" or "Religious Persuasions" have a god(s) but All can be said to believe in some imaginary beings or imaginary things like spirits, afterlives, etc.

Animism, Totemism, Shamanism, and Paganism



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Paganism? Siberian Shamanism migrated to Turkey and then emerged as Paganism because of Agriculture.

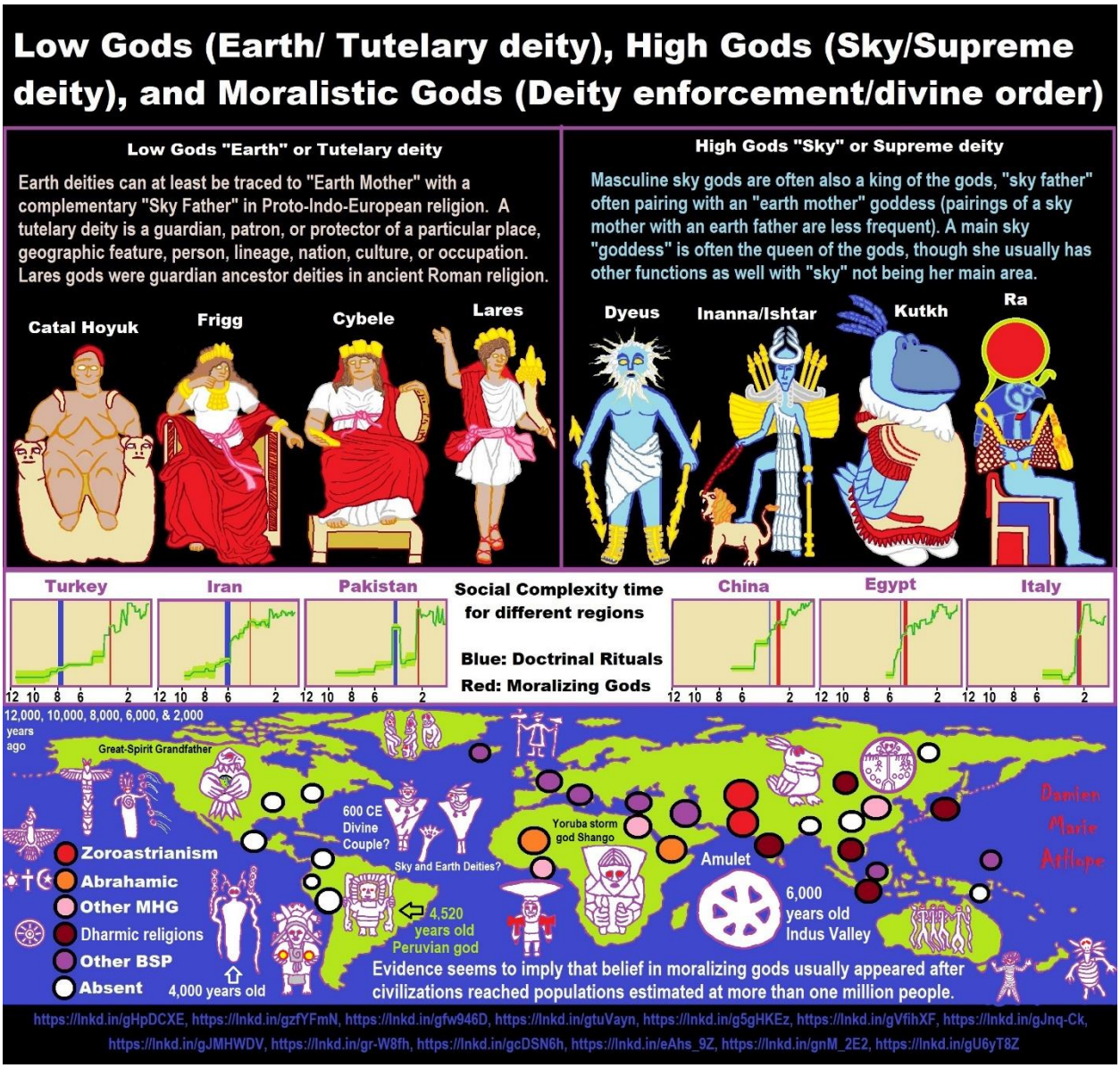
Paganism 12,000-4,000 years old

12,000-7,000 years old: related to (Pre-Capitalism)

7,000-5,000 years old: related to (Capitalism) (World War 0) Elite and their slaves!

5,000 years old: related to (Kings and the Rise of the State)

4,000 years old: related to (First Moralistic gods, then the Origin time of Monotheism)



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Low Gods "Earth" or Tutelary deity and High Gods "Sky" or Supreme deity

"An **Earth goddess** is a deification of the Earth. Earth goddesses are often associated with the "chthonic" deities of the underworld. Ki and Ninhursag are Mesopotamian earth goddesses. In Greek mythology, the Earth is personified as Gaia, corresponding to Roman Terra, Indic Prithvi/Bhūmi, etc. traced to an "Earth Mother" complementary to the "Sky Father" in Proto-Indo-European religion. Egyptian mythology exceptionally has a sky goddess and an Earth god." ref

"A **mother goddess** is a goddess who represents or is a personification of nature, motherhood, fertility, creation, destruction or who embodies the bounty of the Earth. When equated with the Earth or the natural world, such goddesses are sometimes referred to as **Mother Earth** or as the **Earth Mother**. In some religious traditions or movements, **Heavenly Mother** (also referred to as *Mother in Heaven* or **Sky Mother**) is the wife or feminine counterpart of the Sky father or God the Father." ref

"Any masculine sky god is often also king of the gods, taking the position of patriarch within a pantheon. Such king gods are collectively categorized as "sky father" deities, with a polarity between sky and earth often being expressed by pairing a "sky father" god with an "earth mother" goddess (pairings of a sky *mother* with an earth *father* are less frequent). A main sky goddess is often the queen of the gods and may be an air/sky goddess in her own right, though she usually has other functions as well with "sky" not being her main. In antiquity, several sky goddesses in ancient Egypt, Mesopotamia, and the Near East were called Queen of Heaven. Neopagans often apply it with impunity to sky goddesses from other regions who were never associated with the term historically. The sky often has important religious significance. Many religions, both polytheistic and monotheistic, have deities associated with the sky." ref

"In comparative mythology, **sky father** is a term for a recurring concept in polytheistic religions of a sky god who is addressed as a "father", often the father of a pantheon and is often either a reigning or former King of the Gods. The concept of "sky father" may also be taken to include Sun gods with similar characteristics, such as Ra. The concept is complementary to an "earth mother". "Sky Father" is a direct translation of the Vedic *Dyaus Pita*, etymologically descended from the same Proto-Indo-European deity name as the Greek *Zeûs Pater* and Roman *Jupiter* and Germanic Týr, Tir or Tiwaz, all of which are reflexes of the same Proto-Indo-European deity's name, **Dyēus*

Ph₂tḗr. While there are numerous parallels adduced from outside of Indo-European mythology, there are exceptions (e.g. In Egyptian mythology, Nut is the sky mother and Geb is the earth father)." ref

Tutelary deity

"A **tutelary** (also **tutelar**) is a deity or spirit who is a guardian, patron, or protector of a particular place, geographic feature, person, lineage, nation, culture, or occupation. The etymology of "tutelary" expresses the concept of safety and thus of guardianship. In late Greek and Roman religion, one type of tutelary deity, the *genius*, functions as the personal deity or *daimon* of an individual from birth to death. Another form of personal tutelary spirit is the familiar spirit of European folklore." ref

"A **tutelary** (also **tutelar**) in Korean shamanism, *jangseung* and *sotdae* were placed at the edge of villages to frighten off demons. They were also worshiped as deities. Seonangshin is the patron deity of the village in Korean tradition and was believed to embody the Seonangdang. In Philippine animism, *Diwata* or *Lambana* are deities or spirits that inhabit sacred places like mountains and mounds and serve as guardians. Such as: Maria Makiling is the deity who guards Mt. Makiling and Maria Cacao and Maria Sinukuan. In Shinto, the spirits, or *kami*, which give life to human bodies come from nature and return to it after death. Ancestors are therefore themselves tutelaries to be worshiped. And similarly, Native American beliefs such as Tonás, tutelary animal spirit among the Zapotec and Totems, familial or clan spirits among the Ojibwe, can be animals." ref

"A **tutelary** (also **tutelar**) in Austronesian beliefs such as: Atua (gods and spirits of the Polynesian peoples such as the Māori or the Hawaiians), Hanitu (Bunun of Taiwan's term for spirit), Hyang (Kawi, Sundanese, Javanese, and Balinese Supreme Being, in ancient Java and Bali mythology and this spiritual entity, can be either divine or ancestral), Kaitiaki (New Zealand Māori term used for the concept of guardianship, for the sky, the sea, and the land), Kawas (mythology) (divided into 6 groups: gods, ancestors, souls of the living, spirits of living things, spirits of lifeless objects, and ghosts), Tiki (Māori mythology, **Tiki** is the first man created by either Tūmatauenga or Tāne and represents deified ancestors found in most Polynesian cultures). " ref, ref, ref, ref, ref, ref, ref

Mesopotamian Tutelary Deities can be seen as ones related to City-States

“Historical city-states included Sumerian cities such as Uruk and Ur; Ancient Egyptian city-states, such as Thebes and Memphis; the Phoenician cities (such as Tyre and Sidon); the five Philistine city-states; the Berber city-states of the Garamantes; the city-states of ancient Greece (the poleis such as Athens, Sparta, Thebes, and Corinth); the Roman Republic (which grew from a city-state into a vast empire); the Italian city-states from the Middle Ages to the early modern period, such as Florence, Siena, Ferrara, Milan (which as they grew in power began to dominate neighboring cities) and Genoa and Venice, which became powerful thalassocracies; the Mayan and other cultures of pre-Columbian Mesoamerica (including cities such as Chichen Itza, Tikal, Copán and Monte Albán); the central Asian cities along the Silk Road; the city-states of the Swahili coast; Ragusa; states of the medieval Russian lands such as Novgorod and Pskov; and many others.” ref

“The **Uruk period** (ca. 4000 to 3100 BCE; also known as **Protoliterate period**) of Mesopotamia, named after the Sumerian city of Uruk, this period saw the emergence of urban life in Mesopotamia and the Sumerian civilization. City-States like Uruk and others had a patron **tutelary** City Deity along with a Priest-King.” ref

“Chinese folk religion, both past, and present, includes myriad tutelary deities. Exceptional individuals, highly cultivated sages, and prominent ancestors can be deified and honored after death. Lord Guan is the patron of military personnel and police, while Mazu is the patron of fishermen and sailors. Such as Tu Di Gong (Earth Deity) is the tutelary deity of a locality, and each individual locality has its own Earth Deity and Cheng Huang Gong (City God) is the guardian deity of an individual city, worshipped by local officials and locals since imperial times.” ref

“A **tutelary** (also **tutelar**) in Hinduism, personal tutelary deities are known as ishta-devata, while family tutelary deities are known as Kuladevata. Gramadevata are guardian deities of villages. Devas can also be seen as tutelary. Shiva is the patron of yogis and renunciants. City goddesses include: Mumbadevi (Mumbai), Sachchika (Osian); Kuladevis include: Ambika (Porwad), and Mahalakshmi. In NorthEast India Meitei mythology and religion (Sanamahism) of Manipur, there are various types of tutelary deities, among which Lam Lais are the most predominant ones. Tibetan Buddhism has Yidam as a tutelary deity. Dakini is the patron of those who seek knowledge.” ref

“A **tutelary** (also **tutelar**) The Greeks also thought deities guarded specific places: for instance, Athena was the patron goddess of the city

of Athens. Socrates spoke of hearing the voice of his personal spirit or *daimonion*:
You have often heard me speak of an oracle or sign which comes to me ... . This sign I have had ever since I was a child. The sign is a voice which comes to me and always forbids me to do something which I am going to do, but never commands me to do anything, and this is what stands in the way of my being a politician." ref

"Tutelary deities who guard and preserve a place or a person are fundamental to ancient Roman religion. The tutelary deity of a man was his Genius, that of a woman her Juno. In the Imperial era, the Genius of the Emperor was a focus of Imperial cult. An emperor might also adopt a major deity as his personal patron or tutelary, as Augustus did Apollo. Precedents for claiming the personal protection of a deity were established in the Republican era, when for instance the Roman dictator Sulla advertised the goddess Victory as his tutelary by holding public games *(ludi)* in her honor." ref

"Each town or city had one or more tutelary deities, whose protection was considered particularly vital in time of war and siege. Rome itself was protected by a goddess whose name was to be kept ritually secret on pain of death (for a supposed case, see Quintus Valerius Soranus). The Capitoline Triad of Juno, Jupiter, and Minerva were also tutelaries of Rome. The Italic towns had their own tutelary deities. Juno often had this function, as at the Latin town of Lanuvium and the Etruscan city of Veii, and was often housed in an especially grand temple on the *arx* (citadel) or other prominent or central location. The tutelary deity of Praeneste was Fortuna, whose oracle was renowned." ref

"The Roman ritual of *evocatio* was premised on the belief that a town could be made vulnerable to military defeat if the power of its tutelary deity were diverted outside the city, perhaps by the offer of superior cult at Rome. The depiction of some goddesses such as the *Magna Mater* (Great Mother, or Cybele) as "tower-crowned" represents their capacity to preserve the city. A town in the provinces might adopt a deity from within the Roman religious sphere to serve as its guardian, or syncretize its own tutelary with such; for instance, a community within the *civitas* of the Remi in Gaul adopted Apollo as its tutelary, and at the capital of the Remi (present-day Rheims), the tutelary was Mars Camulus." ref

Household deity (a kind of or related to a Tutelary deity)

"A **household deity** is a deity or spirit that protects the home, looking after the entire household or certain key members. It has been a common belief in paganism as well as in folklore across many parts of the world. Household deities fit into two types; firstly, a specific deity – typically a goddess – often referred to as a **hearth goddess** or **domestic goddess** who is associated with the home and hearth, such as the ancient Greek Hestia." ref

"The second type of household deities are those that are not one singular deity, but a type, or species of animistic deity, who usually have lesser powers than major deities. This type was common in the religions of antiquity, such as the Lares of ancient Roman religion, the Gashin of Korean shamanism, and Cofgodas of Anglo-Saxon paganism. These survived Christianisation as fairy-like creatures existing in folklore, such as the Anglo-Scottish Brownie and Slavic Domovoy." ref

"Household deities were usually worshipped not in temples but in the home, where they would be represented by small idols (such as the teraphim of the Bible, often translated as "household gods" in Genesis 31:19 for example), amulets, paintings, or reliefs. They could also be found on domestic objects, such as cosmetic articles in the case of Tawaret. The more prosperous houses might have a small shrine to the household god(s); the lararium served this purpose in the case of the Romans. The gods would be treated as members of the family and invited to join in meals, or be given offerings of food and drink." ref

"In many religions, both ancient and modern, a god would preside over the home. Certain species, or types, of household deities, existed. An example of this was the Roman Lares. Many European cultures retained house spirits into the modern period. Some examples of these include:

- Brownie (Scotland and England) or Hob (England) / Kobold (Germany) / Goblin / Hobgoblin
- Domovoy (Slavic)
- Nisse (Norwegian or Danish) / Tomte (Swedish) / Tonttu (Finnish)
- Húsvættir (Norse)" ref

"Although the cosmic status of household deities was not as lofty as that of the Twelve Olympians or the Aesir, they were also jealous of their dignity and also had to be appeased with shrines and offerings, however humble. Because of their immediacy they had arguably more influence on the day-to-day affairs of men than the remote gods did. Vestiges of their worship persisted long after Christianity and other major religions extirpated nearly every trace of the major pagan pantheons. Elements of the practice can be seen even today, with Christian

accretions, where statues to various saints (such as St. Francis) protect gardens and grottos. Even the gargoyles found on older churches, could be viewed as guardians partitioning a sacred space." ref

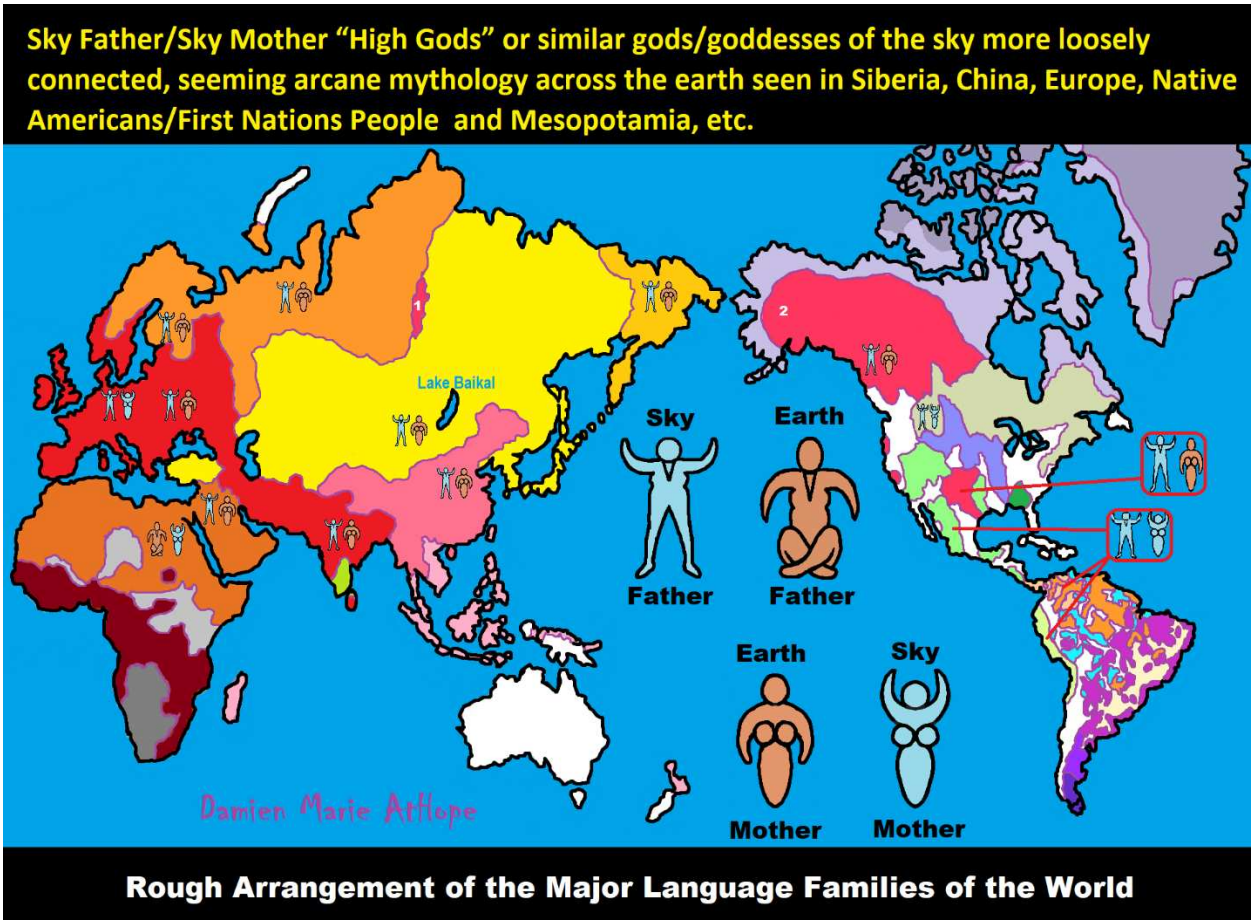
"For centuries, Christianity fought a mop-up war against these lingering minor pagan deities, but they proved tenacious. For example, Martin Luther's *Tischreden* have numerous – quite serious – references to dealing with kobolds. Eventually, rationalism and the Industrial Revolution threatened to erase most of these minor deities, until the advent of romantic nationalism rehabilitated them and embellished them into objects of literary curiosity in the 19th century. Since the 20th century this literature has been mined for characters for role-playing games, video games, and other fantasy personae, not infrequently invested with invented traits and hierarchies somewhat different from their mythological and folkloric roots." ref

"In contradistinction to both Herbert Spencer and Edward Burnett Tylor, who defended theories of animistic origins of ancestor worship, Émile Durkheim saw its origin in totemism. In reality, this distinction is somewhat academic, since totemism may be regarded as a particularized manifestation of animism, and something of a synthesis of the two positions was attempted by Sigmund Freud. In Freud's *Totem and Taboo*, both totem and taboo are outward expressions or manifestations of the same psychological tendency, a concept which is complementary to, or which rather reconciles, the apparent conflict. Freud preferred to emphasize the psychoanalytic implications of the reification of metaphysical forces, but with particular emphasis on its familial nature. This emphasis underscores, rather than weakens, the ancestral component." ref

"William Edward Hearn, a noted classicist, and jurist, traced the origin of domestic deities from the earliest stages as an expression of animism, a belief system thought to have existed also in the neolithic, and the forerunner of Indo-European religion. In his analysis of the Indo-European household, in Chapter II "The House Spirit", Section 1, he states:
The belief which guided the conduct of our forefathers was ... the spirit rule of dead ancestors." ref

"In Section 2 he proceeds to elaborate:
It is thus certain that the worship of deceased ancestors is a *vera causa*, and not a mere hypothesis. ... In the other European nations, the Slavs, the Teutons, and the Kelts, the House Spirit appears with no less distinctness. ... [T]he existence of that worship does not admit of doubt. ... The House Spirits had a multitude of other names which it is needless here to enumerate, but all of which are more or less expressive of their friendly relations with man. ... In [England] ... [h]e is the

Brownie. … In Scotland this same Brownie is well known. He is usually described as attached to particular families, with whom he has been known to reside for centuries, threshing the corn, cleaning the house, and performing similar household tasks. His favorite gratification was milk and honey." ref



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ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref

"These ideas are my speculations from the evidence."

I am still researching the "**god**'s origins" all over the world. So you know, it is very complicated but I am smart and willing to look, DEEP, if necessary, which going very deep does seem to be needed here, when trying to actually understand the evolution of gods and goddesses. I am sure of a few things and less sure of others, but even in stuff I am not fully grasping I still am slowly figuring it out, to explain it to others. But as I research more I am understanding things a little

better, though I am still working on understanding it all or something close and thus always figuring out more.

Sky Father/Sky God?

"Egyptian: (Nut) Sky Mother and **(Geb)** Earth Father" **(Egypt is different but similar)**

Turkic/Mongolic: (Tengri/Tenger Etseg) Sky Father and **(Eje/Gazar Eej)** Earth Mother ***Transeurasian***

Hawaiian: (Wākea) Sky Father and **(Papahānaumoku)** Earth Mother ***Austronesian***

New Zealand/ Māori: (Ranginui) Sky Father and **(Papatūānuku)** Earth Mother ***Austronesian***

Proto-Indo-European: (Dyḗus/Dyḗus ph₂tḗr) Sky Father and **(Dʰéǵʰōm/Pleth₂wih₁)** Earth Mother
Indo-Aryan: (Dyaus Pita) Sky Father and **(Prithvi Mata)** Earth Mother ***Indo-European***

Italic: (Jupiter) Sky Father and **(Juno)** Sky Mother ***Indo-European***
Etruscan: (Tinia**)** Sky Father and **(Uni)** Sky Mother ***Tyrsenian/Italy Pre–Indo-European***

Hellenic/Greek: (Zeus) Sky Father and **(Hera)** Sky Mother who started as an "Earth Goddess" ***Indo-European***

Nordic: (Dagr) Sky Father and **(Nótt)** Sky Mother ***Indo-European***

Slavic: (Perun) Sky Father and **(Mokosh)** Earth Mother ***Indo-European***

Illyrian: (Deipaturos) Sky Father and **(Messapic Damatura's "earth-mother" maybe)** Earth Mother ***Indo-European***

Albanian: (Zojz) Sky Father and **(?)** ***Indo-European***

Baltic: (Perkūnas) Sky Father and **(Saulė)** Sky Mother ***Indo-European***

Germanic: (Týr) Sky Father and **(?)** ***Indo-European***

Colombian-Muisca: (Bochica) Sky Father and **(Huythaca)** Sky Mother ***Chibchan***

Aztec: (Quetzalcoatl) Sky Father and **(Xochiquetzal)** Sky Mother ***Uto-Aztecan***

Incan: (Viracocha) Sky Father and **(Mama Runtucaya)** Sky Mother ***Quechuan***

China: (Tian/Shangdi) Sky Father and **(Dì)** Earth Mother ***Sino-Tibetan***

Sumerian, Assyrian and Babylonian: (An/Anu) Sky Father and **(Ki)** Earth Mother

Finnish: (Ukko) Sky Father and **(Akka)** Earth Mother ***Finno-Ugric***

Sami: (Horagalles) Sky Father and **(Ravdna)** Earth Mother ***Finno-Ugric***

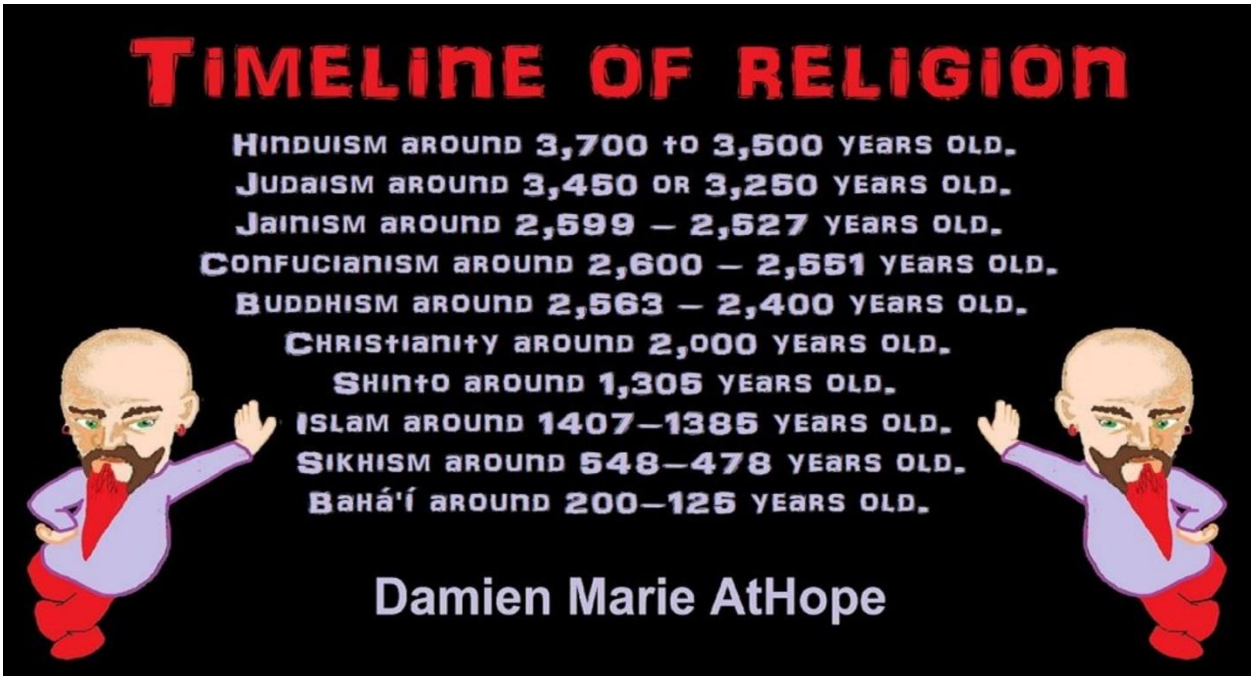
Puebloan-Zuni: (Ápoyan Ta'chu) Sky Father and **(Áwitelin Tsíta)** Earth Mother

Puebloan-Hopi: (Tawa) Sky Father and **(Kokyangwuti/Spider Woman/Grandmother)** Earth Mother ***Uto-Aztecan***

Puebloan-Navajo: (Tsohanoai) Sky Father and **(Estsanatlehi)** Earth Mother ***Na-Dene***

ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref, ref

Sky Father/Sky Mother "High Gods" or similar gods/goddesses of the sky more loosely connected, seeming arcane mythology across the earth seen in Siberia, China, Europe, Native Americans/First Nations People and Mesopotamia, etc.



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ref, ref

Hinduism around 3,700 to 3,500 years old. ref

Judaism around 3,450 or 3,250 years old. (The first writing in the bible was "Paleo-Hebrew" dated to **around 3,000 years ago Khirbet Qeiyafa** is the site of an ancient fortress city overlooking the Elah Valley. And many believe the religious Jewish texts were completed around 2,500) ref, ref

Judaism is around 3,450 or 3,250 years old. ("Paleo-Hebrew" 3,000 years ago and Torah 2,500 years ago)

"**Judaism** is an Abrahamic, its roots as an organized religion in the Middle East during the Bronze Age. Some scholars argue that modern Judaism evolved from Yahwism, the religion of ancient Israel and Judah, by the late 6th century BCE, and is thus considered to be one of the oldest monotheistic religions." ref

"**Yahwism** is the name given by modern scholars to the religion of ancient Israel, essentially polytheistic, with a plethora of gods and goddesses. Heading the pantheon was Yahweh, the national god of the Israelite kingdoms of Israel and Judah, with his consort, the goddess Asherah; below them were second-tier gods and goddesses such as Baal, Shamash, Yarikh, Mot, and Astarte, all of whom had their own priests and prophets and numbered royalty among

their devotees, and a third and fourth tier of minor divine beings, including the *mal'ak*, the messengers of the higher gods, who in later times became the angels of Judaism, Christianity and Islam. Yahweh, however, was not the 'original' god of Israel "Isra-El"; it is El, the head of the Canaanite pantheon, whose name forms the basis of the name "Israel", and none of the Old Testament patriarchs, the tribes of Israel, the Judges, or the earliest monarchs, have a Yahwistic theophoric name (i.e., one incorporating the name of Yahweh)." ref

"El is a Northwest Semitic word meaning "god" or "deity", or referring (as a proper name) to any one of multiple major ancient Near Eastern deities. A rarer form, *'ila*, represents the predicate form in Old Akkadian and in Amorite. The word is derived from the Proto-Semitic *ʔil-, meaning "god". Specific deities known as *'El* or *'Il* include the supreme god of the ancient Canaanite religion and the supreme god of East Semitic speakers in Mesopotamia's Early Dynastic Period. ʾĒl is listed at the head of many pantheons. In some Canaanite and Ugaritic sources, ʾĒl played a role as father of the gods, of creation, or both. For example, in the Ugaritic texts, *ʾil mlk* is understood to mean "ʾĒl the King" but *ʾil hd* as "the god Hadad". The Semitic root *ʾlh* (Arabic *ʾilāh*, Aramaic *ʾAlāh*, *ʾElāh*, Hebrew *ʾelōah*) may be *ʾl* with a parasitic h, and *ʾl* may be an abbreviated form of *ʾlh*. In Ugaritic the plural form meaning "gods" is *ʾilhm*, equivalent to Hebrew *ʾelōhîm* "powers". In the Hebrew texts this word is interpreted as being semantically singular for "god" by biblical commentators. However the documentary hypothesis for the Old Testament (corresponds to the Jewish Torah) developed originally in the 1870s, identifies these that different authors – the Jahwist, Elohist, Deuteronomist, and the Priestly source – were responsible for editing stories from a polytheistic religion into those of a monotheistic religion. Inconsistencies that arise between monotheism and polytheism in the texts are reflective of this hypothesis." ref

Jainism around 2,599 – 2,527 years old. ref

Confucianism around 2,600 – 2,551 years old. ref

Buddhism around 2,563/2,480 – 2,483/2,400 years old. ref

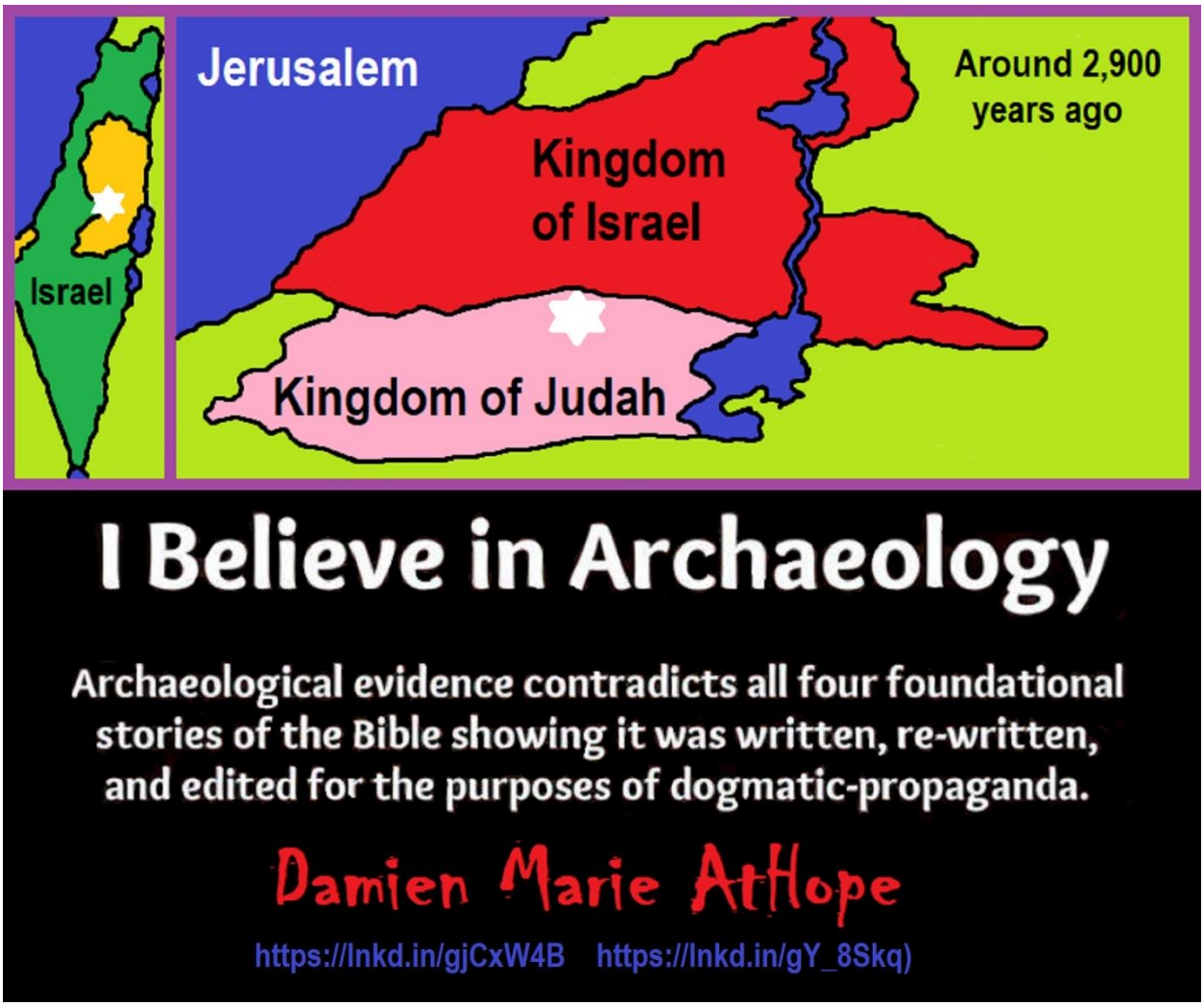
Christianity around 2,000 years old. ref

Shinto around 1,305 years old. ref

Islam around 1407–1385 years old. ref

Sikhism around 548–478 years old. ref

Bahá'í around 200–125 years old. ref



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Knowledge to Ponder:

Stars/Astrology:

- Possibly, around 30,000 years ago (in simpler form) to 6,000 years ago, Stars/Astrology are connected to Ancestors, Spirit Animals, and Deities.

- The star also seems to be a possible proto-star for Star of Ishtar, Star of Inanna, or Star of Venus.
- Around 7,000 to 6,000 years ago, Star Constellations/Astrology have connections to the "Kurgan phenomenon" of below-ground "mound" stone/wood burial structures and "Dolmen phenomenon" of above-ground stone burial structures.
- Around 6,500–5,800 years ago, The Northern Levant migrations into Jordon and Israel in the Southern Levant brought new cultural and religious transfer from Turkey and Iran.
- "The Ghassulian Star," a mysterious 6,000-year-old mural from Jordan may have connections to the European paganstic kurgan/dolmens phenomenon.

"**Astrology** is a range of divinatory practices, recognized as pseudoscientific since the 18th century, that claim to discern information about human affairs and terrestrial events by studying the apparent positions of celestial objects. Different cultures have employed forms of astrology since at least the 2nd millennium BCE, these practices having originated in calendrical systems used to predict seasonal shifts and to interpret celestial cycles as signs of divine communications. Most, if not all, cultures have attached importance to what they observed in the sky, and some—such as the Hindus, Chinese, and the Maya—developed elaborate systems for predicting terrestrial events from celestial observations. Western astrology, one of the oldest astrological systems still in use, can trace its roots to 19th–17th century BCE Mesopotamia, from where it spread to Ancient Greece, Rome, the Islamicate world and eventually Central and Western Europe. Contemporary Western astrology is often associated with systems of horoscopes that purport to explain aspects of a person's personality and predict significant events in their lives based on the positions of celestial objects; the majority of professional astrologers rely on such systems." ref

Around 5,500 years ago, **Science evolves**, The first evidence of science was 5,500 years ago and was demonstrated by a body of empirical, theoretical, and practical knowledge about the natural world. ref

Around 5,000 years ago, **Origin of Logics** is a Naturalistic Observation (principles of valid reasoning, inference, & demonstration) ref

Around 4,150 to 4,000 years ago: The earliest surviving versions of the Sumerian Epic of Gilgamesh, which was originally titled “He who Saw the Deep” (Sha naqba īmuru) or “Surpassing All Other Kings” (Shūtur eli sharrī) were written. ref

Hinduism:

- 3,700 years ago or so, the oldest of the Hindu Vedas (scriptures), the Rig Veda was composed.
- 3,500 years ago or so, the Vedic Age began in India after the collapse of the Indus Valley Civilization.

Judaism:

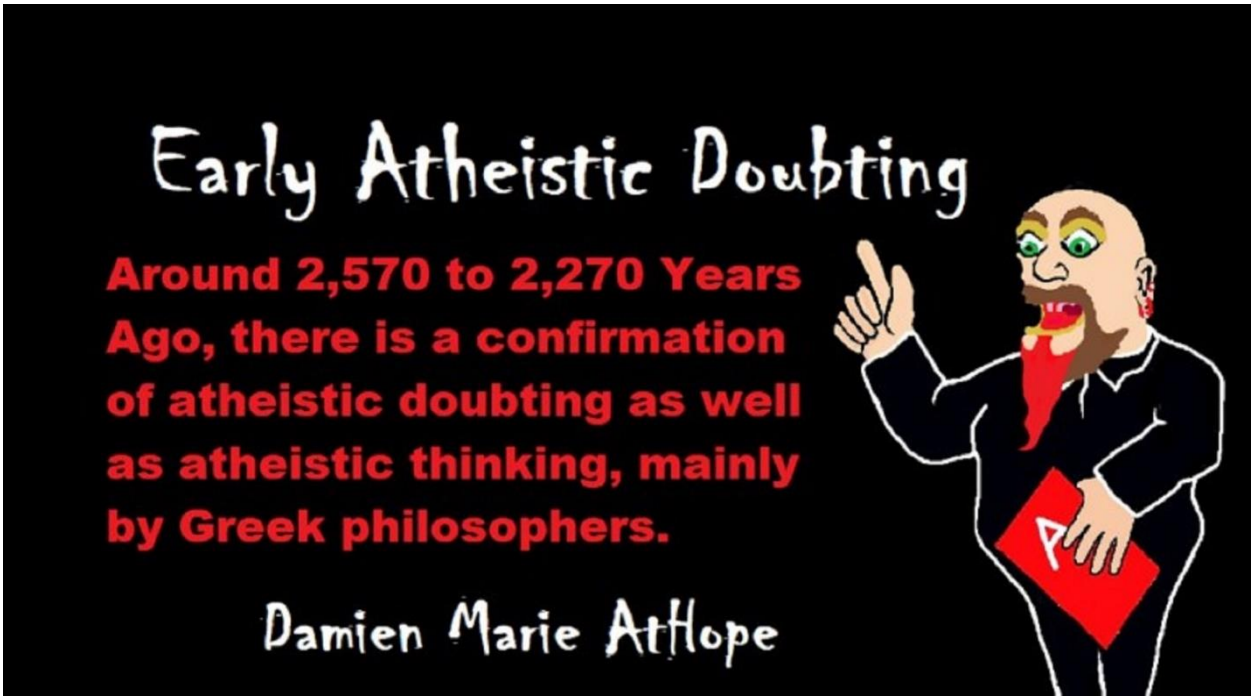
- around 3,000 years ago, the first writing in the bible was **“Paleo-Hebrew”**
- around 2,500 years ago, many believe the religious Jewish texts were completed

Myths: The bible inspired religion is not just one religion or one myth but a grouping of several religions and myths

- Around 3,450 or 3,250 years ago, according to legend, is the traditionally accepted period in which the Israelite lawgiver, Moses, provided the Ten Commandments.
- Around 2,500 to 2,400 years ago, a collection of ancient religious writings by the Israelites based primarily upon the Hebrew Bible, Tanakh, or Old Testament is the first part of Christianity’s bible.
- Around 2,400 years ago, the most accepted hypothesis is that the canon was formed in stages, first the Pentateuch (Torah).
- Around 2,140 to 2,116 years ago, the Prophets was written during the Hasmonean dynasty, and finally the remaining books.
- Christians traditionally divide the Old Testament into four sections:
- The first five books or Pentateuch (Torah).
- The proposed history books telling the history of the Israelites from their conquest of Canaan to their defeat and exile in Babylon.
- The poetic and proposed “Wisdom books” dealing, in various forms, with questions of good and evil in the world.

- The books of the biblical prophets, warning of the consequences of turning away from God:
- Henotheism:
- Exodus 20:23 “You shall not make other gods besides Me (not saying there are no other gods just not to worship them); gods of silver or gods of gold, you shall not make for yourselves.”
- Polytheism:
- Judges 10:6 “Then the sons of Israel again did evil in the sight of the LORD, served the Baals and the Ashtaroth, the gods of Aram, the gods of Sidon, the gods of Moab, the gods of the sons of Ammon, and the gods of the Philistines; thus they forsook the LORD and did not serve Him.”
- 1 Corinthians 8:5 “For even if there are so-called gods whether in heaven or on earth, as indeed there are many gods and many lords.”
- Monotheism:
- Isaiah 43:10 “You are my witnesses,” declares the LORD, “and my servant whom I have chosen, so that you may know and believe me and understand that I am he. Before me no god was formed, nor will there be one after me.

Around 2,570 to 2,270 Years Ago, there is a confirmation of atheistic doubting as well as atheistic thinking, mainly by Greek philosophers. However, doubting gods is likely as old as the invention of gods and should destroy the thinking that belief in god(s) is the “default belief”. The Greek word is apistos (a “not” and pistos “faithful,”), thus not faithful or faithless because one is unpersuaded and unconvinced by a god(s) claim. Short Definition: unbelieving, unbeliever, or unbelief.



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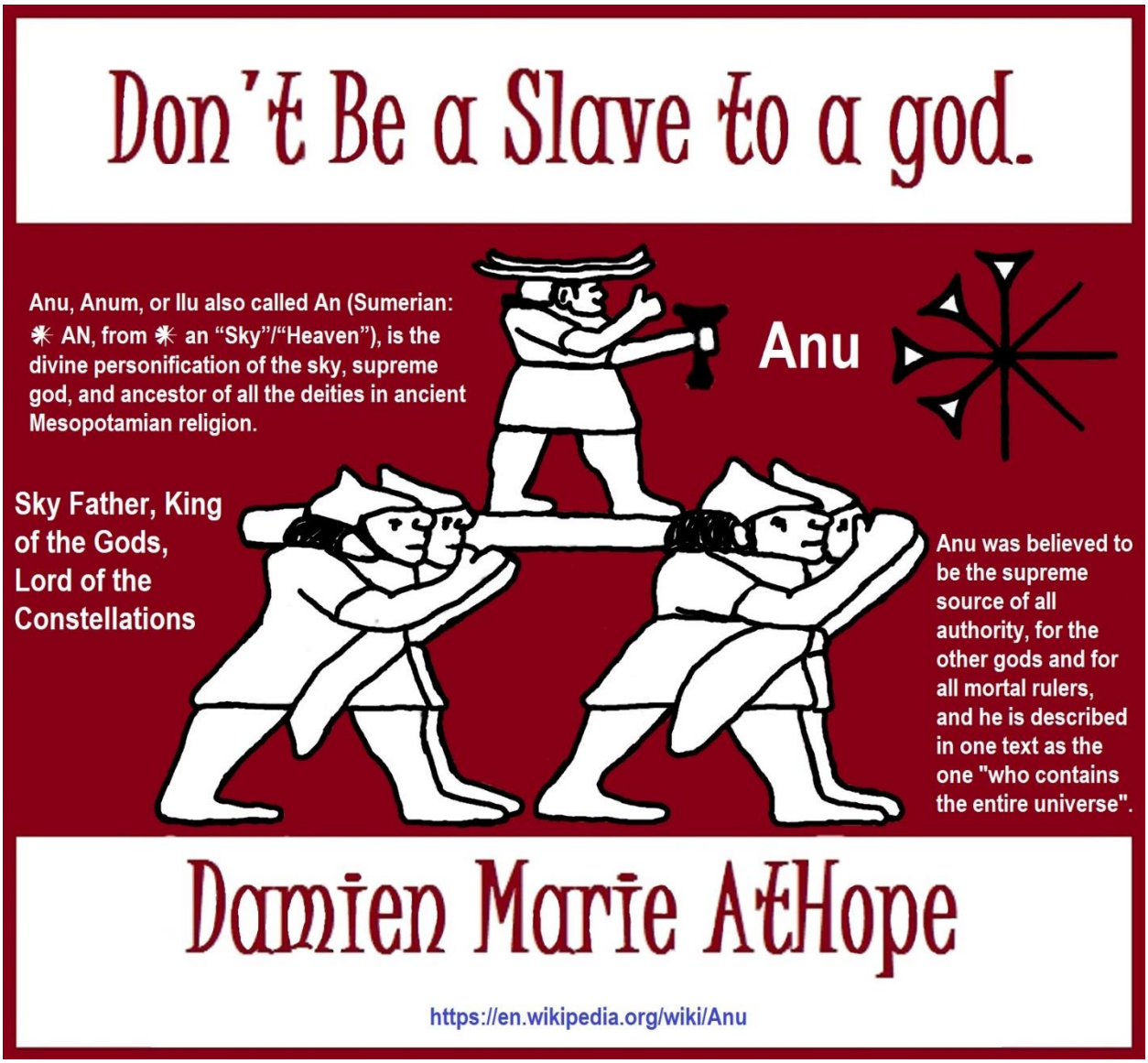
Expressions of Atheistic Thinking:

- Around 2,600 years ago, Ajita Kesakambali, ancient Indian philosopher, who is the first known proponent of Indian materialism. ref
- **Around 2,535 to 2,475 years ago, Heraclitus, Greek pre-Socratic philosopher, a native of the Greek city Ephesus, Ionia, on the coast of Anatolia, also known as Asia Minor or modern Turkey.** ref
- **Around 2,500 to 2,400 years ago, according to The Story of Civilization book series certain African pygmy tribes have no identifiable gods, spirits, or religious beliefs or rituals, and even what burials accrue are without ceremony.** ref
- **Around 2,490 to 2,430 years ago, Empedocles, Greek pre-Socratic philosopher and a citizen of Agrigentum, a Greek city in Sicily.** ref
- **Around 2,460 to 2,370 years ago, Democritus, Greek pre-Socratic philosopher considered to be the "father of modern science" possibly had some disbelief amounting to atheism.** ref

- **Around 2,399 years ago or so, Socrates, a famous Greek philosopher was tried for sinfulness by teaching doubt of state gods.** ref
- **Around 2,341 to 2,270 years ago, Epicurus, a Greek philosopher known for composing atheistic critics and famously stated, "Is God willing to prevent evil, but not able? Then he is not omnipotent. Is he able, but not willing? Then he is malevolent. Is he both able and willing? Then whence cometh evil? Is he neither able nor willing? Then why call him god?"** ref

This last expression by Epicurus, seems to be an expression of Axiological Atheism. To understand and utilize value or actually possess "Value Conscious/Consciousness" to both give a strong moral "axiological" argument (the problem of evil) as well as use it to fortify humanism and positive ethical persuasion of human helping and care responsibilities. Because value-blindness gives rise to sociopathic/psychopathic evil.



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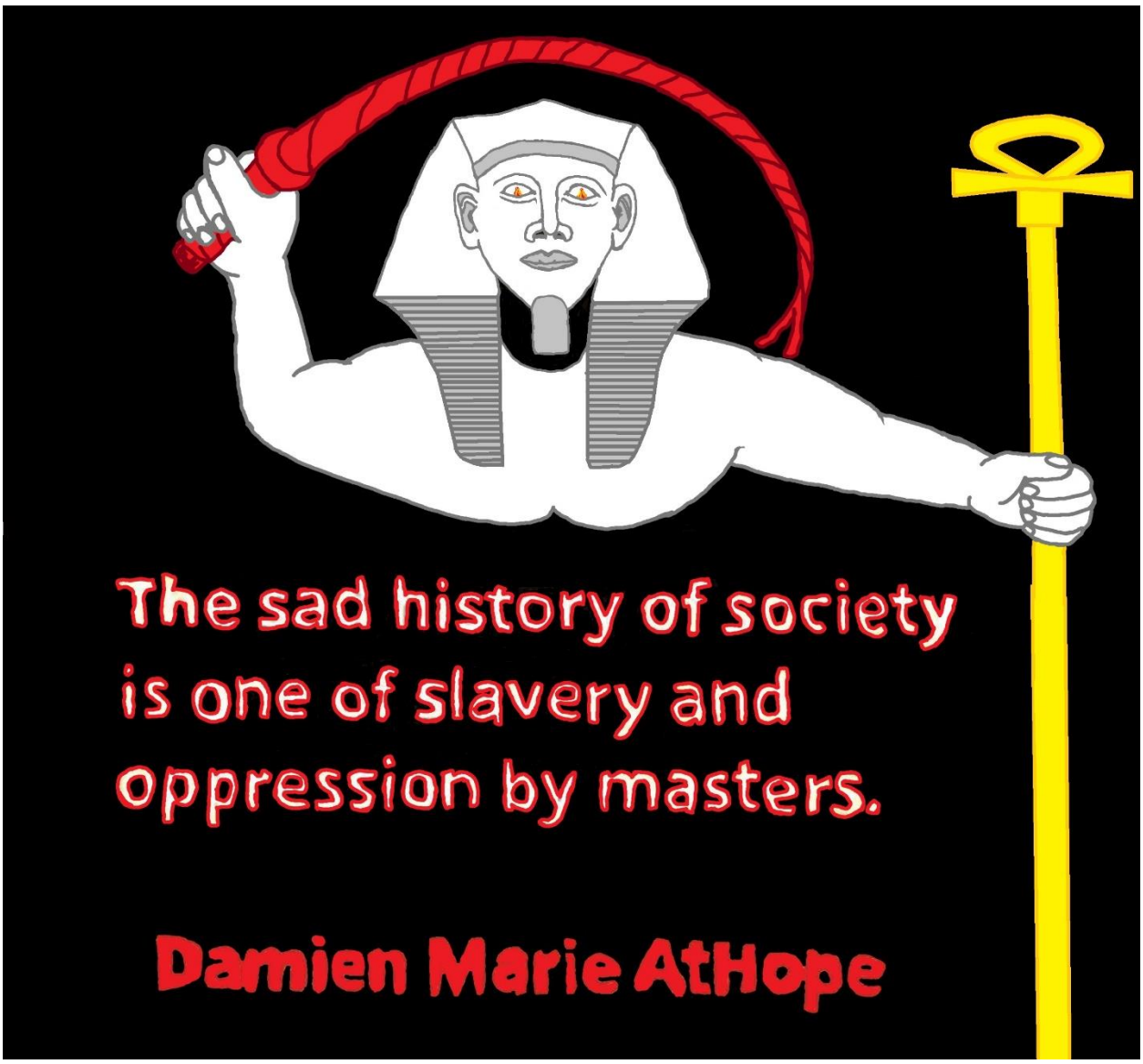
ref, ref, ref

"Theists, there has to be a god, as something can not come from nothing."

Well, thus something (unknown) happened and then there was something. This does not tell us what the something that may have been involved with something coming from nothing. A supposed first cause, thus something (unknown) happened and then there was something is not an open invitation to claim it as known, neither is it justified to call or label such an unknown as anything, especially an unsubstantiated magical thinking belief born of mythology and religious storytelling.



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Advocating Anarchism: Morality, Non-coercion, Anti-hierarchy, Solidarity, Internationalism, Mutualism, Cooperationism, Empowermentism, etc.

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While hallucinogens are associated with shamanism, it is alcohol that is associated with paganism.

The Atheist-Humanist-Leftist Revolutionaries Shows in the prehistory series:

Show one: Prehistory: related to "Anarchism and Socialism" the division of labor, power, rights, and recourses.

Show two: Pre-animism 300,000 years old and animism 100,000 years old: related to "Anarchism and Socialism"

Show tree: Totemism 50,000 years old: related to "Anarchism and Socialism"

Show four: Shamanism 30,000 years old: related to "Anarchism and Socialism"

Show five: Paganism 12,000 years old: related to "Anarchism and Socialism"

Show six: Emergence of hierarchy, sexism, slavery, and the new male god dominance: Paganism 7,000-5,000 years old: related to "Anarchism and Socialism" (Capitalism) (World War 0) Elite and their slaves!

Show seven: Paganism 5,000 years old: progressed organized religion and the state: related to "Anarchism and Socialism" (Kings and the Rise of the State)

Show eight: Paganism 4,000 years old: Moralistic gods after the rise of Statism and often support Statism/Kings: related to "Anarchism and Socialism" (First Moralistic gods, then the Origin time of Monotheism)

Prehistory: related to "Anarchism and Socialism" the division of labor, power, rights, and recourses: VIDEO

Pre-animism 300,000 years old and animism 100,000 years old: related to "Anarchism and Socialism": VIDEO

Totemism 50,000 years old: related to "Anarchism and Socialism": VIDEO

Shamanism 30,000 years old: related to "Anarchism and Socialism": VIDEO

Paganism 12,000 years old: related to "Anarchism and Socialism" (Pre-Capitalism): VIDEO

Paganism 7,000-5,000 years old: related to "Anarchism and Socialism" (Capitalism) (World War 0) Elite and their slaves: VIEDO

Paganism 5,000 years old: progressed organized religion and the state: related to "Anarchism and Socialism" (Kings and the Rise of the State): VIEDO

Paganism 4,000 years old: related to "Anarchism and Socialism" (First Moralistic gods, then the Origin time of Monotheism): VIEDO

I do not hate simply because I challenge and expose myths or lies any more than others being thought of as loving simply because of the protection and hiding from challenge their favored myths or lies.

The truth is best championed in the sunlight of challenge.

An archaeologist once said to me "Damien religion and culture are very different"

My response, So are you saying that was always that way, such as would you say Native Americans' cultures are separate from their religions? And do you think it always was the way you believe?

I had said that religion was a cultural product. That is still how I see it and there are other archaeologists that think close to me as well. Gods too are the myths of cultures that did not understand science or the world around them, seeing magic/supernatural everywhere.

I personally think there is a goddess and not enough evidence to support a male god at **Çatalhöyük** but if there was both a male and female god and goddess then I know the kind of gods they were like **Proto-Indo-European mythology**.

This series idea was addressed in, ***Anarchist Teaching as Free Public Education or Free Education in the Public:*** **VIDEO**

Our 12 video series: *Organized Oppression*: Mesopotamian State Force and the Politics of power (9,000-4,000 years ago), is adapted from: **The Complete and Concise History of the Sumerians and Early Bronze Age Mesopotamia (7000-2000 BC): https://www.youtube.com/watch?v=szFjxmY7jQA by "History with Cy"**

Show #1: Mesopotamian State Force and the Politics of Power (Samarra, Halaf, Ubaid)

Show #2: Mesopotamian State Force and the Politics of Power (Eridu: First City of Power)

Show #3: Mesopotamian State Force and the Politics of Power (Uruk and the First Cities)

Show #4: Mesopotamian State Force and the Politics of Power (First Kings)

Show #5: Mesopotamian State Force and the Politics of Power (Early Dynastic Period)

Show #6: Mesopotamian State Force and the Politics of Power (King Lugalzagesi and the First Empire)

Show #7: Mesopotamian State Force and the Politics of Power (Sargon and Akkadian Rule)

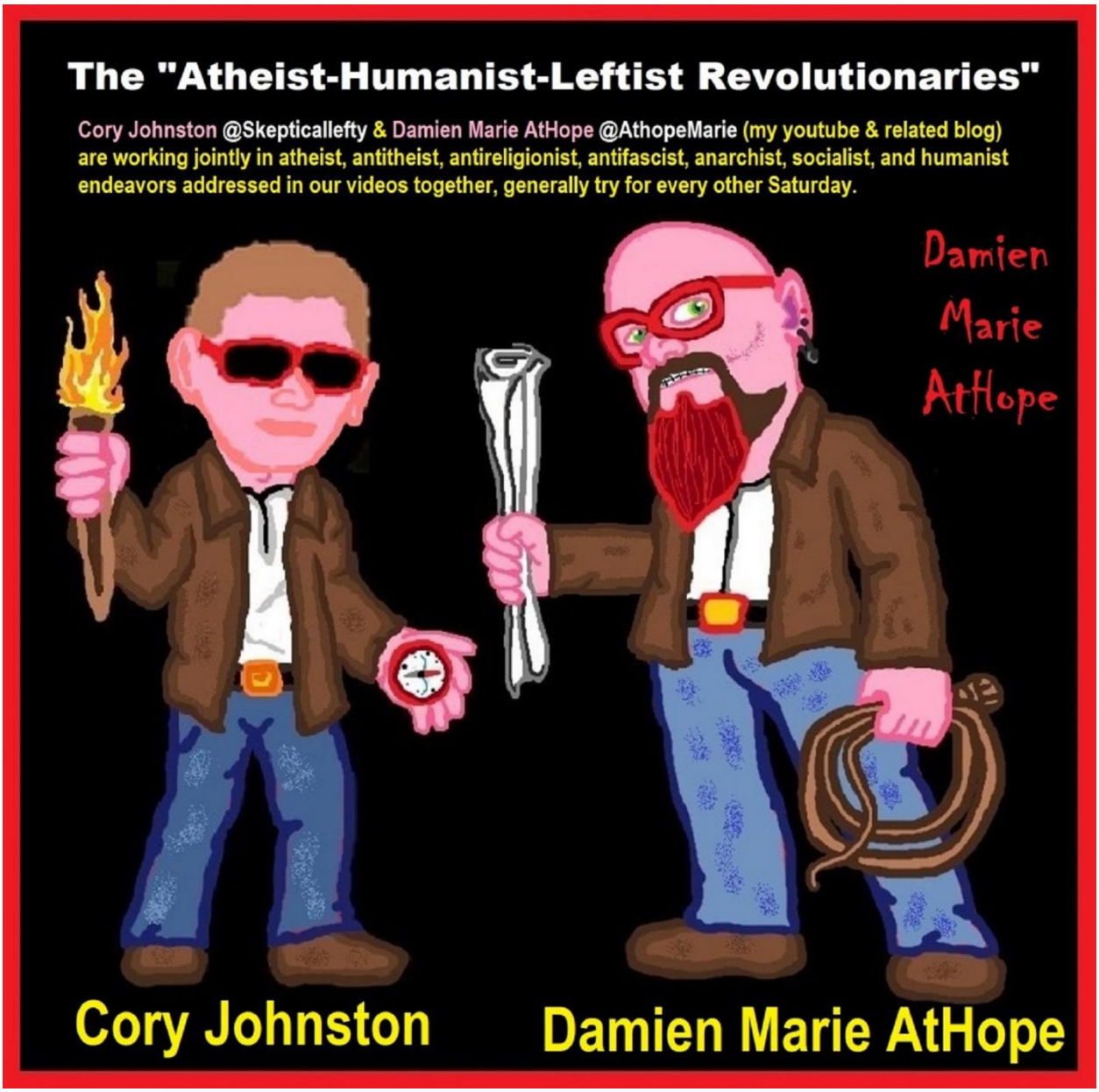
Show #8: Mesopotamian State Force and the Politics of Power (Naram-Sin, Post-Akkadian Rule, and the Gutians)

Show #9: Mesopotamian State Force and the Politics of Power (Gudea of Lagash and Utu-hegal)

Show #10: Mesopotamian State Force and the Politics of Power (Third Dynasty of Ur / Neo-Sumerian Empire)

Show #11: Mesopotamian State Force and the Politics of Power (Amorites, Elamites, and the End of an Era)

Show #12: Mesopotamian State Force and the Politics of Power (Aftermath and Legacy of Sumer)



[Damien Marie AtHope's Art]

The "Atheist-Humanist-Leftist Revolutionaries"

Cory Johnston ☭ Ⓐ Atheist Leftist @Skepticallefty & I (Damien Marie AtHope) @AthopeMarie (my YouTube & related blog) are working jointly in atheist, antitheist, antireligionist, antifascist, anarchist, socialist, and humanist endeavors in our videos together, generally, every other Saturday.

Why Does Power Bring Responsibility?

Think, how often is it the powerless that start wars, oppress others, or commit genocide? So, I guess the question is to us all, to ask, how can power not carry responsibility in a humanity concept? I know I see the deep ethical responsibility that if there is power their must be a humanistic responsibility of ethical and empathic stewardship of that power. Will I be brave enough to be kind? Will I possess enough courage to be compassionate? Will my valor reach its height of empathy? I as everyone, earns our justified respect by our actions, that are good, ethical, just, protecting, and kind. Do I have enough self-respect to put my love for humanity's flushing, over being brought down by some of its bad actors? May we all be the ones doing good actions in the world, to help human flourishing.

I create the world I want to live in, striving for flourishing. Which is not a place but a positive potential involvement and promotion; a life of humanist goal precision. To master oneself, also means mastering positive prosocial behaviors needed for human flourishing. I may have lost a god myth as an atheist, but I am happy to tell you, my friend, it is exactly because of that, leaving the mental terrorizer, god belief, that I truly regained my connected ethical as well as kind humanity.

Cory and I will talk about prehistory and theism, addressing the relevance to atheism, anarchism, and socialism.

At the same time as the rise of the male god, 7,000 years ago, there was also the very time there was the rise of violence, war, and clans to kingdoms, then empires, then states. It is all connected back to 7,000 years ago, and it moved across the world.

Cory Johnston: https://damienmarieathope.com/2021/04/cory-johnston-mind-of-a-skeptical-leftist/?v=32aec8db952d

The Mind of a Skeptical Leftist (YouTube)

Cory Johnston: Mind of a Skeptical Leftist @Skepticallefty

The Mind of a Skeptical Leftist By Cory Johnston: "Promoting critical thinking, social justice, and left-wing politics by covering current events and talking to a variety of people. Cory Johnston has been thoughtfully talking to people and attempting to promote critical thinking, social justice, and left-wing politics." http://anchor.fm/skepticalleft

Cory needs our support. We rise by helping each other.

Cory Johnston ☭ Ⓐ @Skepticallefty Evidence-based atheist leftist (he/him) Producer, host, and co-host of 4 podcasts @skeptarchy @skpoliticspod and @AthopeMarie

Damien Marie AtHope ("At Hope") Axiological Atheist, Anti-theist, Anti-religionist, Secular Humanist. Rationalist, Writer, Artist, Poet, Philosopher, Advocate, Activist, Psychology, and Armchair Archaeology/Anthropology/Historian.

Damien is interested in: Freedom, Liberty, Justice, Equality, Ethics, Humanism, Science, Atheism, Antiteism, Antireligionism, Ignosticism, Left-Libertarianism, Anarchism, Socialism, Mutualism, Axiology, Metaphysics, LGBTQI, Philosophy, Advocacy, Activism, Mental Health, Psychology, Archaeology, Social Work, Sexual Rights, Marriage Rights, Woman's Rights, Gender Rights, Child Rights, Secular Rights, Race Equality, Ageism/Disability Equality, Etc. And a far-leftist, "Anarcho-Humanist."

I am not a good fit in the atheist movement that is mostly pro-capitalist, I am anti-capitalist. Mostly pro-skeptic, I am a rationalist not valuing skepticism. Mostly pro-agnostic, I am anti-agnostic. Mostly limited to anti-Abrahamic religions, I am an anti-religionist.

To me, the **"male god"** seems to have either emerged or become prominent around 7,000 years ago, whereas the now favored monotheism **"male god"** is more like 4,000 years ago or so. To me, the **"female goddess"** seems to have either emerged or become prominent around 11,000-10,000 years ago or so, losing the majority of its once prominence around 2,000 years ago due largely to the now favored monotheism **"male god"** that grow in prominence after 4,000 years ago or so.

My Thought on the Evolution of Gods?

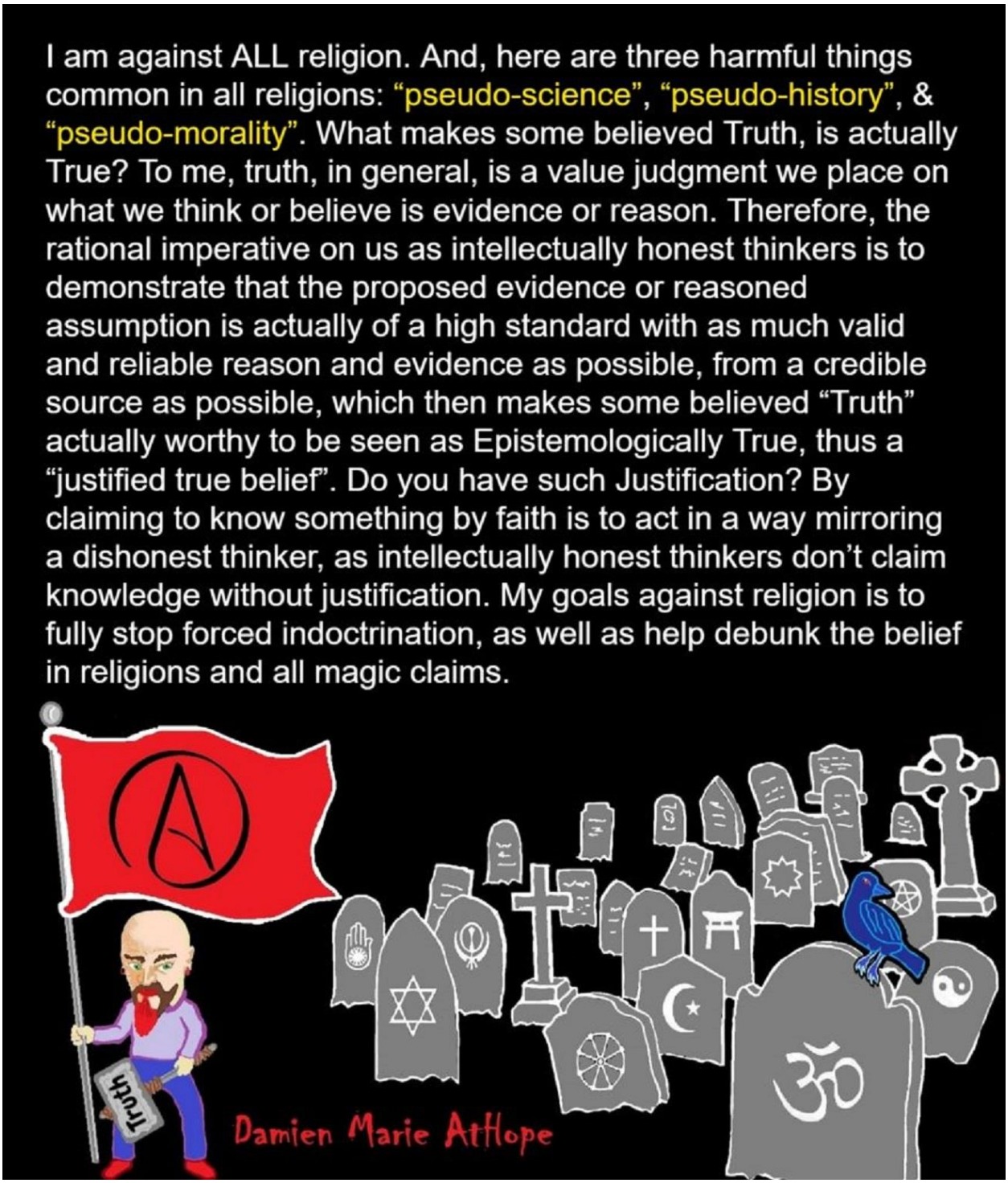
Animal protector deities from old totems/spirit animal beliefs come first to me, 13,000/12,000 years ago, then women as deities 11,000/10,000 years ago, then male gods around 7,000/8,000 years ago. Moralistic gods around 5,000/4,000 years ago, and monotheistic gods around 4,000/3,000 years ago.

To me, animal gods were likely first related to totemism animals around 13,000 to 12,000 years ago or older. Female as goddesses was next to me, 11,000 to 10,000 years ago or so with the emergence of agriculture. Then male gods come about 8,000 to 7,000 years ago with clan wars. Many monotheism-themed religions started in henotheism, emerging out of polytheism/paganism.

Gods?

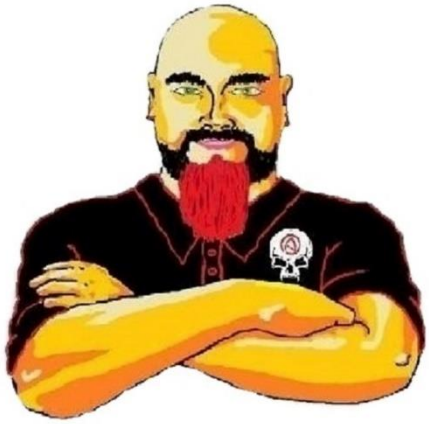
"Animism" is needed to begin supernatural thinking.
"Totemism" is needed for supernatural thinking connecting human actions & related to clan/tribe.
"Shamanism" is needed for supernatural thinking to be controllable/changeable by special persons.

Together = Gods/paganism



[Damien Marie AtHope's Art]

DAMIEN MARIE ATHOPE



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Axiological Atheist, Antitheist, Antireligionist, Ignostic, Secularist, Humanist, Rationalist, Writer, Artist, Poet, Philosopher, Advocate, Activist, educated in Psychology and Sociology; promoting Science, Realism, Axiology, Liberty, Justice, Ethics, Anarchism, Socialism, Progressivism, Liberalism, Philosophy, Psychology, Archaeology, and Anthropology; advocating for Sexual, Gender, Child, Secular, LGBTQIA+, Race, Class Rights and Equality.

Damien Marie AtHope's Art

Damien Marie AtHope (Said as "At" "Hope")/(Autodidact Polymath but not good at math):

Axiological Atheist, Anti-theist, Anti-religionist, Secular Humanist, Rationalist, Writer, Artist, Jeweler, Poet, "autodidact" Philosopher, schooled in Psychology, and "autodidact" Armchair Archaeology/Anthropology/Pre-Historian (Knowledgeable in the range of: 1 million to 5,000/4,000 years ago). I am an anarchist socialist politically. Reasons for or Types of Atheism
My Website, My Blog, & Short-writing or Quotes, My YouTube, Twitter: @AthopeMarie, and My Email: damien.marie.athope@gmail.com