

CHAPTER 4

FOOD CULTURE IN NORTH BALKANS / SE EUROPE EARLY NEOLITHIC

“A revolution in cuisine occurred when Neolithic villagers started to use pottery.”
(Budja 2004a, 235)

Research on the origins of farming in Southeast Europe has, from its inception, placed food at the heart of its narrative—as a cultural value, an economic driver, and a catalyst for transformation. This focus is understandable: once the Neolithic was defined as a transition from foraging to a self-sustaining economy, it naturally followed that food would play a central role in shaping its trajectory. However, perhaps due to the limited range of accessible evidence, this narrative has often remained confined within a framework of economic-environmental determinism—one rooted in notions of adaptivity and optimal productivity. This model has long dominated the interpretation of Neolithic lifeways, following a rich archaeological record and subtly reinforcing a vision of social development that progresses toward the so-called ‘spiritual’ arts. Regarding this latter point, Borić (Borić 2005a) has noted, as previously discussed, such a tendency in the interpretation of boulder art in the Iron Gates region.

The main problem of both quoted accounts, however, is the essentialist separation of foragers and farmers as a way of simplifying the construction of Mesolithic vs. Early Neolithic identities primarily on the basis of subsistence resources. One is left to wonder how easily we can separate the two and how different in reality were the beliefs of the ‘foragers’ of the Danube Gorges as opposed to the contemporaneous ‘farmers’ in the Morava, middle Danube and Tisza valleys of the north-central Balkans.

(Borić 2005a, 46)

Earlier in this study, I expressed agreement with Borić’s foundational premise: that the dichotomy between the Mesolithic and Neolithic is a modern construct that limits historical interpretation. However, I must also express strong disagreement with certain aspects of his approach—particularly regarding subsistence resources. His interpretation, while legitimate in intent, risks reducing cultural development and interaction to a simplistic binary: farmers versus nonfarmers, Neolithic versus Mesolithic, civilized versus barbarian.

Indeed, subsistence strategies have long been entangled within the broader Mesolithic–Neolithic discourse, bound to a linear narrative of progress versus primitivism. Yet there is substantial reason to link identity to subsistence. Food

lies at the core of our existence—central to our survival and so deeply embedded in our daily lives that it often escapes critical reflection (e.g. Hastorf 2016; Twiss 2003; Rozin 1976). The solution is not to dismiss this fundamental aspect of human life, but to liberate it from outdated and restrictive narratives.

Once freed from this stagnant framework, food must be reintegrated—not merely as physical sustenance, but as a critical element of our sociocultural identity. It is this perspective that drives the purpose of this chapter. The residue analysis and faunal data presented here will serve as key components in rethinking the evolution of food culture in Southeast Europe during the Early Neolithic.

4.1 Fishing: Between Tradition and Innovation

First and foremost, what do the residue analyses and zooarchaeological data reveal? The archaeological record had already suggested a north–south divide, and the findings from organic residue analysis reinforce this observation. While the Aegean and South Balkan regions reflect culinary traditions traceable to Anatolia, the northern sites show a notable shift, marked by a greater reliance on dairy products. Previous studies—particularly those by Evershed et al. (2008), Debono Spiteri et al. (2016), and Whelton et al. (2018)—have highlighted a southern preference for ruminant adipose fats, particularly from sheep and goats, mirroring patterns seen in the Levant, eastern and central Anatolia, and northern Greece.

These results support the hypothesis of an Anatolian migration into Greece and subsequently northward into Bulgaria, likely facilitated by coastal networks (Reingruber 2018). The corresponding data suggest the transmission of traditional food habits centered on ruminant animals, passed down across generations, with limited incorporation of dairy products. Such dietary choices, along with a preference for settlement in semi-arid and alluvial plain environments, appear rooted in a desire for familiarity—clinging to what is known, taught, and trusted. As early farmers ventured into new territories that required taming, the replication of established practices provided a sense of confidence and security. Nevertheless, through contact and exchange, these settlers likely acquired preliminary knowledge of the regions they entered, including their sub-Mediterranean climates, facilitating the establishment of permanent, generational villages.

Upon entering the northern Balkans and progressing into the Carpathian Basin, early farmers encountered new environmental realities: a temperate climate dominated by dense forests and floodplains, and the presence of established hunter-gatherer communities. This complex setting necessitated adaptation and negotiation. In the North Balkans, residue analysis reveals two contrasting patterns that might superficially suggest a division between the inhabitants of the

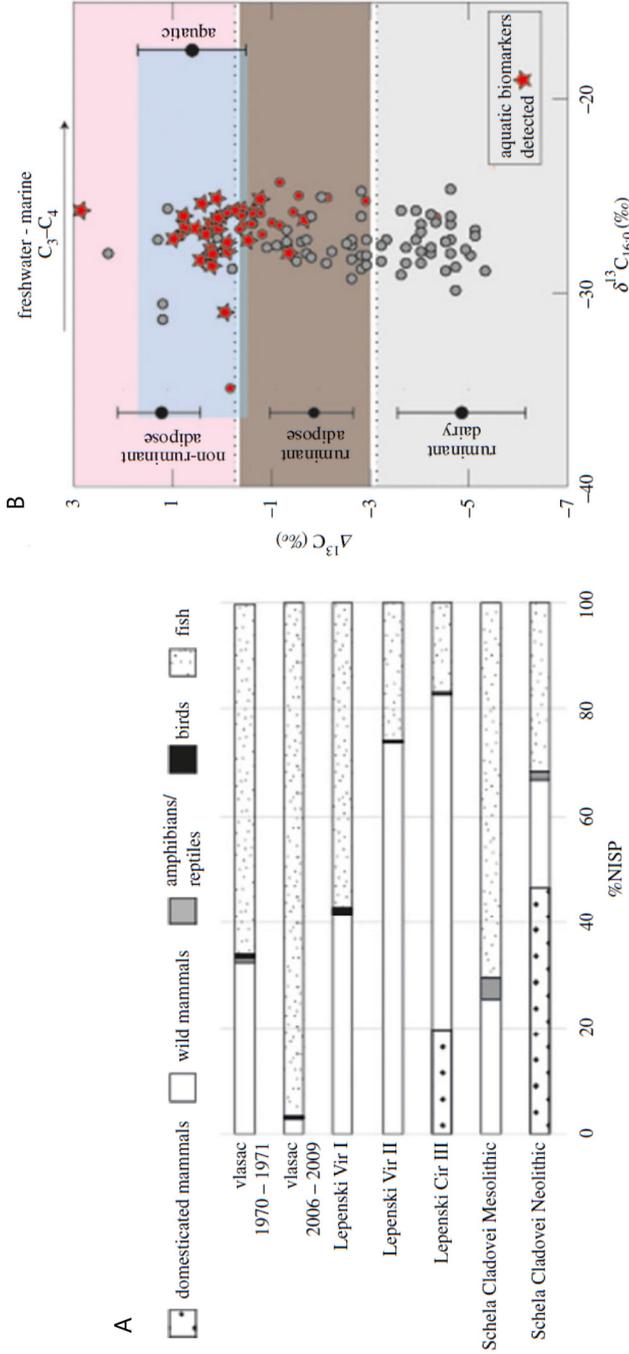


Figure 18. Zooarchaeological and residue analyses results from the Iron Gates. A) Summary of faunal assemblages Vlasac, Lepenski Vir, Schela Cladovei, based on their NISP; B) Plots of the $\delta^{13}C$ values for animal residue from Gates (red circles and stars), in contrast to North and South Balkans and the Carpathian Basin (after Cramp et al. 2019, fig. .3).

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Iron Gates and those of the Šumadija region. As previously discussed, many Mesolithic traditions persisted into the Neolithic, including aspects of food culture.

The zooarchaeological record from Iron Gates settlements reveals a predominance of wild animals, particularly fish and game. Residue analysis confirms this trend, with most samples containing non-ruminant adipose fats (Figure 18). Meanwhile, residues associated with domesticates—primarily ruminants—make up between 18 percent and 37 percent of the lipid-positive samples, indicating a distinct dietary pattern reflective of this unique cultural and ecological context.

The presence of domesticates in the region suggests that contact between foragers and farmers was both established and sustained. However, it remains unclear whether farmers integrated local populations into their communities, whether foragers independently adopted herding practices via social and trade networks, or whether incoming groups seized territory and then exploited the aquatic resources of the Danube. Based on current evidence, the first scenario—mutual integration—seems the most plausible. This view is further supported by recent genetic studies, which increasingly demonstrate evidence of admixture between local hunter-gatherers and incoming farming populations, most likely originating from Anatolia (e.g. Bramanti et al. 2009; Haak et al. 2015; Mathieson et al. 2018; Mathieson et al. 2015; Borić and Price 2013).

In a major 2018 study on the genomic history of southeastern Europe, Mathieson and colleagues (2018) concluded that the Neolithic migrants most likely originated from northwestern Anatolia, with the Aegean contributing less significantly to the gene pool. Their findings also identified two distinct migration routes—Danubian and Mediterranean—both emerging from northwestern Anatolia. According to the authors, Southeast Europe functioned as a “genetic contact zone” even before the Neolithic, with such interactions intensifying with the advent of farming (Mathieson et al. 2018, 5).

Within the North Balkans and Carpathian Basin, both farmers and foragers faced a challenge rooted in what might be called the omnivore’s paradox. Each group found comfort in its own food traditions—deeply embedded in ancestral knowledge—yet both were confronted with unfamiliar variables in this new, shared environment. Agriculture, by nature, yields delayed results; it demands experimentation, observation, and trust in the long-term outcomes. For the farmer, the unfamiliarity of temperate landscapes necessitated new forms of knowledge. For the forager, whose labor had immediate and visible returns, mistrust or caution toward agricultural practices was perhaps inevitable. Still, interactions with Iron Gates communities may have offered comfort and familiarity, particularly through the shared practice of fishing. If fishing had lost some of its prominence among farming communities, it remained a foundational resource for Iron Gates populations—rooted in their past and adapted into their present.

Remarkably, fishing continues to thrive even today in agrarian societies and is often regarded as the last vestige of the foraging tradition. While hunting has largely become a recreational activity limited to a few, fishing persists as a practical and widespread source of nourishment, particularly in temperate regions.

It is therefore unsurprising that fishing continued during the Early Neolithic, especially along the Danube, where fish such as sturgeon can grow up to 4 meters in length and weigh over 100 kilograms (Dinu 2010). These fish offer a significant supply of meat, which can be preserved through drying or smoking. Beyond their practicality, fish are a nutritious dietary addition—rich in protein and essential nutrients such as calcium, fluorine, iodine, phosphorus, omega-3 fatty acids, vitamins A, B, and D, and essential amino acids (Potts 2012).

In a recent study, Jovanović et al. (2019) confirmed through stable isotope and bone collagen analyses that Iron Gates communities, from the earliest to latest phases of the Mesolithic, consumed substantial quantities of both aquatic and terrestrial resources. Anadromous and potamodromous fish species, in particular, dominated Late Mesolithic diets—a conclusion supported by faunal data (e.g. Jovanović et al. 2019; Jovanović 2017; Radovanovic 1997; Bökönyi 1969; Srejović 1969; Bartosiewicz et al. 1995; Radovanović 1996; Bartosiewicz 2001; Dinu 2010; Živaljević 2017)

During the Mesolithic–Neolithic transition, aquatic species retained their significance in the Iron Gates diet. Over time, however, terrestrial resources increased in importance (e.g. Jovanović et al. 2019; Živaljević 2017; Cramp et al. 2019). Even so, variation existed among sites: isotope analysis reveals that individuals at Lepenski Vir and Schela Cladovei had more terrestrially oriented diets, whereas Padina and Hajdučka Vodenica showed a stronger reliance on aquatic resources, with fish-derived signals appearing in all samples (Jovanović et al. 2019). Once we move beyond the Iron Gates, dietary strategies vary according to site location. In general, all settlements exhibit a gradual shift toward terrestrial food, though communities located near water sources continue to show strong evidence of aquatic resource use.

Environmental factors may have influenced these food choices, but cultural preferences played an equally strong role. As discussed earlier, communities in the Aegean and South Balkans drastically reduced their reliance on aquatic resources during the Neolithic, despite their extensive Mesolithic maritime experience. Such a shift reflects deliberate choices, not a lack of availability. The contrast seen in the North Balkans underscores the persistence of sociocultural behaviors and suggests a scenario of biculturalism: neither group fully dominated the other, but rather a gradual and mutual process of adaptation and negotiation took place.

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The development of farming in this region was not an abrupt transformation but a prolonged dialogue—a mutual recognition of the other. Food choices lie at the heart of this interaction. While fish consumption persisted following the arrival of the first farmers, other significant dietary shifts occurred, including a marked decrease in pig consumption and the rise of milk and its derivatives. Interestingly, the study by Jovanović et al. (2019) highlights that wild boar were highly valued among Mesolithic communities. However, in the Neolithic, both wild boar and domestic pig consumption declined substantially, indicating evolving preferences and a realignment of subsistence strategies in tandem with broader cultural changes.

A study published by Frantz et al. (2019) demonstrated that the genetic pool of European pigs points to a Near Eastern origin, even though modern pigs show only 0–4 percent genetic compatibility with Near Eastern lineages.⁵⁰ Their conclusions argue strongly against the notion of local domestication, proposing instead that the European pig population emerged through hybridization between imported Near Eastern pigs and local wild boars. This process would account for the gradual loss of Near Eastern genetic markers over time. From a practical standpoint, once these pigs were introduced, further importation would have been unnecessary; the newly established stock could simply be bred and exploited (Frantz et al. 2019; Larson et al. 2007).

With this in mind, if pigs were brought to the North Balkans and Carpathian Basin in only limited numbers—or not at all—their scarcity in the archaeological record becomes understandable. In these regions, the dominance of cattle and caprines is evident, and wild game is largely represented by deer and fish. The appeal of wild boar or domestic pig seems to have diminished significantly over time.

Practically speaking, pigs are highly adaptable animals, capable of thriving in diverse environments, particularly in temperate forests and wetlands. This makes them a potentially valuable resource for Neolithic herders (e.g. Halpern 1999; Price and Hongo 2019; Ai et al. 2015; Ottoni et al. 2012). One possible explanation for their marginal presence lies in the more mobile lifestyle adopted by northern groups—unlike the more sedentary patterns observed in Anatolia, the South Balkans, or the Aegean—which may have favored species more suited to transhumance. However, ethnographic evidence shows that pig transhumance is practiced in some parts of the world, suggesting it could have been viable in Southeast Europe as well (e.g. Albarella, Manconi, and Trentacoste 2011; Molenat and Casabianca 1979; Halpern 1999).

50. See also Larson et al. 2007 and Ottoni et al. 2012 for similar conclusions on Near Eastern origins.

Ultimately, the reasons behind the limited role of pigs remain unclear. The explanation may lie in a combination of economic, sociocultural, and environmental factors—or perhaps in the accumulation of several influences. What is evident, however, is that a conscious choice must have been made. Pigs could have been integrated into Neolithic subsistence strategies earlier, as occurred in later periods, yet they were not. The reasons for this omission remain an open question.

While zooarchaeological and residue analyses provide strong evidence for the consumption of aquatic resources, the material culture directly linked to fishing practices is limited. One of the most tangible artifacts is the fishing hook. In the Iron Gates region, both Mesolithic and Early Neolithic bone hooks have been discovered (Figure 19), although wooden variants—less likely to survive—almost certainly existed as well (Dinu 2010). For small to medium-sized fish, hooks are an essential component of the fishing toolkit. However, capturing larger species such as sturgeon presents a different challenge, requiring hooks of substantial strength and size. Since the 18th century, it has become common practice to catch sturgeon using a hook attached to a rope—a method that, interestingly, requires no bait, as the fish appear to be drawn to the hook itself (Bartosiewicz, Bonsall, and Şişu 2008).



Figure 19. Fishing tools and remains. A) fishing device from the Iron Gates to catch starlet, a smaller species of sturgeon (after Dinu 2010, fig. 5) B) Early Neolithic fishing hooks made of bones from the Iron Gates (after Dinu 2010, fig. 2) C) two engraved stone clubs or mallets (after Borić 2005a, fig. 14).

For Early Neolithic or Mesolithic communities, stronger fishing hooks may have been crafted from antler or large bone, though the method of dragging fish via a rope would likely have been restricted to smaller species (Dinu 2010). Given that some sturgeon can exceed 100 kilograms in weight, alternative capture techniques would have been necessary. One plausible method involves trapping the fish in a net equipped with multiple hooks, then dragging it to the riverbank (Dinu 2010; Bartosiewicz, Bonsall, and Şişu 2008).

Regrettably, due to poor preservation conditions, we lack archaeological evidence for such fishing tools. No remnants of nets, sinkers, ropes, lines, wooden harpoons, or lances have been recovered, limiting our understanding of fishing technology to informed speculation. However, Živaljević (2012) has suggested that certain stone tools from Lepenski Vir, shaped like clubs or mallets, may have served to stun fish during capture (Figure 19). Whether interpreted as utilitarian, ritual, or multifunctional, this reading holds merit, as many fish species are combative, and a blunt instrument would have been necessary to subdue them. Beyond hooks and possible clubs, the material evidence directly indicating fishing activity remains sparse. In the absence of more comprehensive archaeological data, reconstructions of Neolithic and Mesolithic fishing practices must remain largely hypothetical.

4.2 Milk: A Secondary Product at the Heart of Neolithic Transformations

The predominance of dairy products in the organic residue from both the North Balkans and the Carpathian Basin signals a significant shift in dietary practices, diverging from patterns observed in the South Balkans and the Aegean. This change marks the emergence of a food staple that, in various forms, would come to define European cuisine. Whether consumed in its pure form, transformed into cheese or yogurt, or rendered into butter, dairy products are embedded in many of Europe's signature dishes. From production to consumption, the study of milk in prehistoric contexts has long been of scholarly interest. However, it was the work of Andrew Sherratt and his formulation of the Secondary Products Revolution (SPR) that reignited and broadened research on the topic.⁵¹ In 1981, within a volume honoring the work of David Clarke, Sherratt introduced his

51. A colleague and friend, Ian Hodder (2011, 175) wrote, a few years after Sherratt's death, about the Secondary Product Revolution: "I thought it was quite brilliant then, and still do now rereading it. It showed an amazing range and depth of knowledge, and a really breathtaking grasp of large-scale processes. The idea of the Secondary Products Revolution was his most ingenious and most enduring contribution".

influential theory.⁵² At its inception, the SPR aimed to explain the political and economic transformations observed in the Near East and Europe during the Chalcolithic and Early Bronze Age. These periods were characterized by profound shifts in social organization, which led to the emergence of early state formations and chiefdoms. Sherratt argued that the roots of these transformations lay in innovations associated with animal exploitation and the technological advancements that accompanied them.

Sherratt distinguished between two types of products derived from animals: primary products, which are obtained post-mortem, and secondary products, which are acquired without slaughtering the animal, allowing for the continuous renewal of resources (Sherratt 1983b, 1981). He identified four key innovations: a) the plough, representing the intensification and mechanization of agriculture; b) the cart or wheel, which enhanced transport and further intensified production; c) the harvesting of wool from sheep; and d) the production and consumption of milk.

Sherratt posited that the use of milk began only after a prolonged process of domestication and technological refinement, occurring during the fourth millennium BCE (Sherratt 1997; Sherratt 1983a, 1981). However, subsequent research—including biochemical residue analyses—has demonstrated that dairy products were already in use at the beginning of the Neolithic (e.g. Evershed 2008a). Although Sherratt's estimate was based on archaeological and iconographic data, and on the perceived limitations of early milk consumption, new findings—including those presented in this study—offer further proof of the earlier role of dairy in subsistence practices in Southeast Europe.

Milk acquisition provided distinct advantages to early farming populations, functioning as a renewable source of nutrition rich in protein and essential vitamins (e.g. D, B12, A). The “calcium assimilation hypothesis” has been proposed as one explanation for its development, suggesting that these nutritional benefits encouraged its incorporation into early agricultural diets (Flatz and Rotthauwe 1973). Still, milk consumption also carries physiological challenges, which must be addressed. Before examining its role in Southeast European prehistory more closely, a few remarks are necessary to understand the complexities involved in making milk a staple of the human diet.

Milk is today predominantly consumed in the Western world, particularly in Northern Europe. Its composition offers a near-perfect balance of fat, protein, and lactose (milk sugar), making it a highly nutritious product for human health.

52. Although the use of animals for their secondary products had already been noted by earlier scholars such as Bökönyi (1974), it was Sherratt who first synthesized these observations into a coherent theoretical framework, introducing a functional model that redefined our understanding of the development of animal husbandry.

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However, one of its key components—lactose—presents a challenge for digestion. Lactose is a disaccharide composed of the monosaccharides glucose and galactose. For humans to digest it, the enzyme lactase must be present in the intestine to split these molecules (Scrimshaw and Murray 1988; Kretchmer 1972). In individuals who lack sufficient lactase production—known as lactase non-persistent or lactose intolerant—the ingestion of milk can lead to significant gastrointestinal symptoms, ranging from bloating to severe diarrhea. In contrast, a high frequency of lactase persistence (LP) within a population facilitates lactose digestion and enables milk consumption beyond infancy.

It is well known that infants typically digest milk without complications—barring cases of congenital lactose intolerance, which can be fatal (Kretchmer 1972). However, as a child matures, the ability to produce lactase normally declines, eventually resulting in lactose intolerance.

In all mammals except human lactose-tolerant populations, the production of lactase is at a maximum shortly after birth and ceases after infancy – in man, from two to four years of age.

(Sherratt 1981, 276)

In lactose-tolerant populations, lactase production continues beyond early childhood, allowing dairy consumption throughout adulthood. The origin and timing of the genetic mutation enabling this persistence remains a subject of scholarly debate. In 1971, McCracken identified a correlation between lactase persistence and the lifestyle of specific populations. His findings highlighted the significance of sustained contact with milk as a driver for genetic adaptation, suggesting a deep historical relationship extending back to the early Neolithic (e.g. McCracken 1971; Simoons 1970, 1969). As we shall see, the presence of LP in human populations is a critical factor in understanding the initial adoption and integration of milk into early diets.

Sherratt (1981) posited that, given the challenges of lactose malabsorption and its adverse effects, prehistoric populations would have needed to find ways to reduce lactose content in their diet. One effective solution was the transformation of raw milk into secondary products—such as cheese, yogurt, or butter—which contain significantly lower levels of lactose. These by-products enable the intake of essential nutrients while minimizing the digestive risks associated with lactose (Table 10).

It is important to note that lactose intolerance and tolerance should not be viewed as a binary condition. Rather, it exists along a spectrum of sensitivity, with many individuals occupying a middle ground. As such, products like butter and aged cheeses, which have relatively low lactose content, can often be consumed even by those with limited lactase activity. This nuance supports one of

the foundational arguments of Sherratt's theory: the early use of milk implies a degree of technological knowledge and dietary adaptation among prehistoric populations.

Table 10. Lactose Content (Hofele 2006; Schleip 2005).

Food	Lactose Content in g./ 100g.	Food	Lactose content in g./ 100g.
Butter	0,5-0,6	Buttermilk	4,0
Half-fat butter, Yogurt butter	1,0-1,6	Yogurt nature, 1,5% or 3,5% fat	3,0
Milk (low fat or unskimmed)	4,8-5,0	Goat milk	4,4
Ewe's milk	4,7	Kefir low fat	4,1
Butterkäse	0,6	Feta 45%	0,5-4,1
Cream cheese (50%)	3,4	Mozzarella	0,1-3,1
Sheep milk cheese	Less than 0,1	Cottage cheese 20%	3,3
Cheddar	Less than 0,1	Ricotta	0,3-0,8
Gouda 45%	2,0	Fruit yogurt	3,0

The practice of milking requires a specific body of knowledge concerning animal behavior and effective handling techniques. While some species, such as goats, are relatively easier to milk, cows are typically more resistant, making the task more labor-intensive and demanding a variety of tactics to gain the animal's trust. For this reason, it is generally believed that sheep and goats were the first animals subjected to milking, with cattle following shortly thereafter. The primary technical challenge in milking involves inducing a state of calm in the animal, as stress, separation from offspring, or lack of stimulation can inhibit lactation (e.g. Amoroso and Jewell 1963; Sherratt 1981; McCormick 1992; Balasse 2003; Balasse et al. 2000).

A crucial aspect of the milking process is the so-called "Ferguson Reflex" (Ferguson 1941). For milk to be released, the cow must be in a relaxed state while also receiving adequate stimulation. Ethnographic and veterinary studies have documented various techniques used to induce this state. These include blowing air into the vaginal or rectal canal using a small tube, or even the creation of a dummy dressed in calfskin to mimic the presence of the offspring—since the

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absence or separation of the calf can cause significant distress, thereby halting milk production (Amoroso and Jewell 1963; Balasse 2003).⁵³

Beyond residue analysis and iconographic representations, direct archaeological evidence of milking techniques remains extremely limited and largely speculative. Material evidence pertaining specifically to the act of milking—outside the contributions of organic residue analysis and zooarchaeology—consists mostly of iconography, technological analyses of ceramic forms, and a small number of contested artifacts.⁵⁴

Before the development of organic residue analysis, the most effective means of identifying milking activities was through zooarchaeological studies, particularly those using statistical methods. A landmark approach was introduced by Payne (1973), whose research on “kill-off patterns” in sheep and goats aimed to correlate mortality profiles with different modes of animal exploitation. In his model, Payne identified three ideal mortality curves, each corresponding to a specific purpose: meat, wool, and milk production. Each curve provides insight into the herd management strategies employed to maximize yield based on the intended product. Aligned with Sherratt’s theory of the “Secondary Products Revolution,” Payne’s models have since been applied across a wide range of archaeological contexts to interpret economic strategies and shifts in animal use among early farming societies (e.g. Sherratt 1983b, 1981; Vigne and Helmer 2006; Greenfield 2010).

An illustrative example can be found in the Pfyn and Cortaillod cultures (4000–3500 BCE), where assemblages reveal that between 40 percent and 80 percent of the cattle population were kept to maturity, with a substantial proportion being female (Sherratt 1983b; Sakellaridis 1979). According to prevailing models, this demographic pattern indicates a production strategy centered on both breeding and milking. In the case of ovicaprids from the Cortaillod culture, 20 percent

53. Outside of ethnographic records (e.g. Amoroso and Jewell 1963), Sherratt compiled a wide range of possible indicators of prehistoric milking techniques, drawing from iconography, faunal assemblages, and material culture. Within the archaeological corpus, he identified two noteworthy examples: one from the Baden culture and another from Southern Russia (Sherratt 1981). The first one is a shell artifact presented by Banner (1956), interpreted either as a musical instrument or, based on ethnographic parallels, as a blowing instrument used during milking. The second is a bone tube with a polished end, discovered in a pastoralist burial in Southern Russia and linked to milking practices (Galkin 1975). Notably, Galkin argued that the tube was found in the burial of a cremated sorcerer (shaman) and suggests that one of the powers of the sorcerer was to be able, with the help of his magic and action, to milk a cow, making the practice a part of the sacred sphere. Galkin (1975, 190) wrote: “Находка же в его могиле костяной трубочки служит свидетельством, что одной из функций колдуна было умение восстанавливать с помощью магических и практических действий способность животного отдавать молоко.”

54. See previous footnote.

to 60 percent of the animals were likewise maintained to maturity, again predominantly female. These data suggest a focus on wool production, though the possibility of goat milking cannot be excluded.

Regrettably, Early Neolithic zooarchaeological research in the North Balkans and the Carpathian Basin often diverges from such analytical practices. Most faunal collections lack data on mortality rates or precise age-at-death estimates, offering instead only taxonomic identification and skeletal part counts. Although the original kill-off models have since undergone refinement, they have also been subject to substantial critique. Chief concerns include the models' uniformitarian assumptions (i.e. the projection of modern herd management practices onto past societies), biases introduced during excavation and faunal recovery, and the emphasis on optimal production strategies (e.g. Duerr 2007; Vigne and Helmer 2006; McCormick 1992; Halstead and Isaakidou 2011; Halstead 1998; Marnet and McKusick 2001; Balasse 2003; Balasse et al. 2000).

To this list, I would add the issue of cultural misinterpretation. The pursuit of optimal production often reflects an anachronistic framework shaped by modern capitalist ideologies of efficiency and profit. It is unreasonable to assume that prehistoric societies shared such economic motivations. As previously discussed, human behavior is frequently governed by factors that transcend utilitarian logic, including religious beliefs and traditional customs. That said, greater attention to kill-off patterns would have offered a more nuanced sociocultural insight into herding strategies, moving beyond mere quantification.

Since its inception, the theory of the "Secondary Products Revolution" has continued to benefit from the accumulation of new data, prompting evolving interpretations of early milk use. The early 21st century has seen significant advancements in archaeometric and genetic research, opening new avenues for investigating prehistoric subsistence. While organic residue analysis remains one of the most precise methods for identifying dairy consumption, it is inherently limited to specific questions related to culinary practices and technology. Meanwhile, isotopic analyses of human and animal remains have sought to trace the origins and diffusion of dairying practices—whether through mapping the spread of domesticates or tracking the emergence of the lactase persistence (LP) allele in human populations.

4.2.1 Genetics and Milk

In 2007, Burger et al. conducted a study to investigate the initial appearance of the lactase persistence (LP)-associated allele in human populations during the Neolithic period. At the time, researchers were divided between two primary theories. The first, known as the "culture-historical hypothesis," posits that LP alleles

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were originally rare in human populations, but their frequency increased rapidly with the onset of the Neolithic and the domestication of animals. This rise, proponents argue, occurred through natural selection (e.g. Simoons 1970; McCracken 1971; Kretchmer 1972; Beja-Pereira et al. 2003). According to this model, cultural shifts—specifically, the incorporation of dairy into the human diet—triggered corresponding genetic adaptations. Since LP is a dominant trait, it could have disseminated quickly among populations experiencing such cultural transitions.

In contrast, the “reverse cause hypothesis” offers an alternative explanation, suggesting that dairying was adopted by populations that already exhibited high frequencies of LP alleles (e.g. Bayless, Paige, and Ferry 1971; Nei and Saitou 1986). This model argues that elevated LP frequencies were inherent in certain populations, preceding the use of dairy products and independent of cultural change

The presence of LP traits in human populations is traceable through specific loci on the genome, including G₋₁₃₉₁₅, G₋₁₃₉₀₇, G₋₁₄₀₀₉, G₋₁₄₀₁₀, and T₋₁₃₉₁₀ — each considered principal markers for the LP-enzyme with their frequency varying according to the origin of the milk (e.g. Enattah et al. 2002; Imtiaz et al. 2007; Ingram et al. 2007; Jones et al. 2013; Tishkoff et al. 2007). For instance, high frequencies of G₋₁₃₉₁₅ are linked to camel milk consumption, whereas T₋₁₃₉₁₀ correlates with cattle milk. Burger et al. aimed to determine whether a relationship exists between the species used for milking and the frequency of LP markers in human genomes. According to the “reverse cause hypothesis,” LP allele frequencies should be relatively uniform across populations, as they predate dairying. However, the “culture-historical hypothesis” would predict regional variation in LP frequencies depending on the type of domesticated animals utilized.

The results of Burger et al. (2007) support the “culture-historical hypothesis”: populations in Saudi Arabia demonstrated high LP frequencies associated with camel milk, while European populations showed high frequencies associated with cattle milk. Nevertheless, the authors acknowledged that their findings do not definitively refute the “reverse cause hypothesis,” emphasizing the need for further research. In 2008, Nabil S. Enattah and colleagues conducted a similar study, arriving at the same conclusion and reinforcing the idea of a culturally driven development of milk consumption:

We have demonstrated that the European T₋₁₃₉₁₀ LP and the Arab C₋₃₇₁₀₂-G₋₁₃₉₁₅ LP variants have emerged from different allelic backgrounds and driven to very high frequencies in different populations that presumably had a different history of animal domestication and dairy culture.

(Enattah et al. 2008, 71)

Research into LP allele distributions and evolutionary patterns remains a dynamic field, with new data continually emerging and many questions still unresolved. Seeking to identify the potential expansion point from the earliest LP dairying farmers to modern Europeans, Itan et al. (2010; 2009) conducted simulations of LP genotype frequencies across the Old World. However, they openly acknowledged limitations in their models, citing insufficient data as a possible flaw in their interpretations. A cursory examination of their maps reveals a significant underrepresentation of samples from Southeastern Europe—an omission that likely affects their results (e.g. Figure 20).

While the study of human genetics progresses, parallel advances in animal genetics and the study of domestic cattle origins continue to illuminate herding practices. Initially, Sherratt (1983b, 1981) hypothesized that domestic cattle originated in the Near East and that both the animals and milking techniques subsequently spread throughout Europe. This theory, based at the time on archaeological and ethnographic reasoning, awaited decades of archaeometric evidence to support or refine its claims.

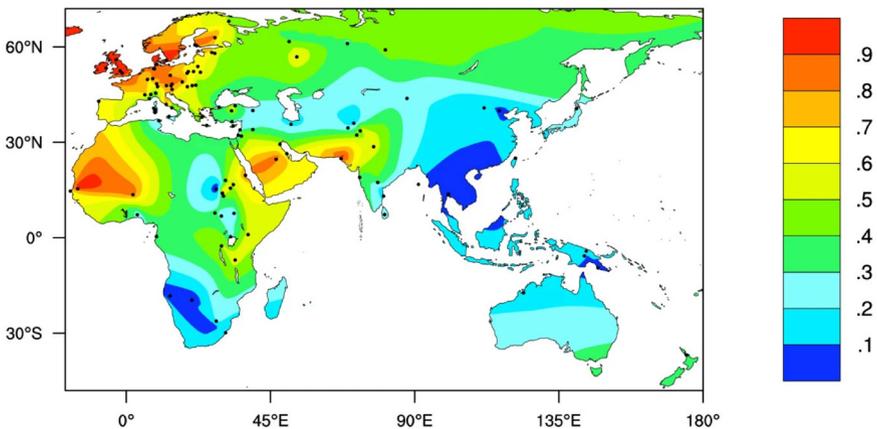


Figure 20. Interpolated map of Old World LP phenotype frequencies. Dots represent collection locations. Colours and colours key show the frequencies of the LP phenotype estimated by surface interpolation. (after Itan et al. 2010, fig. 1).

In investigating the origins of cattle domestication, three primary candidates are typically considered: *Bos indicus* (Indian cattle), *Bos primigenius* (aurochs), and *Bos taurus* (Near Eastern/European cattle). Of these, only two have survived into modern times, as the last recorded *Bos primigenius* died in 1627 in the Jaktorów Forest in Poland. According to current genetic research, some scholars argue that *Bos indicus* and *Bos taurus* were not directly crossbred but instead share a common

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ancestor in *Bos primigenius* (Pitt et al. 2019). This implies that the domestication of cattle in the Near East was a localized development and did not originate from South Asia.

The genetic diversity of Near Eastern cattle is among the highest globally, which researchers attribute to intensified hybridization events during the Neolithic period between *Bos taurus* and local zebu populations. Multiple studies using mitochondrial DNA (mtDNA) analysis have investigated both the origins of domesticated cattle and their diffusion into Europe (e.g. Scheu et al. 2008; Troy et al. 2001; Loftus et al. 1999; Bollongino et al. 2012; Pitt et al. 2019). These studies reached similar conclusions: the diversity of haplotypes diminishes progressively from the Near East to Western Europe. Additionally, mtDNA analyses reveal no genetic continuity between European aurochs and domesticated European cattle, supporting the theory that cattle were first domesticated in the Near East and introduced to Europe via "demic diffusion"—the migration of farming communities carrying domesticated animals.

In 2005, Götherström et al. pursued a different line of analysis by focusing on Y-chromosome haplotypes. Their findings added complexity to the debate, indicating that southern European domesticated cattle were genetically closer to Near Eastern types, whereas northern European cattle showed increasing divergence, possibly due to local hybridization with European aurochs. This result suggests a dual process of cultural diffusion and local adaptation (Götherström et al. 2005). However, in 2008, Bollongino and colleagues challenged this interpretation by analyzing Y-chromosome haplotypes from Early Neolithic specimens across Europe. Their study found no evidence of crossbreeding between imported cattle and European aurochs in the patrilineal genetic markers (Bollongino et al. 2008).

Given these opposing results, Bollongino et al. (2008) pointed out potential flaws in the Götherström et al. (2005) study, such as a geographically limited sample set and insufficient representation of broader regional diversity. Despite the methodological discrepancies, these studies collectively indicate that at least one significant introduction of domesticated cattle from the Near East into Europe occurred during the Neolithic. This movement coincided with the advent and expansion of dairy production and consumption in Europe.

4.2.2 Milk as Food Choice

Yet, the question remains: why did the first farmers of the North Balkans and Carpathian Basin choose milk? Although milking techniques were already known in Anatolia and the Aegean prior to their entry into Southeast Europe, milk was never central to the local diet. It remained a fringe, marginal element—accessible, but rarely predominant. Conversely, the population of northwestern Anatolia, at

the border of modern-day Bulgaria, appears to have been significant consumers of milk products (Evershed, Payne, et al. 2008; Debono Spiteri et al. 2016). his observation partly supports the findings of Mathieson et al. (2018) , who proposed a northwestern Anatolian origin for the Balkans' first farmers via a so-called Danubian route. While this study provides important insights into prehistoric population movements, it relied solely on European samples, which were then compared to a generalized Anatolian database, lacking clear regional distinctions. What is described in the text as northwestern Anatolia is later simply referred to as Anatolia, a discrepancy that complicates interpretation. Consequently, such findings should be cautiously interpreted as indicating an arrival of Anatolian populations into Southeast Europe.

Moreover, correlations between residue analyses and genomic studies must be critically assessed. Evershed et al. (2008) explicitly distinguished northwestern Anatolia from other Anatolian regions, the Aegean, and the Balkans, noting its unique pattern of high dairy consumption. Thus, while suggestive, current evidence does not conclusively support a diffusionist narrative and must instead be framed as a local cultural choice.

Assuming northwestern Anatolian traditions were transmitted into the Balkans remains a localized and tentative proposition.⁵⁵ Other factors influencing the adoption of milk must be considered, especially the notable increase in cattle herding observed in the North Balkans alongside rising dairy consumption. This correlation is less evident in the Carpathian Basin. For instance, the Starčevo site of Alsónyék exhibits patterns akin to Serbian sites, with a substantial presence of wild game, a high proportion of cattle, and a predominance of dairy residues. In contrast, Ecsefalva 23, representing the Körös culture, shows a dominance of dairy in residue analysis, while faunal remains indicate low percentages of cattle and wild game. As previously noted, Ecsefalva 23 cannot be seen as fully representative of the Körös complex. Given the lack of lipid residues at Szakmár, it remains difficult to establish general trends for the Körös groups. Based on current evidence, dairy played a significant role among both the Körös and Starčevo groups, though this can only be conclusively extended to the latter. The shared behavior at Alsónyék lends further credence to treating Starčevo and Körös as distinct cultural entities.

It has been argued (Ethier et al. 2017) that the presence of milk in these regions could reflect an adaptive response to harsher environments. In climates with frosty winters that limited access to plant-based resources, modifying farming strategies and diversifying food sources would have been vital for survival. Milk is a renewable and mobile resource, making it an ideal candidate for such

55. It is important to note that dairy residues are rare within the Bulgarian ceramic assemblage.

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adaptation. Ingold (1980) also highlighted the cost-benefit advantage of dairy production over meat production. Milk's value as a source of essential nutrients further supports its usefulness. However, arguments grounded in optimal production or nutrient optimization must be approached critically. Prehistoric people did not have access to contemporary knowledge of vitamins or nutrient balances. The commonly cited justification for milk as a source of vitamin D is tenuous at best—Neolithic people spent most of their time outdoors, exposed to the sun, the primary natural source of this vitamin. While acknowledging the biological benefits of milk, these explanations should not be mistaken for motivational factors in food choice

Recent studies show that hunter-gatherer diets were complete, diverse, and nutrient-dense (e.g. Cordain et al. 2000; Konner and Eaton 2010; Kuipers et al. 2010; Lösch, Grupe, and Peters 2006; Luca, Perry, and Di Rienzo 2010). Early farmers' contact with local hunter-gatherers likely offered them crucial survival knowledge, including access to seasonally scarce resources.⁵⁶ In this context, milk may have served not only as a survival strategy but also as a pathway to self-sufficiency.

Moreover, the concept of optimal production must be historically contextualized. Our modern understanding of optimality is rooted in capitalist economic logic that prioritizes profit over cultural or ritual significance. As discussed earlier, social and cultural actions are not always driven by economic rationalism. To assume otherwise would be to impose modern assumptions on ancient lifeways. In the Early Neolithic of Southeast Europe, we see no clear evidence of mass production or rigid economic planning. Rather, production was designed to meet a broad spectrum of needs—biological, economic, social, cultural, political, and personal. Interpreting food choices solely through the lens of economic determinism would thus be misleading and reductive.

Milk, however, is not without its limitations—both technical and biological. While the necessary techniques for its processing were already known by at least the 8th millennium BC (Evershed, Payne, et al. 2008), its consumption still raises important biological questions, particularly in relation to regional discrepancies such as those observed in the Iron Gates. Studies on lactase persistence (LP) in ancient populations remain limited and are urgently needed to deepen our understanding of the development and diffusion of milk consumption. The available research, however, largely supports the idea of a post-consumption evolution of the LP allele, as articulated by the 'culture-historical hypothesis' and supported

56. A comparable example can be found in the assistance provided by First Nations during the European colonization of Canada. Harsh winters posed a significant challenge to the settlers, and many Indigenous communities supported them not only by supplying essential food and furs, but also by teaching survival strategies suited to the environment.

by models of regional diffusion from distinct points of origin (e.g. Gerbault et al. 2011; Itan et al. 2010; Itan et al. 2009; Bersaglieri et al. 2004; Pitt et al. 2019). If we accept a diffusion of the LP allele from the Near East inside the Balkans, then the newcomers were already biologically disposed to the consumption of milk, whereas the local hunter-gatherer population would normally present a deficiency and would find dairy products more detrimental than not. If we accept the hypothesis of LP allele diffusion from the Near East into the Balkans, it follows that incoming populations were already biologically predisposed to the digestion of milk, while indigenous Mesolithic groups would likely have lacked this adaptation and may have found dairy products more harmful than beneficial.

This interpretation aligns with the findings from residue analyses—assuming, of course, that the Mesolithic population predominantly remained concentrated in the Iron Gates region during the Early Neolithic. Among the combined samples from Lepenski Vir, Schela Cladovei, Velesnica, Aria Babi, and Vlasac, only one potsherd from Schela Cladovei tested positive for ruminant dairy fats. Considering the archaeological evidence for mixed populations and the presence of domesticates at these sites, one might have expected a more visible, albeit not dominant, presence of dairy residues. A potential biological incompatibility with lactose could offer one explanation, although such a conclusion remains speculative due to the scarcity of genetic studies concerning LP allele distribution in the Balkans.

From another angle, Cook and al-Torki (1975) proposed that milk may have served as a replacement for water in arid regions. While thought-provoking, this hypothesis encounters a fundamental contradiction: water scarcity would equally affect livestock, limiting their ability to produce milk. As a renewable resource, milk still demands continuous care and a stable environment, including regular access to water for the animals themselves. Water, in this sense, is not only critical for human survival but also for maintaining a productive herd. Moreover, it is notable that milk does not appear to have been intensively exploited in semi-arid zones such as central and western Anatolia, the Levant, or the Aegean. Could it be, then, that in a more temperate setting—abundant in freshwater sources—the regular and sustained exploitation of dairy products finally became viable?

At present, our ability to fully assess the factors behind the emergence of dairy as a dietary cornerstone remains limited by gaps in genetic, archaeological, and biochemical evidence. A more integrated research approach, involving close collaboration between geneticists, ethnographers, and archaeologists, may hold the key to producing more robust explanatory models (Gerbault et al. 2011). Still, the residue analyses from the North Balkans and Carpathian Basin offer concrete

proof of dairy exploitation and suggest that these communities made a conscious dietary and economic choice—one that ultimately reinforced their cultural divergence from southern traditions.

4.3 Symbolism in Southeast Europe Food Culture

In discussions of the Neolithization process, scholars such as Jacques Cauvin have posited that the origins of farming may be better understood not solely through economics or environment, but through the lens of symbolism. This line of inquiry becomes particularly relevant if we accept, following Mathieson et al. (2018), that the first farmers in the northern Balkans originated in Anatolia—a region where cattle played a significant symbolic and social role (e.g. Twiss and Russell 2009; Cauvin 1994). In fact, such was the centrality of bovine imagery and ideology in the Pre-Pottery Neolithic B (PPNB) that Cauvin (1994, 170) described its people as a “peuple du Taureau.” For him, the bull—especially the wild aurochs—represented the untamed force of nature, primal instinct, virility, power, and violence.

At sites like Çatalhöyük in Anatolia, cattle feature prominently in ritual and domestic symbolism: depicted in wall paintings, modeled in reliefs, carved into stone, fashioned into figurines, and mounted as crania on architectural features. These remains consistently receive special treatment, highlighting their cultural value (Twiss and Russell 2009). Strikingly, however, in the stratigraphic levels dating between approximately 7400 and 6500 calBC, cattle bones appear in significant quantities—comprising 20–25 percent of faunal assemblages—yet show no morphological signs of domestication. This disparity between cultural importance and economic utility raises the question: what symbolic significance might be associated with the act of mastering such a formidable animal? To domesticate the aurochs would have symbolized, quite literally, the subjugation of wild, chaotic nature—a powerful act of control and transformation.

Within the Starčevo-Körös archaeological record, symbolic representations are more subtle and often ambiguous. Even at symbolically rich sites such as Lepenski Vir, interpretation remains contested. Nevertheless, zoomorphic figurines—often depicting quadrupeds—are widespread across the Starčevo-Körös complex. Examples come from sites like Grivac, Divostin, Blagotin, Knežepište, and Starčevo-Grad, and they have been variably interpreted as representations of sheep, goats, deer, or cattle (e.g. Budja 2003; Vitezović 2015). Among these, cattle figurines appear to be the most commonly identified, although this may reflect the relative ease with which bovine features can be recognized, rather than their actual frequency (Stanković 1990; Vitezović 2015).

Another noteworthy symbolic element is the occurrence of bucrania—cattle skulls or stylized representations thereof—and bucrania-shaped amulets. Though rare, such items have been discovered in contexts associated with pit dwellings, such as at Knejepište and Blagotin, suggesting an association with domestic or private spheres (Budja 2003; Stanković 1990). Despite these examples, however, there is insufficient evidence to support the existence of a structured ‘cattle cult’ analogous to what has been proposed for Anatolia. Nonetheless, the symbolic role of cattle within the Starčevo-Körös sphere cannot be dismissed. It is expressed through the production of figurines and ornaments, but also more materially through the increasing economic emphasis placed on cattle herding and milk production.

This symbolic interest, however, appears to be concentrated outside the Iron Gates, where fish-like motifs had already featured prominently in the symbolic repertoire since the Mesolithic (Živaljević 2012; Srejšević 1972; Borić 2005a). According to Radovanović (1994), fish in the Iron Gates region held primarily symbolic rather than subsistence value. He posited that wild game featured more prominently in the diet, while fish—though occasionally consumed—served more as metaphors for life, with the river itself conceptualized as a life-giving force (Radovanović 1997). While there is merit in acknowledging the symbolic dimensions of aquatic resources, subsequent research has demonstrated that fishing in the Iron Gates was not merely a ritual or symbolic activity but also a significant subsistence strategy. Residue analyses have confirmed that aquatic resources contributed substantially to the local diet, especially during the Mesolithic–Neolithic transition.

Thus, although Radovanović may have underestimated the dietary role of fish, his observations concerning the symbolic resonance of aquatic imagery remain compelling. Indeed, fish iconography and symbolism appear deeply embedded in the cultural fabric of the Iron Gates communities. Monumental boulders carved with hybrid figures—featuring both human and piscine traits—likely functioned as social agents embodying traditions and mediating human-animal relationships during a time of domestication (Figure 21) (Borić 2005a). Similarly, the presence of fish depictions carved onto clubs or mallets found in the region (Živaljević 2012), further illustrates the multifaceted role of aquatic resources, extending far beyond their status as mere commodities to include ritual, social, and ideological dimensions.

Even if the spiritual significance of cattle in the Balkans does not reach the symbolic intensity observed in the Near East, nor is the fish motif universally present throughout all Balkan sites, both may nonetheless have held symbolic relevance in a different context—namely, within the domain of feasting. Hayden (1996) has notably argued that the origins of agriculture are intricately

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tied to the practice of feasting and the sociopolitical implications that stem from such gatherings. Even if the spiritual significance of cattle in the Balkans does not reach the symbolic intensity observed in the Near East, nor is the fish motif universally present throughout all Balkan sites, both may nonetheless have held symbolic relevance in a different context—namely, within the domain of feasting. Hayden (1996) has notably argued that the origins of agriculture are intricately tied to the practice of feasting and the sociopolitical implications that stem from such gatherings. In his “food-fight theory,” the transition to a self-sufficient agrarian economy was not solely driven by subsistence needs but was, rather, a calculated strategy for social competition. In this framework, domesticated food—particularly high-labour or prestige items—functioned as symbolic capital, reinforcing or negotiating status between individuals or groups.



Figure 21. Human-fish presentation. (Srejović and Babović 1983: 116).

While the theory has its merits, it also faces substantial critique for its inherent biases and for projecting economic determinism onto prehistoric communities. As such, it is not necessary to delve into all its shortcomings here. Nonetheless, the notion of feasting has attracted considerable scholarly interest across both prehistoric and historic archaeology, prompting debate over its definition and the methodological challenges associated with identifying it archaeologically (Greenfield and Jongsma-Greenfield 2018). While large, communal feasts may leave discernible traces in the archaeological record, more frequent and intimate feasting events—such as those marking life transitions or seasonal observances—often elude identification and interpretation. Moreover, not all feasting should be understood as politically or economically charged. Greenfield (2018) provides a more nuanced typology of feasting practices, ranging from rites of

passage (e.g. coming-of-age ceremonies, weddings, funerals) and calendrical events (e.g. solstices, first harvest celebrations), to socially and politically significant occasions (e.g. alliance-building banquets, communal redistribution events, national commemorations). In contrast, Hayden's approach tends to emphasize the latter, projecting a model of competitive feasting rooted in ethnographic analogies—particularly the potlatch tradition of the Indigenous communities of the American Northwest (Hayden 2014, 1996).

While the potlatch has indeed become emblematic of complex redistributive feasting, its occurrence outside the specific cultural and environmental contexts of the Northwest Coast is limited and, when present, manifests in far more constrained forms (e.g. Mauss 2013; Piddocke 1965; Rosman and Rubel 1972). The potlatch itself operates within a highly specialized cultural framework, involving ritualized gift-giving, competitive displays of wealth, ceremonial destruction of prestige items, and the public reinforcement of social hierarchies (Mauss 2013). Only elite individuals or group leaders—those with surplus wealth in the form of food, ornaments, or manufactured goods—are able to host such events. In this sense, the potlatch is a structured act of economic theatre, wherein the accumulation and ostentatious redistribution of wealth affirm status, forge alliances, and articulate spiritual and social narratives.

Anthropologically, the potlatch continues to fascinate researchers precisely because of its apparent contradiction to capitalist logic: wealth is amassed, not for personal material enrichment, but to be ceremonially relinquished or even destroyed. This paradox challenges conventional understandings of economic rationality and highlights the diversity of human socio-economic behaviors (Rosman and Rubel 1972; Kan 1986; Benedict 2005). However, retroactively projecting this model onto prehistory is fraught with methodological difficulties. Even when archaeologists can confidently identify evidence of feasting—through patterns of food remains, oversized vessels, or communal structures—discerning the 'nature' of the event remains elusive. Was the feast ritualistic, celebratory, integrative, or competitive? While historical archaeologists may draw on written sources or richly stratified contexts to answer such questions, those working on Neolithic or earlier periods face considerable limitations.

It is therefore problematic to equate any large-scale prehistoric feasting event with the potlatch tradition. Doing so risks reducing complex social behaviors to a single, culturally specific model. This is not to suggest, however, that large redistributive or prestige-driven feasts did not occur during the Neolithic. Rather, it must be recognized that such phenomena—if present—were likely embedded in distinct symbolic, social, and environmental frameworks that shaped their form, function, and meaning in ways unique to each community.

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The first step in exploring the role of feasting in Early Neolithic Southeast Europe is to assess potential archaeological signatures of such practices. In the North Balkans, Greenfield undertook such an investigation at the site of Blagotin. Within pit house ZM07—incidentally the same structure in which a possible map was discovered—two distinct deposits, one lying one over the other (upper and lower), were identified beneath a daub floor in the southern section (Greenfield and Jongsma-Greenfield 2018). The upper deposit consisted of a thick layer of ash and the remains of a neonatal infant. While the cause of death remains uncertain—there are no indications of violence, butchery, or cremation—the context remains suggestive. Beneath this, a lower deposit revealed a small pit densely packed with animal bones. The feature appears to represent a single-use deposit rather than a continuously used refuse pit. Moreover, the well-preserved condition of the faunal remains supports the interpretation of a deliberate, concentrated deposition—characteristics commonly associated with feasting episodes.

Nevertheless, as Greenfield and Jongsma-Greenfield (2018, 121) caution, aside from this particular deposit, there is little additional material or architectural evidence at Blagotin to indicate large-scale feasting activities. The only tangible support for this interpretation lies in the faunal data. Notably, the bones from ZM07 display the lowest frequency of cooking marks among all pit features at the site. While such absence may be due to cooking techniques that leave no burn traces—such as boiling, roasting, or drying—this remains inconclusive. Taxonomically, the assemblage is dominated by caprines, with minimal representation of wild species, pigs, and cattle. Still, the pit's central location within the settlement, the discrete concentration of faunal remains, and its stratigraphic association with a buried infant—suggestive of ritual—led the authors to propose a plausible feasting scenario. Importantly, Greenfield and Jongsma-Greenfield recognize the limitations of their data and emphasize that their analysis represents a preliminary inquiry—the first of its kind for the Early Neolithic in this region. Only with further comparable studies can more definitive conclusions be drawn regarding the presence and character of feasting events.

Because Greenfield's study postdates the residue analysis conducted for this research, the question of feasting was not incorporated into the original sampling strategy. Consequently, no correlation between milk consumption and potential feasting activities at Blagotin can be explored at this stage. However, we do know that cattle were not a dominant component of the faunal assemblage, representing only 31 percent overall. This relatively low figure may be attributed to their value as milk producers—a secondary product that encourages keeping the animals alive rather than slaughtering them. Additionally, Blagotin's domestic architecture provides further insight.

The site is characterized by non-permanent, small-scale structures—presumably intended as shelters for sleeping or protection from inclement weather. This architectural choice supports the idea of a semi-mobile lifestyle. In such a context, where private, enclosed spaces are minimal or absent, food consumption likely occurred in shared, outdoor areas, fostering communal dining experiences. This raises the question: how do we distinguish between communal meals and feasts?

At Blagotin, the context of the upper deposit in ZM07—potentially ritual in nature and associated with infant burial—supports the interpretation of a feast as part of a social or ceremonial event. Yet, such conclusions depend on very specific conditions. As further data becomes available from other regional sites, it will be important to consider the broader spectrum of communal dining practices that may not qualify as feasting in the strictest sense, but still held significant social meaning.

In this light, sociocultural frameworks become essential in assessing food strategies and consumption patterns. The cultural food landscape of Southeast Europe is a mosaic of diverse groups engaged in dynamic interaction. As this study has shown, certain patterns are emerging—particularly the distinction between foodways in the South Balkans and Aegean versus those in the North Balkans and Carpathian Basin. However, the contrast between the Starčevo and Körös complexes still requires refinement and deeper understanding. This research represents only a first step toward a more integrated approach to prehistoric food culture—one that moves beyond economic and biological considerations to embrace the symbolic, social, and ritual dimensions of human subsistence.