Chapter 5
Conclusion

This study sought to reintegrate sociocultural dimensions into the archaeological narrative surrounding the emergence of a self-sustaining lifestyle in the Early Neolithic. For too long, archaeological research on the origins of farming has focused predominantly on economic functionality and the fulfilment of biological needs. While these are essential components of human development, they form only a part of a far more complex system—one that is incomplete without consideration of symbolic, social, and cultural dimensions. The transformations that characterize the earliest Neolithic phase not only reshaped subsistence strategies but also initiated a long trajectory of change that would ultimately define key aspects of human identity and society.

In light of this, the research agenda must broaden to engage with the full spectrum of human experience. Reaffirming the inherently social and cultural nature of human beings compels us to revisit entrenched assumptions and to reimagine interpretive frameworks that allow the archaeological record to be contextualized more holistically. Applying this vision, the present study undertook lipid residue analyses at various sites across the Balkans and the Carpathian Basin. The objectives were threefold: first, to delineate the food culture landscape of the Starčevo–Körös complex through the consumption of animal-derived products; second, to assess the cultural implications of technological and economic transitions; and third, to interrogate the broader role of food culture within archaeological discourse. While archaeological theory and methodology have developed considerably, the exploration of food culture remains indebted to the insights of other disciplines—particularly sociocultural anthropology, but also psychology and sociology. This study thus positioned itself at the intersection of these fields, drawing on their perspectives to guide the interpretation of its findings.

The dataset presented here constitutes the first inter-site lipid residue analysis focusing specifically on the Early Neolithic of the Balkans and the Carpathian Basin. Previous studies were limited to individual sites and often lacked temporal precision, or were amalgamated into broad syntheses of the Mediterranean region that overlooked significant regional differences. The findings of this investigation highlight the complexity and variability of food practices across Southeast Europe, challenging the monolithic portrayals that have too often characterized the region in earlier literature.

In the South Balkans and Aegean, the predominance of caprines in faunal assemblages and of ruminant adipose fats in ceramic residues reflects a marked continuity with Anatolian traditions. These communities appear to have maintained inherited practices, including conservative foodways, as part of their mi-

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gratory identities. This continuity, however, did not extend into the North Balkans. In the Iron Gates region, where a robust Mesolithic tradition predated the arrival of farmers, the archaeological record suggests not cultural replacement but mutual accommodation. The persistence of Mesolithic lifeways, including reliance on aquatic resources, points to sustained interaction, knowledge exchange, and possibly even coresidence between foraging and farming groups. This interaction complicates the simplistic dichotomy of Mesolithic versus Neolithic and suggests instead the coexistence of overlapping social identities.

In contrast, sites across the North Balkans and the Carpathian Basin reveal a markedly different pattern—dominated by residues of dairy fats, with a near absence of such traces in the Iron Gates (save for a single sample from Schela Cladovei). These results confirm zooarchaeological observations but also extend them, underscoring the unexpected prevalence of dairy consumption in regions distant from the Danube. The faunal record reveals a growing interest in cattle, yet, without accompanying kill-off pattern data, it is difficult to establish whether this shift reflected meat, milk, or other forms of exploitation.

Multiple interpretations have been proposed to explain this rise in dairy use, from environmental adaptation to its nutritional value. Yet, these explanations often overlook the cultural frameworks through which food choices are made. Culture is not biologically inherited nor environmentally determined in any linear way; rather, it is a fluid, adaptive system, shaped through continuous negotiation with internal dynamics and external conditions. It is in this interplay—between cultural practice, environmental affordances, and technological innovation—that we must seek to understand the complex evolution of foodways in Neolithic Southeast Europe.

The consumption of milk and the persistence of Mesolithic dietary patterns must be understood as sociocultural choices rather than the outcomes of isolated individual decisions. The residue analysis results presented in this study reveal consistent trends across multiple sites, indicating broad behavioral patterns shaped by collective decision-making. These choices reflect what Fischler (1988) famously termed the "omnivore's paradox": the existential tension between the impulse to explore new dietary options and the comfort found in familiar, culturally embedded food practices. In this paradox, every dietary decision—particularly in periods of ecological and social transition—carries with it a negotiation between risk and security.

Farming, by its very nature, is a long-term investment with uncertain outcomes. The cultivation of crops and the management of herds demand a profound familiarity with local climates, seasonal rhythms, and the behavior of domesticated animals. For Early Neolithic groups arriving from Anatolia—accustomed to the sub-Mediterranean, semi-arid ecologies of their homelands—

settlement in the temperate environments of Southeast Europe required a recalibration of knowledge and practice. It was at this juncture that crucial choices had to be made: to replicate old systems, to adapt to new ones, or to seek local knowledge from indigenous groups whose subsistence strategies had been honed over generations.

Dairy products were not unknown to the newcomers. Evidence of milk use is present in Anatolia, the Aegean, and the South Balkans, though not in the same proportions observed in the Starčevo–Körös complex. The only regional exception appears to be northwestern Anatolia, where dairy products seem to have played a more prominent role. Whether this region directly influenced the communities of the Balkans remains uncertain, and while genetic studies hint at connections, they are still hampered by insufficient resolution and the lack of regional specificity. Indeed, although a general Anatolian origin has been proposed for populations moving into the Aegean, Balkans, and Carpathian Basin, the cultural disparities visible in the archaeological record problematize any simple diffusionist model.

The desire to locate an origin for farming in Southeast Europe has long motivated archaeological research. While origins provide narrative clarity, they risk overshadowing the agency of communities in shaping their own cultural trajectories. Humans do not merely inherit traditions—they negotiate them, transform them, and recontextualize them to reflect emerging identities. In the North Balkans and the Carpathian Basin, the transition to a self-producing economy was not a mechanical adoption of foreign models but a site of dynamic negotiation. The emergence of distinct food cultures—such as the widespread adoption of milk—signals both adaptation to new environmental contexts and the assertion of cultural autonomy.

For example, harsh winters may well have encouraged the use of secondary products such as milk and cheese, particularly in the absence of reliable plant-based foods. These products offer rich sources of protein and fat, nutrients that are essential during periods of scarcity and prolonged stress. However, such an explanation remains incomplete. Survival needs alone cannot account for the specific patterns observed. The choice to exploit milk must also be seen as culturally mediated and historically situated. In this regard, Marvin Harris would likely have supported the notion of milk consumption as a form of cultural adaptation to new environmental conditions. Within his framework of etic and emic perspectives, however, the archaeologist is often confined to working predominantly with etic data—material evidence such as residues, faunal remains, and architectural features. While Harris emphasized the analytical power of etic interpretations, the absence of corresponding emic data inevitably narrows the scope of our understanding.

Prehistoric contexts, in particular, highlight the critical importance of emic perspectives, as the cultural and symbolic dimensions of human behavior often remain obscured beneath layers of sediment and centuries of interpretive distance. This tension is evident in our struggle to differentiate between communal meals and ritual feasts, or to distinguish daily subsistence from symbolic acts. In the absence of clear ritual associations with milk, its consumption in the Early Neolithic must be interpreted with caution. In this light, explaining milk consumption purely as a rational response to environmental stress is a reductionist view, one that overlooks the intricate web of social, symbolic, and historical factors shaping dietary practices. The evidence may point to both daily use and symbolic resonance, but without a concerted research agenda aimed at identifying such duality, interpretation remains tentative at best.

Harris's call for a synthesis between idealist and materialist approaches—though never fully realized—remains vital. As time distorts and erodes the emic dimension of prehistoric life, our etic analyses must stretch beyond the confines of functionalist reasoning. Equally, abandoning idealist perspectives risks reducing milk to a purely ritual commodity, when it may have held multiple roles within Neolithic societies. Future research integrating residue analysis, vessel functionality, and zooarchaeological studies of feasting may help resolve these questions, bringing us closer to an understanding of how food operated not only as sustenance but as a medium of social and symbolic expression.

Viewed from another perspective, the omnivore's paradox—defined by a constant oscillation between neophobia and neophilia—offers a useful lens for interpreting milk consumption during the Early Neolithic. In this context, both tendencies are at play. In their efforts to adapt to a new and unfamiliar environment, early farmers turned to something already known and controllable: milk and dairy production. Control, in fact, was central to this choice. While Mesolithic communities in the Iron Gates were intimately familiar with the challenges of frosty winters and had developed adaptive strategies to meet them, their way of life remained fundamentally rooted in foraging. The Early Neolithic period saw an increase in domesticates in this region, yet resistance to fully adopting farming practices persisted—a subtle manifestation of neophobia, in which tried-and-tested strategies were preferred over new ones with uncertain outcomes.

For the incoming farmers, however, reverting to foraging practices would have signified a loss of autonomy. A self-producing economy offered not only material sustenance but also a symbolic mastery over one's environment. Here, Lévi-Strauss's structuralist framework is instructive: farming can be interpreted as a cultural act that asserts human dominance over nature, transforming animals and plants into products of human design—markers of civilization. Farming, in this sense, is not merely subsistence; it is structure. This transition, however, was

not immediate or universal. In the Iron Gates, the adoption of agricultural lifeways appears to have been gradual, reflecting a period of negotiation between cultural paradigms.

Nevertheless, framing the Neolithic experience through a binary lens of nature versus culture is both reductive and counterproductive. Rather than opposing forces, nature and culture should be understood as mutually constitutive, interwoven elements of human existence. Interpreting early Neolithic lifeways within such dichotomous frameworks inevitably leads us back to the well-worn, but ultimately limiting, Mesolithic vs. Neolithic opposition—a conceptual trap that obscures the complexity of cultural transformation. As Mary Douglas aptly warned, rigid binary classifications tend to flatten the nuances of local variability and historical contingency. Her work underscores the importance of recognizing that macro-regional patterns—whether Mediterranean, European, or global—cannot be fully understood without close attention to the intricacies of small-scale social and environmental contexts.

The Balkans serve as a case in point. When viewed from a distance, generalizations regarding dietary regimes or cultural behaviors may appear convincing, yet they quickly unravel under closer scrutiny. The Starčevo culture, with its distinctive balance of milk consumption and cattle exploitation; the Körös culture, emphasizing dairy and caprines; and the Karanovo culture, marked by its use of both caprine and ruminant fats—all reveal divergent approaches to subsistence. These variations caution against the imposition of homogenizing narratives on the region as a whole. Each cultural complex developed under distinct local pressures and social logics, and their dietary signatures reflect these specificities.

Despite the valuable insights offered by residue and zooarchaeological analyses, our understanding of Douglas's food practice analysis across daily, weekly, yearly, and life cycle contexts remains fragmentary. Yet, Mary Douglas's methodological emphasis on symbolic systems and ritual practices reminds us that food is more than fuel—it is embedded in meaning, structure, and social interaction. In this light, the absence of clear evidence for feasting in the Early Neolithic record—events that might mark calendrical, communal, or transitional moments—limits our interpretive framework. Until more targeted investigations into feasting and ritual consumption are undertaken, especially within the Starčevo-Körös and Karanovo spheres, our interpretations will remain partial. The challenge lies in expanding our analytical lens to include not only what was consumed, but when, how, and why.

Regardless of these limitations, milk emerges in the residue data as a repeatedly used commodity. While only 20–30 percent of the pottery samples tested yielded identifiable lipid residues, this low proportion is to be expected;

positive samples typically result from prolonged and repeated use of vessels for processing particular fats. Therefore, it is reasonable to infer that dairy products held a significant place in the diet of communities in the North Balkans and Carpathian Basin. Drawing on Kittler and Sucher's classifications, milk would be categorized as a "core" food—central to the dietary structure—whereas in the Iron Gates, with only one recorded case of dairy residues, it seems to have been a marginal or idiosyncratic choice, perhaps used by specific individuals or subgroups.

The food choice model proposed in this study provides a framework for analyzing the dietary strategies of the Starčevo-Körös groups. Through it, we can trace how diverse variables—ranging from environmental constraints and cultural traditions to health considerations and technological possibilities—shaped food decisions. Milk, within this framework, stood out as a commodity that satisfied multiple practical and symbolic needs. It was a renewable, mobile, and highly adaptive resource. Its transformation into cheese, yogurt, or butter made it more digestible for populations lacking lactase persistence and also extended its shelf life. When tolerated, milk offered considerable nutritional benefits, contributing proteins, healthy fats, calcium, and essential vitamins to the diet.

In shaping the complex relationship between food and identity, dietary staples often become expressions of belonging. They enable individuals and groups to recognize shared habits, affirm social bonds, and maintain continuity with inherited traditions. In the case of the Early Neolithic Balkans, the symbolic weight of cattle—so deeply embedded in the societies of Anatolia—was transposed into new environments through zoomorphic figurines and bucrania associated with pit dwellings. These artifacts formed part of a symbolic system with possible roots in Anatolia, or, as Jacques Cauvin proposed, in more universal notions of strength and virility. The cultural significance of food extended far beyond sustenance: procurement, preparation, distribution, and consumption were all ritualized, charged with meaning, and reflected in material culture. Whether it was the fish-human iconography on boulders in the Iron Gates, fish-shaped motifs on fishing tools, or clay models of domesticated animals, both herders and hunters imbued their prey with meaning that exceeded their biological value. With the centrality of dairy in the inland areas and the continuity of fishing along the Danube, these foodways became regionally emblematic and symbolically potent.

Over time, these practices became embedded within structured routines, forming what can be seen as culturally mediated food strategies. Within the framework of the omnivore's paradox, this corresponds to the moment when innovation becomes tradition—when new choices are normalized and woven into daily life. In prioritizing milk, groups in the North Balkans and the Carpathian Basin profoundly reshaped their food culture. Their selection of dairy as a core staple

marked a significant departure from older traditions and reflected a willingness to negotiate new conditions, often in collaboration with the more conservative lifeways preserved in the Iron Gates. Together, these groups forged a regional mosaic of coexisting practices, each adapted to different ecological and social realities.

To deepen our understanding of the emergence of farming in Southeast Europe, there is an urgent need to sustain and expand interdisciplinary collaboration. Advances in chemistry, biology, and genetics have equipped archaeologists with new tools for exploring long-standing questions. However, while broad-scale studies have illuminated general trends, small-scale investigations remain essential for refining narratives, challenging overgeneralizations, and capturing local variability. For example, can we identify genetic distinctions in LP (lactase persistence) allele frequencies between populations of the Iron Gates and those of the wider Starčevo-Körös complex or the Karanovo culture? Questions such as these underscore the need for targeted genetic research.

The same applies to organic residue analysis. Although this study represents one of the first large-scale regional applications of lipid residue analysis in the Balkans and Carpathian Basin, its findings are only a beginning. The lack of positive results from Szakmár has constrained our understanding of the Körös culture and limited broader pattern recognition. Given the zooarchaeological evidence for variability within Körös sites, future sampling strategies should be designed to reflect not only geographic and faunal diversity but also cultural boundary zones. Furthermore, lipid residue analysis should be more systematically integrated into studies of feasting and ritual consumption. Such integration would greatly enhance our ability to reconstruct the social roles of various foods—particularly dairy and aquatic resources—within ceremonial contexts.

The contributions of the natural sciences to archaeology are well established. Yet, there remains a tendency within archaeological research to privilege materialist and positivist frameworks while sidelining idealist and symbolic interpretations. To fully realize the potential of archaeological inquiry, there must be a concerted effort to bridge these epistemological divides. Interdisciplinary collaboration must extend beyond the natural sciences to include the insights of anthropology, sociology, psychology, and other human-centered disciplines. Archaeologists are, fundamentally, storytellers of the human past—specialists in the material traces of lived experience. To reconstruct that past in its fullest sense, we must look beyond objects and residues and strive to understand the people behind them: how they lived, what they valued, and who they sought to become.

Food culture stands at the crossroads of these inquiries. It offers a uniquely fruitful site for integrating the natural and social sciences, enabling scholars to examine the intersections of identity, economy, technology, and

symbolism. The Early Neolithic Balkans provide an especially rich context for this kind of investigation. As the initial contact zone between incoming agriculturalists and longstanding forager traditions, this region became a laboratory of cultural negotiation. The findings of this study illustrate that early farming was not a monolithic or unilateral process, but a tapestry of choices, compromises, and adaptations. Through food—particularly through the adoption and valorization of milk—these communities articulated their identities and inscribed their values in the everyday rhythms of life.

Ultimately, the legacy of the Starčevo-Körös culture lies not only in its role in the spread of agriculture, but in its foundational contribution to European food traditions. Long before Rome fashioned its culinary empire, these early farmers introduced dairy into the European repertoire, laying the groundwork for a cuisine that would endure through millennia. Their story reminds us that food is never just food—it is memory, identity, and transformation.