



The Public Defense of the Doctoral Dissertation in Medieval Studies

of

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on

**The Socio-Economic Integration of Cumans in Medieval Hungary. An
Archaeozoological Approach**

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Central European University (CEU)
Nádor u. 9, Budapest**

Examination Committee

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ABSTRACT OF DOCTORAL DISSERTATION
The Socio-Economic Integration of Cumans in Medieval Hungary. An
Archaeozoological Approach

The medieval Cuman minority in Hungary migrated to the Carpathian Basin from the Eurasian steppes where they ostensibly practiced a mobile pastoralist lifestyle for generations. After the devastating Mongol Invasion in the mid-thirteenth century, Hungary lost a considerable percentage of its population, especially on the Great Hungarian Plain. This presented a situation where new settlers were needed and parts of the migrating Cuman community could settle for good. Settlement meant something of a change of lifestyle for this minority, and a necessary shift in their economic strategies. Animal husbandry has been in the focus of Cuman studies in the sense that their traditions in pastoralist herding have been emphasized in the scholarly literature without researchers actually going into detail about what this form of animal husbandry meant on an everyday level over the whole of their territory and over time. The most direct evidence of animal husbandry, the animal bones recovered from archaeological sites associated with the Cuman population, has until now, not been studied in a comprehensive manner.

Research questions targeted the patterns and stages of integration in terms of changing animal husbandry customs and animal-related phenomena, animal rearing being a key element of Cuman economy from the beginning. A large number of textual sources along with faunal remains from all the available archaeological sites identified as Cuman (Orgondaszentmiklós, Asszonyszállás and Móric in Greater Cumania; Kiskunfélegyháza-Templomdomb, Csengele, Kiskunhalas-MOL 5 – Dong ér and Szentkirály in Lesser Cumania, and Perkáta in Transdanubia) were presented as parts of the argumentation. Two additional sites on the fringes of the Cuman habitation area (Tiszagyenda – Morotva part in Greater Cumania and Hódmezővásárhely – Gorzsa in southern Hungary) were discussed. For the sake of comparison, archaeometric data was used from more than 60 contemporary medieval Hungarian sites. The archaeological data was combined with textual sources: charter evidence, tax records and contemporary travel accounts. The archaeological animal remains were studied using archaeozoological methods, and thus, a biological dataset was placed into a historical and cultural context. The aim of the thesis was to explore whether the Cuman minority's animal husbandry practices significantly differed from those practices characteristic for the rest of the country, and whether remnants of their nomadic heritage were in any way preserved in terms of animal management, daily life and ritual.

Identifying the Cuman community in the textual and archaeological record poses a number of methodological problems as this was a group defined by outsiders, and ethnic markers are difficult to grasp. The nomadic pastoralist culture the Cumans brought with them changed quickly after their migration and settlement although different levels of social identity must have altered at different rates, and not all of these are accessible now. Those parts of an originally more variable cultural picture heavily impacted by external influences were transformed rapidly. At the same time, other aspects of daily life such as food production remained more conservative, especially in small villages.

The limitations of the present study were mainly inherent to the material being researched. On the one hand, there are special problems connected to the general research of the medieval Cuman minority (such as the problem of site identification and the question of ethnic markers), and on the other hand, in the archaeological material itself (outdated excavation methods, small sample size, poor condition of the finds, the limited availability of

up-to-date bioarchaeological methods, and the absence of early Cuman dwelling sites). Textual sources are available in abundance only from the sixteenth century onwards.

After discussing the evidence for economic strategies from one region to the other (Greater Cumania, Lesser Cumania and Transdanubia), the various exploitation forms connected to the animal body are explored in the dissertation. Patterns of meat consumption and butchering techniques were investigated, followed by the analysis of the role animals played in the Cumans' belief system, and the domestic species' secondary exploitation for their bones as raw material, as well as for their wool and hide. Pathologies observed in the faunal assemblages were discussed in a separate chapter. Finally, a case study was provided on an Iron Age site in Kazakhstan where the temporary settlement of a semi-nomadic population was excavated and the faunal remains analyzed. This short study is intended to serve as a reference point for proper mobile pastoralism, a probable starting point for the Cumans before their migration.

Cumans entered a Hungarian economy that was in a phase of deep transformation: peasant services and tributes were restructuring and paved way to the peasants' participation in market-oriented animal production. The three-field system of crop rotation became widespread and market towns started to develop. Thus, a diverse group of steppe people whose economic strategies and social structures were probably in the process of disintegration, entered a space where recent transformations created new economic niches that could be filled by them. The moment when Cuman animal husbandry and meat consumption practices can first be studied in the archaeological record (that is, in the early fourteenth century), the faunal material already displays very similar trends to other contemporary assemblages in the Carpathian Basin in terms of both species ratios and kill-off patterns. This suggests that any transformation in terms of animal husbandry happened fast. However, the starting point for the migrating Cuman population is difficult to pin down, although written sources are available and speak of an economy centered on animal herding, with minimal agriculture. The fact that Cumans seem to have adapted to their new environment relatively quickly in terms of animal keeping supports the theory that Cuman settlement was an already on-going process when they were forced to return to a more mobile life on the steppe due to the frequent Mongol attacks and started their migration westwards.

The species encountered on fourteenth-sixteenth-century Cuman sites are identical to those found at other coeval sites in the Carpathian Basin, with an overwhelming dominance of the four main domesticates and a very small contribution of wild game. The species ratio in the Cuman assemblages displays a slight but statistically significant preference for horse and sheep instead of swine when compared to Hungarian samples, which may be rooted in a preference for a form of animal management focused on sheep and horses, typical for the Eurasian steppe region. However, cattle was the dominant species in all Cuman assemblages, while the proportions of the other three main domesticates fluctuated. The Cuman material seems to vary from one region to the other, and there is no homogenous archaeological assemblage that can be labeled as "Cuman proper", even though almost identical ratios were observed in the Cuman villages of Greater Cumania. The sample from Lesser Cumania is dominated by the small market hub of Szentkirály, while in Greater Cumania, assemblages from rather small villages were analyzed, and therefore their comparison must reflect not only regional but also hierarchical differences in settlement type. These differences also express themselves in site type (size and economic importance, access to road networks etc.) much less cultural distinctions between the Hungarian and Cuman populations. A

statistically significant relationship was observed between ethnic background and the ratio of domesticates in all regions. However, the strength of association is low and suggests a weak relationship between ethnicity and the four domesticates' ratio. Although minor differences are noted, both the archaeological and the written records testify to the full integration of Cuman populations into the Hungarian economy by the fourteenth-fifteenth century.

Meat consumption in Cuman settlements did not differ from what was generally present in the kingdom at large, with the exception of the unambiguous signs of regular consumption of horse meat. The calculated meat quantities shows a dominance of beef and pork, while mutton, somewhat surprisingly, played a tertiary role in most cases. The Cuman material is, more-or-less, uniform in terms of butchering marks found on the bones. Household slaughters were practiced at these villages, which corresponds to their status in the settlement network. Only in Szentkirály were traces of standardized butchery (and the presence of professional butchers) observed. This corresponds to the idea that a settlement's place in the settlement hierarchy had an impact even on activities associated with the household sphere such as food processing. Cut marks from high quality metal blade cleavers and other specialized butchering tools were rarely observed on bone refuse coming from the small villages. In general, a high number of spiral fractures were present on the long bone diaphyses, some of them accompanied by cutmarks or traces of percussion, signaling a deliberate, if somewhat primitive process of marrow extraction. Expensive, heavy-duty butchery tools like axes appear to only have been used in primary carcass partitioning, to cut through the strongest joints, and most bones exhibit signs of having been broken up fresh.

Only minor elements of the once predominant steppe traditions survived into the fifteenth-sixteenth century when animal management practices across the country and ethnic boundaries had already been greatly transformed. The reason for the disappearance of differences that most probably existed at the time of migration is, in my view, rooted in comprehensive processes that shaped the fate of Hungarian and Cuman communities alike and left little room for culturally dependent variations in subsistence strategies.

Animal-related ritual phenomena associated with the Cumans are, in fact, distinct. However, their study always involves the danger of circular reasoning. These phenomena are spotted in the record and interpreted as Cuman because they are perceived as being distinct. Most such Cuman finds are burial-related, and include horse and dog burials, food offerings and amulets placed in graves. In the case of equestrian graves, archaeological material in the Great Plain can be combined both with Eurasian steppe analogies and descriptions in written sources. The early, thirteenth-century burials constitute a key cultural layer in the Cuman archaeological heritage, even though these graves mostly reveal information on the élite stratum of the Cuman community alone. The role of dogs in the Cuman belief system is also evident from historical sources, although the actual context of deposited dog skeletons is debated in most cases. Possibly "pagan" elements in cemeteries in Greater Cumania signify that the Cumans may have preserved some of their more intimate cultural traditions long after their initial settlement, irrespective of their full integration into the economic and social life of the Hungarian Kingdom.

It is clear that Cuman communities underwent a similar settlement concentration process that was intimately connected with opportunities for acquiring pastures and maintaining larger herds. The re-structuring of the settlement network is particularly evident in the Turkish-Ottoman era. However, there is no evidence that this re-structuring occurred differently in Cuman communities than in non-Cuman ones. Village desertion had already started before the Mongol Invasion, and after the Great Plain was repopulated (partly by the

Cuman migrants), this process ran in parallel with the emergence of market towns in the fourteenth-fifteenth centuries. These market towns were local hubs typically engaged in agricultural production, where weekly markets (and sometimes also larger fairs) were held. These towns started to attract the Cuman population from smaller villages, and settlement concentration accelerated. In the sixteenth century, the fate of most settlements was impacted by their immediate exposure to the disturbances brought by war (Turkish-Ottoman occupation and the Fifteen Years' War), high taxes and, consequently, out migration.

Market towns also played a key role in the redistribution of pastures that had belonged to abandoned villages. Such pasture lands represented an indispensable resource that was needed for large-scale herding. As a result of the re-organization of the settlement pattern, large tracts of lands became available for grazing. As these lands started to be rented and used by market towns, the organization of animal rearing was taken over by these large settlements. It was these pastures that made it possible for the Great Plain's economic nexus to meet the demands for animal products, especially beef, on the domestic and later on the international markets. The shift in emphasis towards extensive animal rearing was, thus, an economic necessity, a challenge probably positively received by Cumans who had long traditions in herding (which may even have constituted an integral part of their identity and view of their own ancestral past). Late medieval animal production on the Great Plain, however, should in no way be considered a continuation of steppe practice. Such enterprises were undertaken by various groups of people irrespective of their cultural background.

Cattle rearing is only indirectly evidenced in the archaeological record, as cattle raised for the market would not be expected to turn up in the kitchen refuse of small settlements except possibly as animals that were taken from the herd because it was deemed unlikely that they would survive the long trip into Western Europe. The taxes paid after hay probably reflect the presence of large numbers of livestock that needed complementary fodder. The animals' origin is mostly unknown, although the market town a given cattle merchant came from designates the probable area where the cattle were raised (a form of indirect evidence). Cuman communities at least partly participated in this trade as suppliers. Available records on sheep testify to a strong concentration of livestock, especially in the second half of the sixteenth century on the Great Plain, suggesting production for the market. This process was most apparent in Lesser Cumania. In regions where large-scale sheep rearing is evidenced, the ratio of sheep in the faunal material remained unchanged, again signaling that market-oriented animal production may well go unnoticed in the archaeological sample if sustenance herds and herds for sale were handled separately.

It has been demonstrated that animal husbandry in Cuman and Hungarian villages of the Great Plain in the late thirteenth to early seventeenth century was basically the same. Cultural identity and ethnic background probably had some impact on the species preferences but variations are rather individual and do not display any pronounced spatial clustering. A site's geographical location and position in the settlement hierarchy had a more decisive influence on its animal husbandry practices than any kind of ethnic affiliation. The small differences that were found suggest that complex factors inherent not only in medieval realities but also in deposition and recovery methods had a combined effect on samples that were originally, more-or-less, uniform. The livestock the Cumans kept does not seem to differ from the stock generally present in the Carpathian Basin. The disappearance or transformation of animal populations potentially brought from the steppe region at the time of the migration, however, cannot be discussed without implementing proper genetic studies, which still remains a task for future research.

CURRICULUM VITAE

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Studies

1998-2003 Eötvös Loránd University, Department of Scandinavian Studies, MA
2000 individual studies at the Szent István University, Veterinary Faculty
2004-2007 Eötvös Loránd University, Department of Medieval Studies, postgraduate studies
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2007-2008 Department of Medieval Studies, CEU, MA
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Work experience

2002-2007 archaeozoologist at the Budapest History Museum
2006-2014 freelancer archaeozoologist in the Herman Ottó Museum (Miskolc), Damjanich
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2013 veterinary assistant at Hungarovet Veterinary Clinic, Budapest

Other academic and research activities

2010 coordinator of the summer university course “Lived Space Past and Present.
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2010 participant in the workshop “Geometric Morphometrics for Archaeologists”, at the
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2012-2013 archaeozoologist in the Kazakh-American Archaeological Expedition, led by
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Mátyás Király Muzeum, Visegrád. Paper: *The Medieval Hungarian Cattle Trade*
2008 Nemzetközi Archeozoológiai Találkozó (International Archaeozoology Meeting),
Mátyás Király Muzeum, Visegrád. Paper: *Animal Husbandry in Thirteenth-Century
Hungarian Villages. How do archaeological assemblages and written sources come
together?*
2010 11th International Conference of the International Council for Archaeozoology, Paris,
France. Poster: *A Late Example of Nomad-Sedentary Interactions. A Case Study of
Medieval Hungarian Cumans*
2011 Nemzetközi Archeozoológiai Találkozó (International Archaeozoology Meeting),
Mátyás Király Muzeum, Visegrád. Paper: *Pathological animal bones from medieval*

- Cuman archaeological sites. A preliminary report on animal diseases and the possible evidence of nomadic veterinary medicine*
- 2011 International Medieval Congress, Leeds, UK. Paper: *The Cumans in Hungary: A late example of nomad-sedentary interaction. The written sources and the archaeozoological perspective*
- 2013 Universität Leipzig, Geisteswissenschaftliche Zentrum Geschichte und Kultur Ostmitteleuropas (GWZO), invited lecturer (Gastwissenschaftler). Paper: *The socio-economic integration of Cumans in medieval Hungary. The problems of nomadism and the zooarchaeological perspective*
- 2014 12th International Conference of the International Council for Archaeozoology, San Rafael, Argentina. Paper: *The socio-economic integration of Cumans in medieval Hungary. Pastoralists turning into sedentaries*

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