

# Traditiones

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TRADITIONES

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SLOVENSKA AKADEMIJA ZNANOSTI IN UMETNOSTI



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HABSBURG ANIMALS



HABSBURŠKE ŽIVALI



## Habsburg History Beneath the Eagle: The Empire and Its Animals

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The introductory article reflects on the development of animal history and its absence from the otherwise vibrant study of Habsburg history. It highlights the need to integrate nonhuman animals into historical narratives, especially during the long 19<sup>th</sup> century – a period of profound changes in human-animal relationships driven by capitalism and its impact on the environment. This era saw shifts in animal breeding, scientific discoveries, biodiversity, pet keeping, zoos, and the rise of animal welfare movements, to name some.

▪ **Keywords:** animal history, Habsburg Monarchy, 19<sup>th</sup> century, breeding, capitalism

Uvodni članek razgrinja razvoj zgodovine živali in njeno odsotnost na sicer živahnem polju habsburške zgodovine. Osvetljuje potrebo po vključevanju nečloveških živali v zgodovinske narative, zlasti v dolgem 19. stoletju, dobi globokih sprememb v odnosih med ljudmi in živalmi spričo kapitalizma in njegovega vpliva na okolje. Gre tudi za čas sprememb na področju reje živali, znanstvenih odkritij, biodiverzitete, hišnih ljubljencev, živalskih vrtov in vznika gibanja za pravice živali, če omenimo le nekatere.

▪ **Ključne besede:** zgodovina živali, Habsburška monarhija, 19. stoletje, vzreja, kapitalizem

Just weeks ago, in broad daylight, Renee Nicole Good was shot while supporting her neighbours during a large federal immigration enforcement operation in Minneapolis – an unjust and avoidable act of U.S. state violence. The incident was captured on video and circulated widely on YouTube. Among the most liked comments was not concern for her death or for the family she had left behind, but anxiety about the dog in the backseat of her SUV, with countless viewers asking whether it was okay. This sheds light on how much attention and empathy animals receive in today's society, in some cases, their lives are valued more highly than those of humans.

The nineteenth century constitutes a crucial historical period for understanding the growing prominence of animals and the complex human–animal entanglements that shaped modernity. Within the nineteenth-century Habsburg Empire, animals assumed increasingly significant roles, yet historiography has largely remained anthropocentric. The contributions to this themed issue seek to redress this imbalance by integrating non-human animals into historical narratives, thereby aligning the volume with the burgeoning field of animal history and responding to the growing relevance of more-than-human perspectives in contemporary historical and anthropological research.

## At the crossroads of the animal turn and new imperial history

Animals have long appeared in historiography, ethnology and related disciplines. From its earliest formulations, economic history has incorporated animals primarily as productive resources or labouring machines (Lang, 2021: 183). By contrast, cultural history and folklore studies have for decades examined the symbolic meanings and representational roles of animals (Cowie, 2021: 149–159; Babič, 2024). Yet sustained analysis of animals as historical subjects represents a more recent scholarly development, retrospectively labelled the “animal turn”. Since the 1970s, increased scholarly interest in animals has permeated numerous disciplines, including anthropology, ethnology, philosophy, cultural studies, sociology, linguistics, comparative literature, archaeology, and all their intersections. The result has been the emergence of numerous transdisciplinary fields – or, at a minimum, an expansion of their nomenclature – including ethnozoology, zooethnography, ethno-primatology, ethnobiology, historical animal geography, zoofolkloristics, ecophilosophy, and critical animal studies. Less than two years ago, this very journal published another special issue, situated at the intersection of critical animal studies and folklore studies, that placed nonhuman animals at the centre of analysis, taking a decidedly radical approach by arguing that anthropocentrism should be replaced with zoocentrism (Golež Kaučič, 2024).

At its core, the “animal turn” is inherently critical, in that it actively challenges established hierarchies between human and nonhuman animals (Golež Kaučič, 2020; Baskar, 2023). In historical research it catalysed the emergence of animal history as a distinct historical subfield, beginning with Keith Thomas’s publication of *Man and the Natural World* in 1983 (Cowie, 2025: 2). Researchers in the field of animal history, much like their predecessors in the fields of gender history, postcolonial studies, or global history, have embarked on a path of incorporating previously overlooked voices (Taylor, Twine, 2014). In highlighting nonhuman subjectivities and discussing animals as agents with reflective consciousness, many of them combine their theoretical engagement with activism.<sup>1</sup> As a result, animals figure in a far wider range of historical narratives. Moreover, many historians no longer approach animals as passive objects or as mere reflections of human history; instead, animals have been portrayed as independent and productive entities worthy of study in their own right. Returning to the earlier examples, contemporary economic historians increasingly recognize animals as forms of labour, while cultural historians focus on animal experiences and, in some cases, pursue the cultural history of animals themselves.

According to the historian Harriet Ritvo, the appeal and strength of animal history lie in its marginal position and transdisciplinary character. Precisely because of this peripheral status, animal history can challenge established assumptions and even prompt

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<sup>1</sup> An explicitly activist stance is a defining characteristic of the field of critical animal studies.

a rethinking of the relationships between human and nonhuman beings (Ritvo, 2007). In fact, the effects of the animal turn extend beyond history and resonate across many disciplines within the broader field of the humanities. Beyond the foundational contributions of Ritvo and Thomas, the field of animal history has since the 1980s been significantly shaped by Anglophone historians such as Nigel Rothfels, Erica Fudge, and Lorraine Daston. They paved the way for many subfields of animal history researching questions regarding agriculture, breeding, petkeeping, hunting, veterinary science and medicine, even emotional lives of animals in history, to name a few.<sup>2</sup>

Whereas the histories of the French and British Empire have attracted extensive animal-historical scholarship and produced synthetic overviews, the animal history of the Habsburg Empire remains largely peripheral, with even microhistorical cases still underexplored. The animal world was long considered trivial when measured against the supposedly more prominent concerns of political history. In the case of the Habsburg Empire, this tendency was particularly pronounced: until at least the 1990s, historical research centred on national affiliations, both in studies of various national movements and in employing the broader historiographical approach known as methodological nationalism (King, 2001; Wimmer, Glick Schiller, 2002). The latter indicates that, regardless of the research question, the lens remained national. Consequently, broader imperial structures were often overlooked, limiting the scope of historical analysis and reinforcing the dominance of methodological nationalism in Habsburg historiography. As a result, animal-related subjects have attracted limited attention from historians, and existing studies have tended to remain bounded by single national frameworks.

For much of the twentieth century, Central European ethnologists also focused heavily on historical research, particularly on uncovering what was considered the more authentic rural life, often following a similarly nation-centred approach. Nevertheless, at least two notable exceptions explored aspects of the Habsburg animal world without the heavy weight of national framing: Angelos Baš's study of the Ljutomer horse races (1976), and Inja Smerdel's *Sheep Farming in the Pivka Region* (1989).

A break with older national narratives is evident in New Imperial History, a historiographical approach that seeks to reinterpret the Habsburg Monarchy not as a failed entity but as a dynamic and structurally modern imperial formation. As the field matured in the 2000s, a focus on the centripetal aspects of the Habsburg Empire emerged as a key framework for study. Scholars increasingly examined forms of cooperation across ethnic groups, including the practical implementation of imperial policies, imperial culture, administrative networks, and other social and economic systems that transcended crownland and ethnic boundaries.<sup>3</sup> Although at first glance clearly aligned with the approaches of New Imperial History, environmental topics have only very

<sup>2</sup> For an overview of animal history see Kean, Howell, 2018; Roscher et al. 2021; Aiello et al. 2024.

<sup>3</sup> For more on the New Imperial History in the case of the Habsburg Empire, see Judson 2016.

recently entered the field. This is surprising, given that in the nineteenth century few issues were more centripetal than the use of natural resources – whether in water management, the introduction of new species, forestry administration, hunting regulations, or cartography, to name just a few. The observation holds for both the Hungarian and Austrian halves of the empire, which shared largely identical environmental policies (Daheur, Lučić, 2025: 321).

While Jawad Daheur and Iva Lučić, in their recent edited volume *Habsburg Natures: Imperial Governance and Environment in Central Europe, 1850–1918*, expressed scepticism about the expansion of research in Habsburg environmental history, especially in comparison to the research made on other empires, their volume has surely helped to move the field past this impasse (2025). This was further confirmed by the many presentations at the inaugural Central European History Convention in Vienna (2025), underscoring the field’s expanding reach and scholarly momentum,<sup>4</sup> and other recent publications addressing Habsburg environmental history (Remec, 2023; Fuerst-Bjeliš et al., 2024; Shields Mevissen, 2025; Zwitter, Rasran, 2026).

Like the environment itself, animals – its crucial components – rank among the most inherently centripetal objects of historical inquiry. Animal history, after all, cannot be meaningfully confined within national frameworks. Did grape phylloxera halt at political borders (Seručnik, 2011)? Can Alpine chamois adjust their migratory ranges to nationally defined pastures (Strle, 2025)? Animals inevitably disregard such human-imposed divisions and must therefore be approached through their own historically situated trajectories. The maturation of New Imperial History, together with the broader animal turn and the growing interest in environmental perspectives, has generated increased attention to the Habsburg animal world. Yet animal-related topics remain fragmented and strikingly understudied. This special issue addresses this neglected dimension of the Habsburg past by integrating nonhuman animals into the historical narrative through a range of conceptual and methodological approaches.

### Defining “Habsburg animals”

We must first clarify what is meant by “Habsburg animals”: this entails defining what – or who – counts as animals and then addressing the characteristics they shared within the Habsburg context. To begin with a brief disclaimer: while it is today indisputable that us humans belong to the animal kingdom and are therefore animals ourselves, for practical purposes we in this themed issue use the term *animals* exclusively to refer to nonhuman animals, unless explicitly stated otherwise.

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<sup>4</sup> The program as well as short blog posts reflecting on the convention are found here: <https://ceh-c.univie.ac.at/>

Firstly, what are animals, and what role do we ascribe to them in our historical research? As a result of the animal turn, animals are no longer perceived as passive objects. Anthropologists and many other researchers are employing multispecies ethnography and other more experimental approaches, which attempt to research how animals would speak for themselves and give us an opportunity to recognize their subjectivity – even that of microbes (Kirksey, Helmreich, 2010). Although less radically, historians now likewise attempt to consider the animals’ inner world to illuminate nonhuman subjectivities and discuss animals as historical actors with reflective consciousness (Baratay, 2012; Wischermann et al., 2018).

While wolves, pigeons, cattle, pigs, and other animals appear throughout the following pages, they do not function as the primary protagonists. The contributions do not seek to narrate the history of animals *per se*, as we remain sceptical of the possibility of pursuing a rigorous animal history entirely detached from the human factor. After all, animals do not write or paint their own histories.<sup>5</sup> A human interpretative lens remains unavoidable, at least in the context of historical research (Fudge, 2000). At the same time, we maintain that the human should remain central, though not paramount, to the field of humanities as such. Accordingly, the present themed issue does not offer a full-fledged animal history; but it does treat animals as sentient beings endowed with agency. Following Helen Cowie, we believe “their actions range from violent rebellions and conscious disobedience through to instinctive reactions or innate biological characteristics that nuance their relationship with humans and other species” (2025: 8). In practical terms, animal agency can be illustrated with malarious mosquitoes that rendered the Brioni Islands entirely uninhabitable until Koch’s intervention at the turn of the century – after which Brioni were transformed into one of Europe’s most splendid tourist resorts, a place Franz Ferdinand hoped to fashion into his own version of Miramare (Urošević, 2019). A further example is provided by the Viennese Fiaaker horses, discussed in Gašper Raušl’s article in the present issue, where successful pairing for the renowned carriage rides is possible only when the horses’ own preferences are taken into account to ensure compatibility.

In the featured articles, the human element in historical research is treated as central, yet it is also recognized as having always been deeply entangled with the animal world. A recurring question throughout the issue concerns how animals have shaped human history and, more pointedly, how humans have shaped the lives and histories of animals. The experience of sharing this planet is a collective one. The focus is therefore on interactions that blur the conventional boundary of history as purely human, widening the scope to include other, non-human beings around us, because “the history of animals belongs to that of the human species and vice versa” (Freytag, 2016: 12).

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<sup>5</sup> More on methodological challenges in animal history found here: Bonnell, Jennifer, and Sean Kheraj, eds. 2022. *Traces of the Animal Past: Methodological Challenges in Animal History*. Calgary: University of Calgary Press.

Contrary to the common belief that humans are separate from or disturbing to nature, historical evidence shows that humans have long been entangled with and active within their environments. Human presence in nature cannot be reduced to mere disruptive activity; because human beings had been, to nature and within nature, fundamentally non-harmful (Guille-Escuret, 1992; Baskar, 2025: 166). A substantial body of ethnological and anthropological research, grounded in ethnographic observations of interspecies relationships, further demonstrates forms of cohabitation that are not necessarily detrimental to animals and that often embody distinct historical trajectories (Kozorog, 2015: 127). As the contributions to this issue illustrate, human-animal entanglements transformed in the nineteenth century – a period of profound change – but this was not a time when humans suddenly began leaving their mark on nature or on animals as an integral part of it. In fact, the impact of humans on the environment is long-lasting, “particularly in southern and central Europe, it is likely that already by the late-medieval period there were few natural landscapes that remained untouched by humans” (Freytag, 2016: 11). The Habsburg lands had thus almost no “first nature” or “virgin territories” predating the nineteenth century. Róbert Balogh’s recent contribution to environmental history likewise underscores the long-term and systematic character of human interventions in the environment of Habsburg Central Europe (Balogh, 2026: 20–21).

Before turning to the ‘Habsburg’ section of ‘Habsburg Animals’, it is worth briefly revisiting the cultural category of animals in the long nineteenth century, especially in terms of its fluidity. Animals were perceived very differently depending on whether they were seen as exotic, livestock, pets, or pests, and their social value reflected these distinctions. This is evident, for example, in the activities of the then-emerging animal welfare societies, whose members displayed far greater affection for pedigree dogs, lions, and robins than for clams, bats, or salamanders (Ličen, 2025: 116). Some animals ranked very low in social and cultural value. In *The Metamorphosis*, Prague-born Franz Kafka tells the story of Gregor Samsa’s transformation into “*ein ungeheures Ungeziefer*”, a monstrous vermin or gigantic pest who gradually loses his human abilities, autonomy, and ultimately dies. In this metaphor for alienation and dehumanization, Kafka deliberately chose an undefined pest – an animal far removed from humans – to represent someone to be hidden, controlled, and ultimately discarded. Adding another layer of complexity, one’s class belonging affected the value assigned to animals (Kozorog, 2023). Cats were particularly favoured among the upper classes. In his far less famous artistic work, the Triestine merchant and mountaineer Julius Kugy dedicated a poem to his recently deceased and dearly beloved cat Muca, who “like a true queen in velvet, snow-white, victorious majesty, gently and kindly, nobly and elegantly placed paw after paw” (Kugy, 1966: 47–50).

In the nineteenth century, the seemingly less problematic category of “human” was also highly malleable. This was the era of Darwin’s groundbreaking theory of evolution, which fundamentally shifted perceptions of humanity’s place in nature, but his ideas

took time to reach the broader public. Consequently, debates over what constituted a “human” were far from settled. Consider, for example, the case of a “pygmy” girl named Saida brought to Trieste in 1877. In keeping with contemporary practices, she was exhibited as an “exotic example”, yet scholarly and public opinions about her were deeply divided: some speculated that she might actually be an ape, while others noted her similarities with European children (Ličen, 2018: 11).

Even after the scientific community eventually reached a consensus on where humans end and animals begin, significant distinctions within both categories persisted, most strikingly in Nazi Germany. The Nazis enacted what were probably the most rigorous animal protection laws of the time – restricting animal labour and vivisection, permitting euthanasia, and imposing strict rules on animal transport (Uekötter, 2007) – but these measures are chilling when considered alongside the simultaneous deportations to concentration camps.<sup>6</sup> By the same token, it is hardly surprising that the notorious Heinrich Himmler gained experience as a chicken breeder before taking charge of the administration of the lager (Sax, 2000). To sum up, the categories of humans and animals have been fluid, shaped by cultural, social, and scientific perspectives, and they have not always been particularly meaningful for understanding the life that surrounds them, as the boundaries imposed by these categories often obscure other significant categories complicating the human/animal divide.

Moving on to the second question, what makes the studied animals ‘Habsburg’? What common experience did these Habsburg animals share? There is of course something universal about animals’ experiences in history. Still, while animals do not necessarily respect political borders, these political spaces nonetheless shape their lives (Kozorog, 2019). The histories of humans, animals, and other nonhuman beings are deeply shaped by political formations, particularly within imperial contexts. Empires are grounded in power relations among their constituent communities, a logic that also extends to the governance of the environment. Imperial history must therefore be understood as environmental history, since ecological transformation, resource extraction, and the management of nature were not peripheral to imperial domination but central to its practices and political rationales (Barnard, 2019; Keating, 2022). Although historical narratives often focus on humans, they are not the only actors of consequence in imperial histories. Empires should, in fact, be understood as multispecies spaces composed of a variety of nonhuman beings. In other words, rather than serving as mere side characters, animals were vital actors in shaping imperial dynamics (Deb Roy, 2015).

Besides the imperial experience shared by many animals, we argue that there is also a distinctly Habsburg one. The Habsburg Empire had large and, due to its geographical heterogeneity ranging from Adriatic islands to Galician planes, also very diverse

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<sup>6</sup> Conservation efforts were carried out also under Mussolini’s regime in interwar Italy, demonstrating – as in Germany – that nature conservation was not merely an ecological endeavour, but also a political one (Armiero, 2014; Armiero et al., 2021; von Hardenberg, 2021).

animal populations. During the nineteenth century, the imperial administration showed keen interest in many of the animals living within its territorial borders and sought to exert a similar level of administrative control over them as it did over its human subjects. Alongside the introduction of the modern population census, the government conducted a livestock census in the 1820s at the level of cadastral municipalities, recorded in the appraisal protocols of the Franciscan Cadastre (Kolega, 2018). A more extensive agricultural census was introduced in 1850–1851, initially covering horses and cattle, followed by hinnies, mules, and donkeys, then sheep and pigs, and finally beehives. “All these initiatives aimed at a knowledge-driven improvement of nature and thus empire. Together they exemplify how symmetrical the imperial administration understood human and nonhuman animals to be” (Göderle, 2025: 206).

Knowledge production was only one step in enabling the successful exploitation of environmental resources. From its eagle’s-eye view, Vienna sought not only to record these resources but also to manage and govern them. In the case of Bosnia, the abundance of forest resources was a key factor motivating the imperial administration to pursue annexation (Dursun, 2025). After all, “the appropriation and utilization of natural resources in the late nineteenth century were important means of exercising power by the Habsburg Empire” (Lučić, 2025: 103). As the nineteenth century progressed, the land management strategies of the Habsburg imperial administration increasingly operated in close interaction with scientific knowledge and bureaucratic intervention, as Kristýna Kaucká has demonstrated in her study of forest health regulation during the bark beetle infestation in the Šumava region (2025).

Beyond the perspective of governance, animals in Habsburg Central Europe were shaped not only by state intervention but also by a range of everyday human practices, such as butchers whose methods of slaughter were increasingly standardized, coachmen operating similar vehicles, children leafing through the same school readers, farmers introducing the same livestock species, or members of animal welfare associations, who sought to reshape attitudes toward animals and to transform animal-related practices across the empire. By the 1860s, there were already twenty-one animal protection associations operating under the umbrella of the Viennese *Niederösterreichischer Verein gegen Mißhandlung der Tiere* (Lower Austrian Society for the Prevention of Cruelty to Animals) (Guazzaloca, 2018: 5). Its journal *Tierfreund: Zeitschrift des Wiener Tier-schutzvereins* was being printed in 3,000 copies in 1856, making the animal welfare network an influential collective (Ličen, 2025: 118).

### **Transforming animal worlds in the long nineteenth century**

The collected contributions focus on the long nineteenth century, with the exception of the final chapter that addresses a more recent, though decidedly post-Habsburg issue.

This relatively narrow historical focus is deliberate: the period witnessed profound transformations in human–animal cohabitation that not only reshaped contemporary relations but also left enduring, at times devastating legacies that continue to inform human–animal relations today.

To begin with the most prominent force of transformation, one that either precipitated many subsequent changes or was, at the very least, closely intertwined with them; the all-encompassing force of capitalism.<sup>7</sup> In the context of its growth alongside the increasing integration of the world economy and the general acceleration it fostered, the role of states was integral. Empires, in particular, played a decisive role in enforcing and facilitating capitalist development (Osterhammel, 2014). Although the Habsburg Monarchy’s relationship to capitalism was far less direct than that of the British Empire, it was nonetheless firmly entangled in processes of global capitalist expansion.

Connected to the expansion of capitalism, the nineteenth century was also a period in which humans both conceptually and materially reshaped their understanding of the natural world, setting the stage for many of the global environmental challenges we face today. In his work, Pierre Charbonnier examines the philosophical foundations of capitalism and provides a critical analysis of how the nineteenth-century liberal thought shaped European and later global relationships with nature. He explains that the central political categories of modernity are rooted in specific ideas about humans’ relation to land, resources, and the non-human environment. Precisely in the nineteenth century, the notion of political autonomy became closely linked with material affluence through industrial capitalism and liberal economic theory, forming the basis for contemporary understandings of freedom in relation to the natural world. This laid ground for the intensification of the human dominance over the environment, including its non-human entities, producing consequences that are increasingly evident in today’s ecological crisis (Charbonnier, 2021). In just seventy years, between 1850 and 1920, humanity destroyed as much forest as in the 150 years from 1700 to 1850, indicating a dramatic acceleration in the rate of primeval forest loss (Osterhammel, 2014: 376). This large-scale environmental transformation had direct consequences for animal populations: most species living alongside humans, particularly in Europe, have experienced a marked decline since the nineteenth century (Cowie, 2025: 169, 181). At the same time, many recognized the need to limit human impact, giving rise to early conservationist ideas. The nineteenth century thus became the period when the protection of natural habitats began to emerge as an organized practice (Jepson, Whittaker, 2002; Wöbse, Kupper, 2022; Cowie, 2025: 175–181).

The relationship between humans and the diverse living and non-living elements of their environment became increasingly mediated by processes of assessment and

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<sup>7</sup> While recognizing that capitalism exists in many forms and degrees of intensity – warranting, strictly speaking, discussion of multiple capitalisms – we set this issue aside in the introduction and, for practical reasons, refer simply to capitalism.

commodification, turning these elements into exploitable resources. The demand to overcome nature extended also to the animal world as “nonhuman animals fulfilled the role of serving humans on their destined path towards a supposedly wealthier future” (Syrjämaa, 2024: 25). At the first Central European History Convention (Vienna, 2025), many presenters explored questions of resources and human–nature relations across several panels; these emerged as some of the most prominent topics, signalling the future direction of Habsburg studies. With regard to animals, this shift meant that the previously limited body of research – once focused on subjects such as court dogs and their depiction in royal portraits – expanded significantly to encompass agricultural animals and their role as resources.<sup>8</sup> Two of the contributors to this themed issue used that opportunity to present their research. In his paper on the Habsburg state, Corentin Gruffat highlighted the role of cross-breeding in maximizing agricultural productivity, while Tadej Pavković focused on seventeenth-century horse breeding, demonstrating how husbandry was shaped as much by cultural transformations as by expert breeding techniques. Pavković illustrated the capacity of cultural forces to influence infrastructure in ways that enhanced resource production.

The management and breeding of animals as commodities became a central focus of both cultural and scientific efforts aimed at increasing productivity. Reproductive control over animals, viewed as commodities, was intended to increase their productivity. Consequently, nineteenth-century animal management focused primarily on the development and dissemination of breeding practices.

In truth, ethnographers testify that cultural practices associated with the creation or strengthening of breeds have been found in highly diverse regions of the world. Roy Rappaport described the Tsembaga of the New Guinea Highlands sending their pigs into the forest to be impregnated by wild boars, a practice believed to ensure so-called hybrid vigour (Rappaport, 1968). That said, traditional ecological knowledge is also documented in Habsburg territories, for instance in accounts of seventeenth-century cattle breeding practices (Pavković, 2021: 67–76).

By the mid-nineteenth century, scientific approaches like selective breeding, hybridization, and acclimatization had become central concerns in efforts that brought together agronomists and zootechnicians, zoologists and botanists, with scientific and agricultural societies as well as schools also playing a supportive role. England was at the forefront of these developments and widely renowned for the creation of new animal breeds (Baskar, 2025: 384). Empress Elisabeth was particularly fascinated by English highbred horses and, unsurprisingly, sought to acquire such an animal for herself (Antoličič, 2025: 79). Under the influence of economic as well as scientific interests, also the Habsburg Empire took part in the effort to improve the output of domesticated animals (Gruffat, 2025; Pavković, 2026; Surman, 2027). A notable Central European

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<sup>8</sup> More in the author’s conference reflections (<https://cehc.hypotheses.org/270>).

example is the monk Gregor Mendel of Brno, best known for his experiments on pea plants, which laid the groundwork for modern genetics, but who also devoted part of his research to honeybee breeding, exploring the principles of heredity in animals (Baskar, 2025: 383). Techniques for improving species soon became a fully developed commercial enterprise.

Species improving techniques developed alongside numerous scientific discoveries about the animal kingdom, extending well beyond the realm of domestic animals (Coen, 2021; Göderle, 2025). A young Sigmund Freud was among the early researchers of the animal world, focusing on the sexual organs of eels. Despite dissecting and examining some 400 specimens, he was unable to identify mature testes of male eels, as demonstrated in one of his earliest scientific papers from 1877 (Reidel-Schrewe, 1994: 2–4). More broadly, the growth of knowledge and the gradual acceptance of Darwin’s tree of life brought with it the recognition of inherent similarities between human and non-human animal bodies, sparking a wave of discoveries about human physiology based on experiments with animals – above all vivisection – which horrified the growing number of animal welfare advocates (Kete, 2002).

The nineteenth century was also a period of significant population growth, which further intensified efforts to control the environment in order to meet human needs as efficiently as possible. That was visible not only in the countryside, but especially in the rapidly growing cities. Urbanization meant that many people lost, or never developed, personal connections with the animal world, yet paradoxically, the number of utilitarian animals in cities remained high and was even increasing. Still, over the course of the century, animals became increasingly disturbing to city dwellers due to their smell, sound, and sight, and were gradually hidden from urban view (Brantz, 2002; Kete, 2007: 6, 83). In *Taming Manhattan*, Catherine McNeur, for instance, examined how livestock and other animals that once freely roamed New York’s streets were deemed dirty and incompatible with emerging notions of hygiene and modernity, and were subsequently removed from the city (2017).

Efforts to dominate the natural world, together with the rise of global interconnectedness, were closely tied to shifts in biodiversity. Many species declined, while others were introduced into new environments – some deliberately, others inadvertently (Cowie, 2025: 168–196). Expanding global trade brought previously unfamiliar species to new regions. Notably, camels were introduced to the European territories of the Russian Empire in the nineteenth and early twentieth centuries as part of agricultural development initiatives, viewed as potentially suitable to supplement or replace horses and oxen (Olenenko, 2023). The Habsburg Empire kept pace. A now well-known example is the introduction of mongooses to the Dalmatian island of Meleda (Mljet), brought from India in an attempt to eradicate the supposedly dangerous local “viper plague”, which was perceived as a threat to the development of tourism (Göderle, 2020, 2025). Less prominent, but potentially more economically valuable species were also

imported from Far Eastern Asia. Despite the efforts of state inspectors and agricultural experts to monitor and maintain silkworm health, Gorizian, Styrian, and Carniolan breeders in the latter half of the nineteenth century, seeking to improve their business prospects, readily replaced their ailing silkworms with a new Japanese strain (Žontar, 1957: 106–116; Henig Miščič, 2023).

During the decades of growing global interconnectedness, Habsburg Central Europe also welcomed numerous animals that promised little economic benefit but captivated scientists and, even more so, the upper classes, who found certain exotic species both fascinating and visually appealing. The previously mentioned Julius Kugy was just one of many bourgeois Triestines who kept exotic pets: he had a baboon which he named, dressed up, and even took on walks. It did not take long, however, for Kugy to realize that the unpredictable baboon Benjamin, who frequently attempted to escape and hatched “wild plans, acts of vengeance, [and] marauding expeditions”, would be better off at Vienna’s Schönbrunn Zoo (Kugy, 1966: 161–168, 191).<sup>9</sup> Unfortunately, the colder climate harmed him, and he died from pneumonia shortly after its arrival (Schönbrunn Zoo, 1893–1906). Perhaps the most surprising story is that of a camel accompanying its sheikh on a German submarine, which arrived in the summer of 1918 at the naval town of Pola. It is unclear exactly how the young camel travelled on the submarine or in what condition it arrived, but this remains the only recorded instance in naval history of a camel being brought aboard a submarine. The camel then was sent to Brioni to recover and gain strength, though its subsequent fate is unknown (Jung, 1988).

In the early twentieth century, both the Schönbrunn Zoo and the Brioni Archipelago were among numerous rapidly growing venues for displaying animals, catering largely to upper-class audiences (Brantz, 2007: 88–93). The first began as a Kaiser’s menagerie and evolved into the first public zoological garden originating in the mid-eighteenth century, while the second, founded in 1912 by the prominent German animal trader Carl Hagenbeck and the Brioni investor Paul Kupelwieser, was intended to acclimatize exotic animals for the European market and exhibit them to cosmopolitan visitors.<sup>10</sup>

While animal shelters, emotional support dogs, and dog-dating apps may appear very modern, such love for animals dates back to the nineteenth century, when owners increasingly began treating their pets as members of the family. The nineteenth century is hence marked also by the expansion of pet culture. Pets are animals kept for companionship rather than labour and are recognized as individuals, as reflected in the practice of naming them and incorporating them into various aspects of family life (Brantz, 2007: 76–79). Ritvo, one of the pioneering historians of human–animal relations, examined the foundations of changing human–animal interactions in Victorian England,

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<sup>9</sup> One might speculate that Kugy’s change of mind was influenced also by the then-popular and widely translated *The Murders in the Rue Morgue* by Edgar Allan Poe, the first work of detective fiction, in which the culprit is revealed to be an orangutan.

<sup>10</sup> More on the Schönbrunn Zoo in Ash (2008) and Pechlaner et al. (2005).

focusing on the growing prevalence of household pets and contemporary social attitudes toward them (Ritvo, 1987). Extensive research has also been conducted on petkeeping in the United States (Grier, 2006) and France (Kete, 1994). In contrast, the history of petkeeping in Habsburg culture represents another aspect of human–animal relations that remains largely unexplored. Nevertheless, historical sources indicate that the practice of keeping pets was widespread and culturally significant. The growing popularity of pets and their integration into family life is exemplified by 1870s Trieste, where the adventurous British Burtons owned a dog named Nip, treated lavishly with a scented cradle, pillow, sheets, curtain, a sealskin coat, and even painkillers when sick (Burton, 1893: 118). Pets were primarily an upper-class indulgence, and many peasants were amazed at the luxuries they enjoyed. As my grandfather told us about his impoverished childhood, during a visit to Trieste in the 1920s, he saw a dog being “served meals that I myself would not have turned down”. His closest animal companions, as with many others, however, were the many silkworms with which he and his brothers co-slept in the attic.<sup>11</sup>

The class dimension is particularly evident in the nineteenth-century animal welfare movement, which gained significant momentum during its latter half (Guazzaloca, 2018). While ostensibly committed to improving animal welfare, not least in the sphere of politics and government, these urban associations largely concentrated on condemning the practices of peasants and working-class people, whom they portrayed as neglectful or deliberately cruel. This perspective went so far as to depict the lower classes as bestial. In addition, many animal protection associations had a particular issue also with Jewish communities whose animal killings were heavily disputed (Kete, 2002: 27). Such associations functioned primarily as mechanisms for reinforcing and sustaining class hierarchies (Ličen, 2025). It is therefore unsurprising that, before the twentieth century, animal welfare advocates were particularly concerned with the use of sticks to control donkeys, while hunting practices were considered far less problematic. For instance, the Carniolan Animal Protection Association counted among its members Ivan Tavčar, who also served as president of the local hunting association (Čeč, 2000: 15).

The so-called “hunting cult”, in which hunting was pursued not for sustenance but as a leisure activity and a display of power, was another distinctly upper-class phenomenon, exemplified by Emperor Franz Joseph, who was reportedly responsible for the deaths of some 55,000 game animals (Schmöckel, 2026). In contrast to animal welfare, which drew mostly women (Donald, 2019; Ličen, 2022), hunting was predominantly a male endeavour (Kete, 2007: 12–14; Carmichael, 2026). Although animal welfare associations rarely criticized hunters’ activities, as the empire approached its dissolution a growing number of voices began to question hunting practices. The famous example

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<sup>11</sup> More on sericulture in the wider Gorizian area in the ethnological-historical study conducted by Vesna Mia Ipavec (2008).

is the story of *Bambi*, which actually predates Disney's adaptation and was written by Felix Salten, born in Budapest in 1869 and raised in Vienna. His 1923 book, *Bambi: Eine Lebensgeschichte aus dem Walde*, was not intended for children and depicts the forest as a landscape shaped by hunting, where deer and other animals face constant danger. By immersing the reader in the animals' anxiety, Salten subtly critiqued hunting as a threat not only to individual creatures but to the forest ecosystem as a whole.

The final animal-related topic that we consider to have gained significant attention in the long nineteenth century is the instrumentalization of environmental features for national purposes. The national movements were in the Habsburg Central Europe largely emerging and spreading in the second half of the century (Judson, 2016). One of the imaginary elements that national fantasies came to incorporate is nature or some of its segments, as exemplified by Gábor Egry's recent research on Transylvanian forests, which he identifies as both symbols and instruments of national mobilization and resistance (2025), and by Iva Lučić's work on Bosnian forests, which mobilized Bosnian national sentiments as a response to Habsburg efforts to take advantage of the region's forests (2025). In terms of links between emerging national movements across the Habsburg Empire and particular animal species, no research appears to have been conducted so far. Nevertheless, it would be impossible to overlook the eagle as the enduring symbol of the Habsburg dynasty as well as imperial authority. The eagle, however, cannot be compared to the role of wolves in German nationalism. The wolves were said to embody the virtues of the Germanic people – so much so that, by the time of the Third Reich, they existed only in fairy tales yet were nevertheless placed under legal protection (Sax, 2000: 75). Its imagined descendant, the *Germanische Urhunde*, or German Shepherd, became celebrated for embodying the strength, loyalty, and discipline associated with the idealized Germanic virtues (Sax, 2000: 83). A somewhat far-fetched comparison can be drawn with the Lipizzaner horses of the Habsburg imperial stud, which symbolized the prestige, elegance, and discipline of the Habsburg elite rather than representing the empire as a whole. Gašper Raušl's article in the present issue, among other topics, explores the Lipizzaners and their enduring role as symbols of the Habsburg Monarchy, while Tadej Pavković examines selected animal breeds that the Slovenian national movement has come to regard as inherently Slovenian.

### **Habsburg animals in the present issue**

The roots of the present issue lie in a conference held under the same purposefully unconventional title, *Habsburg Animals*, in late 2024 at the ZRC SAZU (Research Centre of the Slovenian Academy of Sciences and Arts) in Ljubljana. The decision to organize the event – and subsequently to develop this special issue – emerged from repeated but ultimately unsuccessful efforts to identify animal-related scholarly works framed

within a Central European context. This absence was particularly striking in light of the breadth and diversity of research on animals within other imperial frameworks, the growing prominence of environmental history, and the continued vitality of Habsburg studies. The time was ripe to bring animals more fully into Habsburg history. Contributors addressed a wide range of topics, including meat consumption, breed selection, animal welfare, animal specimens in museum collections, zoos and pets, art historical perspectives, animals in wartime, hunting practices, and animals as living technologies, to name some. The presentations, primarily focused on the long nineteenth century, covered different parts of the empire: from donkeys on the Dalmatian coast to dogs in Prague, and from exotic animals in Lombardy to animal markets in Transylvania.

The present issue brings together some of the most developed and insightful research on what we broadly term *Habsburg Animals*. Contributors, coming from diverse academic backgrounds, career stages, and disciplines, illuminate important stories about pigeons, wolves, horses, to name a few, and, of course, humans. Their work seeks to portray a Habsburg history that is not limited to humans alone, but one that entangles the more-than-human in ways that acknowledge the agency of animal beings.

Corentin Gruffat's article examines programs of breed selection aimed at promoting particular groups of cattle to develop the Habsburg Monarchy into an "agricultural state". Tadej Pavković also focuses on livestock but emphasizes its classification and the emergence of the concept of breeds. Drawing on examples from Carniola and Styria, he shows how agricultural experts imagined national breeds while highlighting the ways in which animals could be mobilized in the nation-building process. These are followed by two articles on Bosnia which actively integrate its territories into analyses of late Habsburg economic, educational, and leisure life. Cathie Carmichael explores the growing interest in the supposedly unspoiled and inviting Bosnian landscape as a hunting destination. In her article, she highlights the ambivalence of certain Habsburg intellectuals, who both hunted animals and emphasized the rising fragility of natural environments. Mitsutoshi Inaba similarly examines wildlife killings, but from the unexpected perspective of Bosnian children. He investigates the attitudes toward animals that children were expected to internalize through their schooling. Unlike other contributors, Róbert Balogh tells his story through a single species, the pigeon, highlighting its many – and often contradictory – entanglements with humans in both Habsburg and post-Habsburg Hungary. Were these birds symbols of peace or instruments of war? Objects to be hunted or cherished as pets? The final ethnography-based article examines the long legacy of the Habsburg Empire, which in many ways continued to endure even after its dissolution, particularly in relation to animals. Focusing on the Viennese Fiaker industry, Gašper Raušl presents the horses as working partners with significant agency.

All in all, by examining the history of human–animal entanglements in the Habsburg Empire, we contribute to an underrepresented area of Habsburg historiography while also engaging with broader debates on Empire. This perspective allows us not only to

identify what was distinctive about the Habsburg context but also to develop a lens through which to critically situate the Habsburg Empire in a global framework, while simultaneously contributing to the field of animal history.

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### Research statement

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### Habsburška zgodovina pod orlom: imperij in njegove živali

Pričujoča posebna številka se umešča na živahno področje habsburške zgodovine, ki kljub močnemu odmevu živalskega obrata v zadnjih desetletjih ni ugledalo razmaha raziskav zgodovine živali. Nasprotno, stanje raziskav je daleč od tega. Nečloveške živali vendar zaslužijo svoje mesto v zgodovinskih pripovedih, četudi ne nujno kot glavne protagonistke. Raziskovanje zgodovine živali, ki bi bila popolnoma ločena od človeškega dejavnika, je vsled nujnosti človeške prizme pri interpretaciji virov nedosegljiva. Človek tako ostaja v ospredju, a kot akter, ki je z živalskimi akterji tesno prepleten. Ključno vprašanje, ki zaznamuje uvodnik in celotno številko, se dotika načinov, na katere živali oblikujejo človeško zgodovino in zlasti načinov, na katere ljudje oblikujejo živalsko. V tej številki torej raziskujemo habsburško zgodovino, ki ni omejena na ljudi, temveč s prepoznavanjem njihove tvornosti vključuje tudi nečloveške živali.

Prispevki posebne številke pod drobnogled jemljejo t. i. habsburške živali, živali, ki si delijo izkušnjo življenja v habsburškem imperiju. Njihova skupna zgodovina ima posebno težo, zlasti če govorimo o dolgem 19. stoletju. Gre za dobo, ko je dunajska imperialna administracija povečala nadzor nad živalskim svetom in uvedla poseben način upravljanja živali, kar je nedvomno krojilo skupno izkušnjo živali, ki so naseljevale prostor Habsburške monarhije. Obenem so si habsburške živali delile tudi bolj vsakdanje izkušnje, na primer tiste, povezane z novimi prevoznimi uredbami, vse bolj standardiziranimi metodami zakola, inovativnimi vzrejnimi praksami ali spreminjajočimi se splošnimi idejami o tem, kakšno ravnanje z živalmi velja za primerno.

Odnos med živalskim in človeškim so v 19. stoletju zaznamovale številne globoke preobrazbe. Prav v 19. stoletju so ljudje kot rezultat razraščajoče se kapitalistične ideologije tako konceptualno kot materialno preoblikovali svoje razumevanje naravnega sveta, s čimer so postavili temelje globalnim okoljskim izzivom. Odnos med ljudmi in raznolikimi živimi ter neživimi elementi njihovega okolja je tedaj vse bolj zaznamovalo poblagovljenje, s čimer so se tudi živali pretvorile v resurse oziroma vire dobrin. Tudi vse bolj prisotne tehnike izboljševanja živalskih vrst so bile namenjene večanju produktivnosti, a velja poudariti, da so se razvijale vzporedno s številnimi znanstvenimi odkritji o živalskem svetu. Prizadevanja za obvladovanje naravnega sveta so bila v 19. stoletju, skupaj z naraščajočo globalno povezanostjo, tesno povezana tudi s spremembami v biotski raznovrstnosti. Obravnavano obdobje ravno tako označujejo druge pomembne spremembe v odnosu med človeškom in živalskim svetom: urbanizacija, nesluten porast hišnih ljubljencev in med višjimi sloji še vedno priljubljen lov. Zadnja z živalmi povezana tema, ki ji namenjamo pozornost, je instrumentalizacija živali v nacionalne namene.

Tematska številka z raziskovanjem zgodovine človeško-živalskih povezav v Habsburški monarhiji dopolnjuje področje habsburške zgodovine in se hkrati vključuje v širše razprave na področju zgodovine imperijev. Ta perspektiva ne omogoča le prepoznavanja specifik habsburškega konteksta, ampak tudi kritično umeščanje habsburških zgodb v globalni okvir.

## “Habsburg” Breeds? Breed Selection and the Construction of an Agricultural State in the 19th-Century Habsburg Empire

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This article examines programs of breed selection in the 19<sup>th</sup>-century Habsburg Monarchy. Throughout the century, imperial rulers and members of agricultural societies cooperated to promote the selection and circulation of specific groups of cattle. In the scope of broader visions of development for an “agricultural state”, such schemes highlight how agricultural improvers used issues of husbandry to shape, from below as well as from above, a combined process of economic growth and empire-building.

• **Keywords:** cattle breeding, animal populations, agricultural improvement, agricultural societies, Habsburg Monarchy

Članek preučuje programe odbiranja pasemskih živali v Habsburški monarhiji 19. stoletja. V tem obdobju so vladarji in člani kmetijskih družb sodelovali pri spodbujanju odbiranja in načrtnega razmnoževanja določenih pasem goveda. V luči vizij o razvoju »kmetijske države« takšne pobude razkrivajo, kako so kmetijski pospeševalci napredka na podlagi rejskih izzivov oblikovali združeni proces gospodarske rasti in gradnje imperija – tako od spodaj navzgor kot od zgoraj navzdol.

• **Ključne besede:** govedoreja, živalske populacije, kmetijski napredek, kmetijske družbe, Habsburška monarhija

### Introduction: The 19<sup>th</sup>-century project of an agricultural empire

For economic historians, the term *agricultural state* has long been an analytical category for an economic structure. In the case of Austria-Hungary, the concept is often associated with an idea of failure to catch the train of the industrial revolution. This narrative has been based on a set of statistical indicators, especially the employment structure in the Monarchy showing that, throughout the century, a majority of the population lived from agricultural activities (around two-thirds in 1869, 53% in 1910) and that the shifts from agricultural to industrial employments took place later than in Western European states (Sandgruber, 1978: 243; Good, 1984: 46–48). Consequently, describing the Habsburg Monarchy as an agricultural state usually connotes a sense of economic backwardness (Hoffmann, 1978: 13, 61–65). But many agronomists, landowners, and politicians of the nineteenth century used the phrase “*Agrarstaat*” in a more positive sense. In spite of the ongoing industrialisation, agricultural matters maintained their centrality to many economic and social debates of the time (Auderset, Moser, 2018). Far from looking exclusively towards industries, many actors argued that agriculture was the main pillar of the Austrian economy and that the Habsburg Monarchy should develop as an agricultural state. Even the imperial government endorsed this idea in 1898 in the introduction of a large *History of Austrian Agriculture and Forestry*,

*and Their Industries*, claiming that Austrian farmers (Ger. *Landwirte*) were “the strongest and most enduring bearer of the building of the economy that has so mightily grown since [the beginning of the century], the most reliable and devoted pillar of the state” (*Geschichte der österreichischen Land- und Forstwirtschaft*, 1899: IX). To them, the *Agrarstaat* was not a descriptive concept, but a serious political project that took its roots in a particular vision, dating back to the eighteenth century, of how natural riches ought to be used. As the statistician Joseph Freiherr von Liechtenstern wrote in 1802:

The Austrian hereditary lands have above all the most favourable situation, the soft climate, and a fertile soil that spreads almost everywhere, incredibly favouring plant production of almost every kind; and since husbandry is based on the latter, the provinces of the Austrian Monarchy are to a large extent excellently suited for this. One must therefore wonder that, given these happiest natural conditions, one does not find the level of civilisation [*Grad von Kultur*] that the Austrian Estates are so easily capable to achieve. (Liechtenstern, 1802: 2)

By the standards of the early nineteenth century, Liechtenstern’s view was classic in bringing together matters of physical geography and climate with economic schemes and, eventually, with a vision of the empire’s vocation (Horvath, 2020: 31–37; Vianna Franco, Missemer, 2023: chap. 1; Török, 2024). According to Pierre Charbonnier, most modern projects for economic growth based their visions of the political order on the productive use of natural resources (Charbonnier, 2020). What makes the early-nineteenth century Habsburg case distinctive is that many statisticians and agronomists of the time set a particular emphasis on animal husbandry, which Liechtenstern called elsewhere “the soul of agriculture”, calling on both landowners and state authorities to intervene in the realisation of this project. From the early 1800s, sheep and cattle increasingly became objects of improvement plans designed by the combined efforts of the imperial government, agricultural societies, and individual breeders. This article analyses how such projects of agricultural economic growth encouraged a transformation of the relationships between breeders and animals, and how these transformations related to the larger political process of empire-building in the Habsburg Monarchy.

The mission attributed to cattle in projects of economic growth rested on the key role these animals played in contemporary agrosystems. Cattle were the most polyvalent animals, providing the fertilisers necessary to crop cultivation, labour as draught animals, and producing valuable commodities like milk and meat. Agricultural improvers imagined several ways not only to rear more animals, but to make each of them more productive. A first area of improvement revolved around the promotion of more intensive rearing techniques, with the development of fodder cultivation and stable feeding (Nisly, 2019). This article focuses on a second kind of improvement

programs that was concerned with the reproduction of the animals: the classification and promotion of specific cattle “breeds” (Ger. *Rindviehrassen*). These programs shed light on how the agricultural improvers attempted to spread some specific groups of animals throughout the territory of the Habsburg Monarchy, and on the work of agricultural improvers at large. The relevance of such improvement programs went beyond the technical aspects that dominate most of the historiography of the process known as the “birth of modern breeds” (Feliuss et al, 2014; Denis, 2016). Throughout Europe, the classification of animals into breeds and the material transformation of animal bodies intersected with renewed methods of governing (human and animal) populations and with economic objectives (Zellinger, 2019; Bächli, 2023; Gruffat, 2025). The case of breed selection thus enables us to address the political implications of the *Agrarstaat* project. Looking at the variety of intentions and actual practices of the actors who promoted breed selection illustrates how they tried to incorporate animals into a productivist economic system at the service of specific visions of the empire and its government. Seen in this light, programs of breed selection contributed to materialise the Habsburg Monarchy as an agricultural empire.

This hypothesis first requires that we trace how it mattered for the animals to be selected in the Habsburg Monarchy and not elsewhere. To that end, I use archives and publications from two types of institutions that cooperated in the programs of husbandry improvement. The earliest institutions involved were the provincial agricultural societies in which agronomists and wealthy landowners gathered to promote any kind of agricultural improvements. The first such societies in the monarchy had been founded in the second half of the eighteenth century, but their activity progressively decreased until the Napoleonic Wars, following which they gained a new impetus and much larger memberships (Bruckmüller, 1982, 2020; Sušjan, Južnič, 2018). Archival documents concerning husbandry from the Lower Austrian and Tyrolean Agricultural Societies highlight how these associations enjoyed the support of the Habsburg government, who turned them into semi-public bodies meant to develop an early form of agricultural policy.<sup>1</sup> Progressively, some members of the societies managed to play a part in the definition of agricultural policies. The cooperation between the agricultural societies and the Habsburg government became tighter with time, and archives from the Lieutenancies (Ger. *Statthaltereien*) and, for the second half of the century, the Ministry of Agriculture, provide key complements to understand the evolution of breed promotion. Beyond tracing the fates of several cattle breeds, the combined use

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<sup>1</sup> The archives of the Lower Austrian Agricultural Society are in Austrian State Archive (OeStA) – Allgemeine Verwaltungsarchiv (AVA) – Landwirtschaft (LW) – Landwirtschaftsgesellschaft (LWG). To my knowledge, there is no archive of the Tyrolean Agricultural Society, but its activity can be reconstructed through its published proceedings (conserved in the Landesmuseum Ferdinandeum in Innsbruck) and through its correspondence with the imperial administration, whose archive conserve many documents coming from the society (Tiroler Landesarchiv (TLA) – Jüngerer Gubernium or Statthaltereien – Kultur).

of these archives enables us to shed light on the political history of cattle in the nineteenth-century Habsburg Empire. The selection of cattle breeds can be analysed as the construction of a form of government of animal populations (Piazzesi, 2023; Brassart, 2024). Crucially, as these institutions negotiated and implemented it, the government of the animals was shaped from many sides, as much by local actors as by state authorities. Far from being an “improvement” imposed from above (Li, 2005), this history of cattle selection offers us a field of research to explore “from below” the operating mechanisms through which the Habsburg Empire developed as a “cooperative empire” (Osterkamp, 2016, 2021: 83–88). Beyond the intersection between categorisation of cattle into breeds and construction of a productive economy, concrete issues of cattle husbandry, similarly to many others, shaped practices of cooperation between state and non-state actors through which the communication and decision-making networks of the empire spread over its territory and affected the daily lives of both human and animal populations.

The first section analyses how the organisation of cattle exhibitions promoted a new conception of husbandry that reconceptualised the meaning of “breeds” and tied it to visions of a modernised empire. The exhibitions promoted a shift in the relationships between landlords (Ger. *Grundherren*) and peasants and culminated in what governmental ideology presented as the “new organisation of Austria” (Ger. *Neugestaltung Österreichs*). In a paradigm largely inspired by liberal ideals of improvement, cattle became a piece in larger programs of reform of the empire. The second section examines how agricultural improvers attempted to reach smaller landowners through direct distribution of animals that actively involved a variety of actors across the political hierarchies. These programs of breed selection rested on a specialisation of the animals’ economic role and the mobility of the breeds, whose institutionalisation contributed to a process of integration of the empire.

### **A liberal promotion of productive breeds**

Promoters of the “agricultural enlightenment” had already devoted some attention to husbandry at large and animal selection more particularly in the last decades of the eighteenth century (Jones, 2015: 96–98). In the central provinces of the Habsburg Empire, the activity of the early agricultural societies supported the rulers’ policies of importing specific breeds such as the merino sheep to develop more profitable activities (Wood, Orel, 2001: 171–187 and chap. 8). But their activities remained relatively limited until the aftermath of the Napoleonic Wars. When the agricultural societies regained impetus, new programs to promote cattle selection started with the organisation of agricultural exhibitions primarily focused on cattle and sheep rearing. The landowners and agronomists who led the societies interpreted their “private” action

in a “patriotic sense”: they wished to assist the government by “act[ing] with united strength for the improvement of agriculture in its main branches, and consequently for the more perfect use of the natural treasures of the fatherland, and for the multiplication of its inner prosperity [*Wohlstand*]” (Geschichtliche Darstellung, 1816: 5–7).

The original aim of the exhibitions was to promote the development of husbandry as a key activity in this respect and to expand the reach of agricultural societies into the countryside (Vorschläge zur Beförderung, 1821). Like similar events in other parts of Europe, for instance France or the United Kingdom, these economic considerations were tied to issues of social representation. But while in the British context practices of aristocratic distinction intentionally excluded peasants (Ritvo, 1990, 51–54), the Austrian exhibitions promoted another kind of relationship between the landlords and the peasants. From the 1820s, agricultural exhibitions became annual events in several provincial capitals of the Monarchy like Vienna, Brno, and Budapest which gathered mainly large-estate owners who belonged to the traditional aristocracy as well as a more recent nobility that had invested in land. At the same time, however, the Lower Austrian Agricultural Society developed rural exhibitions focused on cattle husbandry with the aim of including peasant breeders into the process of husbandry improvement. As such, they resembled more the kind of awarding ceremonies organised around the same period in rural France by some of the associations known as *comices agricoles* (Vivier, 2015: 123–124).

In principle, exhibitions promoted the intensification of husbandry based on a liberal ideal of progress through education. The leaders of the agricultural society conceived their mode of promotion in opposition to “legal constraints” that could be imposed on the breeders, trusting instead that their appeals to well-perceived interests and reason could replace inefficient customary practices with a “rational” agriculture. In concrete terms, they designed distributions of prizes to the most “beautiful” cattle to create a spirit of “emulation” (Jones, 2015: 85–91) and to foster a model of teaching through example that should, eventually, improve breeding practices throughout the countryside. In practice, the exhibitions often paved the way for a more paternalistic lecturing of allegedly ignorant peasants by agronomists and the landlords or their estate-managers who organised the local rural exhibitions. The system of awards was organised in a way that differentiated two kinds of cattle owners, the nobles and their “subjects” (Ger. *Untertanen*), and appealed to the needs of social distinction of the former with distributions of medals and certificates, while adding pecuniary incentives for the latter.<sup>2</sup>

Early schemes of husbandry improvement were embedded in a larger set of social relationships mixing calls to civic patriotism with attitudes related to the *Grundherrschaft*. The latter were particularly visible in the behaviour of some local nobles, who organised lotteries to indirectly subsidise the purchase of prized animals by the

<sup>2</sup> OeStA – AVA – LW – LWG – Akten – Karton 4 – N°31; Karton 22 – N°93 and Karton 71 – N°453.

peasants.<sup>3</sup> In the 1830s, the Viennese Agricultural Society also experimented with a few direct distributions of prized animals to peasant communities, which the latter usually obtained with the support of their landlord who provided them with recommendation letters and arguments to highlight their local efforts of improvement.<sup>4</sup> Underneath the paternalist outlook of the exhibitions, however, large landowners could actually learn from the peasants who sometimes brought more beautiful animals to the exhibitions than their landlords (Collaredo-Mansfeld, 1835: 61). Non-noble breeders often received the same kind of distinctions as the landlords, and this mode of “government through honours” (Ihl, 2004) that recognised their merits gradually contributed to blur the traditional borders of social distinction.

Exhibitions of cattle and sheep played a crucial role in the emergence of a concept of “breeds” (Ger. *Rassen*) that acquired a strong economic meaning. The granting of medals in the network of rural exhibitions prompted long-lasting debates between the local juries and the central committee of the Agricultural Society about the criteria that made the “*schönes Vieh*”. The juries did not consider the “beauty” of animals as purely aesthetic. Instead, they heavily loaded it with economic considerations in a way that would last for many decades (Heitholt, 2023: 94–96). The exhibitions and the debates that followed them became a central place to compare cattle from different origins, especially from Hungary, Styria, Tirol, and Switzerland. For breeders like Joseph von Ehrenfels, a landowner and renowned figure of the Austrian agronomic networks, the aim was to find out which kind of cattle was the most suited to varying regional agricultures, taking a combination of factors into account. Ehrenfels considered on the one hand the animals’ yields compared to their fodder consumption, focusing on the possible combinations of three main uses: labour, milk, and meat. On the other hand, he compared these productions to the care the animals required and how well they could adapt to the given local environmental and socioeconomic conditions, including for example climatic variations and the economic needs of smaller peasants (Ehrenfels, 1831). With his help, the central committee of the Agricultural Society designed tables for the cattle exhibition juries to evaluate cattle with a fixed set of criteria. The “beautiful” animals’ appearance was supposed to reveal their productive abilities and to give some information about their capacity to transmit them to their offspring.<sup>5</sup> The animals’ external physical characteristics and their ability to transmit them in a constant way to the next generation, in other words their “heredity”, became the key concepts through which zootechnicians classified cattle into distinct “breeds”. The annually held agricultural exhibitions provided the members

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<sup>3</sup> For the plan of the lotteries see Collaredo-Mansfeld, 1834: 7–11. Many reports on individual lotteries can be found in the archives of the Agricultural Society, for instance: OeStA – AVA – LW – LWG – Akten – 72 – N°656. See also the annual reports in the *Verhandlungen der k.k. Landwirtschafts-Gesellschaft in Wien* until 1847.

<sup>4</sup> OeStA – AVA – LW – LWG – Akten – 71 – N° 588 and N°593.

<sup>5</sup> OeStA – AVA – LW – LWG – Akten – 22 – N°176 – Beilage N°12 and N°13.

of agricultural societies with opportunities to both debate about their vaguely scientific terminologies of *Rassen*, *Schläge*, *Stämme* etc. and refine the classification of the breeds along increasingly precise geographic delimitations.<sup>6</sup>

The exhibition’s purpose of scientific classification peaked in the large international exhibitions of the 1850s, when they acquired an additional marketing function. The Ministry of the Interior coordinated the Austrian delegation to the 1856 *Concours Agricole Universel* in Paris, led by prince Adolf zu Schwarzenberg, with the explicit aim of creating a demand for animals like Pinzgauer cattle or Hungarian oxen on the expanding international markets.<sup>7</sup> On this occasion, the ministry commissioned the network of agricultural societies to publish the first comprehensive descriptions of the monarchy’s livestock, which contributed to grant an “Austrian” identity to the animals.<sup>8</sup> The ensuing book was not as comprehensive as the original scheme had projected, but it nevertheless provided the primary material for knowledge of “Austrian” breeds at the European level (*Notes sur l'élevage*, 1856). The Viennese monarchy-wide agricultural exhibition of 1857 that celebrated the fiftieth anniversary of the Lower Austrian Agricultural Society similarly constituted an opportunity to celebrate “Austria’s productive force” and “spirit of progress” through its diversity of cattle breeds (*Die landwirtschaftliche Ausstellung in Wien*, 1857). The Ministry of the Interior commissioned an illustrated album that prolonged the exhibition, which the imperial administration and agricultural societies offered to corresponding European societies and widely advertised in the provinces of the empire as a tool to promote the selection of cattle breeds.<sup>9</sup>

In this process, the Habsburg government and agricultural societies incorporated cattle husbandry into a political representation of the post-1848 reformed empire, or what the empire’s apologists like Czörnig and Schwarzer called more broadly *Neu Österreich* (Seiderer, 2015: 13–14; Judson, 2016: 238–244). On the one hand, the exhibitions staged the new status of the peasantry as independent citizens who, in all their picturesque diversity, represented a pillar of the empire. Press reports of the exhibitions, often written by eminent members of the agricultural societies, emphasised that peasants contributed to economic progress on a par with the traditional aristocracy. The French emperor’s visit to the Paris exhibition also provided the Austrian delegation with an opportunity to put to the fore a Tyrolean peasant named Kajetan Kröll,<sup>10</sup>

<sup>6</sup> On the terminology of “breeds”: OeStA – AVA – LW – LWG – Akten – 39 – N°61.

<sup>7</sup> Preparatory documents of the delegation were circulated to all the provincial agricultural societies of the Monarchy. They can be found for instance in TLA – Statthalerei Tirol und Vorarlberg – Karton 316 – Cultur 1856-1857 – 1856 – N°4472 and N°17315.

<sup>8</sup> TLA – Statthalerei Tirol und Vorarlberg – Karton 316 – Cultur 1856-1857 – 1856 – N°4701.

<sup>9</sup> OeStA – AVA – LW – LWG – Akten – 173 – 767. Another example in Dalmatia: Croatian State Archive in Zadar (HR – DAZD) – 498 – Kut 6 – N°8657/1724, N°11139/2333 and 12148/2523.

<sup>10</sup> More than a random peasant, Kröll nevertheless appears as a successful breeder who quickly got used to international exhibitions. He also got involved in the 1863 Hamburg Exhibition, see TLA – Statthalerei Tirol und Vorarlberg – Cultur – Karton 319 – 1863 – File ‘Landwirtschaftliche Ausstellung in Hamburg’ – N°21095/1965.

together with a couple of Duxer cattle whom he offered to the French imperial family as diplomatic gift (Arenstein, 1856). This type of “spectacular politics” (Truesdell, 1997) extended to the animals themselves, and Hungarian oxen were for instance presented as excellent draught animals who fully contributed to a modern agricultural system (*Notes sur l'élevage*, 1856: 30–33).

On the other hand, large cattle exhibitions also staged a new picture of the empire specifically as a space of economic circulation. A key point of the ministry's communication was to promote the circulation of the breeds, particularly within the imperial territory. The album of the 1857 Viennese Exhibition showcased how some breeds like the Pinzgauer could be reared outside of their “home region” (Ger. *Heimat*) in the Salzburg Alps and settled in Moravia, for instance. The editors of the album placed a particular emphasis on their “Austrian” origin when selecting the breeds. The only “foreign” breeds they presented were the ones that had managed to fully integrate into their new Austrian home, what they called “*sich einbürgern*”, literally meaning ‘becoming a citizen’ (*Abbildungen österreichischer Rindvieh-Racen*, 1859). The process of classification of cattle into breeds proceeded in ways that, in several respects, resembled the ways in which statisticians attempted to classify humans into nationalities (Gruffat, 2025: 299–300). Such an analogous treatment of cattle and human populations, which were additionally counted during the same census operations, suggests how the animals were increasingly considered a productive population for the Austrian economy requiring an administrative management of their circulation (see also Göderle, 2020).

This discourse on breed circulation rested on a complex relationship between the notions of breed and environment. One issue was acclimatising breeds to a new home, and the agronomists suggested that technical solutions such as well-designed stables enabled breeders to successfully settle Swiss cattle from their Alpine home onto the Hungarian Plain (*Abbildungen österreichischer Rindvieh-Racen*, 1859: plate XXI). On the other hand, mid-nineteenth-century zootechnicians admitted that there were important “natural” limits on what they could do (Baudement, 1862: IV), and that some breeds were more adapted to specific local environments of the monarchy than others. The breed's productivity became a relative concept measured with regard to several territorial features. In the eyes of many, the geographic features of the empire came to determine its vocation as an agricultural state and its available options for the improvement of cattle husbandry. The idea of an environmental determinism of husbandry was particularly strong in Alpine regions, where it became commonplace in the economic discourse to argue that alpine pastures “assigned” husbandry to serve as the main source of income of the country.<sup>11</sup>

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<sup>11</sup> This remark was almost ubiquitous in reports from agricultural societies and chambers of commerce. See e.g. TLA – Jüngerer Gubernium – Faszikel 3835 – Normaliensammlung – III.21.C – *Report from the Agricultural Society in Innsbruck 13 October 1803*; TLA – Statthalerei Tirol und Vorarlberg – Handel – Karton 1704 – 1854 – File ‘Handelskammern / Feldkirch’ – N°2369/403.

These representations had strong implications for the types of cattle whose choice agricultural improvers would encourage. Some agronomists concluded from the comparisons between Austrian and foreign cattle in international exhibitions that they should import feeding techniques and breeds from what they perceived as more advanced countries like England (Buchmüller, 1857). In Tirol for instance, Johann Lepuschitz, owner of a model farm and member of the board of the Innsbruck Agricultural Society, considered that the latter should import the famous English Durham to improve Tyrolean cattle through progressive crossings instead of Swiss breeds that were frequently imported at the time.<sup>12</sup> But proponents of English breeds remained a minority within both agricultural societies and the Habsburg civil service. The County Officer (Ger. *Kreishauptmann*) in Imst explained for example in a note that introducing large and heavy breeds like the Durham was not feasible in the Upper Inn Valley. He considered on the one hand that the breed’s consumption of fodder was out of proportion to the local supplies, and moreover that the steep slopes of the Alps were barely accessible to such breeds, whereas the native ones were more suited to the local environment and rural economy.<sup>13</sup> The naturalist and professor at the Viennese Universität für Bodencultur, Martin Wilckens, summarised this general attitude towards breed selection a few decades later by emphasising that “there is no absolutely good or poor breed, but their good or poor qualities result from their adequacy and inadequacy to climate, soil, and economic purposes” (Wilckens, 1876: 24).

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Ideas and practices of breed selection in Central Europe developed in relationship to the deeper political transformations in the Habsburg Empire. Agronomists and landowners developed a concept of “breed” that classified animals in distinct categories for economic purposes. Both the development of this concept and the promotion of actual animals emerged in social settings that were originally strongly embedded in the system of the *Grundherrschaft*, but became increasingly loaded with a political meaning that promoted a new vision of the reformed Austrian Empire. In a way comparable to the work of climatology, cattle improvement embodied how the empire modernised as a space of circulation, promoting economic and social progress accordingly with its environmental vocation (Coen, 2018: 49–55, 160–163, 186–195). However, the material outcomes of breed selection schemes did not seem to take place quite as the political communication had promised. As the Lower Austrian Agricultural Society

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<sup>12</sup> TLA – Statthaltereii Tirol und Vorarlberg – Cultur – Karton 322 (1869-1870) – 1869 – File ‘Staatssubvention zur Hebung der Landeskultur’ – Sub-file ‘Abschriften der Ackerbau-Ministerial-Erlässe’ – Notes by Johann Lepuschitz 28 August and 2 September 1869 (no numeration).

<sup>13</sup> TLA – Statthaltereii Tirol und Vorarlberg – Cultur – Karton 319 – 1863 – File ‘Verbesserung der Rindviehzucht durch Haltung von Zuchtstieren’ – N°161.

complained in the 1860s, the liberal approach to cattle selection based on individual interests and the spirit of emulation seemed to have reached its limits. The breeders' dissatisfaction with the slow changes they observed on the ground led them to call increasingly for state interventions into the selection of breeds in the second half of the nineteenth century.

### **Bull distributions, breeding districts, and imperial integration**

The breeding programs of the mid-nineteenth century went beyond issues of imperial representation and social distinction. The classification of animals into breeds and the attempts to settle select breeds in new regions organised mechanisms of reproduction and circulation of animals aiming to change the composition of livestock populations throughout the territory of the empire. Such management methods produced visible effects on the bodies of the animals and materialised in concrete ways a process of imperial integration supported by the ambiguous cooperation of state authorities, agricultural societies, and landowners.

In the second half of the nineteenth century, agricultural improvers had socioeconomic, political and zootechnical reasons to look for new modes of promoting cattle improvement beyond the paradigm of emulation that had guided the organisation of exhibitions so far. The abolition of the *Grundherrschaft* that followed the revolutions of 1848 definitively granted the peasants an autonomous social status, which also entailed a diminution of the hitherto landlords' influence on their practices. Moreover, the payment of the peasants' shares to the compensation of the landlords for the *Grundentlastung*, and more generally the transformation of the economic relationships between former lords and subjects, made the issue of ensuring the economic viability of the henceforth independent peasant landholdings more pressing than ever (Řepa, 2020: 4). Besides this socioeconomic transformation, the revolutions of 1848 had opened the way for a reform of the governance of agriculture that brought the imperial government and the provincial agricultural societies into a closer relationship (Kiryu, 2020). After much lobbying, agricultural interest groups obtained the nomination of a short-lived Ministry of Agriculture (1848–1853) staffed mainly with agronomist from the Viennese Agricultural Society. This ministry defined a comprehensive scheme of collaboration in which the provincial agricultural societies and their district branches would serve as a relay of the state on the local level (*Verhandlungen des landwirthschaftlichen Congresses*, 1849: 18–29). The model of governance survived when agricultural matters were passed on to the Ministry of the Interior in 1853. At first, the improvement programs of the 1850s continued to rely on the system of awards. The Ministry of the Interior generalised it to all the provinces of the empire and funded “state-prizes” (Ger. *Staatspreise*) of much higher value specifically targeting the small landowners. In order to adapt to

local conditions, the provincial agricultural societies actively contributed to shape the prizes by defining the modalities of attribution together with the local Lieutenancy and by organising the exhibitions.<sup>14</sup>

The continuation of the liberal mode of improvement eventually showed important limits from the zootechnical point of view. Individual peasants could hardly access the market of excellence breeds where a single Pinzgauer bull could cost up to 10,000 fl (*Abbildungen österreichischer Rindvieh-Racen*, 1859: 1). Moreover, zootechnicians from the agricultural societies had started to wonder already in the 1840s how to intervene more directly and efficiently in the peasants’ herds to obtain a population of animals of the desired quality. In that matter, zootechnicians were faced with all the animals that fell outside of their category of *Rasse* defined by constant heredity, which they called *Landschläge* or ‘local varieties’ and represented the majority of the cattle population of Cisleithania (as far as statistical data about breeds could tell anything meaningful in that matter; Lorenz von Liburnau, 1878: 10 and map XXI). The distinction between ‘breed’ and ‘*Landschlag*’ created a hierarchy of economically desirable and undesirable animals within the cattle population. In this conceptual framework, the genealogical element at the heart of the understanding of breed provided zootechnicians with a solution to think about the improvement of cattle as the progressive “ennoblement” (Ger. *Veredelung*) of whole populations over a few generations. “Elevating” (Ger. *Hebung*) the stocks of animal to a higher status became an explicit aim of husbandry improvement programs.

Zootechnicians started to consider cross-breeding as the most efficient way to improve cattle on a large scale. While the technique of inbreeding and its most emblematic practitioner, Robert Bakewell, usually loom large in narratives of husbandry improvement, recent histories of breeding techniques have highlighted that crossing played a crucial complementary role in the formation of modern breeds (Theunissen, 2012: 200–207). For Austrian zootechnicians, cross-breeding was moreover a very pragmatic choice given the large scale of the intervention they aimed at. Within the agricultural societies, they progressively developed modes of intervention aiming at crossing the peasants’ lower quality *Landschläge* with purebred animals, using the ongoing political reforms of the empire to reach deeper in the countryside. From the 1830s, zootechnicians and local civil servants became interested in a communal form of property of the bulls, known as *Gemeindestiere*, which they perceived both as a cause of the low quality of rural livestock and as a potential lever to influence peasant practices beyond the reach of the landlord’s traditional power.<sup>15</sup> The political reforms of the early 1850s that had abolished the landlords’ political and administrative role had deepened this interest in the autonomous municipalities (Ger. *Gemeinde*), which henceforth represented

<sup>14</sup> OeStA – AVA – LW – LWG – Akten – 143 – N°62 and N° 177.

<sup>15</sup> TLA – Kreisamt Imst – Forst und Kultur – Faszikel 302 (1840) – N°7; Colloredo-Mansfeld, 1836; Eckel, 1848: 26 and 37–38.

“the fundament of the whole state” according to the Ministry of Agriculture (*Verhandlungen des landwirthschaftlichen Congresses*, 1849: 24).

Agricultural improvers of the mid-century developed a set of regulations to oversee the reform of breeding practices at the communal scale. In rural communities, bulls were indeed often managed as a form of common property, according to a variety of local rules that became a matter of complaint for many agricultural improvers.<sup>16</sup> Each village usually reared one or two bulls, whose care was entrusted to a member of the community either permanently, or in yearly turns. The bull’s custodian usually benefited from a compensation in form of money or of the exclusive use of a stretch of common land (the *Stierwiese* ‘bull’s meadow’). In the eyes of agronomists, these bulls were the main cause of the poor state of the *Landschläge*, since their yearly turnover had prevented them from ensuring lasting improvements of the herds. But few improvers recommended privatising the bulls. Rather, members of the agricultural societies saw the common management of bulls as a more effective opportunity to reform the peasants’ breeding practices, provided the implementation of an adequate monitoring.

If the municipalities were nominally the “fundament” of the institutional order and the bulls still possibly a form of common property, the improvers’ interventions actually reduced municipal autonomy through the supervision by higher levels of agricultural expertise, in a process comparable to the one that affected communal forests at the same time (Bonan, 2016: 600–607). The agricultural societies encouraged the hiring and training of competent communal herders by the municipalities to ensure the adequate care and continuity of use of the bull. From the 1860s, they also lobbied the provincial diets and imperial government to set up administrative commissions, presided over by veterinarians appointed by local administrations, which would control the choice and health of the bulls.<sup>17</sup> In addition to such regulations around the animals, zootechnicians searched for means to influence rural communities’ choices of the animals themselves, first through the existing system of exhibitions and awards, and from 1868 by subsidising the purchase of bulls. When a ministry of agriculture was reinstated in 1868, the Cisleithanian government launched a large-scale policy of subsidies for virtually every branch of agriculture in the crownlands under its rule, and cattle husbandry attracted a large part of the budget (*Subventionen zu Rindviehzuchtsprämien*, 1871).

The subsidy policy for cattle breeding operated in a decentralised manner “without strict uniformity”, based on the cooperation between the ministry and the agricultural societies.<sup>18</sup> While the Viennese government provided the funds, the choices of how and

<sup>16</sup> Agricultural societies conducted several enquiries about communal bulls in the late 1850s and early 1860. For Lower Austria: OeStA – AVA – LW – LWG – Karton 158 – N°130; N°155; N°156; N°167 and Karton 159 – N°167; N°201; N°202. For Tirol, within a larger commission of the Ministry of Commerce and Economy to several provinces: TLA – Statthaltereie – Cultur – Karton 319 – 1862 – N°7450/692 and 1863 – File ‘Verbesserung der Rindviehzucht durch Haltung von Zuchtstieren’.

<sup>17</sup> OeStA – AVA – LW – LWG – Akten – 254 – N°592.

<sup>18</sup> OeStA – AVA – LW – Ackerbauministerium (AM) – Landeskultur (LK) – Akten – 57 – 7a – 6234/1854.

where to spend the money were once again left to the provincial agricultural societies and their district branches in order to adapt the projects to the local conditions. The imperial administration supervised the subsidies directly only in Dalmatia, where the very short-lived agricultural society founded in 1850 had already ceased activity by the 1860s. Most societies opted to subsidise bulls, often in financially creative ways to reduce the final price for the peasant. In Lower Austria, for instance, the Agricultural Society bought animals at its own expense and then sold them at auction, starting at half the market price of the animal and compensating the difference with the ministerial subsidy.<sup>19</sup> This system made the bulls accessible to small landowners and rural communities, while the agronomists from the central committee of the society could pre-select which breeds would be offered in which district.

Local societies kept a large degree of autonomy when making decisions about the subsidies. In Tirol, several local branches of the agricultural society opted for a direct distribution of bulls to rural communities, while others used their share of the subsidy to grant awards during cattle exhibitions.<sup>20</sup> In some cases, the latter choice was explicitly motivated by diverging political positions regarding the level of autonomy that should be left to breeders in the provinces. The Agricultural Society of Vorarlberg stuck to the traditional model of prizes. Its president, Count Carl Belrupt-Tissac justified this choice in a strikingly critical report that asserted his confidence in a model of improvement based on self-help and enlightenment of the peasants by the educated landowners, and argued against the monitoring by the imperial administration when sufficient provincial expertise was provided.<sup>21</sup> The first years of the collaboration between the Agricultural Society of Vorarlberg and the imperial administration were marked by tensions about the level of involvement of the Viennese government and the choices of subsidised agricultural sectors. Belrupt often criticised the ministry in his reports for supervising too closely the societies, for thinking in too “theoretical” terms and for not leaving enough local autonomy to the provinces.<sup>22</sup>

The subsidy policy aimed at promoting the circulation and settling of select breeds across the empire, but it progressively acquired an additional conservationist objective of maintaining the quality of breeds over the long run in an increasingly commercialised economic system. Bull distributions confronted agricultural societies with an increasing problem of finding purebred reproducers. Some breeds, such as the Styrian Mürztaler

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<sup>19</sup> OeStA – AVA – LW – LWG – Akten – 248 – N°1498; OeStA – AVA – LW – AM – LK – Akten – 57 – 7a9 – N°4720/1504.

<sup>20</sup> OeStA – AVA – LW – AM – LK – Akten – 19 – 7a14 – N°179/67 and N°6616; 39 – 7a14 – N°3596/1435; 58 – 7a14 – N°2715/822.

<sup>21</sup> OeStA – AVA – LW – AM – LK – Akten – 57 – 7a – N°2314/706.

<sup>22</sup> On the uses of the subsidies: OeStA – AVA – LW – AM – LK – Akten – 9 – N°1558/874; 19 – 7a14 – N°9/5; 39 – 7a14 – N°1497/555. On tensions with the administration: TLA – Statthalerei Tirol und Vorarlberg – Cultur – Karton 321 – 1868 – File ‘Landwirtschafts-Verein in Vorarlberg’ – N°1780/70; N°3246/130; N°7856/287 and N°13550/498.

and the Bavarian Allgäuer, were so popular in the 1870s that the Viennese Agricultural Society could barely find enough bulls to answer the demands it received.<sup>23</sup> Moreover in the case of dairy breeds, rural breeders faced the competition of another kind of husbandry, the urban dairymen. The latter used to buy the most productive animals in terms of milk yields at higher prices from the countryside, but they did not let them reproduce because of considerations tied to the dairy's profitability, since high fodder prices in the cities made it economically unsustainable to keep males or females when they did not produce milk (Schreibers, 1847: 173–174). The city of Vienna was home to a population of four to six thousand cows (around ten to twelve thousand counting the suburbs) that were sold to butchers at the end of their lactation cycle and replaced by new animals bought in the countryside every year.<sup>24</sup> Additionally, the high level of urban meat consumption in general made the city appear to be a “meat-devouring monster” where attractive meat prices pushed the breeders of the immediate surroundings to sell so many young animals that they could not ensure the reproduction of their herds by themselves.

The capital city was thus a highly consuming dead-end from the point of view of breed selection. Some members of the agricultural society considered that large stretches of Lower Austria, “from Wolkersdorf to Wiener Neustadt and from Tulln to Bruck an der Leitha”, were “lost for breeding [*Viehzucht*]”.<sup>25</sup> Styrian and Salzburger agronomists complained that the Viennese dairymen emptied their countryside of the best animals and threatened the maintenance of the Mürztaler and Pinzgauer as productive breeds in the long run. As the public veterinarian (Ger. *Landestierarzt*) from Salzburg, Jacob Lechner warned, this problem did not concern only the animals, but the peasants who reared them as well. According to him, selling the most beautiful animals outside of their home region jeopardised the value of the herds that constituted the peasants' main source of income, and would eventually force the latter into rural exodus.<sup>26</sup> Urban dairymen were not the only ones responsible for such risks of trade. In Tirol, Adolf Trientl warned of similar effects of the increased success of Tyrolean cattle on export markets.<sup>27</sup>

The agricultural societies and the ministry consequently adapted their selection policies to integrate longer economic and zootechnical temporalities. A first answer to the challenges of commercialisation was to use the governmental subsidy to found nurseries (Ger. *Pépinieren*) that consisted of a small herd of a bull and a few cows

<sup>23</sup> OeStA – AVA – LW – LWG – Akten – 288 – 633; 297 – N°316 and N°590.

<sup>24</sup> WStLA – 2.8 – *Innungen und Handelsgremien – Milchmeier und Milchverschleißer* – B39/1 and B39/2; *Niederösterreichisches Heerdbuch*, 1873: 7 and 12.

<sup>25</sup> OeStA – AVA – LW – LWG – Akten – 252 – N°2520.

<sup>26</sup> OeStA – AVA – LW – LWG – Akten – 176 – N°1409; OeStA – AVA – LW – AM – LK – Akten – 101 – 7a11 – N°3724/590.

<sup>27</sup> Trientl, 1873. Trientl emphasised this point again in a report for the Lieutenancy after the law was passed: TLA – Statthalerei Tirol und Vorarlberg – Cultur – Karton 332 (1877 Zl. 97-19822) – N°13539/2090.

managed through a form of public-private partnership. The animals were entrusted either to agricultural schools or to a large landowner who possessed the means to rear them in good conditions. With this system, the Lower Austrian Agricultural Society created its own sources of supply for the bull distributions, while the large landowners who hosted the cows mainly benefited from their milk production and its expanding urban outlets.<sup>28</sup> Distributed bulls could also be leased for reproduction to the surrounding breeders, in a system of public “breeding stations” (Ger. *Zuchtstationen*) modelled on the stud farms in use for horses since the eighteenth century. In any case, these bulls as well as their offspring remained the property of the agricultural societies or of the state itself, as for instance in Dalmatia where they were known as “*tori aerariali*”. As the agricultural society in Trient/Trento explained, this form of property was judged more efficient than private property in order to impose some control of the custodian’s practices through the agricultural societies.<sup>29</sup>

Individual breeders often voluntarily participated in the distribution programs, but their own interests could diverge from the improvers’ expectations and lead to distortions from the original programs. In Dalmatia, local civil servants actively advertised the bull distributions and easily found more applicants to host the animals than necessary. The district captain of the island of Lessina/Hvar even managed to find eight applicants from the same village, seven of them illiterate and signing with a simple cross.<sup>30</sup> Other similar cases suggest that small breeders generally welcomed this policy, although their own interests in the scheme may have differed from the ones of the administration and agricultural societies. The peasants from Lessina/Hvar probably took the program as a gift of animals without much afterthought for the larger project of public breeding stations. Another applicant from Arbe/Rab named Pietro Galzigna first asked to adapt the conditions imposed by the state for the use of the “public bull”. Galzigna finally received a bull after complying formally with the administration’s initial regulations, but his actual use of the animal is harder to document.<sup>31</sup> According to Ferdinand Kaltenecker, who conducted a survey of cattle breeds for the Ministry of Agriculture in Tirol, many communities which received subsidised bulls seemed to think more about getting their taxes back than about improving their livestock.<sup>32</sup>

Local breeders sought to adapt the improvement programs to their own practices and interests in more or less formal ways. Several local associations from the district Ober Manhartsberg directly petitioned the central committee of the association in 1878 to contest the latter’s choice of Allgäuer and Montafoner cattle as the only subsidised breeds in Lower Austria. The petitioners, led by politically active landowners like

<sup>28</sup> OeStA – AVA – LW – LWG – Akten – 286 – N°203 and N°205; 287 – N°403; 288 – N°633.

<sup>29</sup> OeStA – AVA – LW – AM – LK – Akten – 124 – 7a – N°6346/743.

<sup>30</sup> HR – DAZD – 88 – 2. Odjelni spisi – Kut 2183 (1870) – BR-38 – N°11931.

<sup>31</sup> HR – DAZD – 88 – 2. Odjelni spisi – Kut 2183 (1870) – BR-38 – N°14119.

<sup>32</sup> OeStA – AVA – LW – AM – LK – Akten – 172 – 7a14 – N°8059/791.

Georg von Schönerer but also including smaller breeders as well as butchers and cattle traders, argued that these breeds were not compatible with the local Gföhler cattle, which they had tried to improve over the past forty years with visible progress evidenced in the yearly exhibitions. They emphasised among others that the imported cattle was predominantly specialised in dairy production, while the Gföhler had specialised in draught work and fattening for exports to Germany. The incompatibility was not just a matter of productive abilities of the animals per se, but also of marketing with respect to the animals' colour. As the petitioners emphasised, grey cattle in general were increasingly harder to export to Western Europe because this colour associated them with the "Podolian" breeds from Hungary, the Danubian Principalities and Russia which also transmitted the devastating virus of cattle plague. Since importing countries like Germany increasingly closed their borders to grey cattle in the 1870s, the breeders from Ober Manhartsberg attempted to select cattle to obtain a more easily marketable colour and rejected the "grey" Allgäuer and Montafoner.<sup>33</sup> According to the president of the Zwettler Agricultural Association, the subsidised grey breeds had found purchasers nevertheless, but only for speculation purposes instead of for the planned crossings to improve the local livestock.<sup>34</sup> The petitioners eventually obtained an enlargement of the list of subsidised breeds that reflected their own local interests.<sup>35</sup>

By the end of the 1870s, the Cisleithanian government revised its policy of subsidies along new guidelines that furthered the territorial approach to the promotion of cattle breeds, with the explicit aim of rationalising governmental spending and increasing its efficiency on the ground. At the level of each province, the agricultural societies were tasked with delimiting "breeding districts" (Ger. *Zuchtgebiete*), each of which had to be associated with a specific list of breeds which would be the only ones to receive the state subsidies.<sup>36</sup> In practice, this ministerial demand incorporated some local demands and systematised earlier practices of the agricultural societies. The Lower Austrian Agricultural Society had published for instance two maps based on the livestock surveys in 1873 that presented the distribution of breeds and specialisations between dairy production and "breeding" (Ger. *Aufzucht*) at the scale of each district, depending on their capacity to ensure the reproduction of the herds by themselves (*Cultur-Atlas von Nieder-Oesterreich*, 1873: maps 20 and 21; *Niederösterreichisches Heerdbuch*, 1873). The committee tasked with the delimitation of the districts, including the Landes-cultur-Inspector from the imperial administration and the two itinerant teachers

<sup>33</sup> OeStA – AVA – LW – LWG – Akten – 307 – N°430 to 433.

<sup>34</sup> NÖLA – 1.2.1.3 Landstände und Landesausschuss – F48 Veterinärwesen – K01 – 48/10 (1876-1880) – N°14058/2595 (XXIV *der Beilagen zu den stenogr. Protocollen des niederösterreichischen Landtages*, V. Wahlperiode, Beilage C).

<sup>35</sup> OeStA – AVA – LW – LWG – Akten – 307 – N°460.

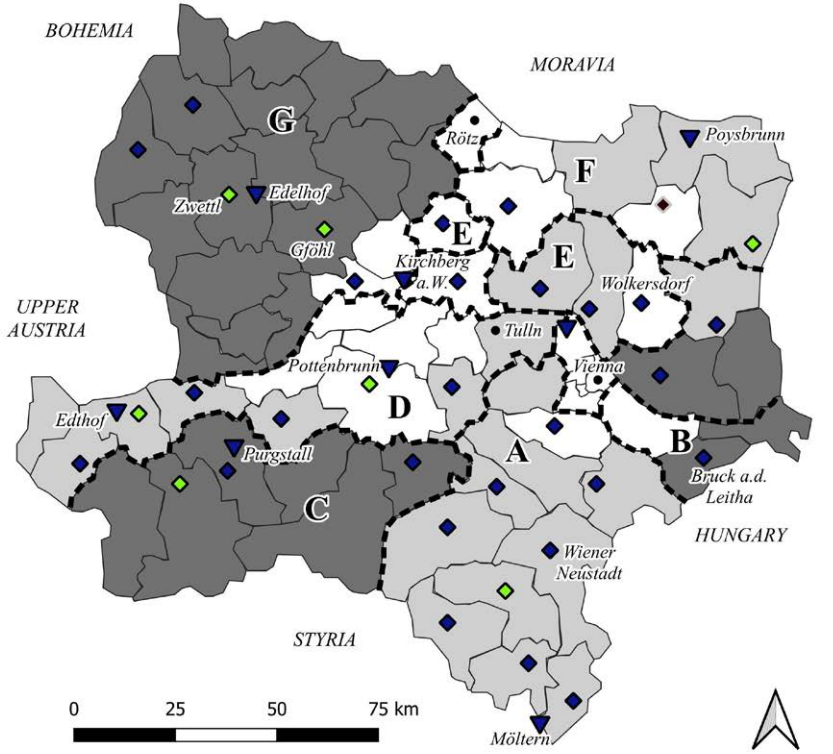
<sup>36</sup> TLA – Statthalterei Tirol und Vorarlberg – Cultur – Karton 332 (1877 – Zl. 97-19822) – N°6954-1142: *Erllass des Ackerbauministeriums an die sämtliche Landwirthschaftsgesellschaften, an den Landes-culturrrath in Prag und die Statthalterei in Zara.*

from the Agricultural Society, used these maps as a basis to differentiate the breeding districts. They also incorporated local demands like the one from the associations from Ober-Manhartsberg, as well as from the southern districts of the Ober-Wiener-Wald who managed to obtain distinctive breeds.<sup>37</sup> The map of breeding districts (Figure 1) overlapped for a large part with the 1873 maps of the Agricultural Society and their update around 1880 by Franz Zoepf, the Landescultur-Inspector of Upper Austria who was conducting a survey of cattle breeds commissioned by the ministry of Agriculture (Zoepf, 1884). In neighbouring Upper Austria, similar maps and surveys enabled Zoepf to delineate the breeding districts by differentiating regions of “breeding”, regions of “use” (corresponding mainly to cities) and “mixed” regions (Ger. *Zucht-, Nutz- und Misch-Gebiete*). The map proposed by Zoepf in his project of breeding districts was an adaptation of a map of breed distribution published in his survey of Upper Austria breeds. As Zoepf emphasised in his report, his delineation of the districts facilitated the consolidation of local Austrian breeds like the Pinzgauer, but entailed the gradual abandonment (and eventually disappearance) of some local varieties as well.<sup>38</sup> The delineation of the districts also left some of them out of the subsidies, for instance in Lower Austria the districts around Vienna, Kirchberg am Wagram, Rötz, and the South-Eastern part of Unter-Manhartsberg.

Zoepf’s proposal for breeding districts highlighted two crucial consequences of the territorialisation of breeding improvement for the cattle of the Habsburg Empire. First, the aim of the breeding districts was to define some regions which would practice *Nachzucht* as an activity in itself, and supply offspring to other regions that could focus more on work and dairy or, secondarily, meat production. The delimitation of breeding districts institutionalised a fourth specialised use of cattle in addition to the three traditional ones defined by Ehrenfels in the 1830s: some animals were henceforth supposed to produce offspring as an activity valuable in itself. In this way, the promotion policies created a sharper distinction between those regions that “bred” cattle in a strict sense (Ger. *Viehzucht*) and the ones that merely “reared” cattle for a specialised production with less care for the next generation of animals (Ger. *Viehhaltung*). Second, the spatial implementation of this distinction embedded the economy of husbandry in an extended regime of animal circulations that was necessary to its functioning, making several districts and crownlands interdependent. Distributions of several hundreds of purebred reproducers and crossings with local varieties sustained the settlement of breeds from Styria (Mürztaler, Murbodner, Mariahofer), Moravia (Kuhländer), Vorarlberg (Montafoner), or Salzburg (Pinzgauer) in targeted areas of Lower Austria (Figure 1). Additionally, the making of a more productive husbandry

<sup>37</sup> NÖLA – 1.2.1.3 Landstände und Landesauschuss – F48 Veterinärwesen – K01 – 48/10 (1876-1880) – N°14058/2595 (XXIV *der Beilagen zu den stenogr. Protocollen des niederösterreichischen Landtages*, V. Wahlperiode, Beilage D).

<sup>38</sup> OeStA – AVA – LW – AM – LK – Akten – 210 (1878) – 7a10 – N°2768/292; Zoepf, 1881.



Subsidised auctions of the agricultural society (1868-1872)

- ◆ Allgäuer and Montafon cattle
- ◆ Berner cattle (together with Allgäuer)
- ◆ Mariahofer and Pinzgauer cattle (frequently with Allgäuer and Montafon)

1869-1872: 146 bulls and 269 heifers distributed  
 1873-1881: 228 bulls and 202 heifers distributed

Breeding orientation of the districts (Cultur-Atlas, 1873)

- Breeding (Aufzucht)
- Breeding and dairy (Aufzucht und Milchwirtschaft)
- Dairy (Milchwirtschaft)

▼ Nurseries of Allgäuer and Montafon cattle (1876)

--- Limits of the breeding districts (1880)

- A: Mürtzaler, Murbodner, Allgäuer and Montafoner
- B: idem plus Pinzgauer, Kuhländler and Berner
- C: Mürtzaler, Murbodner and Mariahofer
- D: idem plus Allgäuer, Montafoner and Pinzgauer
- E: Stockerauer, Allgäuer and Montafoner
- F: Berner and Kuhländler
- G: Gföhler, Mariahofer, Lavantaler, Scheinfelder and Glaner

Figure 1: Breed subsidies in Lower Austria 1868–1880 (Cultur-Atlas von Niederösterreich, 1873; Niederösterreichisches Herdbuch, 1873; Zoepf, 1884). Cartography by Corentin Gruffat.

sector relied on larger movements of dairy and fattened cattle to the “use districts”, especially cities and their surroundings. The territorialisation of breeding incorporated animals and breeders in a broader system of reproduction and circulation conceived at the scale of the empire.

### **Conclusion: Cattle breeding and the materialisation of an agricultural empire**

Programs of breed selection increasingly took the shape of a government of the reproduction and circulation of cattle populations. This mode of government was the outcome of a gradual political construction. Among many other issues, cattle husbandry provided the material for a process of empire-building in the nineteenth-century Habsburg Monarchy. Programs of breed selection had started in the social setting of the *Grundherrschaft*, but the practice of agricultural exhibitions had promoted new forms of relationships and identities for farmers and cattle. As the programs expanded, they reframed institutional relations between a range of actors including municipalities, agricultural societies, and imperial administrations. Distributions of selected cattle expanded the reach of public action into the countryside by incorporating everyday practices of husbandry and, eventually, even turned improvement schemes into a routine activity that regularly returned in the form of subsidies, statistics and map-making. In that way, making cattle more productive incorporated concerns of reproduction and circulation of the animals that participated in a material and institutional integration of the empire.

A crucial aspect of this process of integrating “Austrian” cattle into the construction of the “*Agrarstaat*” was the large level of decentralisation and negotiated autonomy of local actors. Breed selection was not imposed “from above”, but developed at the multiple interfaces between state and civil society. It often started with local or provincial initiatives, which the imperial government scaled-up in attempts to affect its whole territory, and which local agricultural societies and individual breeders readapted to their own purposes. Agricultural improvers often justified the decentralisation with the need to adapt to local environmental and social conditions, but this decentralisation also enabled them to mobilise the resources, knowledge, and animals necessary to the implementation of their schemes. In this light, the process of husbandry “improvement” that took place in the nineteenth century does not appear as a simple, dual relationship between animal and breeder or zootechnician mediated primarily by technology, unlike what most of the literature focusing on the model of the “animal-machine” suggests. The “birth of modern breeds” appears much more as the outcome of a political construction that linked breeders, animals, breeding experts, and civil servants in specific institutional settings, making them all work in their own way and with more or less coordination towards the materialisation of the “agricultural state” project.

## Research data statement

The author states that the article is based on archival sources, which are cited in the list of references below. The article is based on research data that is available in public domain resources as well as publicly accessible archival and museum collections that are cited in the list of references.

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### **»Habsburške« pasme? Selekcija pasem in oblikovanje kmetijske države v Habsburškem cesarstvu 19. stoletja**

Članek preučuje proces odbire goveda v habsburški monarhiji v 19. stoletju, tj. v času, za katerega je značilno »rojstvo« sodobnih pasem goveda. Oblasti in kmetijska društva oziroma družbe so v tem obdobju spodbujali razstave goveda, preučevanje »pasem« (nem. *Rassen*) in z denarno pomočjo usmerjali vzrejo izbranih skupin goveda. Vse to je pomembno preoblikovalo odnose med rejci in živalmi. Poleg prizadevanj za dvig produktivnosti v kmetijstvu so bili ti procesi del širšega političnega projekta, zaradi česar je bila habsburška država z njimi tesno povezana. Izbira pasem je pridobivala obliko upravljanja razmnoževanja in razširjanja določenih vrst goveda na ravni celotne monarhije. Živali so predstavljale materialno osnovo za razvoj širših procesov oblikovanja države in krepitve imperialne integracije. Avtor poudarja, da programov pasemskega odbiranja ni zasnovala ena sama skupina akterjev, ki bi jih vsilila »od zgoraj«. Nasprotno, nastali so na podlagi številnih oblik sodelovanja med različnimi akterji na več političnih ravneh, torej tudi »od spodaj«. Lokalni akterji so si na primer prizadevali prilagoditi izbiro pasem lokalnim razmeram, interesom in praksam. Proučevanje programov odbire goveda tako osvetljuje konkretne mehanizme in prakse, s katerimi so bile živali vključene v materialno uresničevanje širših vizij Habsburške monarhije kot kmetijske države.

## Breeding Nationalism: Conceiving the Native Breeds

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The article researches the influence of nationalism on shaping livestock classification and the concept of animal breeds. Analyzing 19<sup>th</sup> to 21<sup>st</sup>-century animal husbandry literature from Carniola and Styria, it demonstrates how agricultural experts researched the origin of certain groups of livestock to legitimize the conception of native national breeds. The study reveals the integration of animals into the process of nation-building and thus signals a modern redefinition of societal relationships with the animal world.

▪ **Keywords:** classification, categories, animal husbandry, agricultural science, animals

Članek raziskuje vpliv nacionalizma na oblikovanje sistemov klasifikacije živine in koncepta živalske pasme. Prispevek na podlagi analize literature o živinoreji na Kranjskem in Štajerskem od 19. do 21. stoletja prikazuje, kako so kmetijski strokovnjaki uporabili metode raziskovanja izvora določenih skupin kmetijskih živali, da bi legitimirali koncept avtohtonih nacionalnih pasem. Študija tako prikazuje vključevanje živali v proces oblikovanja naroda, ki kaže moderno oblikovanje družbenih odnosov z živalmi.

▪ **Ključne besede:** klasifikacija, kategorije, živinoreja, agronomija, živali

### Introduction

Recent decades have seen growing interest in livestock classification. Within this literature, some studies have dedicated chapters or sections to the influence of nationalism in shaping these systems. Scholars have examined the construction of livestock categories, showing how states deployed these classifications in the Third Reich (Saraiva, 2017; Sax, 2017), Great Britain and its colonies (Ritvo, 1987; Da Cal, 1992; Ritvo, 1997; Woods, 2017), and Southern Africa (Swart, 2007a, 2007b) to advance national economic and political projects, such as colonization and asserting racial identity. Additionally, individual breeds – such as Chillingham cattle (Ritvo, 1992), Hungarian Grey cattle (Bartosiewicz, 2017), and Lipizzaner horse (Golež Kaučič, 2018; Vičar, 2018) – have been studied as national symbols. This research demonstrates that the formation of modern breeds was intertwined with that of national identities, framing specific animal categories as important elements of national identities. While scholarship has convincingly demonstrated the utilization of national livestock categories to address concrete national interests which shaped them, it tended to either overlook or inadequately engage with a crucial dynamic: the technical process by which these categories were created and legitimized. This is the dynamic that I will explore in this paper.

Focusing on 19<sup>th</sup>- and 20<sup>th</sup>-century development of agricultural sciences, this study explores livestock classification during a period of profound sociopolitical transformation.

In keeping with the studies cited above, I contend that classification systems are products of their social contexts. However, by focusing on understudied border regions between two national groups, this study offers the neglected insights into how other historical contingencies shape categorization practices. The analysis centres on Carniola and Styria – a historically contested zone between German and Slovenian national spheres – where livestock classification became an arena for asserting national distinctions. In this borderland context, breed categorization emerged as a tool for drawing concrete historical boundaries between the two nationalities, particularly through competing claims about livestock origins and their incorporation into divergent national narratives.

To analyze the process, I employ Louis Althusser's framework of the spontaneous philosophy of the scientists, which demonstrates how ideology operates within science, not necessarily by changing the methodological approaches for producing data, but rather by framing the questions researchers ask and the answers they deem valid during interpretation (Althusser, 1990). This framework also provides a new perspective on Bartosiewicz's analysis of the Hungarian Grey cattle. While his study convincingly demonstrates how this national category was constructed using apparently neutral methods, the author overemphasized the problematic aspects of these methods, which became apparent in hindsight, but overlooked that national breed categories appeared legitimate precisely because they were produced by these seemingly objective methods.

The analysis at hand is grounded in case studies drawn from animal husbandry literature published from the 19<sup>th</sup> to the 21<sup>st</sup> centuries in Austria-Hungary, the Republic of Austria, and the Republic of Slovenia. The first section identifies the key actors and core methodological developments in livestock classification during the nineteenth century. Building on this foundation, the next section analyzes early attempts to implement these historical methods to establish native breeds. The final section examines the culmination of this process in the institutionalization of native breeds within the nation-state framework.

### **On the origin of breeds**

Modern livestock classification systems, including their concepts of breeds, emerged during the 18<sup>th</sup> and 19<sup>th</sup> centuries (Ritvo, 1987; Da Cal, 1992; Ritvo, 1997; Derry, 2015; Bartosiewicz, 2017; Pavković, 2025). This chapter does not seek to demonstrate the social construction of livestock classification systems at large, nor does it attempt to establish (dis)continuities in historical livestock classification systems or provide an in-depth analysis of their institutionalization within agricultural sciences (for that see Pavković, 2025). Instead, it focuses on key developments in modern livestock classification systems that led to the creation of categories imbued with ideological significance.

To understand how nationalism shaped these systems, we must examine its concrete mechanisms of influence. This involves analyzing how actors used these systems to produce specific kinds of data, which they then interpreted to shape or modify categories in line with their national perspectives. Consequently, this section also identifies the actors who were recognized by the state as experts on matters of agriculture and livestock classification, and the institutions that they represented.

A defining innovation of modern livestock classification systems was the implementation of new parameters (which information was gathered) and methods (how information was gathered and analyzed) for breed differentiation (Pavković, 2025). In the Habsburg Monarchy these novelties were developed and implemented by an emerging group of agricultural experts. Many worked in specialized institutions – agricultural societies – which were part of a broader European phenomenon tied to the 18<sup>th</sup>- and 19<sup>th</sup>-century knowledge production and dissemination. In the Habsburg hereditary lands, agricultural societies were organized at the level of individual duchies, with many agricultural experts simultaneously belonging to several such societies. Throughout this period, the state sought to implement doctrines for increasing economic productivity, while agricultural societies functioned as semi-private, semi-state-funded institutions that generated agricultural knowledge which legitimized state policies (Britovšek, 1964; Valenčič, 1970; Bruckmüller, 1977; Umek, 2006; Vodopivec, 2008; Jones, 2015; Pavković, 2025).

Agricultural experts, who appeared in the Habsburg Monarchy in the late 18<sup>th</sup> century and particularly during the 19<sup>th</sup> century, became leading authorities on agricultural matters, including animal husbandry and livestock classification. Much of their work was directed by the state, exemplified both by small regional missions, for instance assessments of cattle for monetary rewards, and large state-funded projects such as the 1870s cattle classification initiative in the Austrian Alpine regions. Although preexisting classification systems among local farming communities were noted, the state sought to impose new, institutionalized and unified methods, implementing two primary parallel sub-species categories: “breeds” and “races” (*Racen*) and “local varieties” (*Landschläge*) (Gruffat, 2025; Pavković, 2025).

To understand the rationale behind novel classification methods, a basic overview of the 19<sup>th</sup>-century theories of livestock classification in the Habsburg Monarchy is needed. Most analyzed animal husbandry publications presented existing breeds without discussing the theory and methods that led to the formation of breeds, either as a universal category or for specific breeds. A sufficient overview can be gained in a publication on agricultural knowledge written by an agricultural expert, Franz Xaver von Hlubek (1802-1880), a member of both the Carniolan and the Styrian agricultural societies in the middle of the 19<sup>th</sup> century. This work likely reflects, at least partially or sufficiently, the existing understanding of the theory of livestock classification among the agricultural experts in Carniola and Styria. Only crucial elements of the theory

are presented here to explain the implementation of methodological approaches for classification.

A key principle in this theory of classification is the influence of environment on breed formation. Hlubek argues that distinct breeds arise from distinct environments – meaning there are only as many breeds as there are environmental conditions. He further contends that when a breed is introduced to a new environment, it gradually transforms into the breed native to that setting. Crossbreeding, in his view, does not produce a new breed but rather a hybrid (*Mischling*), which will through generations eventually revert to the dominant local breed under environmental pressures. This historical perspective explains why 19<sup>th</sup>-century experts documented and investigated lineage. By examining an animal's ancestry – whether its parents and grandparents belonged to the same breed – they sought to distinguish breeds, as they termed them, from unstable mixed stock (Hlubek, 1853). While the theory expanded over the nineteenth century to include livestock of mixed origin as breeds (Pavković, 2025), the notion that a breed is defined by its lineage remained.

These theoretical principles were put into practice by state-employed agricultural experts tasked with investigating and classifying the cattle of the Habsburg Monarchy's Austrian lands. One of the primary goals was to identify and describe distinct categories of cattle, including their productive capabilities and suitability to specific environments. According to the Viennese Ministry of Agriculture this mission would survey the state of cattle husbandry to guide the development of administrative measures for its improvement (Gruffat, 2025; Pavković, 2025). For this survey, the state commissioned a group of agricultural experts: imperial advisor (*Kaiserlicher Rath*) and royal professor Ferdinand Kaltenecker for Austrian Alpine lands (Kaltenecker, 1879; Gruffat, 2025; Pavković, 2025), professor of agriculture at the agricultural school in Gorizia and a member of the Carniolan agricultural society Franz Povše for Austrian Karst and coastal lands (Pavković, 2025), imperial royal farming inspector (*k. k. Landescultur-inspector*) Franz Zoepf for Upper and Lower Austria (Zoepf, 1881), August Günther for Bukovina (Gruffat, 2025), economical director (*Oeconomiedirector*) in Prague Heinrich Seidl for Bohemia (Lassmann, 1899), and an agricultural official (*landwirtschaftlicher Beamte*), professor at the agricultural school in Silesia, travelling teacher of agriculture and secretary of the agricultural and forestry association in Weidenau, Emil Baier for Silesia (Baier, 1900). These selected “surveying authorities” (*Erhebungs-Organen*) were advised to turn to regional agricultural societies and their branches for directions with selecting key areas for conducting the survey (Kaltenecker, 1879).

For analysis, I focus on the work of Ferdinand Kaltenecker (1843-1911), an agricultural expert who conducted the survey of Austrian alpine cattle breeds. His first book of the series Cattle in Austrian Alpine Lands (*Rinder der Oesterreichischen Alpenländer*) was published in 1879, and contains the results of his survey of cattle in the valleys of the rivers of Inn and Lech in Tyrol. For our investigation into the development of

classification methods his work is particularly useful, because it contains introductory descriptions of surveying methods, which were directed by the Ministry of Agriculture and were initially developed in 1870 (Kaltenegger, 1879).

His published work describes a crucial approach. In his book, he emphasizes the use of three key records: (1) lists of mating (*Sprungregister*), (2) herd (*Heerdbuch*), and (3) pedigree books (*Zuchtbuch*). By cross-referencing lists of mating and herd books, experts could link offspring to specific bulls and cows. The Ministry of Agriculture's instruction notes that while smallholders relied on mating records, large estates maintained comprehensive herd books, which he advocated consolidating into regional registries. As explained in Kaltenegger's work, lineage tracking served a pragmatic economic purpose: evaluating results of breeding by analyzing offspring traits (Kaltenegger, 1879).

The implementation of state-sanctioned methods demonstrates two crucial points. Firstly, the existing forms of classification used by populations in the Habsburg Empire were replaced by novel classification, based on a different set of methods and parameters, which were conducted by a group of selected agricultural experts (see also Pavković, 2025). Secondly, origin research became important in this novel system of classification and functioned as a material practice for classifying cattle to optimize animal husbandry economics. Yet, as the following section will illustrate, the data produced by these classification techniques served not only specific economic demands (cf. Derry, 2020), but were also, in some cases, used by agricultural experts and zootechnicians to interpret certain breeds as national breeds.

### **National origins of breeds**

The practice of tracing the origins of modern breeds remains central to their classification even today. In this chapter, I explore how various historical actors employed this approach and expanded it by incorporating historical methods and genetic analyses to investigate the alleged early histories of breeds. Agricultural experts, scholars of animal husbandry, and university professors relied on fragmentary historical descriptions of livestock to draw connections between past animals and the modern breeds that resembled them, thereby constructing direct lineages (cf. Borneman, 1988). Significantly, these purported ancestors of contemporary breeds were frequently tied to historical populations – themselves framed as progenitors of modern nations – thus embedding these animals within national symbolism.

This section examines several cases where ideological influences shaped breed classification, focusing on sources from Austria-Hungary, Austria, and Slovenia. Rather than presenting a strict chronology, the analysis highlights key documents from the 19<sup>th</sup> to the 21<sup>st</sup> centuries, each reflecting period-specific interpretations of breed origins

and their incorporation into national mythmaking. The selected sources reveal how the concept of breeds evolved, becoming entwined with nationalist narratives before being institutionalized within the legal frameworks of states.

One of the earliest attempts to link a modern breed to historical populations in Austria-Hungary was made by Janez Bleiweis (1808-1881), a Carniolan-Slovenian veterinarian, agricultural expert, and editor of *Kranjske in Rokodelske Novice* – a Carniolan newspaper dedicated to promoting farming practices and technologies (Selišnik, Verginella, 2021; Vodopivec, 2021). As a key figure within the Slovene nationalist movement (Kosi, Stergar, 2016), Bleiweis exemplified the broader pattern of individual figures shaping nationalist identities in the Habsburg Monarchy (Judson, 2016). His work thus influenced not only the production of scientific knowledge but also politics, a dynamic which was part of a broader trend of nationalist influence on science in the state (Feichtinger, 2012). Alongside his work for the Carniolan Agricultural Society, Bleiweis published extensively on livestock, including breed classifications. In his 1871 treatise on animal husbandry, he addressed the origins of the Noriker horse (*noriški konj*) (Bleiweis, 1871) – whose development was later attributed to breeders in Salzburg from where the breed spread to Styria and Carinthia (Novak, 1970). For this study, the accuracy of Bleiweis's claims is less critical than the mechanisms he employed to establish breed lineage.

Bleiweis proposed two key arguments. First, he connected the modern Noriker horse to the Roman province of Noricum, asserting that robust horses had been bred there in antiquity. Second, and more revealing of ideological influence, he sought to identify the people responsible for breeding the original Noricus horses. Citing historians such as Nestor, Schlötzer, and Gilferding, Bleiweis contended that the inhabitants of Noricum were ancient Slavs or Slovenians (Bleiweis, 1871).

His reasoning extended to philological analysis. Noting that Emperor Nero owned a horse from Noricum named *Drauco*, Bleiweis suggested the name derived either from the Drava River (*Drava* in Slavic) or from the Slavic root *zdrav* (meaning 'healthy'). He further argued that the suffix *-ko* was uniquely Slavic, implying that the Noricus horses were originally bred by Slavs. His conclusion was explicit: "Thus, there is ample evidence that Noriker horses descend from Slovenian stock, and that Nero's Drauco drew his strength from the sweet hay and wholesome oats of Slovenian soil" (Bleiweis, 1871: 34).

Bleiweis's work exemplifies how historiographical and philological methods were employed to construct early breed histories, particularly with an emphasis on identifying the peoples who supposedly bred them. The central purpose of this paper is not to question whether the inhabitants of Roman Noricum should be considered Slavs, nor whether there was continuity between ancient Noricus horses and modern Noriker horses. Rather, it is to show the mechanisms of nationalism's influence on classification of livestock. By relating the breed to specific historic peoples, emphasizing a

certain Slovenian quality of the stock, including its development feeding on produce of Slovenian soil, Bleiweis imbued the category with a series of ideological propositions of the contemporary period.

Contingent nationalist worldviews were also reflected in the slightly later and much richer writings of Adolf Gstirner (1855-1940), a Styrian-Austrian high school teacher, alpinist and a scholar of animal husbandry history who published extensively on cattle breeds in Austria in the early 20<sup>th</sup> century. Gstirner's work explicitly expressed connections between peoples and breeds, stating that breeds such as Arab horses, Romanian pigs, and Hungarian cattle show that such breeds were primarily bred by their respective peoples, so Arabs, Romanians, and Hungarians; or that they originated with these peoples (Gstirner, 1923a). Trying to identify groups of cattle connected to peoples in Styria, Gstirner was faced with an issue, which shaped his classification. Modern breeds of cattle in Styria were neither named after some historical political toponyms, nor after ethnic groups that would for the author signify origin with a particular national group. This is why Gstirner turned to other types of information.

At the core of his investigation was the establishment of two larger categories of cattle in Styria, which correspond to national groups in Styria: Slovenian and German cattle. The establishment of such categories was done by investigating the origin of animals. Gstirner started citing a list of seven officially recognized "native" (*einheimisch*) breeds in Styria. He excluded five of them (Brown and Grey Swiss, Pinzgau, Mariahofer, and Murbodner cattle) due to their foreign origin or too recent development. He concluded that the remaining two, the monochrome light coloured Mürztal and pied coloured Bergscheck should be considered as native to Styria (Gstirner, 1923a).

But these two categories also had to be connected to certain historic peoples so as to qualify them for incorporation into specific nationally inspired categories. Starting with antique Roman authors like Strabo (Gstirner, 1923a), Columella, and Pliny the Elder (Gstirner, 1923b), Gstirner focused on visual descriptions of antique Illyrian cattle in territories which became Styria (Gstirner, 1923c). Running on the assumption that settlers bring their cattle with them, he supposed that the Illyrian cattle were superseded by cattle of Slavic and Bavarian newcomers to the territory. This is why for him it was crucial to research a migration pattern for Styria, which would show areas first inhabited either by Bavarians or Slavs. As existing historiographical scholarship portrayed Northern and Northwestern Styria as being colonized by Bavarians while simultaneously being mostly inhabited by coloured and pied cattle of the Bergschecke category, Gstirner concluded that such cattle must be German, while southern, central, and eastern territories of Styria were first supposedly settled by Slavs and in these territories the monochrome light skinned Mürztal cattle was most numerous, which led him to the conclusion that light-skinned cattle must be considered Slavic (Gstirner, 1923c).

This was also supported with other sources, such as *Ottokar's Ryhmed Chronik* from the 14<sup>th</sup> century, which discussed the enthronement of a German duke, as Gstirner

pointed out, who according to the chronic held a pied bull in one of his hands. For Gstirner the implication was clear, this could only be a Bergschecke, also commenting that “it is very telling, that a German duke [was depicted], as we will find out later, with German cattle” (Gstirner, 1923d: 6). The analysis of his works displays several key influences. For one he projected the categories of German and Slavic cattle into premodern periods, implying Slavic and German peoples were rigid ethnic identities also characterized by adhering to breeding specific breeds, which they understood as symbols of their ethnic identity.

Gstirner followed through with analysis of a selection of early modern probate inventories, which among other possessions also documented cattle. Although the authors who created these documents rarely recorded the animals’ coat colours, Gstirner used the occasional mentions of colours as a justification for asserting the continuity in the characteristics of cattle in Styria. He concluded his investigation with a crucial view, arguing that the historical documentation justified talking about “German and Slovenian cattle” and that “the breeds remained as constant as nations of men” (Gstirner, 1923e: 14). Gstirner’s work reveals the influence of contemporary understanding of Styria as a land inhabited and split among two distinct modern nations, an ideology that significantly shaped classification of modern cattle breeds and their supposed ancestors.

### **State institutionalization of native breeds**

The association of livestock breeds with modern nations continued beyond the interwar period. A further example of nationalist influence on breed classification emerges in 21<sup>st</sup>-century Slovenia through the work of zootechnician Andrej Šalehar and his research colleagues. Their investigations into the origins of native breeds, particularly the Ljutomerski Kasač horse, underscore how modern scholarship continues to frame livestock history as a question of national ownership. In a 2014 publication Šalehar explicitly framed the debate around native breeds in terms of contested heritage, noting that the central question in contemporary discussions is “where and how did our native breeds come into existence, and oftentimes, whose are these breeds” (Šalehar, 2014: 3). This phrasing reveals the underlying ideological thrust of such research: the characterization of breeds is evidently not solely about biological traits but rather also about using historical documentation for asserting proprietary claims tied to national identity. By emphasizing the need to determine “ownership” of breeds by specific nationalities, Šalehar’s work illustrates how classification systems serve to legitimize cultural claims. The focus on breed origins thus transcends zoological inquiry, functioning instead as a mechanism to embed livestock within nationalist narratives.

Šalehar and his team of zootechnicians undertook comprehensive efforts to systematically document and validate the histories of breeds they classified as

“Slovenian native breeds” (*slovenske avtohtone pasme*).<sup>1</sup> Their meticulous research involved gathering archival evidence, historical breeding records, and genetic data to construct detailed lineages demonstrating indigenous development within Slovenian territory. This rigorous methodology was not merely academic but served a specific national framework, as clearly outlined in their published works. The researchers explicitly tied their investigations to Slovenia’s legal definitions, which establish three strict criteria for native breed recognition: first, conclusive evidence that the breed originated within the borders of modern Slovenia; second, documentation showing territories which are presently in Slovenia as the primary site of the breed’s development; and third, verifiable records of continuous breeding practices within the present Slovenian territory (Šalehar et al., 2013).

This classification system operates as more than a zoological categorization – it functions as a mechanism that determines which animals qualify as national heritage. By requiring documented proof of origins within the borders of modern Slovenia, the process effectively creates a binary taxonomy of livestock: (1) those officially recognized as Slovenian native breeds, and (2) those categorized as foreign.<sup>2</sup> This classification has concrete results. Once a breed achieves native status, it becomes institutionalized within state protection programs, qualifying for conservation measures (*Cikasti Zvonček*, 2008).

The case of the Cika cattle breed offers an illuminating example of how agricultural scholars have employed established methodologies for studying breed origins to justify the designation of the Cika breed as a Slovenian native breed, a classification that was subsequently institutionalized by the state. This process was not an isolated event but part of a broader historical development in which the concept of native breeds gained prominence in agricultural discourse. As documented in *On the Origin of the Slovenian Cika Cattle*, the conservation of native breeds became a significant concern in Slovenia beginning with 1992. The formal recognition of the Cika breed was further consolidated in 2001, when breeders were organized under the Association of Autochthonous Cika Cattle Breeders in Slovenia, followed by the establishment of an official breeding program in 2005 (Simčič et al., 2013).

Analysis of Cika cattle breeding records demonstrates how Slovenian zootechnical literature constructed native breed identity through establishing territorial origins of the breed while emphasizing the supposed ethnic identity of historical breeders. The documentation traces the Cika’s alleged lineage to “Slovenian” settlers who purportedly brought ancestral cattle to what is today Slovenian territory (*Rejski Program*, 2019). By asserting that these late antique or early medieval animals contributed to the Cika’s

<sup>1</sup> *Avtohtone pasme* is translated from Slovenian into English either as “native breeds” (Vičar, 2018) or “autochthonous breeds” (Simčič et al., 2013).

<sup>2</sup> The Republic of Slovenia also recognises the so-called traditional breeds which were not created in the historic territories of Slovenia, but are bred there for prolonged time (Bojkovski et al., 2014).

development, the narrative creates continuity between the modern Cika breed and its supposed ancestors, reinforcing national ownership claims through historical genealogy.

What makes the case of the Cika breed especially revealing is the explicit acknowledgment by Slovenian zootechnical researchers of the contested nature of its nativeness. Zootechnician Mojca Simčič and her colleagues directly confronted the question of whether the Cika cattle “should still be considered as an autochthonous breed” (Simčič et al., 2013: 489). During the 20<sup>th</sup> century the breed was cross-bred with Austrian Pinzgauer cattle, while by 1976 breeders were legally required to inseminate their cattle with semen from either imported Pinzgauer or crossed Cika sires. In 2002 some 300 unregistered Cika cattle were found in the mountainous regions of Slovenia, which were possibly free of Pinzgauer influence, as it was found that some breeders defied the legal requirements.

Simčič and her colleagues analyzed blood samples from 93 cows and blood or semen from 57 sires to analyze Cika cattle’s genetic variability and their relation to Pinzgauer and other Central European breeds. Despite the expressed hesitations, the genetic analysis has shown that there was some mixing of Cika cattle with Pinzgauer introgression ranging from 46% to 5%, which still led the zootechnicians to reaffirm the breed’s status as “the only authentic and autochthonous cattle breed” and an integral part of “Slovenian cultural heritage” (Simčič et al., 2013: 492). This shows that while investigations of historical documents were complemented with investigation of the genetic composition of selected Cika cattle, the findings were again interpreted in the framework influenced by contingent understandings of native national breeds.

Following Althusser’s concept of spontaneous ideology, the presented cases show how scientists imbue their scientific investigations with nationalist discourse, thus actively shaping scientific knowledge according to their national worldviews (Althusser, 1990). This means that in the end, the classification of breeds as national breeds does not emerge from a neutral analysis of inherent biological traits – whether phenotypic characteristics or genealogical data – but rather from specific ideological interpretations of the selected data. This process operates by reframing scientific inquiry around historically contingent notions of national identity. At its core, it shifts the focus to specific questions such as: Which historical societies allegedly developed these animals? How are they linked to modern nations? What entitlements does this connection confer? By foregrounding these concerns, the discourse conceptualizes breeds as national cultural heritage as noted in the previous paragraph —variously cast as a source of “national pride” or as a “symbol of Slovenian natural heritage,” in line with Branislava Vičar’s analysis of narratives surrounding Slovenian native breeds (Vičar, 2018: 138).

## **Conclusions**

As I have demonstrated with three case studies in the Carniolan and Styrian territories of Austria-Hungary, the Republic of Slovenia, and the Republic of Austria, livestock classification systems are also shaped by ideology in order to classify and define breeds within corresponding ideological framework(s). This influence was exhibited by the appropriation of the core methodological approach for classifying and conceptualizing individual breeds – investigating breed origins – which was systematically directed towards producing conclusions that serve an ideological function. This demonstrates that nationalist ideology need not replace scientific methods like pedigree analysis, archival research or genetic testing; rather, it appropriates them, framing the inquiries and interpretations to align breeds with specific national identities.

Within the context of particular historical circumstances of emerging nationalism, individual scholars of animal husbandry in the historical territories of Carniola and Styria were influenced to formulate livestock classification systems that categorized breeds according to the ethnic or national identity of their original breeders, and the territorial origin of the breeds. This resulted in the formation of two distinct categories of breeds: native and foreign. These conceptions were first formulated by 19<sup>th</sup>-century agricultural experts and were sporadically developed to their present form by 21<sup>st</sup>-century academic zootechnicians. As shown with the case of the Cika cattle, the investigations have concrete political and economic effects, influencing state policies to provide legal and material support for conservation of the so-called “native breeds”.

Consequently, this demonstrates that livestock classification is not a purely scientific endeavour but rather a sociopolitical one. By interrogating its historical development, we reveal how knowledge production in agricultural science has been, and continues to be, shaped by political ideology, such as nationalism.

## **Research data statement**

The author states that the article is based on archival sources, which are cited in the list of references below. The article is based on research data that is available in public domain resources as well as publicly accessible archival and museum collections that are cited in the list of references.

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### **Vzrejanje nacionalizma: spočetje avtohtonih pasem**

Prispevek obravnava vpliv nacionalizma na oblikovanje sistemov klasificiranja kmetijskih živali na območjih Kranjske in Štajerske od 19. do 21. stoletja. Članek z analizo živinorejske literature in rejske dokumentacije prikazuje oblikovanje specifičnega pojmovanja avtohtonih pasem, ki je postalo sredstvo za utrjevanje nacionalnih identitet. V tem oziru študija prikazuje zgodovinske dejavnike oblikovanja sistemov klasifikacije kmetijskih živali.

Raziskava uvodoma predstavi razvoj sistema klasifikacije kmetijskih živali v pasme, ki je temeljil na novih parametrih in metodah merjenja dimenzij med telesnimi deli. Avtor raziskave kot ključne akterje modernega pasemskega klasificiranja identificira državno administracijo, kmetijske družbe in kmetijske strokovnjake v Habsburški monarhiji. Slednji so zavoljo gospodarske optimizacije živinoreje po vodilih državne ekonomske politike razvili in uveljavili metode sledenja izvora posameznih skupin živali. Nekateri kmetijski strokovnjaki so te metode uporabili za karakterizacijo pasem in njihovo interpretacijo v skladu z narativi o narodnem izvoru. Osrednji argument članka podpirajo tri ključne študije primerov: (1) poskusi Bleiweisa v 19. stoletju, ki je uporabil zgodovinske in jezikoslovne dokaze za vzpostavitev kontinuitete med antičnimi in sodobnimi konji ter s tem oblikoval povezave med zgodnjimi slovanskimi ljudstvi in sodobnimi Slovenci, (2) medvojne raziskave Adolfa Gstirnerja, ki je poskušal vzpostaviti sistem klasifikacije goveda v »nemške« in »slovanske« predstavnike na podlagi kožuha, in (3) raziskave slovenskih zootehnikov v 21. stoletju, ki so (so)oblikovali in uveljavili koncept »slovenskih avtohtonih pasem«.

Prispevek v zaključku poudarja trajno politizacijo klasifikacije živine za doseganje konkretnih nacionalnih interesov ter s preučevanjem zgodovinskega razvoja klasifikacije kaže, kako nacionalne države institucionalizirajo pasme in si jih prilastijo, kot nacionalno kulturno dediščino.



## Hunting and Environmental Consciousness in Late Ottoman and Habsburg Herzegovina

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Hunters arrived in Ottoman-held Herzegovina from Dalmatia after 1815. With its mild winter, Herzegovina was regarded as unspoiled, full of birds and animals. After the Habsburg occupation in 1878, scientific research, specimen gathering, and the care of urban spaces increased. Paradoxically, at the same time, animals were being hunted, and some were in danger of extinction. Several Habsburg public intellectuals were both defenders of the environment and specimen gatherers or hunters.

▪ **Keywords:** hunting, Ottoman Empire, Habsburg Monarchy, Herzegovina, Dalmatia, Bosnia, environmental consciousness

Lovci so v osmansko Hercegovino iz Dalmacije prispeli po letu 1815. Hercegovina je zaradi mile zime veljala za neokrnjeno, polno ptic in drugih živali. Po habsburški zasedbi leta 1878 se je povečalo znanstveno raziskovanje, zbiranje vzorcev in predana skrb za urbane prostore. Paradoksalno se je lov na veliko število živali odvijal v času, ko so bile nekatere od njih v nevarnosti izumrtja. Številni habsburški javni intelektualci so bili tako zagovorniki narave kot tudi navdušeni zbiralci živalskih primerkov ali lovci.

▪ **Ključne besede:** lov, Osmansko cesarstvo, Habsburška monarhija, Hercegovina, Dalmacija, Bosna, okoljska ozaveščenost

### Introduction: Hunting in the Habsburg and Ottoman lands

In this article, I explore the cultures of hunting and environmental record-keeping in late Ottoman and Habsburg Herzegovina. Most of the examples focus on the mild winter destinations of Mostarsko blato, the Trebišnjica River, and the Neretva River and its tributaries including the marshes at Hutovo blato. By using a range of sources including letters and sketches in hunting journals, I discuss the paradoxical process at the heart of expeditions into the countryside: scientific progress, social interactions and a genuine appreciation of the natural world went hand in hand with excess resource appropriation, entitlement, and antisocial behaviour (i.e. wastefulness, heavy drinking and leering). In this respect Central European attitudes and practices were typical of imperial cultures elsewhere where resources were seen as freely available for incomers to use regardless of local custom. Perhaps this paradox is clearest in the careers of individuals who were both avid hunters and assiduous specimen gatherers.

Improvements in flintlock gun technology after 1780, with shorter, lighter double barrels, combined with methods to flush out birds such as the *battue* (Griffin, 2008: 120) meant that it became easier for hunters to kill a lot of birds and other animals in a single day. In many areas of Europe, animal populations became depleted: native species such



as wild boar, jackals, lynx, and bears were in decline, while pollutants and industrialization were simultaneously changing soil, water, and air quality (Crosby, 2004: xvi). The idea that technology and rising demand were negatively affecting the environment and that people had become more disconnected from nature prompted a rise in ecological consciousness and proactive research agendas (Heise, 2016: 6–7). Nevertheless, this ecological consciousness was insufficient to halt the search for untapped resources which, in turn, drove imperial expansion. A marked tension between environmental concern and exploitation was observable in nineteenth century within the Habsburg Monarchy with its vast rich lands, transport and trade infrastructure, expansionist aims, and an increasingly well-educated population. The Habsburg takeover in Dalmatia in 1815 made Ottoman lands more accessible especially via the Neretva Delta, while the 1878 occupation of Bosnia and Herzegovina opened up opportunities for Habsburg subjects to explore, hunt, and record their experiences. Bosnia and Herzegovina were described by civil engineer Andreas Knobloch as “prodigally endowed with treasures of every kind, with fertile soil, cattle, wood, minerals, waterpower as well as unparalleled scenic attractions” (Okey, 2007: 17).

Despite signs to the contrary, Europeans often perceived Ottoman territories as an “El Dorado”, a fresh, well-stocked hunting ground (*Jagd-Zeitung*, 1866: 309–310). Hunting expeditions within the Ottoman lands were seen by incomers as minimally invasive, informal, and opportunistic. One British sailor remembered how they took an opportunity when his ship docked at Yumurtalık (Ayas) in Cilicia:

[T]he country around is very wild and extremely sparsely populated, and is full of game, a veritable sportsman’s paradise. Wild boar abound, and in winter there are woodcock, snipe, francolin, plover, wild geese, and [...] ducks, and from being so little disturbed, they are not so difficult to approach as they are in more civilized countries. (Fitzgerald, 1916: 30)

Within the Ottoman territories, there were elaborate techniques of falconry and hunting which had evolved over many centuries (Hörmann, 1890: 227–233). In Bosnia and Herzegovina scenes from the hunt were found on the old *stećak* tombstones (Ćurčić, 1937: 8). Falconry was still practiced in Habsburg Bosnia and Herzegovina after 1878 (Reiser, 1939: 685), only becoming less popular in the 1930s (Šamić, 2008: 43). There were signs even in Ottoman Bosnia and Herzegovina that overall numbers of red deer were low (Dunkin, 1897: 129), although their presence was still alluded to in myriad place names (Führer, 1902: 64) and there are records of deer hunting in the Middle Ages (Kurtović, 2014: 36–37). The ecological assault on Herzegovina took place in tandem with widespread hunting and specimen gathering in Habsburg Dalmatia after 1815. Accounts of these trips formed part of an emerging genre of writing which mixed autobiography, adventure and descriptions of peoples, landscapes, and animals.

Friends invited one writer to go hunting for rock partridges in the hills around Trebinje and he agreed because he was curious about the country and its people as much as he was keen to shoot birds (*Jagd-Zeitung*, 1867: 465). The short journey from Habsburg-controlled settlements on the Neretva River to Hutovo blato was even easier to make than the journey from Dubrovnik to Trebinje and offered the chance to hunt (or collect) pelicans in the marshlands (*Jagd-Zeitung*, 1860a: 1). Too insect-ridden in summer, the marshes were an “abundant” destination in autumn (*Journal des österreichischen Lloyd*, 1840: 1–2). Francesco Lanza (1842: 94–98) wrote about the region close to his medical practice in Opuzen, recording the birds of the Neretva and its tributaries and marshlands (Mužinić, 2011: 118–121). Military personnel and government officials had also started to visit in greater numbers (*Jagd-Zeitung*, 1860b: 72–73). Army officer and ornithologist Christoph Feldegg was instrumental in introducing the birds of the Adriatic coast and Hutovo blato to colleagues across Europe and received some bird specimens from Lanza (1843). His stuffed birds were considered to be particularly fine by collectors and curators (Natterer, 1837). Over several years, Feldegg shot 72 Dalmatian pelicans in the Neretva Delta, 70 of which were dispatched to museums across Europe (*Neuigkeiten*, 1845: 887). Some bird species collected by Feldegg are now considered to be rare or extinct (Mlíkovský, 2012: 96–98) including the species of Pelican (*Pelecanus crispus*, *Feld.*) that is named in his honour. Feldegg described how he tracked down so many birds along the Neretva which was “bordered with morasses”.

[The pelican] arrives in spring and autumn [and] comes through Bosnia, seldom alone, but generally in flocks. I have seen as many as twelve together hunting for fish; it is very cunning and extremely difficult to shoot. (Gould, 1837: 406)

There were four thousand Habsburg subjects permanently resident in Bosnia and Herzegovina before 1878 (Grandits, 2022: 65) where they fraternized with the small number of international diplomats based there (Branković, 2009: 74–79; Radušić, 2011: 33–55). This small diplomatic community enjoyed hunting, playing whist and drinking together. The French Vice-Consul in Mostar, Auguste Dozon, was a “passionate hunter” of chamois (*Jagd-Zeitung*, 1866: 310) as was his British counterpart: in October 1872 Vice-Consul Edward B. Freeman recorded in his diary that he had shot partridges in the “vineyard behind the Catholic church” and he had fished for grayling in the Neretva the previous week. Freeman especially valued Mostarsko blato as a hunting ground: it flooded in spring and winter and was about three hours on foot from his residence. He got up at six in the morning to go out to Mostarsko blato to shoot red and then grey partridges: after lunch at the “curé’s house”, his companion got so drunk that he fell off his horse before they arrived after dark to sleep at the Franciscan priory in Široki Brijeg (Freeman, 1870–1874). Another account of duck-hunting in Mostarsko blato by



diplomats noted that one of the participants had “evidently partaken” of “ardent drinks” (Arbuthnot, 1862: 214). At the same time that foreign diplomats were on excursions, landlords (*begovi*) in the Stolac region were also hunting partridges using a traditional red cloth trap, a shield and short rifles. This method of hunting was banned after the Habsburg takeover but carried on illicitly: “a good hunter could shoot a hundred or more of these splendid wild birds in one day” (Führer, 1902: 12). By about 1865, therefore, Herzegovina had distinct, but sometimes overlapping hunting communities each taking large numbers of birds or animals.

### **Infrastructure, regulations and transport**

In Habsburg Bosnia and Herzegovina, still formally Ottoman until 1908, hunting continued and strict gun control in the 1880s, introduced to assert state control against insurgency, may have led to a temporary increase in some species. Six dedicated hunting reserve areas covering over 250,000 hectares were set up and run by the joint Ministry for Finance, but in Herzegovina, a small number of *begovi* still owned the land (Kamberović, 2003: 215–221). Laws were introduced very quickly including rules about fishing, hunting seasons, and regulations about size of dogs permitted. Although hunters needed prior permission to hunt in the reserve areas, state officials were usually happy to issue permits because this raised revenue. Gamekeepers were allowed to take part in hunting and local people, used to unregulated access, sometimes disregarded the new rules (Führer, 1902: 5). Incomers seem to have felt entitled to hunt quite freely especially in more remote areas (Dunkin, 1897: 1). Birds of prey, partridges, and larger animals such as bears were the primary attraction while primeval forests, wild, rocky gorges, and marshlands offered great hunting locations. Land was leased to hunting clubs and reserves were usually reasonably accessible: the new railway lines made shorter trips more viable. In 1885, Mostar was connected with the Dalmatian town of Metković and by July 1901, hunters could travel across Popovo polje to Trebinje by train. Official hunting lodges were built, for example in Karaotok in Hutovo blato, which offered comfortable accommodation, a large hearth, and outdoor spaces to hang slaughtered animals (Laska, 1910: 200). Decrees regarding forest usage were issued in 1879 and 1884, but this may not have changed the “widespread local understanding” that forest resources were free to use (Lučić, 2022: 604). Furthermore, there seems to have been spontaneous weekend hunting by garrisoned soldiers and their friends (Andrejka, 1904: 344–345). Rewards were given by the Habsburg authorities for killing of wolves and bears (both regarded as dangerous predators). One man made 40 Kronen from the state in a single day by killing two bears, not including the value of the pelts (Holbach, 1910: 162).

Herzegovina also attracted hunters and birdwatchers because it was a milder destination than Central Europe in winter. The heir to the Habsburg throne, Crown Prince Rudolf was a keen ornithologist and hunter. Mindful of the seasons and the landscapes, Rudolf kept records of the birds he observed in Hutovo blato including curlews, plovers, and sandpipers: “I was informed that the first of the pelicans had returned from their winter travels [...] their breeding place is in a marsh not far from Metković” (Rudolf of Austria, 1889: 637). Incomers also observed the ways in which local people responded to the seasons and how they had adapted to environmental challenges: in Popovo polje, there was a rush to catch the fish left behind in the limestone cavities (*ponore*) when the Karst waters receded (Capus, 1896: 342). One writer recalled his time there “some decades” earlier when the “thundering” sound of the *polje* emptying of water alerted people to the chance to take the stranded fish:

During the winter, the water is densely populated with wild ducks [...]. Like the wild ducks, the local population is also very active in fishing, as there are no special fishing rights there [...] they catch considerable quantities of fish in the smaller *ponore* using specially constructed baskets. (Waldmann, 1930: 7)

Excursions to Herzegovina could be combined with other mild weather destinations such as the Ionian Islands, which had acted as a springboard for hunting in the Ottoman lands for some decades by 1878. Under British control from 1815–1864, garrisoned soldiers in Corfu had travelled just a few miles by sea to “relieve the tedium of our imprisonment by cruising to the coast of (Ottoman) Albania [...] shooting woodcocks and other game” in “an unlimited country, over which one can range free from [...] constraint” (Best, 1842: 2, 99). After it became part of Greece, Corfu continued to be a popular destination (sometimes en route to other hunting grounds): “all day long you can hear gunfire from all sides, as if a major manoeuvre were taking place, no matter which part of the island you are on” (Führer, 1902: 122). In December 1892, it was announced in the press that a small party consisting of Hungarian notables and politicians would set off

to Hutovo blato [...] where they will hunt ibises and pelicans. In nearby Mostar a bear hunt will be held in honour of the gentlemen. The trip will end on the island of Corfu, where the population of woodcock is exceptionally high at this time of year. Bela Vermes and Geza Latinovics will travel from Corfu to Egypt to hunt crocodiles on the Nile and then travel to Jerusalem via Jaffa. (*Pester Lloyd*, 1892: 1)



Figure 1: *Jagdkähne*, hunting boats on Hutovo blato (Führer, 1902).

### **Paradise gained. The exploration of Herzegovina's regions**

Hunting for sport was traditionally elitist and accompanied by cultural rituals, especially compared with the subsistence hunting of peasants. Excursions were perceived as a way of (re-)connecting with nature: the six-hour journey on foot from Mostar to Velež meant crossing from “an area with figs and pomegranates to that of mountain pines and chamois” (Führer, 1902: 5). Hutovo blato was prized for its natural diversity: “wild geese, wild duck, bitterns, and plovers buzz just above the hilltops around the marshes [...]. Small summer frogs fill the pleasure zone with monotonous wailing, while varieties of cricket chirp an octave higher” (Kunersdorf, 1889: 1). When the *bura* wind blew, the dry land between the lakes was an ideal spot to shoot migrating birds who were attracted there by abundant fish (Morgan, 1913: 52–53). In parallel to the recent hunting expeditions, there were ancient traditions of fishing in the waters of the marshlands close to the Neretva River including catching leeches for medicinal purposes. Local diets were varied and often supplemented with wild food, including the consumption of myriad plants and herbs as recorded in 1913 by the Sarajevo based

curator Vejsil Ćurčić who worked at the newly established regional Landesmuseum or Zemaljski muzej (Łuczaj, Dolina, 2015: 297–304). Frog’s legs, turtles, coot (*crna liska*), and trout were also consumed, and the Neretva Delta was known for its eel fishing (Clewning, 2015: 137). Ćurčić made meticulous studies of traditional fishing hooks, baskets, and lines in different regions of Bosnia and Herzegovina, recording the use of pronged spears (*ostve*) in Hutovo blato (Ćurčić, 1910: 27). The wooden boats (*trupe/trupice* and *čopule*) used by local hunters were so light that they could be carried on the shoulder. They also offered some wind protection if the rower lay down and could be steered at speed around the marshlands (Macan, 1967: 161–179). Local hunters would cover their *opanci* (leather shoes) with animal fur to muffle sound (*Jagd-Zeitung*, 1866: 309–310).

Other descriptions of locals were also sympathetic, imagining an unbroken connection between people and the environment (Waldfahrer, 1888: 1–2). The painter Gyula Tornai declared “give me a fisherman’s hut in Hutovo blato and I would be happy” (Günste, 1910a: 6). As editor of the *Bosnische Post* after 1889, Milena Mrazović travelled around the region on horseback accompanied by the illustrator Augusta Bock. Her publications often contain ethnographic detail. For Mrazović there were “no better rowers and marksmen than the [...] peasants who have lived here since time immemorial [...] experts on all the countless species and varieties of the feathered inhabitants and guests of Hutovo blato” (Preindlsberger-Mrazović, 1900: 233). One author, writing under the pseudonym “Frmdbl.” (but likely to have been Milena Mrazović), described their stay in a farmhouse close to Hutovo blato with a woman called Jana, her husband Marko, their son Marko and a dog called Hajduk. They marvelled at the simple food; fish with millet gruel for supper and goat’s milk and cheese with black bread for breakfast and studied the implements used for fishing. At daybreak, they went out into the marshes on a light wooden boat. Marko knew every inch of the territory and the name of every species, a deep connection with nature which he and his son celebrated with song. The name of the marshes had nothing to do with the fort at nearby Hutovo, according to Marko, and instead they took their name from the shelduck known locally as *utva* which had golden feathers. The author felt that they had been taken back to a world where the way of life had not changed for centuries:

What strange hunting and fishing devices they were. Rods of various sizes, not a single one made of metal, fishing hooks made of thorn or fire-hardened wood, short and elongated wooden skewers, old rifles with a narrow or wide muzzle, different hammers and swatters (*Pracker*), nets of different sizes, the kind of snares used in prehistoric times. It felt as one had been transported back several centuries into the past. (Frmdbl., 1910: 1)

Constructing the local people as simple and virtuous, Habsburg officer Reinhard Günste retold a story about how he had collapsed (from malaria) while out hunting and, lying immobilized, he believed he would die undiscovered as crows circled above. He knew that if he fell into the water he would die but he could not call out. A horse discovered him, but he could not make it stay to help him, and eventually local farmers found him. He explained that they “ripped the clothes off my body and with them the leeches, four of which were already sitting on my mosquito-eaten body, and they removed them too, let me mount the horse and took me, covered with their shirts, to the train station” (Günste, 1910a: 4). Despite the obvious care with which incomers were treated, local rowers were reluctant to relinquish their light wooden boats, preferring to lead the way themselves and to retain ownership and expertise. The appearance of local men often drew comments: one hunter described his guide Marko as a “giant guy (*Riesenkerl*) as colourful as a parrot, with a bright red fez, a blue jacket with red stitching and a long flintlock duck gun” (Perfall, 1906: 124). The rowers with their “sun-tanned muscular arms” moved “as swiftly as arrows” (Kunersdorf, 1889: 1). Travelling just a few miles to Hutovo blato, one hunter recalled that “our Herzegovinian rower, tanned red-brown by the scorching southern sun, was already waiting for us with his small, light, flat boat” (Floericke, 1895: 657–658).



Figure 2: “*Blick gegen Ostrovo am Utovo blato*”, the light wooden slatted boats (*trupice*) and a local hunter (Führer, 1902).

### The Habsburg paradox: Curation, care, and exploitation

Hunting for game or birds had several functions in Habsburg Herzegovina. For some people including local residents, hunting had an obvious nutritional purpose: the meat was lean, healthy, free and “extremely tasty thanks to aromatic herbs” (Hütt, 1914: 9–10). Garrisoned soldiers supplemented their modest rations: Slovene officer Jernej Andrejka remembered that “once a month, the battalion commander went to inspect the cordon posts. He always announced his arrival a few days in advance and on these occasions, dining at Visoka glavica was no less delicious than at a hotel in Vienna, including rabbit, partridge, and fried dormice” (Andrejka, 1904: 341–343). Roasting the meat was also an important ritual:

One man prepares a long spit with a *handžar* (i.e. dagger), while another skins the buck or doe *lege artis*, while a third carves a small skewer for roasting the delicacies: liver, heart and kidneys, intended as a starter to appease already growling stomachs. Now the meat is skilfully skewered, salted and slowly rotated by the hunters in turn. (Führer, 1902: 10)

Incomers got up at dawn to fish in local rivers (Oransz, 1903: 7–8). It was forbidden by law to shoot into the water and only silver hooks were permitted for fishing in rivers. Robert Dunkin (1897: 318) confessed he would have been tempted to use his gun had the fish been larger. Some sources suggest that it was possible to catch a lot of fish in a single day in the Neretva close to Mostar: “Journu [...] occupied his leisure time fishing and often returned to the hotel [...] with around forty trout” (Romain, 1896: 9). Hunters who camped out could also supplement their diet with wild berries and condiments. At the market at Glavatičevo, walnuts, rosehips, haws, and mirabelles were for sale and the hills around the town were covered with sumac (Dunkin, 1897: 231–235). Many hunters liked going out into the countryside to camp, enjoying picnics propped against *stećci* and a break from the monotony of military or administrative service. Cigarettes, flasks of coffee and rakija kept the hunters alert and facilitated discussions about strategy (Führer, 1902: 10–11). Other sources also suggest that locally based military personnel drank an “extraordinarily high amount” of local wine (Günste, 1915: 2). Wine and the prospect of female company could improve an excursion: one hunter recalled “a narrow valley [...] where the Lištica breaks into the river and we hurried towards this romantic spot on the left bank of the lake. We passed several village inns where the famously pretty Herzegovinian women served strong red wine (*Blatina*) and fragrant white wine (*Žilavka*) and were ogled by a group of hunters” (Hütt, 1914: 10). Clothing was also an important part of the hunting ritual: Crown Prince Rudolf wore a wool cloak and leather *opanci* while out close to Gluva Smokva, as well as a red waistcoat, in the style worn in Zadar (*Wiener Allgemeine Zeitung*, 1886: 5). Hunters would take a pine tuft for their



hats as they did in the Alps (Dunkin, 1897: 368). A predominantly masculine environment, excursions also allowed hunters to spend valuable time with their dogs and horses.

Scientists working in the Habsburg lands often overlapped with hunters while out in the field. More bluntly “classification meant killing, and the collection of specimens for scholarly examination and public display involved killing on a large scale” (Mackenzie, 1988: 36). In Herzegovina, the curator Othmar Reiser went on expeditions with the hunter Ludwig von Führer (Reiser, 1895; Führer, 1902: 95). Like so many of his counterparts in Sarajevo, Reiser was an inveterate correspondent and extolled the virtues of the natural environment in Herzegovina to the ornithologist Henry Dresser (Reiser, 1901). The two of them visited the “wonderful marsh” of Hutovo blato in 1902 (McGhie, 2017: 210). Like Christoph Feldner von Feldegg a generation earlier, Reiser personified this paradox between the dedicated scientist and avid specimen collector. His comprehensive work *Materialen zu einer Ornithologie der Balkanhalbinsel* was published posthumously in Vienna in 1939, and he left a large collection of stuffed birds and their eggs to the Zemaljski muzej in Sarajevo. He also sent examples of stuffed birds to his correspondents, including the ornithologist Ernst Hartert (Reiser, 1900). On a field trip to Brazil in 1903, Reiser was the first ornithologist to see the “rare and beautiful” Spix’s Macaw for 84 years: he tried unsuccessfully to shoot one but “the parrot species so desired by us was the only one to be observed but not collected” (Juniper, 2004: 25). In other words, Reiser’s need to procure specimens seems to have outweighed his desire to preserve a rare species.

In the circle of writers and intellectuals in Sarajevo, a passionate defence of the natural environment was initiated. Josip Vancaš, an architect originally from Sopron, helped push through laws protecting caves and the karst environment (Kapel, 1999: 109–114). This intellectual movement in Sarajevo was shaped by the foundation of the Zemaljski muzej in 1888 (Hartmuth, 2012: 194–205). Its journal *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* was first published in 1889, which covered almost every area of local life (Sparks, 2015: 144). By the 1890s, hunting in Herzegovina had become a vibrant milieu for competition and friendly rivalry which often overlapped with fieldwork and research. Hunters read accounts of trips which inspired their own expeditions: journals such as *Jagd-Zeitung*, founded in 1858, contained detailed notes about habitats and species of animals as well as accounts of hunting trips and it was the journal *Der Weidmann* that first brought Robert Dunkin (1897: 1) to Herzegovina. In 1914, the Czech writer Milan Stříbrný published a brief book about the history and development of hunting in Bosnia and Herzegovina (Frković, 2009: 327).

If hunting and an appreciation of nature had become a means of environmental knowledge transfer, so too had specialist publications in geology, geography, ornithology, and speleology. This was an era of profound scientific advances, many of which were made by Habsburg scientists in Herzegovina who fit well with Wolfgang Göderle’s category of “middle-class experts who had joined the ranks of the imperial administration (and) advanced these fields with significant personal engagement and sometimes even

their own money” (Göderle, 2022: 455–456). These experts often included husband and wife teams, indicating that women were taking an increasingly prominent role in the accumulation of scientific knowledge. Clubs for speleologists were formed across the Habsburg Monarchy including one in Trebinje which spearheaded research on Popovo polje (Mattes, 2015: 234). Its first secretary was Augusta Burgmaier and her husband, a garrison postmaster, Leo Weirather classified new species of beetles – *coleoptera* (Pretner, 2011: 85–234). Museum curator Karel Absolon from Brno discovered a subterranean passage in the cave system at Vjetrenica, still called the Absolonov kanal (Lučić, 2009: 27–28), while his wife Marie Marvánková took photographs of landscapes, which also documented rural life including animal husbandry. Maude Holbach was accompanied by her husband Otto who took the photographs of Herzegovina that appeared in her 1910 book *Bosnia and Herzegovina: Some Wayside Wanderings*. It had become increasingly easy for writers to learn about the region before they set out. Journals such as *Mittheilungen des Ornithologischen Vereines in Wien* founded in 1877 published detailed accounts about birds and their habitats (Kadich, 1887: 317–320) while *Jahrbuch der Kaiserlich-Königlichen Geologischen Reichsanstalt*, which first appeared in 1857, published studies of the landscapes in Herzegovina (Bukowski, 1901: 159–169). Daily newspapers regularly covered both hunting and environmental issues (such as road or rail construction or weather events) in all of the local languages. The pluralist nature of education, communication and media in the Habsburg Monarchy may have speeded up multilingual exchanges and knowledge transfer (Marchetti, 2014: 210). Local policy initiatives especially by Governor Benjamin von Kállay encouraged cultural developments and research (Kraljačić, 1987: 268). Kállay wished to promote Bosnia and Herzegovina as a sporting destination and in 1895, an international shooting event was organized in Ilidža which was attended by his wife (Cameron, 2023: 246).

Despite laudable scientific progress, knowledge transfer and international contact, a great paradox lay at the heart of Habsburg practices in both Bosnia and Herzegovina. The ubiquitous problem of entitlement that manifested itself through heavy consumption of local resources (especially alcohol), raucous behaviour, and excessive hunting spills out of many contemporary accounts that suggest that a hunter could shoot “ten different species in a day” (Schlabitz, 1904: 89). It is quite clear that these hunters shot to excess simply because they could. British diplomat Freeman made regular hunting trips for over the four decades that he was in post: indeed, in his personal diaries it is one of the most regular themes. In September 1895 Freeman arrived in Hutovo blato with the Duke of Breganza, Henry Moser, Ferdinand Graf Trauttmansdorff-Weinsberg and other companions where eighteen boats were waiting for them. The party shot 150 birds including “a dwarf crane, a mallard, a pintail, a tufted duck, two teals, nine ferruginous ducks, five little grebes, a black-necked and a great grebe, two squacco herons, two pygmy cormorants, four moorhens, and 76 coots” (*Wiener Zeitung*, 1895: 3). They had left Sarajevo on a specially commissioned train that arrived in Gabela at five in the morning where



they met Othmar Reiser by surprise. They arrived back at the Hotel Narenta in Mostar in the evening where they enjoyed a supper in the garden to the sound of a “splendid military band”. Freeman failed to mention whether the party ate the birds they had shot, although this was his normal habit (Freeman, 1895–1897). In October 1897, Ludwig von Führer led a hunting expedition to Hutovo blato and in one day, 287 waterfowl including coots, pygmy cormorants, gulls, and ducks were shot. The following day, von Führer’s companions shot over 100 pigeons close to the Buna River. It was reported that “the hunting party returned to Ilidža [...] highly satisfied” (*Bosnische Post*, 1897: 2). The possibility of shooting high numbers of birds was repeatedly noted in contemporary texts: an officer called Wurtzbach killed 183 partridges close to Mostar in December 1895 alone (Dunkin, 1897: 178). In a veritable ecological assault, Reinhard Günste (1910b: 6) and his companions turned up at the railway station in Gabela after a hunting trip in Hutovo blato with 159 slaughtered carcasses consisting of 91 ducks and hens, 28 snipes, 16 lapwings, 14 herons and 4 wild geese as well as rarely eaten birds, including seagulls, a vulture, a grebe, a pelican and a marsh harrier. The slaughter by incomers was sometimes absorbed by the local population: in Mostar there was lively trade in animals and birds and in 1894, 3000 hare pelts were sold there (Dunkin, 1897: 178).

An interest in hunting coincided with a marked increase in ecological record keeping, particularly of birds (Kotrošan, Papes, 2007: 9–38) which allows us to assess how and where some of the damage was taking place. Intensive and well documented hunting in the late Habsburg period was certainly threatening animal population levels elsewhere in the monarchy. According to the hunting journal *Łowiec* in 1882 alone, 23 bears were shot in the Eastern Carpathians (Bajda, 2020: 107). Bears were also becoming increasingly rare in Bosnia and Herzegovina (Frković, 2009: 330). Such a meticulously documented onslaught could prompt us to consider the specific impact on the environment in what Wolfgang Göderle (2020: 215–240) has termed the “Habsburg Anthropocene”. There was an increase in logging (sometimes unauthorized) in Herzegovina in the early nineteenth century, much of it to supply imperial navies (Dursun, 2025: 76). Habsburg occupation had speeded up a process of timber extraction (Lučić, 2024: 343–344) that had been in process since the era of the Napoleonic wars: live animals, pelts, medicinal plants, honey, wine, tobacco, and wood were exported from “mountainous regions” to the Habsburg monarchy before 1878 via the market at Unka on the Dalmatian border (Grandits, 2022: 18). There was widespread concern for tree as well as animal numbers. Othmar Reiser was aware of the intricate relationship between trees and animals: he first saw a little owl (*Steinkauz*) in October 1888 in a “splendid” Juniper tree in graveyard in Tasovčići (Reiser, 1939: 664) so any decline in tree health or numbers would automatically affect bird populations. Descriptions of trees also formed a key part of ornithological narratives: for example, a pygmy eagle could generally be seen sitting on lower branches of an old beech or oak, almost like an owl (Rudolf of Austria, 1889: 435). The phenomena of taking timber and hunting

animals were closely intertwined in other colonized locations such as Myanmar (Saha, 2022: 51–82). Many writers thought that oak forests had been destroyed only in the recent historic past and had once grown to a wider extent (Beck-Mannagetta, 1901: 199–216). The Sarajevo-based curator Carl Patsch (1907: 3–4) imagined that Herzegovina had been covered with lush vegetation and believed that much of the damage to the primeval forest and deer stocks along the Trebižat River had occurred only after the mid-nineteenth century. In 1907, Carl Patsch spoke to 61-year-old Pero Alilović, who had been a woodcutter in his youth: “Sir, there were once logs so wide that two men could span them, but today we search there in vain for firewood” (Baric, 2023: 228).

Although deforestation had occurred in Herzegovina before 1878 through exports to adjacent countries including Austria-Hungary, the Habsburg occupation also led to extensive tree planting in urban spaces. In Mostar, avenues of trees were planted to create a greener centre and in Trebinje saplings of plane trees (*platani*) were brought from the botanic gardens in Trsteno in Dalmatia in the 1880s to add much-needed shade. Volker Pachauer and Filip Suchoń (2018: 86) have established that the “greening” of Trebinje during the Habsburg era also included attempts to plant traditional hedgerow plants which develop well in areas over four hundred meters above sea level, including wild roses, blackberries, blackthorns, and garland thorns. In this respect, we also seen another paradox: devoted care for urban spaces on the one hand and damaging resource appropriation on the other. Some writers, concerned about the excess, thought that they had entered a race against time to protect both the environment and animals. Carl Patsch was aware that the construction of the railway would damage the environment in the Neretva Valley, and he clearly appreciated local skills and knowledge, but he blamed the local population for not preventing the felling of trees (Džambo, 2024: 26). Indeed, he expressed negative opinions about the capacity of local people to show any interest in nature preservation at all (Baric, 2023: 224). Othmar Reiser was concerned about bird numbers in August 1911, and he blamed excessive hunting although he himself had introduced many visitors to the marshes:

There have been no breeding herons in recent years, only the pygmy cormorants have held out tenaciously. They were badly disturbed when they were establishing their nesting colony, so that they laid their eggs unusually late. On 19 July. I visited them in the most sweltering heat. No shooting took place, and I only took a number of half-down young with me, two of which I am sending you, as they are probably the last to be hatched in all of Bosnia and Herzegovina. Such a thing is sad, but unfortunately it cannot be changed! For my part, I have contributed very publicly [...] to the preservation of Hutovo blato. The more Bosnia and Herzegovina opens up to so-called culture [...] the more these lands lose their appeal for the true nature lover. (Kleinschmidt, 1936: 506–507)



An animated account of a hunting expedition published in 1904 by Ludwig Schlabitz captured the real ambivalence or paradox of Habsburg-era sentiment. Schlabitz expressed concern for the status of the bearded vulture (*Lämmergeier*), the white-headed vulture (*Weißkopfgeier*), and the cinereous vulture (*Kuttengeier*), a species now thought to be extinct in Bosnia and Herzegovina. Furthermore, he believed vultures had consumed strychnine intended for rats, been heavily hunted or had lost their habitats due to the railway construction and that they might soon die out. While he knew that staff at the Zemaljski muzej in Sarajevo were attempting to preserve these birds, and despite his gloomy prognosis, he carried on hunting himself. After spending hours hunting, his arm began to hurt and he was “glad to run out of ammunition” (Schlabitz, 1904: 88). In a similar vein Robert Dunkin (1897: 95) confessed that he was ashamed after attempting to shoot an eagle despite the fact that he wanted to add this species to his personal inventory. He also believed that the bearded vulture would soon be extinct (Dunkin, 1897: 292). Hunters had strong codes of honour (Varner, 1998): hunting had originally developed within clear ethical traditions, partly attributed to the seventh century Saint Hubert, a keen hunter who abandoned the sport after a pious Easter revelation. Traditional ethics included not attacking a mother with her young, especially in winter and aiming for older stags. Hunters almost universally disliked the use of traps and appreciated the natural beauty of marshlands, forests and hills. They often expressed their affection for dogs and occasionally horses, and their keen admiration for the species they pursued. Yet most carried on despite their qualms.

### Some conclusions

After the late eighteenth century, the capacity of hunters to kill a lot of animals and birds at one time “rapidly upset the precarious balance that earlier generations had achieved”, substituting “the thrill of the chase” with “the pleasure of the kill” (Griffin, 2008: 121). This new state of disequilibrium arrived later in Bosnia and Herzegovina, and these lands were regarded as a fresh place to hunt to excess by incomers, much like other Ottoman lands. A new rapacious “hunting ethos” developed, captured in Oscar Wilde’s comical phrase “the unspeakable in pursuit of the uneatable” (Lorimer, Whatmore, 2009: 670). Habsburg administration and occupation coincided with European colonial projects which devastated the natural environment across the globe. Many incomers in Herzegovina were primed to hunt and felt that they were entitled to drink, eat, ogle, shoot, take or waste. Nevertheless, there are glimmers of an ecological consciousness developing and a clear appreciation of the traditional knowledge of local people. Furthermore, urban planning led to the development of parks and the planting of boulevards of trees in the expanding towns in Bosnia and Herzegovina. The growth of scientific interest in Bosnia and Herzegovina intensified both record keeping and respect for tradition.

Many writers began to see that natural resources were not infinite, including those who clearly loved hunting with a passion. A sense of environmental justice was being shaped by an extraordinarily energetic generation of Habsburg writers, scientists, and public intellectuals including Othmar Reiser, Carl Patsch, Vejsil Ćurčić, and Milena Mrazović, whose work aimed to defend and preserve much of Bosnia and Herzegovina's rich natural heritage. However, extolling the countryside, collecting specimens and publishing the results of their work may have helped to increase visitor numbers and accentuated the threat to the environment. The paradox of Habsburg expansion into Southeastern Europe is that it encouraged the collation and discovery of plant and animal species, and the greening of urban spaces, but it also speeded up a process of environmental degradation through excessive resource appropriation including hunting.

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### Research data statement

The author states that the article is based on research data that is available in public domain resources as well as publicly accessible archival and museum collections that are cited in the list of references.

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## Lov in okoljska zavest v poznoosmanski in habsburški Hercegovini

Lov se je v Bosni in Hercegovini razmahnil po habsburški zasedbi leta 1878 in kasnejši aneksiji leta 1908. Lovci so začeli raziskovati osmansko Hercegovino skozi močvirja Neretve, zlasti po letu 1815. Priljubljenost lova so spodbudili strokovni časopisi, transnacionalni stiki in prisotnost garnizij. Lovskega orožja so bili večji mnogi, hercegovska močvirja pa so ponujala izvrstne možnosti za lov na divje ptice s čolnom, medtem ko so bila gorska območja primerna za lov na divjad. Mnogi so izražali veliko navdušenje nad lovnimi dejavnostmi: dajale so jim občutek svobode, moči in namena. Lov ni nudil zgolj priložnosti za druženje in pitje lokalnega vina, temveč tudi nove možnosti za raziskovanje podeželja. Pod vodstvom vedno večjega števila znanstvenikov in piscev, ki so proučevali deželo, so habsburški častniki, njihovi prijatelji in dostojanstveniki pogosto razmišljali o lepotah podeželja in tudi o morebitni izgubi naravne raznolikosti, zlasti z razvojem železnice. Instinktivno so ugotavljali, da bo streljanje živali sčasoma zmanjšalo njihovo število v divjini, morda celo trajno. Avtorica v članku raziskuje ambivalentnost lova v Hercegovini v tem obdobju. Istočasno z razmahom lova je čut za okoljsko pravičnost oblikovala izjemno vitalna generacija habsburških pisateljev, znanstvenikov in javnih intelektualcev, kot so Othmar Reiser, Carl Patsch, Vejsil Ćurčić in Milena Preindlsberger-Mrazović, katerih cilj je bil braniti in ohranjati velik del bogate dediščine in naravnega okolja Hercegovine.

## Animals in the Educational Discourse in Habsburg Bosnia and Herzegovina in the Early Twentieth Century

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The study aims to elucidate the relations between animals and children within the educational context of Bosnia and Herzegovina (1878–1918). Drawing on archival documents, textbooks, articles, and feuillets, it examines the attitudes toward animals promoted both inside and outside the classroom, with particular attention to animal death and the envisioned relationship children were expected to develop with it. More broadly, the study situates these findings within the framework of school education in Habsburg Bosnia.

• **Keywords:** animals, education, economy, Habsburg Bosnia, children

Raziskava si prizadeva osvetliti odnose med živalmi in otroki na področju izobraževanja v Bosni in Hercegovini (1878–1918) in na podlagi arhivskih dokumentov, učbenikov, člankov in feļtonov razkriva zaželen odnos do živali – znotraj in zunaj učilnice. Posebna pozornost je namenjena vprašanju smrti živali in pričakovanemu odnosu, ki naj bi ga otroci do nje razvili. Raziskava poleg tega obsega širšo obravnavo šolskega sistema v habsburški Bosni.

• **Ključne besede:** živali, izobraževanje, gospodarstvo, habsburška Bosna, otroci

### Introduction

In 1879, the year after the Habsburg administration began in Bosnia and Herzegovina (hereafter Bosnia), a railway line was built in the northern Bosnian city of Maglaj. The noise generated by trains was claimed to have caused a decline in the number of falcons that had been captured in the vicinity for falconry in the times of the Ottoman Empire (Hörmann, 1894: 503; Reiser, 1895: 1). These kinds of change in wild animals' living environment detrimentally impacted the relationship that emerged between humans and wild animals in Bosnia in the early 20<sup>th</sup> century. Nonetheless, except for one short essay, no historical research on human-animal relations in Bosnia under the Habsburg Empire has been conducted. The essay tried to highlight animals' circumstances by analysing two Bosnian words: hare (*zec*) and rabbit (*kunić*) (Inaba, 2018a: 20–21). The current study seeks to fill the gap in our understanding by answering the question: How were animals treated in the educational discourse in Bosnia during the Habsburg Empire? This study seeks to explore the Habsburg authorities' perception of animals within human society. Although it does not discuss direct relationships between children and animals, this study elucidates the attitudes the Habsburg authorities required the Bosnian people to adopt towards animals. Insofar as education is a means of cultivating desirable human resources for the dominant paradigm, we believe that our discussion

on animals in the educational discourse illustrates the prevailing perception of life and human beings at that time.

The same question has been investigated in Croatia of late, particularly within the framework of research on children's literature. Nikola Visković provided an overview of the animal genre in children's culture, along with the positive and negative influences of animals on child development (Visković, 2009: 291–302). Ana Batinić analysed animal texts in children's magazines from the modern era to the present day. Batinić highlighted the transition from anthropocentrism, which focuses on the utility that animals bring to humans, to biocentrism, which focuses on the dangers that humans pose to animals (Batinić, 2013: 294). Marijana Hameršak and Dubravka Zima devoted a chapter to the issue of animals in children's literature in general. They noted that animals that appear in children's literature are cultural products of the periodical and social environment, and that the widespread identification of children with animals often functions as projections of values of adult society (Hameršak, Zima, 2015: 311–338). The reflection of the prevailing social and political opinions in the descriptions of the relationship between children and deer was demonstrated in an article by Berislav Majhut and Sanja Lovrić (Majhut, Lovrić, 2012: 827–846). Furthermore, Martina Jurišić reported that within this anthropocentric context, animals' death in early 20<sup>th</sup> century juvenile literature was used as a method to morally enhance children's sociability (Jurišić, 2022: 553–565). Because Bosnia under Habsburg rule had strong ties with Croatia in the domains of educational personnel and ideas, we justifiably argue that the anthropocentrism in the field of education revealed by these prior studies serves as a relevant point of departure for this article.

We address the aforementioned question by focusing on natural history education in teachers' training schools. We review teachers' training schools because these institutions trained primary school teachers who provided natural history education on animals to children, which reflects attitudes present in the Bosnian society towards children and animals. While several existing studies on primary school lessons pertain to history and geography, discussing the cultural and national policies of the Habsburg Empire, little attention has been paid to other subjects in any schools in Habsburg Bosnia (Bogićević, 1965: 176; Papić, 1972: 59; Kraljačić, 1987: 252–258; Okey, 2007: 67–68; Pejić, 2021: 96–99; Dierks, 2024: 186–195). Dinko Župan (2013) focused on female handicrafts and physical education in girls' education, although in Croatia. Likewise, Fabio Giomi explored female handicrafts in the girls' schools in Habsburg Bosnia (Giomi, 2021: 50–51). Ayşe Zişan Furat, drawing on the Ottoman documents, discussed religious education among Muslims in Habsburg Bosnia (Furat, 2013). Additionally, Mitsutoshi Inaba investigated the pedagogy in teachers' training schools in Bosnia (Inaba, 2015: 31–47). Thus, no study has examined natural science in any school. We acknowledge that history education played an important role in the construction of belonging and in developing certain cultural, social, and political values in the Habsburg Empire

(Jelavich, 1990; Bruckmüller, 2007: 11–35; Moore, 2020). Moreover, Deborah R. Coen has recently argued persuasively that meteorology scientifically justified the Habsburg imperial ideology (Coen, 2018). Considering that natural science therefore contributed to shaping the consciousness of imperial citizens or subjects, we should also analyse it in school education.

Furthermore, Robin Okey argued that modernisation as a school policy – although in terms of transforming “Oriental” extreme individualism into membership of a “Western” civic community – was consistently entrenched in Bosnia under the Habsburg Empire (Okey, 1990: 43–44, 58). Other works affirmed that school education was concerned with not only nationalism but also citizenship education (Inaba, 2015: 45; 2018b: 59–60). While using arithmetic as a casework, Thomas S. Popkewitz argued that the management of textbooks was nothing but the management of children through the prescription of norms of thinking, feeling, and understanding, even in the schools of the modern United States of America (Popkewitz, 2017: 101). To verify whether these norms were national or civic in the Bosnian context, we must examine textbooks other than those of history. Accordingly, the book *Organisation of the National School in Bosnia and Herzegovina* (hereafter *Organisation*), published by a decree of the Provincial Government at Sarajevo in 1909, listed religious and moral education, comprehensive development of children’s physical mental abilities, and procuring the most necessary knowledge and skills for living as a citizen as the objectives of primary education (*Organizacija*, 1909: 1). Apart from history and geography, natural science was a means to achieve those objectives. What was the concrete educational result achieved through the school education? How would those objectives be achieved? Additionally, what roles were natural sciences – especially education on animals, in this context – expected to play? We then specifically analyse the discourse on the activities of children outside of school to understand the logic that was used to justify killing animals without violating the requirements of the education guideline *Organisation* – which expressed concern that animal death may adversely affect the development of moral emotion (*Organizacija*, 1909: 57). Before discussing the discourse on animals, we examine school education in Habsburg Bosnia in general, and primary schools in particular.

### **Primary school education in Habsburg Bosnia**

In Ottoman Bosnia, each religious sect conducted primary education separately. However, in the 1860s, the *rüşdiye* (Bos. *ruždija*) as a type of primary school began being established, wherein the secular subjects were taught to all pupils regardless of their religious sect. While the instruction language was Turkish, the General Education Regulation (Maarif-i Umumiye Nizamnamesi) in 1869 stipulated that *rüşdiye* be opened separately in areas where Muslims and Christians lived together. Thus, these practically

became primary schools exclusively for Muslim children (Ćurić, 1983: 135–136, 153; Furat, 2013: 42). In Habsburg Bosnia, primary education began in 1879 as a one-year course for children between the ages of 7 and 10. In the following year, 1880, the ‘Provisional Instructions’ were issued, charting educational guidelines for primary schools; following this, primary schools began operating. Education was imparted in the native language for South Slav pupils, and obligatory subjects included arithmetic, calligraphy, geography, geometry, German, gymnastics, handicrafts (handiworks for girls), history, natural sciences, religion, singing, and the national language. However, in 1891, German was changed to an elective subject. Lajos Thallóczy, who inspected the schools in Bosnia in 1904, criticised the excessive burden of the educational programme on primary school pupils and proposed reorganising primary schools into a five- or six-year system. However, in a letter to Thallóczy, Ljuboje Dlustuš, the provincial government secretary, argued that the current programme was appropriate, and emphasised the teachers should be given the freedom to create flexible educational programmes according to pupils’ circumstances, while citing the different educational needs between urban and rural areas. Furthermore, an expert conference – held by the Provincial Government at Sarajevo in December 1905 – concluded that the current educational programme had no issues, and proposed the school years should be extended to reduce the pupils’ burden after the completion of the primary school network.<sup>1</sup> Thus, although there was a debate on the primary school programme, in 1909, two curriculum courses were introduced: a 92-hour-week course and an 81-hour-week one, both spanning four years. Children were allowed to attend school from 6 to 12 years of age. Seven years of age was later adopted as the appropriate age to begin attending school. In 1911, compulsory education was introduced, and boys older than 11 and girls older than 10 years were prohibited from attending primary school (Bogićević, 1965: 168; Papić, 1972: 41–43, 54–56, 62).

Bosnia, which spanned an area of 51,027 km<sup>2</sup>, had 38 primary schools in 1880, after the occupation. In the 1880/81 school year, model primary schools were opened in Banja Luka, Bihać, Sarajevo, and Travnik, but all their maintenance and operational costs were incumbent upon the relevant city’s municipality. The municipality where the primary school was built fundamentally had to bear the costs of the construction as well. If it was financially unable to do so, the Provincial Government at Sarajevo could subsidise it or even pay the full cost. Similar provisions applied to the costs of maintaining the school, with the municipality having to pay teachers and janitors’ salaries. The number of primary schools had increased to 143 in the 1891/92 school year, and then exceeded 200 at the turn of the 19<sup>th</sup> and 20<sup>th</sup> centuries. In the school year

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<sup>1</sup> Arhiv Bosne i Hercegovine (ABiH), Fond: Zajedničko Ministarstvo Finansija (ZMF), Präsidial (Pr) 1282 / 1904, *Bericht des Sektionschefs Dr. von Thallóczy über seine Inspizierungsreise in Bosnien-Hercegovina vom 17. Oktober bis 11. November 1904*; ABiH, ZMF, 12494 / 1906, *Abschrift eines Briefes des Regierungsssekretär Ljuboje Dlustuš, de dato Sarajevo 17. Mai 1905, an Sektionsschef Dr. Ludwig von Thallóczy*.

of 1904/05, 239 primary schools grew to 306 by the 1909/10 school year. There were 374 primary schools in Bosnia before the First World War, that is, in the 1912/13 school year (Schmid, 1914: 700, 717, 720; Bogićević, 1965: 150–153). Figure 1 illustrates the number of newly opened primary schools per school year. Construction of new schools in the 1890s lagged behind, but more than ten schools were generally opened each year in the 20<sup>th</sup> century. In particular, the number of new schools increased rapidly in 1910. However, the number of primary schools was insufficient. In the 1912/13 school year, there were 52837 pupils enrolled in 543 primary schools, including religious schools. This number of pupils represented only 2.78% of the entire population or 18.55% of school-age children (Bogićević, 1965: 153, 249–251).<sup>2</sup>

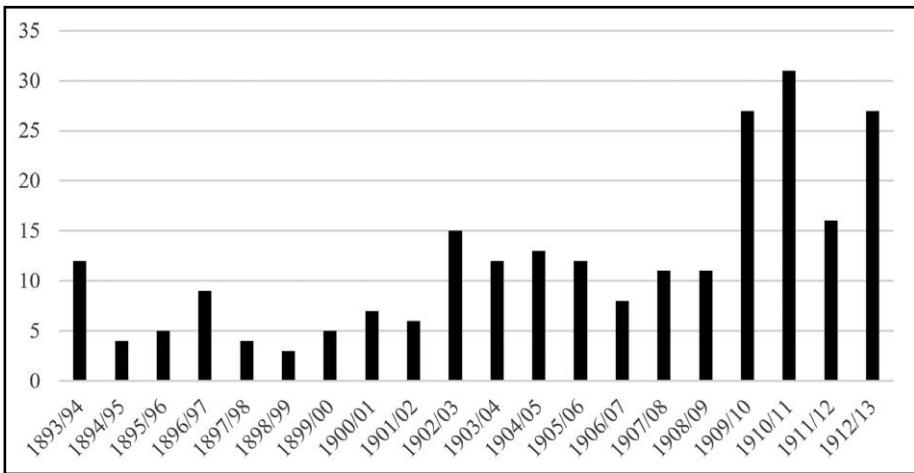


Figure 1: Number of newly opened primary schools in Bosnia and Herzegovina per school year.<sup>3</sup>

In this context, teachers' training became urgent. In Bosnia, it began in 1882 as a three-year course, leading to the establishment of a teachers' training school at Sarajevo in 1886. This school was the only teachers' training institution, excluding private facilities, until 1911. In 1900, the curriculum of this teachers' training school was expanded from three to four years.<sup>4</sup> This meant that the educational programme at the teachers' training school at Sarajevo was recognised as being on par with those in the Habsburg Empire. Its admission required the completion of the fourth year of gymnasium or *Realschule* (Bos. *realka*) as well as a commercial school (Papić, 1972: 90). Although 53.2 % of all teachers in Bosnia were natives, many teachers at the teachers' training

<sup>2</sup> In the school year of 1908/09, 16.56% of school age children were enrolled in primary schools. However, because the school types were not differentiated, determining whether this figure included pupils in religious schools is impossible (*Bosna i Hercegovina u Brojkama*, 1911: 7).

<sup>3</sup> See Papić, 1972: 46–48.

<sup>4</sup> Regarding teachers' training schools in Bosnia see Papić, 1972: 90–101; Ademović, 2009.

school at Sarajevo were from neighbouring regions such as Croatia. Its principals, Đuro Bujher (1889–1909) and Viktor Pogačnik (1911–1915) were from Croatia, and August de Tartaglia (1909–1911) was from Dalmatia (Žalac, 1989; Kolar-Dimitrijević, 1991: 131; Džaja, 1994: 117). While Ljudevit Dvorniković, a graduate of the teachers' training school at Zagreb, taught pedagogy at the teachers' training school at Sarajevo from 1902 to 1915, he served as a deputy principal of the newly established teachers' training school at Mostar in 1914. Additionally, he also performed the principal's duties at a female teachers' training school at Sarajevo for approximately two months from the end of January 1916.<sup>5</sup> Furthermore, the teachers' training schools consistently adopted the book *Pedagogy* authored by the Croatian pedagogue, Stjepan Basariček, as a textbook until the end of the Habsburg Empire. Thus, pedagogy in Croatia exerted a great influence on teachers' training in Bosnia both materially and intellectually.

In multireligious Bosnia, the Habsburg Empire fostered the emergence of a regional identity instead of a religious or national one in public primary schools. In this context its educational experiences in Croatia, in which Catholic and Orthodox population speaking South Slav languages lived, was reflected in the process of constructing the primary school system, particularly in the textbooks (Pejić, 2021: 93–94). However, the Habsburg Empire was involved in Muslim education for the first time, and the textbooks were revised to facilitate their integration into the “Western” civil society. When the teachers' training school at Sarajevo was reorganised into a four-year school, the Ulema Council decided which textbooks should be included for Islamic education. Further, as the autonomy for Muslim schools was granted in 1909, Muslim intellectuals who internalised the Habsburg civilising mission called for educational reform. Bosnian Muslims themselves took the initiative to introduce natural science as a subject at madrassas (Okey, 2007: 149; Furat, 2013: 79, 187; Pejić, 2021: 94). These facts demonstrate that the Bosnian Muslims themselves were actively involved in designing educational curricula. However, the education for Muslims had some shortcomings. While the completion of *mekteb* education was a prerequisite for enrolling in primary school, Muslim literature lacked in schooling materials (Čurić, 1983: 196; Islamović, 2008: 155).

Srećko M. Džaja indicated that the vocational schools (*Berufsschule*) with teachers' training schools aimed at practically transferring Central European civic culture and lifestyle to the orientalisised urban sects in Bosnia (Džaja, 1994: 118). Additionally, above all the “confidence that the free individual, the free nation and a free humanity were all part of a seamless web which progress was bringing into being” that was fostered in Croatia since the 1860s continued to exert a great influence on educational thoughts in Habsburg Bosnia, even though it dissipates under the social realities of the

<sup>5</sup> ABiH, ZMF, Pr. 1282 / 1904; Džaja, 1994: 112, 117; ABiH, Fond: *Zemaljska Vlada za Bosnu i Hercegovinu – Sarajevo (ZVS)*, 1914, kutija 239, šifra 82-100/18, Nr. 253864; ABiH, ZVS, 1916, kutija 170, šifra 82-35/2, Nr. 27453; ABiH, ZVS, 1916, kutija 170, šifra 82-35/9, Nr. 66750.

early 20<sup>th</sup> century (Okey, 2013: 151–152). For instance, at an extraordinary teachers' meeting in the commercial school at Sarajevo in October 1912, its members argued that two completely different educational courses were introduced: professional education with an emphasis on vocational training, and general one aimed at acquiring necessary knowledge for Western citizenship (Kasumović, 2016: 301–302). Basariček insisted that the ultimate purpose of education was to develop character (*značaj*) and argued that the girls could hardly accomplish that purpose because their nature was more emotional. However, Jagoda Truhelka, a teacher at the female teachers' training school at Sarajevo, rebutted it emphasising the important function of moral emotion to cultivate character. Both Truhelka and Basariček consistently discussed vocational education within the framework of cultivating character (Inaba, 2024: 77–83). Thus, vocational education was not necessarily different from general education. However, the educational environment for girls was inferior to that for boys, and Muslim girls were remarkably excluded from obligatory education in 1911 under pressure from the Muslim society. Furthermore, while the female teachers' training school was delayed until 1911, its educational programme was based on the existing teachers' training school at Sarajevo. Although teachers' status was generally low, female teachers' treatment was even worse than their male counterparts' (Šušnjara, 2013: 63–72, 2014: 456–464; Giomi, 2021: 84). As Giomi aptly argued, the Habsburg civilising mission was gendered: that is, the general education to cultivate Western citizens, that is character, was gendered (Giomì, 2021: 41). Therefore, we justifiably argue that the aforementioned purpose determined the educational policy at primary schools under the management of the teachers who had graduated from teachers' training schools. At the end of the 1890/91 school year, first-form students of the teachers' training school at Sarajevo were asked the following question: "How does one's character develop and what should you consider with care in character development?" (*Godišnji Izvještaj*, 1890/91: 102). First-form students in the 1896/97 school year were required to answer these questions about character: "How does character develop among people? How is the character cultivated through school education?" (*Godišnji Izvještaj*, 1896/97: 20). We noted that during the first examination in the 1904/05 school year, a question was asked about the purpose of school education, that is, the character, and more specifically, the contribution of primary schools in shaping pupils' characters. Students had to answer the same question in the maturity exam in the school year of 1908/09. (*Godišnji Izvještaj*, 1904/05: 82; *Godišnji Izvještaj*, 1908/09: 49). Thus, we assert that primary school teachers were expected to learn how to educate the character of learners in their charge.

## Character education and natural sciences

How exactly was character education taught in pedagogy? We examine two articles published in the educational journal *Školski Vjesnik* in Bosnia to answer this question. The educational journal *Školski Vjesnik*, of which the teachers in Bosnia were both authors and subscribers, was the oldest in Bosnia, having been published since 1894. Notably, at a teachers' meeting held at the teachers' training school at Sarajevo on 13 February 1907, the members proposed that some articles published in *Školski Vjesnik* should be reprinted for lessons.<sup>6</sup> Thus, we reasonably infer that most teachers (and teacher candidates) in Bosnia may have perused that journal. Gjorgje Glibonjski defined character in two ways: individuality, and a single inner principle controlling human life. Individuality must become the principle that controls all of one's behaviours. In this case, Glibonjski emphasised the importance of intuitional education (*zorna obuka*). Intuition is the psychological activity to comprehensively understand the objects, which is acquired through the ordering and unifying of each sensory perception (Basariček, 1879: 10). Such intuition enables children to perceive objects more vividly and construct the basis for their further intellectual development. This intellectual basis can then become the guideline for confidently dealing with the world (Glibonjski, 1903: 315–316, 607). Although Glibonjski's approach seems passive, his contemporary educator, Bogumila Čehović, emphasised children's agency, according to which three factors should be considered to educate the character: congenital features, habit, and insight. This insight implies that each child devises their habit subjectively (Čehović, 1907: 101–102). Thus, character education required each child to voluntarily transform their life into a lifestyle based on a steadfast principle.

The idea that the Bosnian population was evolving and gradually developing sufficient maturity for autonomy was expressed by the Joint Minister of Finance, Benjamin Kállay (1882–1903), who was in charge of Bosnian administration. According to Robin Okey, Kállay's successor, István Burián (1903–1912), acted on the evolutionary notion that the Bosnians can be sufficiently mature to adapt themselves to a civic society. Indeed, he stated in his memoir that the Habsburg Empire's mission in the South Slav issue was to introduce the Bosnian people to a fully European lifestyle in the cultural and political fields (Burián, 1923: 221; Okey, 2007: 130, 177–178). The mechanisation of factories accelerated in the 20<sup>th</sup> century. For example, a cigarette paper factory using electricity commenced operations in 1905. An entrepreneurial class gradually developed among the Bosnian people, and workers were required to improve their abilities to become more employable. Thus, the concept of cost effectiveness became increasingly prevalent, extending even to the educational sphere. In this social context,

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<sup>6</sup> ABiH, ZVS, 1907, kutija 127, šifra 135-65, Nr. 46503, *Zapisnik treće redovne sjednice učit. zbora učiteljske škole, koja je držana 13. februara 1907. za mjesec decembar i januar kao i za prvi semestar.*

school education was required to cultivate financially and socially independent persons, and above all, character (Kruševac, 1960: 212–213; Hauptmann, 1983: 245–250; Inaba, 2018b: 55–56). In fact, even though the objective of *Organisation* was arithmetic education, it emphasised the cultivation of human beings that can think multilaterally and act independently “for civil life” (*Organizacija*, 1909: 1, 50). <sup>2</sup>

BEFORE 1909				
SUBJECT	FIRST-FORM	SECOND-FORM	THIRD-FORM	FOURTH-FORM
Natural History			3	3
Total School Hours	23	24	29	29
92-HOUR-WEEK COURSE				
Natural Sciences			3	3
Total School Hours	20	22	25	25
81-HOUR-WEEK COURSE				
Natural Sciences			2	2
Total School Hours	18	21	21	21

Figure 2: Primary school schedule.<sup>7</sup>

In this educational context, we reviewed how lessons on natural sciences were envisaged at primary school. In 1909, the primary school schedule was revised as depicted in Figure 2. Although natural history (*prirodopis*) accounted for 5.7% of total school hours before the curriculum’s revision (Figure 2), natural sciences (*prirodne nauke*) amounted to 6.5% in the 92-hour-week course. However, natural sciences accounted for 4.9% in the 81-hour-week course, and thus, we arrive at an average of 5.7% even after 1909. Consequently, we contend that no dramatic change happened after 1909 in terms of school hours for natural sciences. Nevertheless, according to *Organisation*, natural sciences lessons in primary schools do not establish “systematic and scientific learning” as per their educational purpose. Instead, they have two aims: the comprehensive and harmonious development of mental faculties of school-going children at each developmental stage, and contributing to practical life in the future. Therefore, natural sciences as a subject is presented as something that should awaken “empirical, aesthetic, religious, cultural and practical interest” in children (*Organizacija*, 1909: 57–58). As a specific educational method for this purpose, observing animals as “biological groups” was recommended, using stuffed animals, dolls, and diagrams at the time (*Organizacija*, 1909: 59). Thus, natural science supported one part of the aforementioned intuitional education for character development. By accurately understanding the nature around them, pupils could acquire the precise knowledge about the natural environment and the animals. They were expected to use this knowledge for

<sup>7</sup> See Papić, 1972: 55; *Organizacija*, 1909: 3.

studying more advanced natural science, or for enriching their lives. We assert that the purpose of natural science in primary school was not simply to provide the pupils with knowledge about their familiar natural circumstance, but instead to form one step of character education – as it functioned as a means of intuitional education that allowed pupils to acquire the basic knowledge and experience necessary to become the independent citizen. However, “the pupils should not visit (*navraćati*) collections from the animal kingdom – except for ones that should be installed in the school – because they may lead the pupils to the unrestrained killing of animals, which would be detrimental to their development of moral emotion. Therefore, if animals are captured, observed, and then released, lessons can be greatly enlivened and progress can be made” (*Organizacija*, 1909: 57). We subsequently investigated how this contradiction was resolved in the educational discourse. Meanwhile, based on our research on ways to resolve this contradiction in the following sections, we will also demonstrate that the principle of character behaviours, which was formed by the “objective association of its thought’s contents”, was neither necessarily objective nor neutral.

### In the classroom

In Bosnia’s primary schools in the early 20<sup>th</sup> century, the chapter ‘Annual Notes’ in the *Fourth Reader*, which was recommended in the book *Organisation*, instructed pupils to record the characteristics of animals, plants and natural phenomena by season (*Četvrta Čitanka*, 1910: 95–96). We argue that this instruction may have been influenced by Stjepan Basariček’s pedagogy which emphasises the development of apperception (*apercepcija*). His textbook *Pedagogy* advocated that “old familiar representations should be reproduced before new representations are given to children” and that “the representations that children have acquired at home should be corrected, supplemented, and completed” (Basariček, 1880: 74).<sup>8</sup> By completing the representations of animals that each pupil encountered in their living space, they were expected to establish their basis for “complete and harmonious development” of their apperception. Basariček’s pedagogy establishes representation as the basis of all mental activities. These representations are then linked together to produce intuition, which becomes the source of higher mental activities such as judgments, concepts, and ideas. Thus, it is underscored in Basariček’s *Pedagogy* that the task of education is to firmly produce this intuition in each child. The representations are constantly competing in the mind; the clarification and obstruction of a certain representation cause pleasant and unpleasant feelings, while the pleasure felt when observing one’s own or others’ behaviours conforming to the model acquired through education is identified as moral feeling (Basariček, 1880: 24,

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<sup>8</sup> For Basariček’s pedagogy in the teachers’ training schools in Bosnia, see Inaba, 2015: 31–47.

35–38, 114). By encouraging the clarification of this model, developing children's virtue and thereby character becomes possible. In this educational context we posit that the way to deal with animals suggested in the *Fourth Reader* was nothing but a tool to form character.

How was the situation with regard to natural sciences in the teachers' training school at Sarajevo? In 1888, the first form had two hours per week for the basic knowledge and description of animals, plants, and minerals; the second form had two hours per week for the review of the first form's lessons and classification of animals, plants, and minerals; and the third form had two hours per week for all subjects related to natural history (*Godišnji Izvještaj*, 1888/89: 17–22). In 1891, the curriculum was changed, and one hour per week was allocated to zoology for the first form, one hour per week to botany for the second, and two hours per week to mineralogy for the third (*Godišnji Izvještaj*, 1891/92: 89–94). Furthermore, owing to the 1900 curriculum change, three hours per week in the first form were allocated to “zoology: vertebrates; the basic constituent organs of animals; the most important domestic and foreign species of Mammalia, Aves, Reptilia, Amphibia, and Pisces; the main species of harmful and beneficial insects and larvae, particularly those which have a biological relationship with humans and with domestic animals; the lower organisms with special attention to their composition” (*Godišnji Izvještaj*, 1900/01: 15). The textbook initially used was *Zoology* by Ivan Woldřich, but was replaced by Moja Medić's *Zoology* in 1900, which was adapted from Woldřich's book. Additionally, one hour per week in the fourth form was devoted to the subject of “the community of life: the house with its garden, the forest, the plain, the heath, the streams, which may be the starting point of observations in the primary school” (*Godišnji Izvještaj*, 1900/01: 16). Thus, while the subject of natural history in the teachers' training school focused on learning about the composition and classification of various animals, it also emphasised the importance of learning about things closely related to the daily life of primary school pupils, such as the domestic natural environment that serves as the “starting point of natural observations in the primary school” and knowledge of “harmful and beneficial insects and larvae” that have “a biological relationship with humans and with domestic animals”. A primary school teacher at Tuzla, Džemal Fejzagić, partially published a lesson on hares conducted on 12 November 1908. According to Fejzagić, at the end of the classwork, pupils were asked to state what they knew about hares. Of 33 pupils, 29 answered by narrating encounters with hares on nearby hills and fields with their relatives, seeing the hares chased by hunting dogs and other relevant things they had seen and heard. One pupil recalled having been given a hare by a farm worker when he had visited a pear orchard (Fejzagić, 1908: 10–11). As no other content of his lesson was recorded except the pupils' stories, why he asked his pupils to talk about them is unclear; we assume that by letting the pupils talk about their own experiences in primary school classes he may have wanted them to share knowledge of a familiar animal that they firmly apperceived.

Furthermore, we believe this highlights ecological learning from the content of the educational activities in the Sarajevo teachers' training school. The first teachers' exam in 1909 probed "the connection between animals and plants" (*Godišnji Izvještaj*, 1909/10: 62). The emphasis on learning about the relationship between humans and the natural environment is acknowledged in not only zoology but also botany. In 1890, third-form students were asked in their exam: "Which plants provide us with food?" Their final exam in 1904 posed a question on "apples, their friends and enemies", and in 1906, the final exam question was "wine grapes, their friends and enemies" (*Godišnji Izvještaj*, 1890/91: 102; *Godišnji Izvještaj*, 1904/05: 59; *Godišnji Izvještaj*, 1906/07: 70). This demonstrates that the textbook's change in 1900 did not significantly change class activities. The way natural history was practically taught in the classroom is difficult to ascertain, owing to the format – mostly reports submitted by teachers – and paucity of historical documents. For instance, a natural history class report from 1 September to 30 October 1908 records a session of "description of plants and other natural objects in the Koševo Valley", and a natural history class report from 16 March to 3 May 1912 reports that the relationship between life and the environment was taught as "the circulation of matter in nature".<sup>9</sup>

As previously mentioned, the textbook for zoology was replaced in 1900, but its content did not change significantly. While Woldřich described natural history as a "task to interpret in some synoptic union the origin, existence and decay, mutual relationship and purpose of mentioned natural things", Medić indifferently explained that "zoology belongs to biology, the science of organic natural things in general". After listing the more specialised fields of its study, Medić continued by stating that zoogeography attempts to understand where and how animals are spread across the earth, and also tries to identify the influences that caused this distribution (Woldřich, 1885: 1; Medić, Prica, 1903: 1–2). Accordingly, he emphasised the learning of animal morphology, geographical conditions, and the environments in which they live as part of natural history classes.

For example, Woldřich described a hare as an animal that has "stronger hind legs than forelegs, generally long hairy ears, short or non-existent tail", was hunted for meat, and was harmful to fruit trees. However, the rabbit is simply described as "living underground in southern Europe, especially on the Greek islands". Medić offered a similar explanation: "Their hind legs are longer than their front ones, their ears are large and covered with hair, but their tails are short", affirmed that they were excellent game, but explained in detail the harm they cause – "they damage fruit trees and crops by gnawing at them" – and added that their fur was valuable and that rabbits "live underground" (Woldřich, 1885: 75; Medić, Prica, 1903: 85).

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<sup>9</sup> ABiH, ZVS, 1908, kutija 119, šifra 82-81, Nr. 223607, *Nastavno gradivo iz prirodopisa, što se je uzelo u razdoblju od 1. septembra odnosno 14. septembra do 30. oktobra 1908*; ZVS, 1912, kutija 261, šifra 82-100/5, Nr. 110807, *Nastavno gradivo obragjeno u sjedmičkoj perijodi od 16. marta do 3. maja 1912, u drugom godištu, iz prirodopisa*.

Woldřich described the skeletal structure of snakes in detail. And their habitat was explained thus: “Today snakes live mainly in torrid zones, but there are a few in temperate zones as well. They live on land, but also on trees and in water, although in the latter case they are good swimmers. The first snakes appeared in the Cenozoic Era, but not in large numbers.” While similar to Woldřich’s description, Medić’s anatomical description omitted the historical information and mentioned hibernation – an ecological characteristic of snakes which belong to poikilotherms. Both divided snakes into two subcategories, non-venomous and venomous, and recommended a venomous snake’s bite should be treated by using a tourniquet to prevent the venom from spreading through the bloodstream (Woldřich, 1885: 128–130; Medić, Prica, 1903: 145, 148–149). Medić did not necessarily describe the geographical environments of animals in more detail than Woldřich, but focused on how animal ecology affected readers of that time. In addition to illustrating the characteristics of animals and the environments in which they lived, the writers referred to their relationships with humans.

Thus, we strongly assert that an ecological perspective of natural history education was considered, but the concurrent anthropocentric worldview functioned dominantly. Even the exams for students in teachers’ training schools asked about the gains and losses affecting plants related to economic life, such as apples and wine grapes, and as the description of hares in textbooks indicated they were “hunted for meat”, we affirm that ecological relationships were not to be observed without bias to educate character, but should be learned in compliance with value judgments as to human social and economic life. In “Chapter 114: How should humans interact with animals”, the *Fourth Reader* merely mentions the care of livestock; it unhesitatingly explicated that “animals sacrifice their lives and strength for our happiness and profit. Therefore, it is probably right to treat animals nicely and humanely. The more neatly we treat our animals, the more willingly and better they will serve us” (*Četvrta Čitanka*, 1910: 215).

However, the *Fourth Reader* urged pupils to respond differently to vermin such as wolves that were designated as targets for extermination by a provincial government decree dated 27 January 1880 (*Sammlung*, 1880: 403). According to the *Fourth Reader*, “Everyone is afraid of wolves because they are odious, vicious and bloodthirsty. No one trusts them, and wolves trust no one.” They were considered “clumsier than foxes, but full of treachery”, but they were also believed to be very timid. They “have a strong tendency to attack all domestic animals because the latter are like sweet morsels (*slatke zalogaje*) to the wolves. Thus, they cause trouble by attacking livestock.” Moreover, “the wolf that has once devoured a human has a taste for human flesh and follows the army to scavenge corpses, sometimes dragging them out of their graves”. In addition, their “sharp and cunning gaze” proves their “savage nature (*divlju ćud*)”. It recommended that “this evil and noxious beast” should be “completely eradicated (*sasvim istrijebi*)” (*Četvrta Čitanka*, 1910: 97–99). The *Fourth Reader* ascribed the danger of wolves to their taste for human flesh and the damage they wreaked upon livestock. This threat

may not have been unfamiliar to children, whether they lived in urban or rural areas. The official records on the exterminated wolves in each district, found at the Archive of Bosnia, are limited to the early 20<sup>th</sup> century. Figure 3 lists the number of wolves killed and for which compensation was paid in the Sarajevo district from 1899 to 1908 (record for 1906 is missing).

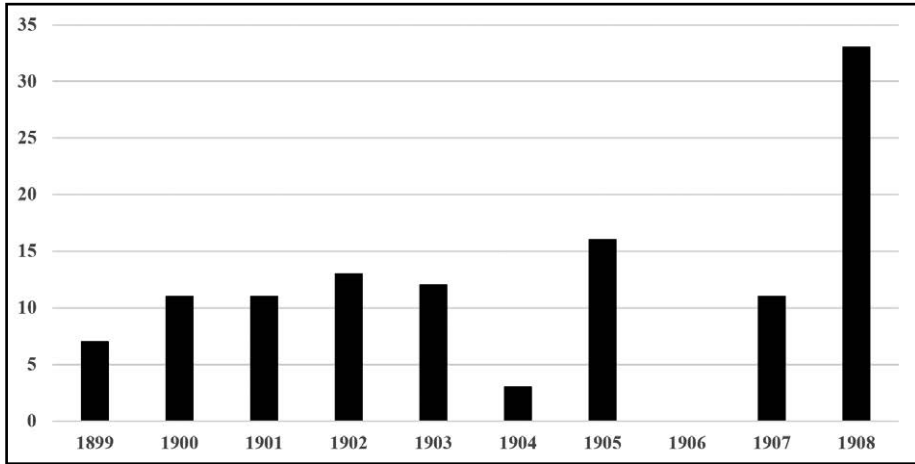


Figure 3: The number of wolves killed in the Sarajevo district for which compensation was paid by the provincial government at Sarajevo.<sup>10</sup>

The reason for the dramatic drop in the number of wolves killed in 1904 is unclear. Nonetheless, we know that in the 20<sup>th</sup> century, more than 10 wolves were killed every year in the Sarajevo district. Six of the 33 wolves killed in 1908 were shot by a resident of Sarajevo city in June. The place of residence (*Wohnort*) of each hunter who received a bounty was also recorded, and in 1903, a person who lived in Sarajevo city first appeared on the record. Although it only records the residence of the person who killed the wolf and not the place where the wolf was killed, we infer that wolves may have been encountered on the outskirts of Sarajevo. Two wolves were reported to have appeared in Kovači near Bašćaršija, the centre of the old town of Sarajevo, on the nights of 26–27 February 1888, and one of them was killed by Hamdija Mehmed Bašić (*Bosnische Post*, 1888: 2). In 1905, wolves were reported to have appeared in the winter in Koševo, Nahorevo, Trnovo, and Vogošća, which are located close to Sarajevo city. Consequently, the Sarajevo district office reportedly distributed 16 guns to the villagers to exterminate the wolves, based on their petition (*Bosnische Post*, 1905: 3). We frequently came across Trnovo in the official records since 1899 as the residence of

<sup>10</sup> ABiH, ZVS, 1900, Nr. 3114; ZVS, 1901, Nr. 26225; ZVS, 1902, Nr. 12258; ZVS, 1903, Nr. 39481; ZVS, 1904, Nr. 36193; ZVS, 1905, Nr. 37580; ZVS, 1906, Nr. 28775; ZVS, 1908, Nr. 23897; ZVS, 1909, Nr. 32927.

wolf-killing bounty recipients, and Koševo, Nahorevo, and Vogošća also appeared in the records as places where hunters resided. In this context, pupils may have swallowed without question the utilitarian story of wolves that the *Fourth Reader* offered. We often encountered this utilitarian perspective of animals elsewhere. For example, on one venomous snake 50 heller coins were imposed as a premium, and 688,297 venomous snakes were exterminated in Bosnia between 1906 and 1909. It was asserted that “the reason we must protect non-venomous snakes, which have a wide variety of species, is because it is beneficial” (*Srpska Riječ*, 1908: 2–3; *Bosansko-Hercegovački Težak*, 1908: 166; ...r, 1910: 113–114). We argue that the principle of economic efficiency may have determined whether an animal was vermin or not, and that this principle was also taught in every schoolroom. However, pupils learned such a utilitarian approach to animals beyond just the classroom, as will be gleaned from the following section.

### Outside the classroom

According to *Organisation*, pupils were not expected to participate in or observe the killing of animals. However, in the teachers’ training schools that trained tutors who would teach natural history, domestic animals were observed as a starting point to develop apperception. While the natural history textbooks mentioned the gains and losses that hares may bring to the economy, the exam questions asked about the “friends and enemies” of apples and wine grapes in a dichotomous way.

Pupils and students were mobilised to fight against that “enemy”. One “enemy” was vermin that damaged apple and other fruit trees. In 1907, schoolchildren were mobilised to collect nests of pests that damaged pear and other fruit trees, and were rewarded for it. The following year, the British Consul at Sarajevo reported that numerous caterpillars appeared on many fruit trees in various places; 500 kronen were awarded to schoolchildren for their contribution to collecting caterpillars and their eggs, with 171 kronen awarded to Sarajevo, 100 to Bihać, 81 to Banja Luka, 78 to Mostar, 48 to Travnik, and 21 to Tuzla regions (*Bosansko-Hercegovački Težak*, 1907: 37; *No. 4305 Annual Series*, 1909: 3; *Bosansko-Hercegovački Težak*, 1909: 255). Every winter, orchardists had to remove and burn caterpillars, and schoolchildren participated in this campaign. A reward was paid every year from the provincial treasury as an incentive to collect vermin’s nests. Furthermore, agricultural periodicals also recommended removing and burning nests as the best way to deal with such pests. Teachers were mobilised alongside the clergy and gendarmes to enlighten the inhabitants using wall panels (*Wandtafel*) that illuminated the developmental stages of pests of fruit trees, and evidently, the Habsburg authorities understood schools to be vital bases for controlling these noxious insects (*Bericht*, 1906: 259; Havelka, 1908: 235). Schoolchildren were mobilised almost every year to collect nests of fruit-tree vermin, and rewards of

495 (1906), 495 (1908), 504 (1909), and 595 kronen (1910) were paid to them in the indicated years from the provincial treasury (*Bericht*, 1907: 84; *Bericht*, 1910a: 106; *Bericht*, 1910b: 95; *Bericht*, 1911: 96).<sup>11</sup> Whether the schoolchildren who had collected these nests and eggs actually participated in their incineration is unclear; however, as observed, we cannot claim that they were completely kept away from killing animals.

Although the names of the fruit trees for whose protection the schoolchildren were mobilised were not concretely listed in the provincial government reports, the 1909 report mentions “fruit trees, and especially in plum orchards”; thus, we justifiably deduce that the schoolchildren were mobilised as part of a programme to control damage to plums. Plums comprised an important export crop in Bosnia. Since the early stage of the occupation, the Habsburg authorities had eagerly implemented a policy of supporting plum cultivation (Kasumović, 2016: 152–155). Figure 4 exhibits the percentage of each crop produced in 1913 before the outbreak of the First World War.

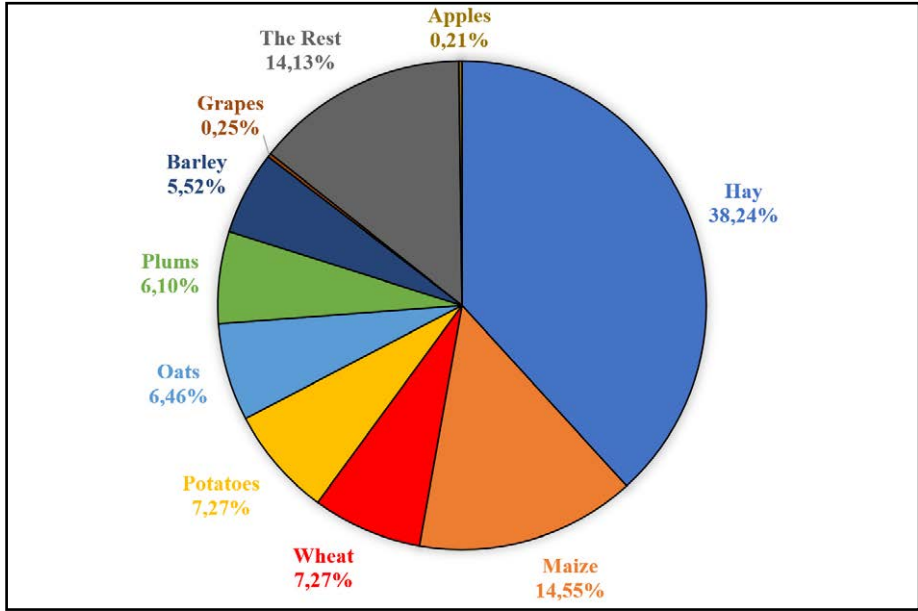


Figure 4: Percentage of crop yields in 1913.<sup>12</sup>

As reflected in Figure 3, plums accounted for 6.10% of Bosnia’s total agricultural production, making it the most productive fruit tree. However, while plum cultivation was primarily carried out in northern Bosnia, the 500 kronen (495 kronen in the provincial

<sup>11</sup> Between 1913 and 1916, schoolchildren were likewise mobilised to destroy noxious insects, although the concomitant reward amount is unknown (*Bericht*, 1917: 59).

<sup>12</sup> See *Bericht*, 1917: 267.

government report) bounty for schoolchildren in 1908 was distributed throughout Bosnia. Therefore, we reasonably infer that schoolchildren were mobilised to protect multifarious fruit trees cultivated in Bosnia – not just plums alone. According to Figure 3, apples accounted for only 0.21% of the total agricultural production, but were the third most productive fruit tree after grapes (0.25%). Apple cultivation, along with plums, was publicly expected to be a significant source of income as it was a fruit tree suited to the Bosnian climate. Apples harvested near Sarajevo city were transported to the mainland of the Habsburg Empire, while apples from eastern Bosnia (Vlasenica and Zvornik districts) and Konjic district were transported by rail to the Adriatic coastal ports of Pula and Rijeka for export (*Die Landwirtschaft*, 1899: 160–162). In 1914, 40% of the 1,841,955 fruit tree seedlings distributed to farmers were apples, exceeding the 27% for plum seedlings (Jarak, 1956: 79–80).

Although we must consider farmers' needs, this data may serve to illustrate how much the Habsburg Empire was inclined towards apple cultivation. The woolly apple aphid was specifically mentioned as a pest on apple trees, and countermeasures, such as destroying affected trees and ordering and distributing young trees, were outlined. As the 1911 provincial government report describes that “special attention was given to the eradication of the woolly apple aphid in 1910 which had been found in various parts of Bosnia and Herzegovina”, it was one of the pests that plagued the entire Bosnia (*Bericht*, 1911: 96). Woldřich's *Zoology* recorded that hares caused harm to fruit trees, particularly apple trees. However, unlike insects that nest arboreally, hares move freely from the surrounding mountains and fields to nibble at apple trees. Accordingly, an instruction was given to erect fences around orchards, but eradication measures like those for noxious insects were not recommended (Havelka, 1906: 252; H-a, 1911: 59).

Another indirect method of controlling pests was the extermination of raptors, i.e. birds of prey targeting small birds. The provincial government at Sarajevo considered this to be of great value in controlling pests of fruit trees as it led to the proliferation of useful songbirds. Sarajevo city installed bird nesting boxes in parks during the winters of 1909 and 1910, and in 1910 substantial rewards were paid for the eradication of raptors near Sarajevo. The installation of bird nesting boxes in many places that led to an increase in useful small birds was advocated (*Bericht*, 1911: 96; *Bericht*, 1917: 60). The provincial government contrived again to mobilise schoolchildren for the extermination of raptors by seizing their eggs. However, this method also concerned the local offices. In a proposal dated 27 June 1904, Prnjavor district pointed out the risks associated with eradicating the eggs of useful birds such as jackdaws, hoopoes, woodpeckers, blackbirds, and thrushes. Against the counterargument that such dangers could be avoided with proper guidance from teachers, the district report refuted the efficacy of such a prevention measure owing to the poor discipline (*Unerzogenheit*) of schoolchildren and their parents and the inability of teachers to supervise the children when they collected eggs based on the fact that the chicks were already killed

(*Zerstörung der Brut*).<sup>13</sup> Whether this concern was seriously considered in the provincial raptor control measures is unclear; however, we explicitly interpret based on this proposal that schoolchildren were already mobilised to exterminate raptors' eggs, and that the children's actions on the spot – not under the supervision of teachers as in classrooms – went beyond the scope of the intended raptor control measures and led to the destruction of other birds' eggs.

Considering that the mobilised schoolchildren were referred to as *Schuljugend* in German in provincial government reports and other documents, they were not necessarily primary school pupils.<sup>14</sup> We strongly assert that the classification of beneficial and noxious animals, which was established within the framework of the Habsburg economic and financial policies, was intentionally instilled in the children by informing their perception of nature through school education. The previously described argument of the Prnjavor district – which outlines that the absence of teachers at the extermination site made it impossible for teachers to provide proper guidance – articulately denotes that teachers may have taught their pupils on raptors' eggs in classrooms to enable them to easily exterminate them. Teachers were also mobilised to instruct pupils in the developmental stages of pests inflicting damage on fruit trees. In return, a premium was awarded to schoolchildren from the provincial treasury, just as it was for exterminating wolves.

## Conclusion

In Bosnia, which fell under the rule of the Habsburg Empire from 1878, interconfessional primary education commenced in 1879. In 1909, two curriculum courses were introduced: a 92-hour-week course (four years) and an 81-hour-week one. In 1911, compulsory education was introduced and a teachers' training school was opened in Sarajevo in 1886. This school served to supply teachers to all primary schools in Bosnia as the only teachers' training institution until 1911. In the early 20<sup>th</sup> century, the number of newly founded primary schools in Bosnia increased rapidly. Accordingly, industry and commerce progressed. In this context, the emphasis in Bosnia was placed on educating self-reliant citizens, that is, by inculcating character. Primary school teachers were required to teach each subject congruent with this overarching educational purpose. Even though the objective of the education guideline *Organisation* (1909) was arithmetic education, it explained that human beings should be helped to think multilaterally and act independently “for civic life”.

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<sup>13</sup> ABiH, ZVS, 1904, Nr. 9520.

<sup>14</sup> According to Nikola Jarak, although he never cited any evidence, it was the pupils in primary schools that engaged in the control of pests on fruit trees (Jarak, 1956: 109).

In this educational context, learning about nature was meant to be done through observation. Beginning with learning about the natural environment is also advised as it is closely related to children's daily lives. This reflects the educational perception of the time, which aimed to create character that was intellectually and morally correct through the accumulation and association of correct representations. Thus, we assert that the educational way to "correctly" observe the animals did not function as a starting point to ponder humans' symbiosis with animals and nature, but instead simply as an educational step to achieve the status of the ideal human being shared by Bosnian society at that time.

However, this character, educated through the accumulation and association of correct representations, did not necessarily have behaviours guided by an objective and impartial principle. The knowledge about the benefits each animal has to human economic activities was considered salient. In natural history education at teachers' training schools, the understanding and learning of the relationship between nature and humans was biased owing to human economic interests. Ivan Woldřich's *Zoology* and Moja Medić's *Zoology*, which were used as textbooks at teachers' training schools, briefly describe the damage inflicted by hares on fruit trees, which overlaps with an example of a hare caught in an orchard, narrated by a pupil in a class at Tuzla's primary school. In this way, while the educational emphasis was placed more on the relationship between animals and pupils' everyday life, the primary school students could acquire basic knowledge about domestic animals. In particular, the balance sheet pertaining to the activities of wolves or other animals functioned as the educational principle for the children, as the residents of Lower Vogošća had petitioned for the extermination of wolves and wild pigs that threatened their livelihood.

The pupils may have been familiar with the extermination of vermin such as wolves. For example, according to a provincial government decree in 1880, more than 10 wolves were exterminated every year in the Sarajevo district in the early 20<sup>th</sup> century. The treatment of wolves as threats was justified by arbitrarily citing their "savage nature". Animals that were acknowledged as "enemies" of apples and grapevines included various caterpillars. They were similarly exterminated, and schoolchildren were mobilised for this action with the lure of a reward. Damage to plums and apples, which was particularly significant in fruit cultivation in Bosnia, led to economic losses. Therefore, raptors that preyed on songbirds contributing to the extermination of caterpillars in question were considered harmful. Consequently, schoolchildren were mobilised to exterminate their eggs. This provided pupils with an excuse to kill animals, because such extermination was neither unbridled nor was considered to have a negative impact on the development of moral emotion. As Batinić argued, this is an anthropocentric view of animals in that it determines their life, death, and existence solely in relation to economic profit without holistically considering the ecosystems forged between humans, animals, and plants.

Conversely, as Jurišić argued, we could explain the reason why the textbook taught the children not to have the same “savage nature” as wolves as a way of encouraging them to develop improved sociability. However, wolves were not merely killed in the text; children were mobilised to kill animals to the extent that their physical capabilities allowed. If we apply the focus on animal death, we argue that educational discourse on animals functioned as a means to teach the principle for distinguishing “us” from “others”, instead of as a way to foster sociability among children. Furthermore, considering the culturally and socially constructed identification between children and animals, we claim that education may have utilised children’s killing of animals to sever the latter. As indicated by extant research, such an identification actually proves nothing but the fact that all beings (human and nonhuman) exist only “before the law” at the biopolitical level, as Cary Wolfe has also argued (Wolfe, 2013: 10). We infer in this context that, through the binary opposition between the threatener (vermin) and the threatened (human), the animals’ extermination may have been educationally justified as a watershed to help children shed their animality and become human.

What is the “law” here? Nikola Visković categorised the relationships humans have with animals into six types, one of which is the economic relationship.<sup>15</sup> We justifiably argue that the early 20<sup>th</sup> century in the educational field in Bosnia encompassed a time when an economic relationship with animals was dominant. We should not forget the fact that the behavioural pattern of dividing animals (or plants) into friends and enemies and eliminating the latter based on such economic rationality was concurrently applied to humans, particularly schoolchildren in Bosnia. In early 20<sup>th</sup> century Bosnia, “excess” in education was criticised by discussing neural activity with the metaphor of energy. Wasting energy strains the body and mind while hindering the healthy growth of children. This hindrance was labelled as an evil that brings to harm not only individual children but society as a whole. For example, Avram Altarac, a teacher who graduated from the teachers’ training school at Sarajevo, referred to it in his article as a balanced education, or life as an “economy of human being” (Altarac, 1913: 6–7). Anything that harms the physical and mental growth should be completely eliminated, he believed, as it would negatively impact society and the economy. The relationship between animals and humans in the early 20<sup>th</sup> century in Bosnian education was therefore determined firstly by an economic perspective.

Thus, we conclude that the children learned natural history in which the value of (human and nonhuman) life was calculated based on the economic “law” or economic efficiency of what Dinesh Joseph Wadiwel called “metabolic labour” (Wadiwel, 2023: 95). However, an anthropocentric hierarchy of life was implicit in that the harmful life, that is, vermin, was assumed as being destined to lose its life, unlike children.

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<sup>15</sup> The six relationships are economic, symbolic, artistic, sentimental, scientific, and ethic (Visković, 1998: 11).

Hereafter, we must investigate how the economic policy of the Habsburg Empire and education on animal death in Bosnia interacted with one another. We believe that this research will serve as a stepping stone to explore how capitalism affected the ecological perceptions of the Bosnian people.

### Research data statement

I state that this article is based on archival sources, which are cited in the list of references.

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### **Živali v izobraževalnem diskurzu habsburške Bosne in Hercegovine v zgodnjem 20. stoletju**

Članek vsebuje analizo odnosa med otroki in živalmi v habsburški Bosni in Hercegovini od leta 1878 do leta 1918, pri čemer je posebna pozornost namenjena vlogi živali pri osnovnošolskem pouku naravoslovja. V zgodnjem 20. stoletju, ko se je število novoustanovljenih osnovnih šol v Bosni močno povečalo, je bilo težišče osnovnega izobraževanja namenjeno vzgoji samostojnih državljanov. Z drugimi besedami, šolstvo je težilo k razvoju značaja utemeljenega na »apercepciji«, kot so jo zagovarjali Gjorgje Glibonjski, Bogumila Čehovićin in Stjepan Basariček. Učiteljski kandidati so se na predajanje naravoslovnih znanj pripravljali na sarajevskem učiteljskišču, kjer so bile v ospredje postavljene značilnosti posameznih živali, še zlasti v luči njihove relevantnosti za človeka. Pouk naravoslovja naj bi na otroke prenašal idejo o tem, da je različna življenja možno ovrednotiti na podlagi njihovega gospodarskega potenciala.

Otroci so se skladno s posredovanimi znanji učili smotnosti ubijanja nekaterih živali in se v tem tudi preizkušali, o čemer pričajo obravnavani viri. Čitanke za osnovne šole so te usmrtitve upravičevale z gospodarskimi razlogi. Šolarji so bili mobilizirani, da neposredno in posredno iztrebljajo gosenice in ujede, ki so škodile gospodarsko pomembnim sadnim drevesom, za kar so prejeli nagrade – podobno kot odrasli za lov na volkove. Gospodarsko načelo, po katerem je vsako življenje prejelo oceno vrednosti, je učencem zagotavljalo opravičilo za ubijanje živali, saj naj bi bilo takšno iztrebljanje obrzdano in naj ne bi negativno vplivalo na razvoj moralnega čuta.

Sklepamo lahko, da je bil odnos med živalmi in ljudmi v osnovnem izobraževanju Bosne in Hercegovine zgodnjega 20. stoletja določen z ekonomskim pogledom na življenje, ki je gospodarski vrednosti dajal prednost pred drugimi oblikami doživetja živih bitij.



## Agents of the Air: Pigeons in the Political and Social Networks of Habsburg and Post-Habsburg Hungary

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This paper explores human-pigeon relations in Habsburg and post-Habsburg Hungary. During the First World War, pigeons functioned as both a symbol of peace and a tool of warfare used for communication. Moreover, the birds had their role in post-war irredentist and modernist politics. The paper also foregrounds the social aspects of pigeon breeding, ranging from the elite circles of competitive shooting, to organised animal protection and the intimate domestic bonds in households.

▪ **Keywords:** more-than-human history, carrier pigeons, animal welfare, pigeon shooting, pigeon racing, Austro-Hungarian Monarchy, First World War

Članek raziskuje odnose med ljudmi in golobi v habsburški Ogrski in posthabsburški Madžarski. Med prvo svetovno vojno so golobi služili kot simbol miru in hkrati kot vojaško komunikacijsko sredstvo. Ptice so imele svojo vlogo tudi v povojni irredentistični in modernistični politiki. Članek izpostavlja tudi družbene vidike gojenja golobov, ki segajo od elitnih krogov tekmovalnega strelstva do organiziranega varstva živali ter intimnih vezi v gospodinjstvih.

▪ **Ključne besede:** več kot človeška zgodovina, golobi pismonoše, dobrobit živali, streljanje golobov, golobje dirke, Avstro-Ogrska monarhija, prva svetovna vojna

### Introduction

Fifteen years prior to writing this paper, my friend and then housemate, who was to become a social scientist, Lidis Garbovan, saved a pigeon during a cold period of the winter of 2010 in Budapest. On day one, the bird looked hopelessly sick tilting its head and sitting like hurt birds do, yet recovered in the warm flat, began to eat seeds and simply flew away through the open window after just a couple of days. My friend's decision to bring the pigeon upstairs, the resilience of the bird and the ease and calmness with which it adapted to the flat with us being around surprised me. At that time, I did not suspect the long and deep history behind what had transpired. As Tamm and Simon (2025) have recently argued, more-than-human history is not only a new trend in historiography. Bringing species other than humans into historical analysis goes beyond the current boundaries of the discipline of history. Tamm and Simon make their arguments based on Éric Baratay's demand for not only telling the human history of animals, but pushing ourselves into a non-anthropocentric point of view in historical narrative, and on Ewa Domańska's and Anne Tsing's position on seeing politics, society, economy, culture as a web of life that involves many species (Tsing, 2015; Domańska, 2017; Baratay, 2022). While in theory it may be tempting to

dismiss these bold claims by stressing the enormous gap between human and animal minds, in research practice the bridges between human and other species are many (e.g. Barcz, 2018; Nemes, 2024; Kaucká, 2025).

This paper joins the line of research that is interested in relating the history of social and political realms to non-human beings. It argues that the history of the presence of pigeons in society and in human settlements of various type is one of those bridges. Theoretically, the aspects of the history of humans-pigeons to be presented here confirm Latour's idea that animals are non-human actors in networks resulting in social and political transformations at the descriptive and interpretive levels (Latour, 2004, 2017).

As Johnston (2000) shows, while pigeon meat had been part of human diet since the end of the Ice Age, its importance declined by the mid-19<sup>th</sup> century even compared to early modern times in Europe. A number of studies have pointed out pigeons as salient species interacting with social and cultural change and influencing scientific and political developments in contemporary life worlds (Janiga, Johnston, 1995; Dobeic et al., 2011; Jerolmack, 2013; Scarf et al., 2016; Soh et al., 2020; Dunn et al., 2022). Popular science journals have addressed the contradiction between associating pigeons with danger, the damage their excrements cause to the urban built environment, and the historically rich relationship between humans and pigeons who have the possibility and feasibility of co-habitation at their core (Portugal, 2022; Thompson 2025). Maria Martelli has recently emphasised that cities are multi-species spaces, of which pigeons are constituent (Martelli, 2022). However, there are just few historical studies that take pigeons as their subject, and these exclusively relate to military history (Szikora 1983; McCafferty, 2002; Snyders, 2015; Corera, 2018; Macalaster, 2020). These works include many areas and countries such as Australia, New Guinea, the USA, and France.

Looking at some relatively widely known episodes from the entangled past of pigeons and humans is a way to identify historical research questions in the context of Hungary within the Austro-Hungarian Empire, as well as post-Habsburg Hungary. The pigeon, as a symbol of love and war, had already appeared in ancient Akkadian culture. In the version of the great flood story that was canonized to become part of the Bible, a white dove was a messenger notifying Noah about the new peace with God that meant the end of the catastrophic flood. The image of the pigeon as the symbol of peace became part of the medieval world as well. Notably, the capacity of one of the key figures of religious reform, St. Francis, to communicate with pigeons in the woods was yet another sign that the animals convey divine messages. Yet, when it comes to historical memory of pigeons during the 20<sup>th</sup> century, war related stories outnumber those about transcendent peace. Among the stories that ask for contextualisation, the wartime deeds of the birds named Cher Amie and Paddy are among the best-known. In the last weeks of the First World War in France, Cher Amie played a key role in saving a nearly 200-strong unit of USA infantry from friendly fire. The bird managed to get through artillery fire, reaching the army command with a note tied to one of its

legs – the one that was not damaged. Decades later, the pigeon Paddy carried the first news about developments during D Day in June 1944 back to England from the coast of Normandy. Notably, these birds served the Western alliance. Swedish artist Eva Marie Lindahl recently emphasised that as opposed to anthropocentric understandings, the birds' life was ruined by what was termed heroism (Lindahl, 2014). Were there pigeons used by armies of Germany and Austria-Hungary during the First World War? How much did publics in the homefront know about this? Were the bird-soldier celebrities forgotten or were their actions undisclosed in Austria-Hungary? Another context for the stories of Cher Amie and Paddy is the way their behaviour was understood as a skill to be trained.

Another tragic episode of pigeon-human history, the extinction of the passenger pigeon (*Ectopistes migratorius*), likewise happened during the First World War. This species was a migratory bird that spent winters in the Caribbean while returning to the eastern part of North America in spring. It was so well adapted to feeding on fruits and invertebrates of deciduous forests that it made up a large proportion of all birds of North America, and perhaps its number reached the order of billions much before *Homo sapiens*. Some of the Native American nations relied on hunting pigeons to a certain extent, but large-scale hunting threatening the population of pigeons began when squab meat was turned into a cheap bulk commodity with the arrival of railway traffic across the continent (Schorger, 1972; Greenberg, 2014). Moreover, hunting passenger pigeon became a socially prevalent form of sport around the same time, in the 1860s. In four decades, the species went extinct in its natural habitat and then in zoos as well. Contemporaries took notice of the event and were scandalized by it when it was already too late. This episode gives a broader context for pigeon hunting associations and the debate about it in Hungary around the turn of the 19<sup>th</sup> and 20<sup>th</sup> century, showing the background for North Americans' interest in taking part in pigeon shooting competitions. The extinction of two other pigeon species also occurring in the 1900s points out that pigeon species were present and important to native diets in many regions of the globe, and also that the quick and tragic erasure of these animals was not limited to an extreme example. The introduction of domestic dogs and cats was the indirect consequence of colonialism that caused irreparable ecological damage to pigeon populations in a number of islands known as the Solomon Islands east of New Guinea. Among the colourful ground pigeon species of the region, those known in taxonomy as *Microguora meeki* and *Gallinula salomonis* died out due to the arrival of feral cats and dogs in the mid-19<sup>th</sup> century with European explorers and collectors (Mayr, Diamond, 2001: 32; Walker, 2007).

The third well known episode that reveals much about the historical context of pigeon-human relations is the publication of Charles Darwin's version of the theory of evolution in 1859. Darwin was in the middle of writing a comprehensive study of the natural history of pigeon breeds and of orchids, when he was informed that a fellow scientist, Alfred Russel Wallace, was also developing a theory of natural selection (Slotten,

2004: 121–122). As a self-conscious natural philosopher, Darwin put his work aside and wrote *On the Origin of Species* using his results about pigeons as examples in his argument. His detailed research results on pigeon variation were eventually published in Darwin's book titled *The Variation of Animals and Plants under Domestication*, published in 1868. For Darwin, working on his theory of evolution, the hundreds of variants bred from the species provided a database for studying variation in traits. As explains Katrina van Grouw, a museum curator specialised in ornithology, the challenge for him was to show why and how the growth in diversity can occur while selection also takes place (Grouw, 2018).

Darwin drew on the experience of breeders fascinated with certain excessively expressed physical features as inherited traits, and the breeding experience of pigeon racers regarding the skills of orientation and speed of carrier pigeons. Darwin concluded that instead of a number of extinct pigeon species, the ancestor of all the pigeon breeds was a single species that is still around, the rock pigeon. He also traced the cultural history of the domestication of pigeons to ancient Egypt. Darwin's science brings attention to the widespread presence of pigeons in households across Europe as well as to the emerging networks and social life among their breeders. This is the context for the second section of this paper that focuses on the social roles of pigeon breeding in Austria-Hungary. We will also step into the realm of households and see how pigeon-human relations worked on a one-to-one basis and at the level of the family. The afterlife of Darwin's experiments with pigeons is also a reason to focus on the social and political meanings of pigeon breeding specifically in Hungary. Recent genetic studies found that the Pannonian Basin features exceptional genetic diversity; thus, it is likely to be one of the regions of Eurasia where pigeon breeding has had the longest history (Balog et al., 2025).

Carrier and homing pigeons are the key breeds when it comes to the wartime roles and the post-imperial political importance of pigeon-human histories. Pigeons, because of their special orientation skills, were used as messengers and as agents carrying secret insights across borders as well as displaying the extent of total mobilisation and military capabilities. The mid-19<sup>th</sup> century was the time of a pigeon related sport, the pigeon races that involved hundreds of pigeons navigating across hundreds of kilometres motivated to return to their mates and home base. These activities were of interest for the armies especially after 1870, when pigeons were dropped from balloons operated across enemy lines during the war between Germany and France (*Pesti Hírlap*, 1928). The close relationship between the pigeon and its human breeder-owner, as well as the special orientation skills of pigeons made pigeon race events worthy of the attention of the military. The importance of pigeon races for the military is illustrated by the fact that Lajos Dirner, a doctor from Budapest and president of the Columbia Association, was awarded the Knight's Cross of the Order of Franz Joseph for his achievements in the field of racing and training homing and carrier pigeons (*Budapesti Hírlap*, 1906).

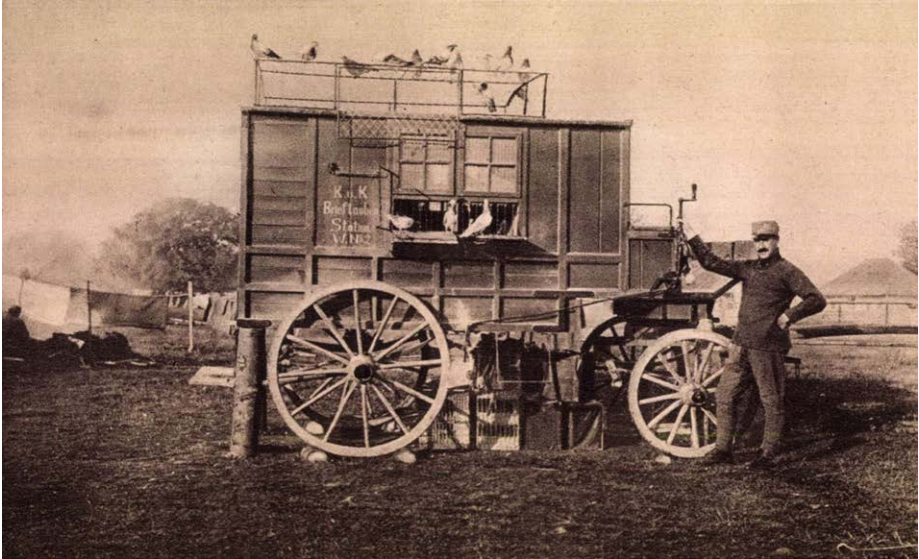


Figure 1: Pigeon wagon photographed for a Hungarian media outlet by Zsigmond Vas, 1918. Source: *Az Érdekes Újság* 1918. no. 4. 112.



Figure 2: A soldier of the Austro-Hungarian Army holding pigeons, 1917. Source: Fortepan/Österreichische Nationalbibliothek.

The fortitude of pigeons also drew the attention of scientists wishing to understand the workings of muscles, such as Albert Szent-Györgyi, a Nobel Prize winning Hungarian researcher (Kiss, Vajda, 2012: 28). Besides their muscles, behaviour was also a key question: why do pigeons return at any cost? In the 21<sup>st</sup> century, GPS-based studies revealed that pigeons have specific individual roles within a small flock manoeuvring together (Yomosa et al., 2015). Although scientific works did not address this issue in the early 20<sup>th</sup> century, participants in pigeon races knew it from experience: the pigeon cove is a safe source of food and, perhaps more importantly, the place where reuniting of pigeon pairs was possible. If the male and female can see and touch one another through their cages, it will become a strong motivation for them to return. Recent research has revealed that male pigeons do not react to stress as much as female pigeons do. Males follow routine behaviour in dangerous environments, while females adapt to increasing risks and pass on modified genes to their offspring (Calisi et al., 2018).

Building on the already considerable literature on the role of pigeons in frontline operations, the next section foregrounds the symbolic appearance of pigeons in interwar politics of irredentism, and in expressions of fear of a new war as well as the ways veterinary science came to be applied in the service of battlefield operations involving pigeons. Visual imprints taken from contemporary newspapers as well as from contemporary photographs likely taken for demonstration and propaganda help us a great deal in addressing these aspects.

### **Tools of war, symbols of peace: Pigeons in imperial and post-imperial history**

A 1926 article in the *Budapesti Hírlap* newspaper tried to capture the impact of the war: “The terrible struggles of the World War taught us that what we had only known from poetic descriptions of the pigeon’s wings was a sad reality, and that the pigeon, the sacred bird of peace, was one of the instruments of destruction, because apart from the courier, the postman, the telephone, the telegraph, the radio, it was one of the most important messengers [...] That is why the breeding of carrier pigeons has flourished in every country” (*Budapesti Hírlap*, 1926: 8).

It is possible to piece together some episodes that show how the integration of pigeons into the military complex was building up in the decade before the war. In October 1908, *Pesti Hírlap* published an article on pigeons being used to take aerial photos for military purposes, stating that “The pigeon, the tame pigeon is no longer the symbol of peace, but rather that of war: it does not hold the olive branch but carries the confidential correspondence of armies at war” (*Pesti Hírlap*, 1908).

This link was reinforced by anecdotal news, even if the action was set in a remote area, such as one about the winged spies. We read that “Jules Verne has a novel with a Hungarian theme, *Mátyás Sándor*, in which Hungarian overlords plot against Austrian

absolutism in Trieste. In the book, the conspirators use a homing and carrier pigeon to convey their news, and this becomes their traitor. Perhaps the idea that the police in Trieste banned the keeping and sale of homing pigeons in its territory came from this fantastic novel. A few weeks ago, a merchant from [the town] Isola, who was engaged in small-scale pigeon breeding, was subjected to extremely unpleasant investigations by the authorities, night searches, because he had bought several pigeons to a fair which were later identified as homing pigeons” (*Budapesti Hirlap*, 1908).

The veterinary laboratories in Budapest also played an important role in “mobilising” the pigeons’ abilities for use in the field. Because of the military implications of pigeon keeping, experiments focused on the pigeon’s brain, and more specifically the link between brain damage and the ability to fly. The experiments at the medical university of Budapest included a purpose-built apparatus to measure the force exerted by the animal’s head and wing movements, and a padded resting place to protect the birds undergoing the experiments. The results showed that the pigeons’ motion relies so heavily on reflexes that it was even possible to remove a significant part of the brain if necessary. The brain areas left intact took over the functions needed for eating and flight within weeks. In other words, the pigeon proved to be a good case for neuroplasticity, especially when cared for (Reusz, 1905).

On the face of it, photographs presented to the public during the war tell that the army of Austria-Hungary had a refined system for applying pigeons in the front line and also that they wanted the public to know about it. Since pigeons need to have their artificial nests stationed where they can return from some distance, using pigeons as messengers makes most sense in situations when dramatic breakthroughs or failing attempts to break through along relatively long-held positions are to be expected. Hence, it is not surprising that the photos and the news concerning pigeons used by the Austro-Hungarian army represent locations on the Italian front, such as Gorizia, Trento, and Veneto regions. In August 1917, one report talked of the use of pigeons in transmission as a novelty on the Italian front:

In previous battles, relay runners conveyed the most urgent orders and reports in the ancient manner. Now they tried another ancient method, and it was successful: carrier pigeons replaced telephone lines; the pigeon loft is one of the most important aids to the frontline troops and command; a special non-commissioned officer looks after the precious birds, many of whom have already died a heroic death: we can take comfort in the knowledge that the military mail service and this ancient bird of sacrifice and peace may have saved a soldier’s life. (*Pesti Napló*, 1917: 5)

A news piece from early 1918 reported a propaganda lecture about the role of animals in the war (*Budapesti Hirlap*, 1918: 7). Indirect evidence suggests that the

use of pigeons became widespread in the second half of the war. There was a ban on keeping pigeons already in early 1916 (*Erdővidék*, 1916). The decree warning local authorities about the possible landing of spy pigeons in the homefront dates to early 1918 (*Maros-Torda Megyei Hivatalos Lap*, 1918). Although pigeons were not named in official gazettes listing soldiers to be decorated for their deeds on the frontline, we find a handful of soldiers who received decoration as commanders of pigeon units in the same year (*Budapesti Közlöny*, 1916: 3).

Despite all this, pigeons were mentioned more frequently as symbols of peace in the press in wartime Hungary. The image of the pigeon as a symbol of peace also appeared in more or less refined poems at various points of the war. Lajos Zilahy was a young writer in uniform, fighting in the area of Lviv in January 1915, when he published a poem titled *Consolation (Vigasztalás)* in a daily of a Hungarian town (*Esztergom és Vidéke*, 1915: 1). He was trying to console the wounded soldiers by reminding them of the idyllic rural scene, featuring white pigeons, that they shall one day experience again, and of the pride they will feel recalling their wartime bravery.

You will have your land and your little house,  
Two mulberry trees in your lovely yard,  
A clean room and a small room,  
And a picture of Ferenc Jóska on the wall –  
Snow-white doves in their colourful cages,  
[...]  
You will be happy, happy little kings, then in the evening silence you  
will kiss,  
The ragged uniform soaked in blood! (*Esztergom és Vidéke*, 1915)

In 1918, Béla Jánossy, a politician from Vas County published a small volume of poetry entitled *Bloody Pigeon (Véres galamb)* that included the lines:

The flutter of your wings  
Pumps blood through Satan's heart  
And his blood that flows like a river  
Falls on the heads of the rouges  
Who have cut your wings  
[...]  
Free flutter of your wings  
Will be free forever! (Jánossy, 1918)

Jánossy joined the ranks of those who interpreted the war as a purge leading a better world of eternal freedom.



Figure 3: A carrier pigeon being released from a port-hole in the side of a tank near Albert, 9 August 1918. It is a Mark V tank of the 10<sup>th</sup> Battalion, Tank Corps attached to the III Corps during the Battle of Amiens. Source: Imperial War Museum, IWM (Q 9247).

One of the most tangible, although coincidental, manifestations of the contradiction between the association of doves with peace and the use of pigeons as tools of total warfare was the type-name of the fighter airplanes used by the German and Austro-Hungarian armies, the *Taube* (meaning pigeon in German language), which were easily identified based on their white colour, to add one more element to the paradox. Yet it was a piece of news report echoed in a number of dailies and weeklies across Hungary that used this duality most consciously and subtly. A widely cited and circulated report was about German artillery destroying what we would call tanks today and what were then termed armoured automobiles or caterpillars employed by the British troops on the Western Front. The description of the fatal engagement ended with reporting that the crew of one of the tanks that took a direct hit managed to let out a pigeon before their moment of doom. Given the cultural history of the sight of doves, one may assume that many read hope into this episode: the pigeon of peace escaping death and destruction (*Magyarország*, 1916: 5). At the same time, it was not an impossible scene. There is photographic evidence of tank crews using pigeons to communicate and releasing them through a designated hole in the front section of the tank.

After the First World War, the association between pigeons and political goals did not disentangle. Rather, it gained a new facet through assigning a new political meaning to pigeon racing, a mixture of modernity, patriotism for reconstructing the nation and irredentism, challenging the post-war territorial order. Pigeon races grew to a major scale and reached their greatest popularity between the two world wars. On occasion, thousands of pigeons flew on the course, usually between the capital and a rural town (*Budapesti Hírlap*, 1931). As a January 1927 issue of the *Friss Ujság* put it: “Pigeon breeding is a branch of poultry breeding in itself, bringing together specialist breeders. And it puts pigeon breeding at the service of the country and the nation. We still remember the service of homing pigeons during the World War, which brought news even when we no longer had any means of contact. The pigeon fancier must be clear about what he wants and why” (*Friss Ujság*, 1927: 4).

In the interwar period, associations of pigeon breeders and racers operating at the local level abounded. The area of the Great Plains was the most important one in this regard. Some of these associations had their own periodicals, such as the *Házi Szárnyasaink* (Our Domestic Fowls) managed by the Keletmagyrországi Baromfi- és Galambtenyésztők Egyesülete (Association of Poultry and Pigeon Breeders of Eastern Hungary), which was based in Debrecen, and *Postagalamb Tenyésztők Szakértésítője* (Pigeon Breeders’ Gazette; 1931–1944) owned by the national association called Hungaria Postagalambtenyésztők Országos Szövetsége (Hungarian National Association of Pigeon Breeders), edited in the small town of Derecske near Debrecen. The latter periodical had a headpiece with irredentist imagery: two pigeons appeared to guard elements of the pre-1918 coat-of-arms, the three hills symbolizing the different mountain ranges of the Carpathians, with the cross on top of the middle one, while a third dove flew over the hills, probably symbolising an ideal, peaceful situation.

The content of some of the front-page articles of these breeders’ journals became overtly political in 1938 at the prospect of Hungary re-annexing territories that had become part of Czechoslovakia and Romania in 1919. Otherwise, the tone of reports was critical but optimistic about progress achieved in the field of pigeon racing. The greatest, unsurpassable opponent was Belgium, where pigeon breeding was a widely practiced activity with the highest achieving homing pigeons born there year after year. The Hungarian team achieved the 6<sup>th</sup> place in the first pigeon race Olympiad held in Belgium in 1938, coming before England, Denmark, Czechoslovakia, and Poland in terms of total points gained.

There were other spectacular gestures involving pigeons filled with political meaning. One such event took place in Budapest in early September 1937. Amid news of Japan’s attack on China and the threat of a world war emerging out of civil war in Spain, during the congress of the International University Association one hundred white doves brought from the countryside were released with the congress’s message of peace. The author of a report on the event in *Képes Vasárnap* (Sunday Images) pointed out that pigeons

will attack birds of prey that take their chicks even if it means sacrificing their own lives (*Képes Vasárnap*, 1937: 21). In this case, pigeons were associated with heroic acts of self-defence and bravery.

Pigeons were used as tools of war during the First World War by the army of the Austro-Hungarian Empire and as symbolic agents of post-war politics of reconstruction, irredentism and anxiety in Hungary. In contrast to descript news well-known to contemporaries about the deeds of Cher Amie and other pigeons deployed in various frontlines of the Great War, research has not revealed any specific stories reported in Hungarian about a daring act of some pigeon in the Austro-Hungarian army. It does not mean there were no incidents specifically described, perhaps they are yet to be uncovered. In fact, such lacuna would be surprising in the broader context of the presence of pigeons in rural and urban Hungary, and the comparatively advanced bird protection movement in place in the early 20<sup>th</sup> century. The purpose of the following section is to provide this broader context also involving the social patterns behind breeding, knowing, protecting, and hunting pigeons.

### **Value, bonds and social status in pigeon–human interaction**

The tragic scales of commodification of the passenger pigeons and the stories of the bravery and gallantry of pigeons during war occurred nearly contemporaneously, yet they seem to indicate two different extremes on the interspecies bonding vs. alienation axis. The scientific fascination with diving into the natural history of the diversity of pigeon breeds would rank somewhere in the middle on this scale. Daša Ličen has recently argued that pigeon shooting was one of the constituents of the discourse of respectable society setting itself against the “inhumane” acts carried out by the lower echelons of society (Ličen, 2025: 124–125). What was the situation in the late 19<sup>th</sup> and early 20<sup>th</sup> century Hungary in this regard?

There are indications of the ubiquity of pigeons in contemporary rural and urban Hungary. Such is a comment in the paper of pigeon breeders stating that pigeon keeping was not only practiced in rural areas. “If we look at the sporting branches of pigeon breeding, and breeding pigeons as pets, we will find that it too is more suited to the farmer’s home than to the smoky factory chimneys of the cities, where there is neither space nor a real understanding of the needs and wants of the animals” (*Magyar Galambtenyésztők Lapja*, 1938). From the 1890s onwards, advertisements where breeders offered racing pigeons appeared regularly in dailies, specialised publications and hunting magazines. Breeders’ networks and associations, and the exhibitions organised by these played a key role in shaping the value of pigeons. People who kept pigeons became involved in networks through the events, such as races and exhibitions, and were, at least partly, motivated to take part by the social importance of these networks.



Figure 4: The gate of the Szekler National Museum in Sepsizentgyörgy with a pigeon motive and pigeon holes in the upper part [Sfântu Gheorghe]. Source and courtesy of Csaba Zahorán (4 January 2026).

As noted by a 19<sup>th</sup> century geographer and archaeologist of the Szeklerland, a region named after its Hungarian community and situated at the foot of the Southeastern Carpathians, pigeon keeping was so widespread that the image of pigeons and pigeonholes became a common element of folk ornament (László, 2023).<sup>1</sup>

The names of different breeds indicate the places where they were first standardized, such as *kőrösi* ‘of Nagykőrös’, *debreceni* ‘of Debrecen’, *makói* ‘of Makó’, *ceglédi* ‘of Cegléd’, *budapesti* ‘of Budapest’, *egri* ‘of Eger’, *komáromi* ‘of Komárom’. These locations are in the Great Hungarian Plains and along the Danube, meaning that this geographical zone was the main area of pigeon breeding. The genetic studies of Katalin Balog and her colleagues (2025) confirm this and also show that these activities had a longer history than elsewhere in Europe.

The underlying narrative of newspaper articles discussing pigeon breeding was that the field was underdeveloped when contrasted with potential importance. In particular, the authors referred to the rudimentary pigeon meat market, while emphasising the potential of the business, citing examples mainly from the UK and the USA. This basic tone remained unchanged between the end of the 19<sup>th</sup> century and the 1930s. For example, in the winter of 1883, a journalist for the *Politikai Ujdonságok* (Political Novelties), in an article entitled ‘Pigeon Farming for Kitchen Use’, stated that:

The pigeons that are sold on our markets and sold by the game dealers are exclusively so-called field pigeons. This is a species which is not very large, which, even when well fed, becomes but little fleshy, which, with the care and feeding already mentioned, is of small reproduction, and which is not very careful in hatching its eggs. Although in size it is inferior to the common pigeon, the so-called carrier is distinguished by its peculiar fecundity and care it takes of its chickens, no less careful in laying, and is conspicuous for its size and muscularity. The latter species has a very high price; in England it costs 600 marks or more for a pair. To serve these would be a veritable Lucullan feast. (*Politikai Ujdonságok*, 1883: 68)

In 1908, a newspaper of Heves County, which was becoming an important breeding region with Eger at its head, also emphasised the value of pigeon meat, saying that foreign practice proved that it was worth developing the sector. “The meat of young pigeons is tasty, easily digestible and its nutritional value far exceeds that of any other poultry. People abroad know this well. From Milan alone, an average of 7,500 per day, and from Italy 2–3 million pigeons are shipped at 70–100 pfennigs a piece. It costs hardly anything to keep pigeons. And their winter feed is nothing more than grape marc, which is otherwise

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<sup>1</sup> I am grateful to Enikő Gazda, ethnographer at the Szekler National Museum in Sepsiszentgyörgy (Sfântu Gheorghe) for bringing my attention to the presence of pigeons and pigeon holes on this form of folk art.

exploited. And their misjudged pests are nothing, and their weed killing is excellent. And pigeon droppings are the finest garden manure” (*Heves Vármegyei Hírlap*, 1908).

The point was not only about numbers, but also that it was important to have uniform breeds (*Molnárok Lapja*, 1918: 938). The exhibitions, with the Magyar Galambtenyésztők Országos Egyesülete (Hungarian Pigeon Breeders’ Association, MGOE) as a key actor in organising these events, were to indicate the state and direction of breeding efforts. The pigeon show, held at the end of February 1923 in the Károlyi Palace in Budapest, an unusual venue, was a major post-First World War event in the field. The purpose of the exhibition was to display all the breeds bred in Hungary and to allow the public, partly consisting of owners, to admire them. The patron of the exhibition, Countess Júlia Teleki (born Júlia Szász de Apaj), was also President of the National Association of Poultry Breeders, and her person indicated that in the post-war world, the promotion of pigeon breeding was a suitable task for an aristocratic woman. In all, some 800 birds filled the first floor of the palace. According to the correspondents, there were homing pigeons, proud peacock types bred in Debrecen and Budapest, examples of the breed called stork, as well as the so-called breasted, which were puffing themselves up to great stature. The most expensive breeds are reported to have sold for between 20,000 and 30,000 crowns per pair. The organizer, MGOE, saw its future task primarily in multiplying the live pigeon export (*Budapesti Hírlap*, 1923). Thereafter, we read about similar large-scale exhibitions every few years, and in October 1925 and early November 1928, such an event took place in Budapest, that time at the premises of the Agricultural Museum (*Nemzeti Ujság*, 1925; *Budapesti Hírlap*, 1928).

Among the associations of breeders of homeing pigeons formed in the last third of the 19<sup>th</sup> century or around the turn of the century, the Columbia Association (Columbia Egyesület, founded 1901) and a number of regional associations stood out. The latter often emerged from poultry breeders’ associations. The networks of associations were most dense in the immediate Budapest area while the exhibitions brought pigeons to the inner-city population. The members of these associations were mainly located in the settlements around the capital, with a significant number of members, such as in Újpest, Pestszenterzsébet, Pestszentlőrinc, and Rákospalota. Birds that missed their targets during their flights were regularly reported in trade journals in the hope of finding pigeons and their owners. Thus, pigeon breeding associations were important in creating social links between the capital and its hinterland. Moreover, through “producing” lost birds, breeding activities influenced the cityscape and the environment.<sup>2</sup>

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<sup>2</sup> Some of the news articles reported opposition to pigeon breeding on the grounds that pigeons caused damage to agriculture by feeding on seeds in arable land as late as the late 1930s. In the 30 January 1938 issue of *Köztelek*, László Gesztelyi Nagy, in his article entitled ‘Our Poultry Breeding Policy’ claimed that pigeons were not poultry but mere toys, and that they were damaging to the farmers. The editorial staff of the *Magyar Galambtenyésztők Lapja* (Hungarian Pigeon Breeders’ Journal) responded in its June 1938 issue, and deduced point by point that Gesztelyi’s statements were based on misconceptions or errors.

The following two cases – the story of intimate relationship between Lajos Kassák and his pigeons, and the controversy over the practice of pigeon shooting – show that pigeons were part of the noise of the city and of the countryside in the sense that Aimee Boutin interprets the social roots of noise (Boutin, 2015: 4–9). Pigeons created links between distant social worlds, between the rural zone, the suburbs, and the city centre.

From the personal account of the eminent avant-garde poet and artist hailing from the north of Hungary, Lajos Kassák, we learn that care had been a part of human-pigeon relations historically. Pigeons, usually called *Tóbiás*, played a major role in Lajos Kassák's childhood and later adult life. Pigeons lived in the household he shared with many other people, and one specimen, a white and brown bird, was photographed in the company of the artist and his romantic partner, Jolán Simon.<sup>3</sup> The gestures in these photographs bring to the fore the emotional relationship between humans and an animal.

Based on the chapters retelling childhood experiences in Kassák's *Egy ember élete* (One Man's Life; 2010), Kassák had considerable experience of pigeon-keeping as a child. His dovecote was home also to rabbits and a turkey as pets. In other chapters in the same book, it comes to the fore that he also had an eye for the pigeon's fate during his later travels. From his childhood memories, and from the 1931 short story titled *Tóbiás útja a születéstől a halálig* (*Tóbiás' Journey from Birth to Death*), we learn that pigeons that had become surplus or were considered to be of no breeding value often changed hands at the markets. Moreover, workers' households of the time also took in quasi-rescued animals. One of the ancestors of the *Tóbiás* we see in the photographs was introduced in the 1900s to Kassák's household in Angyalföld, which contained many members and lived in deprivation at the time (Szikra, 2021). According to Kassák, the pigeons of his childhood were of the Purzler or *Kőrösi* breed. The Purzler breed was the result of the work of the Duna-Tisza breeding community, and by the 1860s it was already well established.

*Tóbiás'* recorded behaviour patterns are described in more detail in Kassák's fictional letters to his mother. From these, we understand that emotional closeness based on mutual observation was a prime feature of the interaction between pigeon and household.

He likes to bounce around us, sometimes he'll be so happy that you can almost hear his burst of happy laughter, other times he'll jump up and down in front of us to make us laugh, and then we're really grateful for his kindness. We give him broken maize, white millet, light seeds and rape, which he nips from our palms, while he opens his ochre, terracotta brown and silver grey tail feathers, and the flakes on the top of his head

<sup>3</sup> I am grateful to Sára Bagdi of the Kassák Museum in Budapest and Eszter Balázs, Ludovika University of Public Service in Budapest, for bringing Kassák's *Tóbiás* to my attention.



rise up as if he had suddenly grown a crest, and he twists his neck slightly to one side, to wink mischievously at us with one eye, yellow or brown.

He is a little animal, I say, and I must confess at once how many times I have felt him to be a more spirited creature than most human, and how many times he has clung to me with the love that a dove cuddles to her mate.

He is sitting here on my typewriter desk, a little hurt, his wings drooping, his head tucked between the feathers of her inflated breast, because I have just shaken him away from the machine three or four times.

He wanted to play, but I had to work. He was offended, just as intrusive people are when they get tapped on the nose. (Kassák, 1937)

From the descriptions, it seems that Tóbiás adapted to their new situation, to the relations of the household community, to some extent by learning.

The milieu of households was also linked to the veterinarians examining and rescuing pigeons. Kassák describes in detail a scene in which a pigeon – this time a female individual – is rescued owing to the help of medicine:

For now, she was ill for days, and it seemed that she would soon be leaving us for good. But then we found out what was wrong with her. She was due to lay her first spring eggs, and probably because of her poor diet she couldn't part with them. We took her to the animal clinic and they helped her. The doctor was very pleased with her, said she was a rare beauty, and cuddled her as if she had grown closer to his heart than ours. Then a man with an anaesthetic laid her on the operating table, and the doctor reached into her belly with a long needle and cracked the eggs inside her. So, Tóbiás easily passed them in a liquid state. How silently and with how much surrender such a small animal can endure its troubles. (Kassák, 1937)

Around 1900, hundreds of pigeons were killed in noisy and bloody sporting competitions on the site that was to become the peaceful Japanese Garden on the Margit-sziget (Margaret Island), one of the islands in the Danube and a low-lying green area in Budapest, the capital of the Kingdom of Hungary within the Austro-Hungarian Monarchy. Good shooting form could mean as many as 40 to 50 deadly shots in a row. A postcard from a photo of a pre-First World War pigeon shooting competition on the northern part of the island in Budapest shows the cages from which the pigeons,

facing a good chance of death, had to fly out. Shooters needed to wait until pigeons began to lift, shooting them on the ground was against the rules. The 2 February 1894 issue of the journal *Sport-világ* gave a description of the rule based on the prestigious Monte Carlo competition. It stated that participants shoot at the pigeon released from one of the five spots located behind the shooter from double-barrel 12 calibre guns from a distance of 25–30 meters (*Sport-világ*, 1894: 59–60). This almost industrial scale “use” of the creatures for entertainment purposes also demonstrates that the sport of pigeon shooting played an important role in the organisation of the pigeon market, especially in the capital area as well as international bird trade from Southwestern Europe to Central Europe due to the popularity of the *Columba oenas* species among elite shooters. Moreover, socializing developed around the shooting in various associations, thus, the social history of pigeon shooting opens up the space for looking at the impact of pigeons and their behaviour on the networks of social elites.

From the 1880s onwards, pigeon shooting became more and more organised in Hungary. Although this was most clearly expressed in a provincial newspaper in 1904 – the year in which the Országos Magyar Galamblovó Egylet (National Hungarian Pigeon Shooting Association) was founded – the centre of the sport was clearly in Budapest.

Pigeon breeding, for the purposes of pigeon shooting, has become one of the most useful branches of poultry breeding. We have reached the point where a pair of ordinary pigeons now earns more than any of the valuable breeds. A pair of homing pigeons, if they are of fresh blood and of good stock, and if they have two broods, will raise at least 10 pairs of young in a year. It costs little or nothing to raise young all the year round, and especially from March to November, 10 pairs of young cost 8 crowns. Thus, a pair of pigeons earns eight crowns, 100 pairs earn 800 crowns. (Bereg, 1904)

Although it would be an exaggeration to see a causal relationship between the rising trajectories of the associations that organized pigeon shooting events and those that advocated and organized the animal protection movement, the similarities in chronology are remarkable. It is indicative for dating the spread of shooting and its social salience that from 1883, the Hungarian hunting magazines published the detailed results of the pigeon shooting competitions in Vienna, and later in Budapest which were modelled on the former. The activities of aristocrat figures, such as Baron Géza Podmaniczky, led to the formation of a sports association outside the capital during the same decade. Géza Podmaniczky was one of the prominent figures of science and politics in contemporary Hungary, mostly known as the founder of an observatory in Pest County in 1884. The case of the association that Baron Podmaniczky initiated in Hatvan shows that the

planned rules of the competition were published in anticipation of critical comments (see issues of *Vadászlap*, *Vadász- és Versenylap* as well as *Sport-világ*) inspired by the animal protection movement that started around the same years.

The engine behind the formation of the Országos Állatvédő Egyesület (All-Hungary Animal Protection Association), formalised in 1882, was the celebrated ornithologist and polymath Ottó Herman. Due to the role of ornithologists such as Herman and István Chernel, another founder figure of ornithology in Hungary, in setting up the network of animal protection societies, bird protection was high on the agenda of the national and local or regional animal protection societies. The *Madarak és Fák Napja* (Day of Birds and Arbour) was a key event of the years about which many local animal protection associations sent in their reports for the journal *Állatvédelem* (Animal Protection) from 1906 onwards. The cause of animal protection received political and financial support from the Ministry of Agriculture. From 1901, dozens of bird species were granted protected status by decree, and from 1906, the Day of Birds and Arbor was institutionalized and celebrated in educational institutions on 10 May. The celebration and events organised on a day dedicated to forests and birds fit into a global trend that began in the mid-1870s in the USA and was directly the result of a pioneering international treaty, the Convention on the Protection of Agriculturally Useful Birds signed in 1902 in Paris (Bowman, 2014; Li, 2025: 42–43). Pigeon shooting was on the agenda of animal protection as early as 1882 when Ottó Herman published a short newspaper article with the title ‘Egy merész lövés. Galamblövőkre irányozza Herman Ottó’ (A Daring Shot at the Pigeon Shooters by Ottó Herman) published along with an illustration in the popular weekly *Vasárnapi Ujság* in June 1882. The issue had a marked presence on the pages of *Állatvédelem* in 1909 when the Hungarian association for animal protection embarked on a major data collection about the state legislation of pigeon hunting in European countries. In the same year, the journal also reported the formation of a clay pigeon shooting association near Brescia in northern Italy as a most positive development. Italy was the country where pigeon shooting was reportedly an integral element of popular culture (*Állatvédelem*, 1909a, b, c). The argument of these publications was for banning pigeon shooting altogether outside of hunting on the grounds that it causes pointless suffering for the birds and creates a sight of horror besides lacking the features of actual sports. The key point of contention was what happened to wounded pigeons, since they were often able to fly beyond the boundaries of the shooting range and suffer for a number of hours before passing away. Even if they fell down before the fences, it was dogs that were picking them up, which was the cause of further stress and pain.

The golden days of pigeon shooting as well as of animal protection gave place to decline around the start of the First World War. The pigeon shooters in Budapest found themselves in a difficult situation already in 1913. The yearbook of the National Hungarian Pigeon Shooting Association began with the following sentences:



Figure 5: Participants of Birds and Arbour Day in the Húvösvölgy Forest (now a part of, then near Budapest) in 1924. Source: Fortepan/Local History Collection of Angyalföld.

We have managed to amend this termination [...] However, it has become necessary to demolish the buildings and possibly rebuild the area by filling it up, to cover the area with earth and to grass it, and negotiations are now underway with the Margaret Island Joint Stock Company (Margitszigeti Részvénytársaság) regarding these works. (*Az Országos Magyar Galamblovó-Egylet Évkönyve*, 1913. 4.)

The sudden change was probably related to the grand but eventually bankrupted property development plans initiated by the Margitsziget Részvénytársaság that would have had a casino venture at its heart (Gyalai, Szekeres, 1991). It was a curious development that the local government of the capital should take such a clear stand against the interests of the National Hungarian Pigeon Shooting Association, a small community with direct links to the imperial court and the international elite, many of whose members were wealthy.

Two thirds of the 140 or so members were aristocrats, barons, counts or dukes. Those who were not formally aristocrats were of the upper class as important public figures or landowners. Examples of prominent members who were not members of the aristocracy include Béla Csajághy of Lower Dabas, son of the head of the 1848 army medical corps, and Thomas Drake Martinez Cardeza, an American banker and by then a survivor of the Titanic disaster, who was ambassador to Vienna. Cardeza

was not the only American with an extraordinary life on the list of members. William Gould Brokaw, the inspiration for the character of Jay Gatsby in F. Scott Fitzgerald's world-famous novel, a fan of racehorses, sports cars and sailing, and a highly successful personality with women, appeared in 1910. Gould Brokaw was still on the front pages of American newspapers in early 1910 with his divorces, and he probably arrived in Budapest hiding from the spotlight. Among the well-known and influential members of the Society who did not have the title of count were members of families engaged in big-time food processing industries, such as Dreher, and Pick or a dynasty of writers and artists, such as the Fáy. And, of course, there were also the most passionate hunters, such as the landowner from Heves County, Béla Hellebronth, author of one of the most important books on sport shooting in Hungarian at the time.

In Hungary, pigeon shooting associations were all-male societies, generally with only men taking part in pigeon shooting. The exceptions included Countess Teleki, Géza Teleki's wife who reportedly made it to the semi-finals in a competition organized in July 1913 in Mocs, near the city of Kolozsvár (today's Cluj-Napoca). Women were certainly present among the spectators: reports of the competitions also mention prizes offered by women's societies. The reports do not mention the reason behind this custom but this was also a feature in other sports, such as yacht racing.

It is not fully clear why the Council of Public Works of Budapest (Közmunkák Tanácsa) was trying to get rid of the club's racecourse on Margit-Sziget (Margaret Island), but it is known that the social perception of pigeon shooting was already highly controversial at the beginning of the 20<sup>th</sup> century. The problem was partly caused by the rules of shooting. In fact, point 6 of the shooting rules stated that "The boundary of the shooting range within which a pigeon must fall to be counted as good shall be enclosed by a wire mesh." In practice, as the discussion in the Association's yearbook shows, this meant that while birds falling inside the range, in the area that was legal for competition, were collected by dogs and killed if necessary, birds falling outside the range could suffer for days before they died. This was no longer an appropriate procedure in the eyes of a section of the contemporary public. It may be assumed that the increasing number of guests arriving at the track on the northern part of Margaret Island, as the Margaret Bridge connecting the island to the mainland was built, also complained about the noise of gunshots and screams. Pigeon shooting in Budapest came to a temporary halt with the outbreak of the First World War, as the use of ammunition seemed wasteful in the war effort, and the noise of the shots could have caused panic. We learn from news and even newsreel reports that the practice of pigeon shooting and international elite tournaments returned to Budapest in the 1920s (*Nemzetközi galamblövő verseny a Margitszigeten*, 1924). The sport in Hungary eventually waned in the 1950s with the emigration, repression, retirement and death of top shooters and was replaced by skeet.

## Conclusions

The history of human-pigeon connections in the late 19<sup>th</sup> and early 20<sup>th</sup> century is a good example of how animals played a role in human social networks and in the struggle between empires. As this paper has explored, the relationship between humans and pigeons was defined by a profound paradox. The bird served simultaneously as a sacred symbol of peace in poetry and propaganda, and as a mechanized “instrument of destruction” and surveillance within the total mobilization of the First World War. In the late 19<sup>th</sup> century, pigeons attracted the attention of the army and this resulted in the deployment of pigeon units as messengers near and along the frontlines during the Great War. Thus, pigeons directly shaped military and political history. In the interwar period, Hungarian associations of pigeon breeders and race contestants exhibited irreverentism in their publications and perceived the bird races as occasions for competition among peoples. This understanding went along with occasional peace ceremonies also featuring pigeons. It was humans that gave political meaning to events designed to make use of the capabilities of pigeons, while the responses that the birds gave to changing practices were crucial to the human sense of success or failure. Whether serving as subjects for neuroplasticity research in veterinary labs or as “winged spies” crossing the Italian front, pigeons mobilized human knowledge, resources, and emotions. Pigeons were, as Latour suggests, active participants in the networks that shaped social and political transformations.

From the 1870s, pigeon breeding became increasingly important in Hungary, especially in the Great Hungarian Plains, and a community of breeders was established in the region through a network of associations. Pigeon-keeping not only strengthened the links between the capital and the immediate countryside but also brought together social milieus that were otherwise far apart. While just about anyone could own a pigeon loft, the leaders of the associations were members of the gentry, doctors, engineers, and landowners. The most socially exclusive association was the National Pigeon Shooting Association, linked to the Margaret Island racecourse in Budapest, two-thirds of whose members held the title of count or baron. Yet, they encountered a sharp opposition from another organized group, that of the animal protection movement that did not agree that pigeon shooting could be seen as a form of sport and presented the activity as unnecessary cruelty taking place in public view. Eventually, the First World War sidelined the goals of both associations.

While pigeon meat was still a relevant food item in the era, having value as a commodity, it was not as important as squab in contemporary North America. Being a potential food source was not a key determinant of value when it came to how local breeders related to pigeons. In addition to producing stocks of well-defined pigeon breeds that might also turn into companion animals such as Lajos Kassák’s Tóbiás, breeding focused mainly on homing pigeons. Despite Darwin’s keen interest in the inherited

features of domestic pigeons, their adaptability to human social relationships, such as family life, was not among the aspects explicitly studied. Thus, the surviving notes on the existence, role and behaviour of Tóbiás are a particularly valuable source for the 20<sup>th</sup> century history of the relationship between pigeons and humans.

This example is in line with Donna Haraway's arguments that in the Anthropocene there is a need for establishing new and caring interspecies relations. Social norms and even political relations can be reshaped by the caring relationships that develop between different species (Haraway, 2016: 12–13). Moreover, Kassák's example confirms that pigeons are the trusted companions of many people from the margins of society, such as workers in precarious conditions. Ultimately, this case study validates the call by Tamm, Simon, and Baratay to push historical analysis beyond an anthropocentric worldview. By tracing the flight paths of these birds, we uncover a more-than-human history where the pigeon is not merely a passive subject, but a constitutive element of the social, cultural and military history as well as of the urban fabric of modern Hungary.

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### Research data statement

The author states that the article is based on archival sources, which are cited in the list of references below. The article is based on research data that is available in public domain resources as well as publicly accessible archival and museum collections that are cited in the list of references.

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### **Zračni agenti: golobi v političnih in družbenih mrežah habsburške in posthabsburške Madžarske**

Avtor prispevka izhaja iz t. i. *več kot človeškega* interpretativnega okvira, s katerim analizira delovanje in vlogo golobov (*Columba livia*) v Ogrski in posthabsburški Madžarski. Pri tem zagovarja tezo, da so bili golobi aktivni udeleženci družbenih in političnih mrež in ne le pasivni objekti. V članku raziskuje povezave med golobi in ljudmi v treh zgodovinskih kontekstih: paradoks prve svetovne vojne, medvojno politično simboliko in družbeno stratifikacijo tedanjega časa.

V času prve svetovne vojne so golobi utelešali protislovje, saj so nastopali kot sveti simboli miru v mirovni propagandi in hkrati kot mehanizirani vojaški instrumenti uničenja in nadzora. Avtor podrobno opisuje, kako je avstro-ogrška vojska, zlasti na italijanski fronti, uporabljala golobe za sporazumevanje ter kako so veterinarski znanstveniki v Budimpešti preučevali nevroplastičnost golobov z namenom povečanja njihove uporabnosti na bojišču.

V medvojnem obdobju so se golobarske dirke prepletle s politiko nacionalne rekonstrukcije in iredentizma. Rejske in gojiteljske zveze so prevzemale nacionalistično ikonografijo ter uporabljale golobe kot simbol želje po ponovni pridobitvi ozemelj, izgubljenih leta 1918, hkrati pa so sodelovale na mednarodnih tekmovanjih.

Nazadnje avtor v članku obravnava družbeno razhajanje v odnosih med ljudmi in golobi. Primerja elitno prakso streljanja golobov na Margaretskem otoku v Budimpešti, ki so jo obvladovali pripadniki in pripadnice plemstva, ter nasprotujoče ji gibanje za zaščito živali, ki se je uveljavilo na podlagi intimnih čustvenih vezi med ljudmi in golobi, značilnimi za delavska gospodinjstva. Avtor na primeru avantgardnega umetnika Lajosa Kassáka in njegovega goloba Tóbiása pokaže, kako so golobi delovali kot zaupanja vredni spremljevalci v negotovih družbenih okoljih. V sklepu članka avtor ugotavlja, da vključevanje teh nečloveških akterjev v raziskave razkriva njihovo temeljno vlogo za sodobno družbeno, kulturno in vojaško zgodovino.

## The Dynamic Relationships of Human-Horse Cooperation in Vienna

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The focus of the article is on working relationships between humans and horses in Vienna's *Fiaker* industry. Based on ethnographic research, the author shows that these horses are not merely tools, but working partners with their own agency. Analysis reveals that interspecies working practices are both intimate and political, connecting the past with contemporary challenges, and raising questions about tradition, animal welfare, and the role of animals in the urban environment.

▪ **Keywords:** horses, fiacre, work, Vienna, interspecies relationships research, domestication, farm animals

Članek obravnava delovne odnose med ljudmi in konji na fijakarskem Dunaju. Na podlagi etnografske raziskave avtor pokaže, da dunajski fijakarski konji niso zgolj orodja, temveč delovni partnerji z lastno tvornostjo. Analiza razkriva, da so medvrstne delovne prakse hkrati intimne in politične, povezujejo preteklost s sodobnimi izzivi ter na ta način odpirajo vprašanja o tradiciji, dobrobiti živali in vlogi živali v urbanem okolju.

▪ **Ključne besede:** konji, fijakar, delo, Dunaj, raziskovanje medvrstnih odnosov, udomačitev, kmetijske živali

### Introduction

Horses used in sightseeing carriage tours and wedding ceremonies in Vienna's city centre have a multifaceted role. This became evident during my ethnographic research on the working relationships between humans and horses in Austria's capital. For some Viennese residents, horse-drawn carriages and their drivers, known as the *Fiaker*, represent a traditional and institutionalized form of urban human-animal relations. Conversely, for others, they are seen as an outdated vestige of the past, with no place in a modern and progressive Austrian society. Domestic horses (*Equus caballus*) find themselves caught between these two opposing perspectives.<sup>1</sup>

This article highlights the complexities of more-than-human work collaboration in the tourism industry, where ambivalent relationships have emerged due to social, cultural, and political factors. I examine how the work alliance between the Viennese Municipality, certified coachmen, and trained horses enables their continued engagement

<sup>1</sup> While I acknowledge the welfarist viewpoint aimed towards these horses, I hereby only consider its veterinarian and ethological aspect. A broader welfarist approach, as advocated by e.g. Human-Animal Studies (DeMello, 2012) or Critical Animal Studies (ed. Nocella II et. al., 2014), given their political and militant undertone, may obscure the complexity of "direct" (Kozorog, 2023) relationships between humans and animals.

with Austria's capital. In Vienna, low-paid grooms and stable masters from South-eastern Europe, along with *Fiaker* and trained domestic horses, work together in the tourism industry under the banner of tradition and culture. Their partnership is crucial to maintaining the presence of this once-vital working animal in the urban setting that has historically been exclusionary toward more-than-human life (see Shingne, Reese, 2021).

To gain deeper insight into the researched topic, I engaged in daily conversations and active participation with *Fiaker*, while also contacting key institutions related to horse-drawn carriages. These included the Municipality of Vienna, the University of Veterinary Medicine Vienna, the Association Against Animal Factories (*Verein Gegen Tierfabriken*), and the Austrian branch of UNESCO, which decides whether the Viennese *Fiaker* should be granted the status of intangible cultural heritage or not. During this period, I conducted twenty semi-structured interviews.

My paper has two aims. First, I aim to highlight the conceptual importance of work relations. As Ursula Münster (2014: 426) has observed in the context of human-elephant collaboration in South India, labour is not solely a human activity; rather, as this article argues, it also involves human-animal entanglements. *Fiaker* have been living and working with horses for centuries, originally for transportation purposes throughout Imperial Vienna. It may be that horses have not only observed changes in Viennese society, but have influenced them as well. By contributing to the acquisition of specific skills and tasks, they have directly collaborated with, and actively participated in, the social life of the *Fiaker*. These types of human-horse relationships are formed through an intimate and highly integrated partnership that extends back millennia (see Druml, Grilz-Seger, 2023).

Drawing on a more-than-human perspective shaped by the multispecies studies approach to ethnography (see Kirksey, Helmreich, 2010), this article examines the dynamic human-horse relationships in a professional work environment. Completing a task without the horse's engagement is difficult. In practical terms this means that, if a horse does not want to work and pull a carriage, it will not do so. By analyzing human-horse relationships through the lens of labour, I aim to show that the work performed with such animals cannot be reduced to a purely utilitarian or instrumental relationship, nor can it be framed solely as an act of domination or enslavement (cf. Lainé, 2019). Thus, this perspective challenges the traditional view of domestication as a process of human control over animals (see Digard, 1990; cf. Raušl, 2023). Moreover, reliance on fear and domination is unsustainable in a long-term partnership between a *Fiaker* and his horses. My eleven-month-long ethnographic research conducted in 2022 and 2023 in Vienna has shown that horses' subjective commitment to work, their voluntary engagement of intelligence, their affectivity, their ability to communicate with humans, and their capacity to analyze and adapt to different situations must also be taken into consideration.

To understand cooperation in human-horse relationships, I draw on the thought of French sociologist Jocelyne Porcher and her concept of sociology of animal work (Porcher, 2007, 2011). Porcher's perspective on human-animal working relationships, rooted in Marxist theory yet shaped by her professional experience as a breeder and livestock industry worker, examines the multifaceted nature of animal work. She explores its instrumental rationale (the production of goods and services), its relational and moral dimensions (domination, cooperation, recognition, and affectivity), and its subjective qualities (pleasure and pain) (Mouret, Lainé, 2023: 3).

By analyzing these interspecies working collectives through the lens of labour, we can observe how work serves as a meeting point between the lived experiences of humans and animals. Within this framework, humans and animals not only coexist in a shared environment but actively shape and transform it through their joint efforts. Work, in essence, redefines the human-animal dynamics, integrating them into a collective reality that transcends conventional boundaries and creates a unique workplace that is new to both species (Porcher, Estebanez, 2019: 16–27).

The second aim of this paper is to emphasize the significance of both human and animal contributions to Vienna's tourism industry. Human-horse teams are a destination attraction, a phenomenon reinforced by symbolic horse-carriage marketing and material objects (e.g. souvenirs) (see Cloke, Perkins, 2005). This article argues that horse-drawn carriages have become the nexus of what Franklin (1999) calls the "zoological gaze", i.e. an integral part of Viennese leisure and tourism practices; yet this role is today evolving, at least in part, due to shifting attitudes toward the displayed activity of animals. My ethnography makes visible the subaltern work of both humans and domestic horses in shaping the symbolic image of Vienna that tourists today consume as a key component of Viennese cultural identity. I aim to show that within Vienna's urban political ecologies of tourism and tradition, ambivalent human-horse relations have emerged.

Just like *Fiaker*, horses have left their own imprint in the city's fabric. Their presence has shaped Vienna's ecological, political, and discursive social space. In examining human-horse relationships within Vienna's urban tourism industry, horses serve dual roles. As "tools" they are integral to the Municipality's tourism infrastructure, facilitating transportation and enhancing the cultural appeal of Vienna's historic streets. Simultaneously, they function as "labourers", with their physical efforts acknowledged as the Municipality and *Fiaker* ensure that these working horses receive a "good life" (see Porcher, Estebanez, 2019; cf. Haraway, 2008: 55–56; cf. Münster, 2014). A closer examination of human-horse relationships reveals that although they are politicized, they are nevertheless characterized by pleasure, affectivity, distress, and adaptation – all of which emerge from sustained proximity over time. Their personal relationship is revealed above all by working together.

## Theoretical framework: Cooperating and working with horses

Christophe Dejours's (2009; see also Dejours, 2012) concept of *ergonomics and psychodynamics of work* is especially relevant in analyzing the labour of farm animals. By focusing on the activity of work and the individual transformation it generates, we can observe that performing a task effectively is not merely about following rules, procedures, or organizational structures. Instead, effective work emerges from the interaction between established guidelines and the actions of individuals carrying out the tasks. It encompasses gestures, know-how, body involvement, the mobilization of intelligence, the capacity of reflection and interpretation, and the ability to react according to situations; it is the power to feel, think, and invent (Lainé, 2016: 185). Work is often carried out within a collective, where individuals collaborate towards a shared productive goal. As Dejours highlights, productivity – understood as the result of a common working task – does not stem from the utility of one individual to another but rather from their collective engagement in a productive activity. As Dejours (2009) reveals, cooperation is “the way in which, collectively, workers reshuffle, realign, readjust the coordination so that it becomes efficient” (Lainé, 2016: 186). Dejours thus emphasizes the distinction between coordination and cooperation.<sup>2</sup> While coordination is driven by a prescribed organization of work (following rules and orders to ensure the articulation of individual activities), cooperation is based on the intelligence of partnership that motivates an individual's actions (Mouret et al., 2019: 142). Cooperation presupposes a willingness on the part of all participants to engage jointly in the task at hand, fostering trust and mutual visibility among workers. Furthermore, when individuals contribute their distinct intelligence to create a shared dynamic, they form a labour collective – a team that has built its own rules through a *deontic activity*<sup>3</sup> and has established a space for deliberation, where these rules are openly discussed and refined (Lainé, 2016: 186). Beyond its focus on productivity, work also serves a relational purpose, fostering the creation of social bonds. In the context of human-animal labour, it engages in the sensory world, encompassing human attention and gestures towards the animal. As Donna Haraway (2008: 3) notes in relation to “becoming with”, the same applies to “working” – both human and animal are mutually transformed through the process. At work, *Fiaker* and horses share a daily routine and close physical proximity. By spending time together and sharing space, they strengthen their relational bonds.

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<sup>2</sup> It is important to emphasize that in the studied human–horse relationships, coordination and cooperation are not mutually exclusive but rather mark the opposite poles of the same continuum, with this interspecies relationship fluctuating along it.

<sup>3</sup> Deontic activity refers to the bonds people form to work together (Dejours, 2012: 101).

## Working for Vienna

While speaking with *Fiaker* in Vienna, it became evident that, for them, horse-drawn carriages are one of the city's main attractions. They often compared themselves to iconic landmarks like St. Stephen's Cathedral, Schönbrunn Palace, and the Vienna Boys' Choir. Many *Fiaker* emphasized their integral role in Vienna's culture and history, frequently drawing parallels to Venetian gondoliers. They highlighted the long-standing presence and importance of horse-drawn carriages in the city, often supporting their claims with references to their predecessors and Vienna's rich carriage-driving history. In most conversations, the coachmen described tradition as a fundamental element of their profession, shaping both their perception of Viennese horse-drawn carriage culture and their identification with it (see Poljak Istenič, 2012). Although Viennese *Fiaker* unsuccessfully applied for recognition of their profession as an intangible cultural heritage to the Austrian Commission for UNESCO in 2017, they nevertheless insist that, over time, they have organically become a living heritage of the city.<sup>4</sup>

It is reasonable to assume that this perspective is shaped by a positive evaluation of a long-standing practice, which has, in turn, transformed horse-drawn carriages into integral symbols of Viennese cultural identity. During this transformation, horse-drawn carriages underwent a process of heritagization and commodification for tourism purposes (for ethnographic examples see Helgadóttir, 2006; White, 2011; Talley, 2017; Sturød et. al., 2019; Adelman, 2021). It goes without saying that economic factors were the main reason for their transition into a leisure activity. French geographer Sylvine Pickel-Chevalier (2020: 3) accordingly notes that although certain long-established equestrian practices have been challenged by the modern world, they have also catalyzed a new awareness of identities and sparked concerns about their potential disappearance, concerns that are often intertwined with a particular relationship to time and history. Tourism has encouraged the reinvention and adaptation of Viennese urban equestrianism, thus ensuring the continuation of this practice within contemporary society (cf. Pickel-Chevalier, 2019). While increased regulation of the *Fiaker* and the assurance of adequate animal welfare have been the chief consequences of their integration into Vienna's tourism industry, other reinventions have also emerged, such as the inclusion of women in this traditionally male-dominated profession.<sup>5</sup>

The practice of horse-carriage driving is not merely a remnant of the past but an evolving equestrian culture (Adelman, Thompson, 2017). Since *Fiaker* are embedded

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<sup>4</sup> When I spoke with the representative of Austria's UNESCO Commission for Intangible Cultural Heritage, she cited two main reasons for the rejection of the *Fiaker*'s application. Firstly, the Commission had received numerous public complaints concerning the practice. Secondly, the application failed to demonstrate the existence of a clearly defined and cohesive community of carriage drivers supporting the tradition. According to several *Fiaker* I spoke with, they intend to submit a revised application in the near future.

<sup>5</sup> Gender dynamics are described in more detail in the Master's thesis (Raušl, 2024).

in socio-cultural processes such as industrialization, modernization, and globalization, certain ambiguities have emerged. While horse-drawn carriages continue to embody Vienna's historical charm, they have also faced increasing pressure to align with animal welfare movements, leading to debates over their place in an urban setting. External actors, primarily the Municipality of Vienna, ensured the continuation of this practice on a political level (cf. Bindi, 2020). It is therefore not surprising that, when I asked a municipal employee about the importance of horse-drawn carriages for the city, she stated: *"Horse-drawn carriages are part of the appearance of our city and contribute to the incomparable flair of Vienna, which inspires millions of tourists every year."*

Historically, being a *Fiaker* was a well-regarded and respected occupation in Viennese urban society during the 18<sup>th</sup> and 19<sup>th</sup> centuries.<sup>6</sup> During this time, *Fiaker* and their horses – primarily light thoroughbred Arabians and Lipizzaners, valued for their vitality and brisk trot – were an indispensable feature of Viennese daily life, essential for covering long urban distances (Druml, Grilz-Seger, 2023: 479–486). In a famous 1885 song titled *Fiakerlied*, Jewish composer Gustav Pick describes how *"A personal Fiaker was responsible for delicate matters. As such, he had to hear, bless, be silent, and be clever."*<sup>7</sup> During this period, numerous stage plays featuring coachmen were produced, such as the opera *The Fiaker as Marquis* (1821) and the folk theatre play *Glück in Wien* (1826) by Adolf Bäuerle. However, things began to change after the Second World War. Arno,<sup>8</sup> recollecting the many stories he was told, revealed that up until thirty years ago, this profession was often taken up by those who could not find other employment.

*The Fiaker were usually criminals. They spoke Rotwelsch, the argot of these social groups, so that others did not understand them and they could be doing some business [...]. They waited in front of the Stein prison for people to come out and offered them a job. "Come with me, you can learn to drive a carriage and you'll have work." One simply affirmed they wanted to be a coachman, was taken to a farm, participated for five days and on the sixth day was told: now do it on your own. And this is partly probably where this bad reputation comes from, because of this connection. [Arno 2022]*

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<sup>6</sup> The term *Fiaker* derives from Saint Fiaccus, an Irish hermit who emigrated to France in the 7<sup>th</sup> century. Several towns and streets in France were named after him, including the Rue de Saint Fiacre in Paris, where horse-drawn carriages were first introduced for passenger transport in the second half of the 17<sup>th</sup> century. With the rise of French fashion and lifestyle in Vienna in the 18<sup>th</sup> century, French-style carriages appeared, and the term *Fiaker* entered the Austrian vocabulary around 1720 (Druml, Grilz-Seger, 2023: 479).

<sup>7</sup> Such as Prince Rudolf's personal *Fiaker*, Josef Bratfisch, commonly known as Nockerl, the only witness to the Mayerling tragedy.

<sup>8</sup> All personal names used in this article are pseudonyms.

What further reinforced the image of the *Fiaker* as “bad guys” in the second half of the 20<sup>th</sup> century was excessive alcohol consumption, which, as one older carriage driver named Albert lamented, became regarded “*as an image of Fiaker culture*”. Even though coachmen told me that some horses consume alcoholic beverages, mostly beer, most accidents in the city occurred when their human counterparts were intoxicated.<sup>9</sup> Rudy fondly reminisced during one such break:

*I mean [...] it was a big problem back then [alcohol]. The others, we called them the Warme Partie, they preferred cocoa. While the Tschecheranten [drinkers] ordered Fiaker goulash and a stein of beer, those guys asked for cookies and cocoa. But a proper coachman back then ate beef and drank wine! Honestly, how does it look if someone has a stiff hat on, drinks cocoa and munches on a brioche croissant? That's not a Fiaker!*  
[Rudy 2023]

With the reinvention and adaptation of this traditional equestrian culture, one that maintains a utilitarian and, when necessary, rough style of interaction with the animals, significant changes began to take shape. Austria's accession to the European Union in 1995 further accelerated this transformation, reshaping the working relationships between coachmen and horses through new regulations and evolving societal expectations. Due to the liberalization of markets, aimed at protecting individual trades, and the implementation of new economic and political regulations for the Viennese horse carriages, horses were now required to be managed within certain guidelines, and coachmen had to comply with newly established rules. In my conversations, particularly with older *Fiaker* who had experienced these changes firsthand, they often lamented the government's growing involvement in preserving horse-drawn carriages in the city. On one such occasion, Rudy remarked:

*You know, we were always here [in the city]. No one ever complained, but nowadays everybody oversees us. The municipality, the media, activists, the public. We're constantly being watched and judged and they tell us how we should handle our horses. Sometimes people don't understand that these are animals, not humans. We need to be in control of them, otherwise they'd kill themselves in the city. But if I do something that people don't agree with, I will be in the newspapers tomorrow. It can get annoying, [...] they don't work with horses every day like we do, and they think they know everything.* [Rudy 2023]

<sup>9</sup> Although alcohol consumption during working hours is now almost non-existent, I did occasionally observe it, particularly during the mandatory 30-minute rest periods the horses have to take after every two hours of work. During these breaks the drivers and horses would eat and drink together.

Policymakers from Vienna's Municipal Council dictate how horses are integrated into the urban fabric. In 1999, additional regulations were implemented to reduce the number of horse-drawn carriages in the city centre. This was done to lessen their impact on the First District and to regulate their operation more systematically.<sup>10</sup> Still under this system today, carriages with even-numbered registrations, marked with green concession cards, can operate on Mondays, Wednesdays, Fridays, and Saturdays, while those with odd-numbered registrations, marked with red cards, can work on the remaining days.<sup>11</sup> Legally, *Fiaker* are managed by Municipal Department 65 – Legal Affairs: Traffic and Transport (MA 65). To work as a coachman, individuals must obtain the Austrian Bronze Driving Badge (ÖFAB), which certifies their ability to handle horses in the city, maintain a clean criminal record, and possess the necessary equipment, stables, carriages, and a sufficient number of trained horses. The 324 horses officially approved for work are monitored by the Municipal Department 60 – Veterinary Services and Animal Protection (MA 60).

In 2015, the Municipality implemented a regulation requiring horses to stop working and return to the stables when the temperature in the city surpasses 35 degrees Celsius.<sup>12</sup> During one of my conversations with a veterinarian, she explained that horses can endure the city's scorching summer heats due to their adaptability. Horses are among the few animals that regulate their body temperature through sweating. To ensure their wellbeing, the Municipality has installed water stations at all five designated *Fiaker* stands in the city, where carriages are parked daily from 11 a.m. to 10 p.m. During this time, veterinarians routinely conduct random checks to assess the horses' health and ensure drivers comply with the Austrian Animal Welfare Act. Additionally, to further enhance animal welfare, Vienna's Municipal Council implemented a regulation limiting each individual horse to a maximum of four working days per week or eighteen days per month. However, when I spoke to one of the veterinarians, she believed that this is at odds with their work rhythm:

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<sup>10</sup> In Vienna, traditional metal horseshoes damage historic city roads, causing an estimated €300,000–700,000 in annual repairs. To address this, the Municipality and the Veterinary Faculty developed synthetic horseshoes, which may also benefit horses. A veterinarian noted during my fieldwork that from an ethological and biomechanical perspective, horses wearing synthetic horseshoes took longer strides and appeared more comfortable walking on hard surfaces.

<sup>11</sup> The bigger the company is, the more horses and carriages it has, the more available concessions it gets per day. A private entrepreneur with only one carriage and four horses can therefore work only once per week because of the number of bigger companies in Vienna. Horse-carriages that are allowed to operate on a given day can drive anywhere on the roads in Vienna. Concessions do not include designated routes/areas where they can operate.

<sup>12</sup> In 2008, the Veterinary University of Vienna did a study on the influence of heat on horses while working. It is still the reference point for *Fiaker* when discussing heat-related topics, especially when heat reaches 35 degrees Celsius, as it asserted that the horses were not negatively affected by it. However, a close inspection of the study shows that on the days when heat influence on horses was examined, temperatures did not reach over 35 degrees Celsius. In 2025, the Veterinary University of Vienna launched a new study on the effects of temperature on horses in the city, which has concluded that heat does not negatively affect these working horses.

*These horses need quite a long time to get in the condition to do what they are doing, and they are very tired in the beginning, but you need to start slowly with two or three hours of work per day, and with training they are able to do this job for ten hours. By law horses have to stop working for three days, which is not good for these horses. Eighteen days working and thirteen days off is not good. This was the last new law, and to be honest, it's detrimental. [Veterinarian 1 2023]*

The city of Vienna strives to ensure that horses receive proper care by implementing various regulations for their management. The use of animals in tourism highlights the importance of animal welfare in shaping service quality, as people value the positive treatment of horses. Every detail regarding the horses' care affects how both the *Fiaker* and the city wish to present themselves. *Fiaker* see themselves as representatives of Vienna and of all communities whose lives are intertwined with working animals. They make efforts to educate guests about horse care and management, offering weekly stable tours for those interested in learning about the work behind the scenes. These initiatives aim to maintain transparency and foster a greater understanding of their profession. Since the horses are constantly in the public eye in the city centre, coachmen ensure they are well-groomed to meet public expectations. As a result, a veterinarian noted that most horses in Vienna today are intentionally overweight:

*If you look at the healthy horse, how does it look? It looks very skinny, athletic. And it's not suffering, their anatomy is simply like this. But if you have such a horse in the city, you'll get a fine, because their ribs are visible and the activists and public will cry. One should be able to see the ribs on a healthy horse! If not, the horse is too heavy. So, the tendency here is too fat, most of them are too fat. [...] Everyone will tell you that *Fiaker* horses are overweight ... but they want them that way, because of the people who have no idea about horses, to say that they look good. [Veterinarian 1 2023]*

The way horses are visually perceived by the public thus plays a significant role in shaping their presentation in the city. Their appearance must align with public expectations, thereby also enhancing their appeal to visitors.<sup>13</sup> When I asked *Fiaker* what primarily attracts people to their service, they consistently identified the horses as their main appeal. Johannes remarked on the importance of horses' agency in tourism: *"We all know that this whole thing works just because of the horses, nobody takes a*

<sup>13</sup> A *Fiaker* told me that tourists are more likely to book a ride if the horses are white, as they are deemed more attractive.

*carriage just to ride with me, nobody wants to ride just because of the carriage. They want to ride because of horses and pet the horses and it's good for tourism because of the horses.*" This strong emphasis on the horse as the central figure in tourism highlights their complex role within the city (see Notzke, 2017). While some view horses as part of the city's heritage and an essential aspect of the tourism industry, others raise ethical concerns about their use in an urban environment. The topic is a point of contention in Vienna, with some supporting the presence of working horses in the city and others opposing it. An activist I spoke with noted that the core issue lies in how people perceive the status of horses:

*From the scientific point of view, this is the controversy. For us they are like cats and dogs, and we want them to be treated like that. But if I talk to a Fiaker, they'll say horses are a working animal, that they need to work and they are there to work. I spoke to some Fiaker for two or three hours; we finally realized that this animal is a different kind of thing for them and for us. To them it's a working animal that must work, to me they are pets. And this is where we will never see eye to eye. We could even agree on treating them right, but this basic thing, this is just a completely different worldview. [Activist 2023]*

Opinions about horses in the city reflect a divide between their illustrative representation as symbols of leisure and their practical function as working animals. Likewise, these opinions are closely tied to social classes (see Kozorog, 2023).<sup>14</sup> During fieldwork, it became clear that coachmen and horses form strong emotional and affective bonds regardless of the distinction. *Fiaker* Tobias highlighted the fluidity of a horse's status, noting: "*They are a kind of pet, but also a kind of working animal. The relation is the same, we have a very close relationship, but we see horses as they are and not as people want them to be, there is no romanticizing of horses.*" Importantly, the working relationship does not diminish the depth of connection between humans and horses; rather, it strengthens it. This bond is best understood as a dynamic balance between two forms of interaction: working together and providing companionship. These roles shift and complement each other across different contexts and over time (see Mouret, 2019). Through work, a horse's role becomes more significant, reinforcing its individuality and value in the human-animal relationship – an idea we will explore further in the following discussion.

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<sup>14</sup> For farmers and rural communities, as well as the military and police, horses are primarily valued as indispensable working animals, while for the middle and upper classes, horses symbolize status and privilege, often reserved for sports, hunting, and leisure (see Digard, 2004, 2007).



Figure 1: Fiaker manoeuvring his horses. Photo: Gašper Raušl, Vienna, 2023.

### Collaborative labour

Coachmanship, which requires a deep understanding of animals' habits and behaviours, is built on trust and intelligence. Working with horses is also an embodied experience that aligns with Tim Ingold's concept of *sentient ecology*, which prioritizes knowledge derived from careful observation of animals' actions, vocalizations, and bodily expressions (Ingold, 2000: 25; see Smerdel, 2023). At the same time, it should be stressed that animal work relies not on instinct but on knowledge acquired during the process of professionalization (Porcher, Estebanez, 2019: 26; for ethnographic example see Porcher, Lécrivain, 2012). This process consists of education and training indispensable for carriage horses. The carefully selected animals must acquire specific skills that are crucial for effective performance in an urban setting.<sup>15</sup> During conversations with *Fiaker*, they often referred to *school* as a synonym for *training* and described trust as an essential part of their relationship with the horses.<sup>16</sup> Arno highlighted this point when he shared his perspective on working with horses:

<sup>15</sup> Viennese *Fiaker* believe the skills and knowledge possessed by working horses are acquired through training, but are also conditioned by genetics shaped by selective breeding.

<sup>16</sup> Each horse must successfully complete one level of training before advancing to another.



*They [the horses] have to trust us, and we should trust them. If you're nervous when driving, a horse becomes nervous. If you're relaxed, the horse becomes relaxed, but it also works the opposite way. Because if you spend a lot of time with horses, you start to take on a little bit of their mentality, or how they think. You don't care ahead; you're also in the moment. If you're not in the moment and present with the horse, you can't build up connection. [Arno 2022]*

However, the trust that horses place in humans is an ambivalent form of intimacy. What Arno interprets as the horses' trust in humans is, in reality, an acquired trait, obtained through extensive training to which these working horses are subjected. The main goal of this process is to desensitize the animals to various stimuli they might encounter in the urban setting.<sup>17</sup> At the same time, the training is designed to prepare the horses for specific and demanding work objectives (see Mulier, Müller, 2019: 169). One of the most specialized tasks these horses need to master is turning a carriage on a two-way road in the city. To accomplish this, they must learn a manoeuvre called the *Kurzkehrt*, a precise turn performed while hitched to a carriage. In this movement, the horse crosses one leg over the other in a controlled manner, allowing the carriage to pivot smoothly on its rear wheels. To execute *Kurzkehrt* correctly, the horse must lighten its front legs and take deliberate, measured steps with its hind legs, which act as the carriage's pivot point. This technique ensures a seamless and efficient rotation, demonstrating the complexity and skill involved in carriage driving.<sup>18</sup>

Education and training therefore prepare the animal to actively participate in the working process. At the same time, this distinction sets professional horses apart from non-professional animals of the same species, which are unable to perform the same tasks. Training allows horses to be fully integrated into the world of *Fiaker*, where their lives and careers are interconnected, and their skills mutually dependent (for ethnographic examples see Mouret, 2019; Mouret et al., 2019). Importantly, other horses also play a role in this year-and-a-half-long training process. A key strategy in equine training is pairing an inexperienced horse with an experienced one. The seasoned horse acts as a mentor, guiding the younger one through observation and imitation while hitched to a carriage as a pair. Elena notes that a similar dynamic emerges when a new coachman joins her working collective:

*I always put new Fiaker with a trained horse. Young drivers, old horses, always. Horses teach them. [...] Young rider, old horse, young horses,*

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<sup>17</sup> Similarly, the goal of training army and police dogs (see Mouret, Porcher and Mainix, 2019), as well as assistance dogs (see Mouret, 2019), is to repress their instincts to a certain degree in order to handle unexpected situations.

<sup>18</sup> This manoeuvre is part of the exam for the driving licence for a horse-carriage driver in Vienna.

*old drivers. During this phase, they have to go with other drivers minimum three months. They have to train a lot, and in the beginning there is a lot of risk present, for all my horses and drivers. Normally they have one or two little accidents. It's usually because they don't turn fast enough and their carriages hit other cars, it's just a small fine. [Elena 2023]*

While this structured system of education and training helps prepare both horses and humans for the demands of working in the city, it also reveals the limits of adaptability and underscores the individuality of each horse. The accounts of my interlocutors made it clear that not every horse is suited for this kind of work. Horses that do not adapt are assigned different roles. On one of the farms I visited, there were therapy horses for children with special needs. Coachmen that work there explained that they underwent the same training as other *Fiaker* horses, but their temperament and personality made them better suited for a human-animal relationship centred on emotional care and interaction, rather than practical tasks like pulling a carriage (Porcher, 2017: 310).<sup>19</sup>

Because of that, *Fiaker* must carefully observe each horse's behaviour to assess whether the work is suitable for the animal or if modifications to the approach, or even removal from the activity, are required. Therefore, an important part of working with horses is understanding their facial expressions. As Arno explained, "*A horse's face tells you stories, but you have to learn it.*" Many studies have been carried out on equine facial expressions.<sup>20</sup> When interpreting them, *Fiaker* must pay attention to several key factors: the tension in the nostrils, the prominence of the masseter muscles, the tension above the eyes, the width of the eyelid opening, and whether the ears are persistently held stiffly backward. Furthermore, ethological knowledge is especially critical when a new horse joins the working collective. When a new horse begins work, *Fiaker* anxiously wait for it to urinate in the city, as this is a sign that the horse is relaxed. A veterinarian explained:

*New horses also don't like to pee, that can be a problem. When they come back to their box, they release twenty litres of water [...] because if they hold it in for a long time, they can also get sick. The first days you are really worried if they don't pee. Once a horse pees in the city, they will always pee. This means that they accepted this job. [Veterinarian 2 2022]*

<sup>19</sup> Moreover, a horse's character can change over the course of their career. For example, Arno recounted that one of their horses "*simply decided it won't work anymore after five years of pulling a carriage. I can't force it.*"

<sup>20</sup> The Horse Grimace Scale (HGS) is a standardized method in veterinary science for assessing pain in horses by systematically evaluating changes in their facial expressions.

*Fiaker* often emphasized that flexibility and adaptability are important in managing these human-animal entanglements. Both species must continuously respond to shifting circumstances in their shared work. Their interspecies working relationship relies on teamwork, not only among humans and horses but also between horses themselves. Nevertheless, this dynamic interspecies interplay unfolds within a structured work environment.

On the farm where I conducted most of my fieldwork, both humans and horses adhere to established work procedures. A division of labour, dating back to the early 20<sup>th</sup> century, has produced a hierarchical structure among farm workers. At the top of this hierarchy is the experienced *Fiaker*. Grooms prepare everything for him in the morning before he arrives at the stables, allowing him to spend the entire day working with the horses. This arrangement is partly driven by the coachmen's aim of leaving the stables as quickly as possible to secure the best spots at the carriage stands. The first *Fiaker* in line claims the most favourable position – a situation they refer to as “*auf dem Guck stehen*”. Historically, this phrase was used in prisons, where inmates could only peer out from their cells through a small window (*Guck*), a usage that harks back to their past associations with criminal activity. The groom's role in preparing the horses for the workday is crucial, as he ensures that the animals are ready for their tasks. However, not all *Fiaker* adhere to this division of labour. As Lukas explained: “*For me it's unthinkable that I let someone else do my stuff. Firstly, it's my pride to have my equipment and horse prepared together, and secondly, the relationship with the horse is stronger when you clean it yourself and talk to it in the morning.*”

Experienced coachmen enforce internal rules on the farm and ensure that grooms treat the horses properly. Younger coachmen face pressure from the veterans to prove they possess the qualities of a true Viennese *Fiaker* and to master the unique challenges of handling horses in the city centre. During their first year, young coachmen are given a nickname and are subjected to a series of tests. As Johannes described it: “*We, the veterans, closely observe how they behave around horses and handle themselves in tricky situations. We watch how they respond to the observations of others and whether they assist us when asked.*” At the bottom of the hierarchical order are the *Wasserman* and grooms, responsible for watering the horses and cleaning manure from their dirt bags. Grooms are mostly seasonal workers from Eastern Europe and the Balkans, who came to Vienna to earn money. They have the most physical contact with the horses – sleeping beside them in a custom-built extension of the stable, washing, grooming, and harnessing them daily. Through these routines they develop intimate, personalized working relationships with the animals. However, despite their close bonds with the horses, grooms hold the lowest status in the stable hierarchy (see Fox, 2005). Yet these hierarchical boundaries are porous, as all the men involved share a genuine interest in working with horses. *Fiaker* nevertheless often reminisce about their career progression from once performing the “dirty” work to now guiding horses through the city.



Figure 2: Groom harnessing horses. Photo: Gašper Raušl, Vienna, 2023.

When applying the rules of this interspecies work in the city centre, they primarily focus on ensuring the safety of both humans and horses. Horses must follow specific guidelines, including: remaining calm on command (even a simple leg movement can be dangerous) for as long as required; tolerating contact from passersby (some horses do not accept it); staying attentive to the rider's instructions; avoiding independent actions (especially crucial when clients are boarding or exiting the carriage); cooperating with their working partner without conflict; respecting their partner when moving (adjusting stride and speed); offering reassurance in moments of fear to help restore balance as a pair. It is important to note that not every horse is compatible with every partner. *Fiaker* must carefully observe their horses' behaviour to form well-matched pairs, both physically and temperamentally. Tobias emphasized this, stressing that the coachman must be in harmony with the horses: "*Just as coachmen cannot work with every pair of horses, so a horse cannot work with every horse.*" When harnessing horses, grooms must follow strict workplace protocols, including placing the horses in their designated positions. Each horse is accustomed to being either on the left (L) or the right (R) side of the carriage, and these positions are generally fixed. However, every so often their places are switched to provide the animals with a new physical and mental challenge.

In our conversations, *Fiaker* frequently emphasized the importance of their equine counterparts, as well as the importance of their physical environment, i.e. carriages, horse tack etc. They often referred to themselves as *Zeugln*, which in the Viennese dialect refers to the horses, carriage, and coachman as a single entity. For horses to maximize their traction force and prevent injuries during work, they must be properly harnessed with various accessories.<sup>21</sup> During one of our carriage rides, Tobias underlined the

<sup>21</sup> The act of harnessing serves as a cue for horses to distinguish between work and rest. It structures the animals' behaviour within temporal and spatial parameters, and becomes an object with certain normativity (see Mouret, 2019: 107).

importance of the whip and tug strap. The latter (*Zugriemen*) serves as a key indicator of which horse is exerting more effort when pulling the carriage, depending on how tight or loose the strap is. The whip is the most important piece of equipment that coachmen use in combination with their voice when driving a horse-drawn carriage. It functions similarly to a rider's legs when mounted, serving as a means of communication rather than punishment. In addition, the coachman's voice – combined with precise gestures – plays a crucial role in guiding the horses. It must remain omnipresent for several reasons, the most important being to reassure the horses and command them with confidence using a low, steady tone. Commands such as changes in pace and direction, alerting the horses to potential tense situations, and offering praise are all conveyed through a coordinated interplay of the whip and vocal cues. The effectiveness of these commands relies on the precise synchronization of gesture and voice. Ultimately, the technical and affective knowledge possessed by both humans and horses is complementary, reinforcing their partnership in the working process.

Harnesses are marked with the horses' names, and each horse is fitted with a custom mouthpiece. An ill-fitting mouthpiece can cause confusion and discomfort, or even significant pain while pulling the carriage. During training, it is crucial to determine the best-fitting mouthpiece for each horse to ensure effectiveness and comfort. *“To achieve an optimal driving experience so that the horse and the coachman are in harmony with each other”*, Tobias explained. Each component of the harness serves a specific function, except for the so-called *Aufsatzhaken* (attachment hook), a remnant of the Baroque period. Originally, this hook was designed to prevent horses from lowering their head, since the aesthetic ideals of the time demanded a constant upright posture. Although the *Aufsatzhaken* remains part of the harness, its function is now obsolete as modern regulations prohibit restricting a horse's movement in such a way.

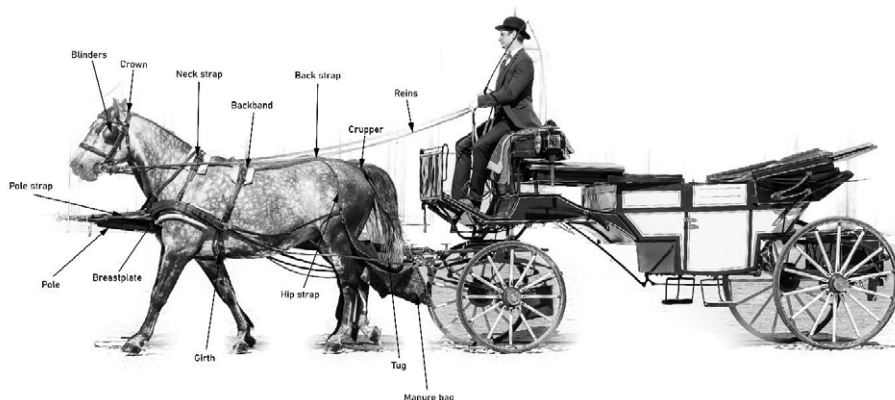


Figure 3: Components of a horse harness. Photo: Gašper Raušl, Vienna, 2023.

While procedures provide important guidelines for both humans and horses, my ethnography has revealed that real labour often contrasts with prescribed procedures. For example, when a groom found a rope too short while harnessing a horse, he left to retrieve another, trusting the horse to remain still – despite protocol requiring someone to stand in front of the horse at all times. In this instance, the groom relied on experience rather than strictly adhering to the rule. Similarly, my observations during carriage rides demonstrate that horses often take initiative beyond procedural expectations. At intersections, they instinctively stop or start at traffic lights without waiting for a direct command from the driver.<sup>22</sup> Testimonies from *Fiaker* also illustrate how their emotional connection with the horses shapes their decisions and sometimes leads them to challenge established rules. For example, they refuse to take routes that are too crowded or narrow, knowing these conditions would stress the horses. In the summer months, they deliberately avoid high speeds on busy roads to prevent overexertion. As Tobias explained: *“If a horse sweats, that’s normal, but I don’t want to force it to do cardio all day.”* This interspecies working relationship is built not only on human and animal expertise but also on trust, intuition, and emotional connection.

Properly managing their animals is their top priority, not only because of the emotional attachment they develop, but also due to the economic benefits the horses bring to the company. Elena explained that horses must be compensated for their work, stating: *“If a horse works 25 years for my company, earned money for me, it deserves to be taken care of.”* This principle becomes especially evident when carriage horses reach an age where they can no longer physically endure the workload. In such cases, carriage companies in Vienna retire their working horses to farms in Lower Austria. Throughout my fieldwork, the care and retirement of these horses were often presented to me as a fair exchange for the years of labour they provided.<sup>23</sup> Elena further emphasized this perspective, describing work as a reciprocal relationship between a horse and its handler:

*But I always say it’s not a one-way relationship. I work with my horses, I live off my horses, we work together and most of the money we earn together goes back to the horses. The driver gets the money and the horse gets the veterinary treatment, food to eat, shelter; they get their breaks outside on the countryside. I give it something and it gives me something. It goes both ways. It’s not like they are my slaves and I only control them. [Elena 2023]*

<sup>22</sup> Experienced horses know that red means ‘stop’ and green means ‘go’.

<sup>23</sup> Since these horses are used to a certain work routine which some of them have carried out for over twenty years, decreasing their activity must be gradual. When a carriage horse retires, the coachman reduces its workload day by day to prepare it for pension. They do this to prevent the horse from going into shock if it suddenly stops working overnight.

Coachmen's recognition and appreciation of their horses' labour is primarily conveyed through attentive care and carefully managed feeding. Each workhorse is provided with a diet calibrated to its workload and level of physical activity, with veterinarians tailoring nutritional plans to meet individual needs. As part of the legally mandated care, these horses must also undergo compulsory vaccination. This regulation prohibits their entry into the food chain, meaning they cannot be sent to slaughter or consumed once they are no longer able to work. Despite their status as working animals, coachmen express deep appreciation for their horses, even after retirement from work. Reflecting on the appearance and demeanour of *Fiaker*, a veterinarian at the university clinic remarked: "*Not your typical horse ladies who like glitter and pink stuff, so to say. They are more like farmers, you know.*" She went on to share a story about a horse that had once been in their care:

*We had one old Fiaker horse here at the clinic that was really sick, it almost didn't make sense to treat it. And they [the owners] said that even though this horse can't drive anymore, they wanted it to survive, and so they put a lot of money towards that. It was even more expensive than the surgery, because we needed to get the horse infusion and very expensive medicine, the horse went home after more than a month. The owner said this horse worked diligently, they felt like they owed this horse. And they got the money no matter what, so the horse got better, and we didn't euthanize it. [Veterinarian 3 2022]*

While attachment is an important element in human-horse relationships, excessive attachment can be problematic. As Tobias explains: "*I don't have a favourite, that's a bad thing to pick a favourite [...] because then you treat them differently and that's not good.*" Jocelyne Porcher (2017: 312) notes that being too emotionally attached exposes one to suffering. The relationship between humans and horses must be carefully managed, not only to maintain professional boundaries but also due to the potential risks posed by the horse's size and strength.

Because this work is carried out by both humans and animals, the working relationship is inherently interspecies. Cooperation requires not only adhering to established rules, but also the capacity to flexibly respond to situational demands within those normative frameworks. When one horse in a usual pair is unavailable, the first step is to determine which horse will take its place. This decision must consider the coachman's preferences as well as the horses' compatibility. A successful reorganization of work therefore depends on teamwork among humans, between humans and horses, and among the horses themselves.

### Some concluding notes and considerations

This paper's ethnographic insights and theoretical reflections contribute to ongoing debates within the anthropology of human–animal relations, particularly in the context of farm animals. Despite the relative scarcity of contemporary anthropological engagement with this topic (see Baskar, 2023), close attention to interspecies encounters with farm animals, such as those between humans and domestic horses in Vienna, reveals a domain of profound analytical complexity and theoretical significance.

At the heart of these encounters lies a shared world structured around labour. Living with these horses, above all, means working with them. This labour-based relationship in an urban setting not only shapes interspecies bonds but also brings together a diverse range of human actors – policy makers, veterinary officials, politicians, subaltern workers, animal rights activists, tourists – each guided by competing ideas of tradition, modernity, and nature. However, the horses themselves also participate actively in this dynamic assemblage.

These entanglements spark broader debates, often rooted in persistent dualisms: tradition versus modernity, rurality versus urbanity, nature versus culture. The discussions further intersect with evolving perceptions of horses as working animals, as opposed to pets or companions. My ethnographic findings suggest that animal labour has given rise to complex and ambivalent relationships that are simultaneously intimate and political.

Ethnographic accounts of daily interactions between humans and horses reveal that these relationships are forged not only through mutual affection, care, and trust – elements essential for successful interspecies labour collaboration in urban settings – but also within the structural forces and evolving societal norms that shape them. Likewise, human and animal labour is deeply relational, requiring adaptive collaboration and situated judgment from both participants.

By closely examining these dynamics, I aimed to challenge simplistic narratives of exploitation and human dominance associated with domestication, which are still frequently considered as sufficient explanations for animals' involvement in labour and their apparent willingness to participate (Porcher, 2017: 306). Ethnographic accounts of living and working with animals revealed the importance of horses' subjective engagement in work and highlighted the intersubjective relationships formed between humans and horses in the workplace. Yet this delicate collaboration is under increasing pressure.

As social norms continue to shift, the role of animal labour in Western societies is being progressively questioned.<sup>24</sup> In Vienna, too, the workhorse may soon lose its relevance and active role that it still holds today. Whether tourism, culture, and tradition

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<sup>24</sup> This trend is not unprecedented, particularly in Africa, which has the world's largest population of working equids (see Starkey, 2011).

can sustain its presence remains to be seen. What can, however, already be observed is that their cohabitation in an urban environment is possible only when humans and trained domestic horses work together.

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### Research data statement

The author states that the article is based on ethnographic research materials that are not classified as research data. All additional information concerning the ethnographic research materials are available on reasonable request with the author.

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### Dinamika odnosov v sodelovanju ljudi in konjev na Dunaju

Odnosi med ljudmi in konji v dunajski fijakarski tradiciji predstavljajo eno izmed osrednjih tem prispevka, ki obravnava to dolgo prisotno, a v zadnjem času vse bolj problematizirano prakso v mestnem okolju. Raziskava na podlagi etnografije, ki je združila opazovanje z udeležbo, pogovore in intervjuje s fijakarji, delavci na kmetiji, veterinarji, občinskimi uradniki, aktivisti ter številnimi drugimi udeleženci, pokaže, da konji niso zgolj orodja in prevozno sredstvo, temveč delovni partnerji, ki s svojo inteligenco, čustveno odzivnostjo in sposobnostjo prilagajanja dejavno prispevajo k opravljanju dela. Etnografija je pokazala, da je pri delu bistvena tvornost konj, saj brez njihovega sodelovanja medvrstna delovna skupina ne bi mogla delovati.

V prispevku so analizirani različni vidiki medvrstnih odnosov: od usposabljanja konj za delo in vsakodnevne rutine do regulacij, ki jih oblikuje politika, ter simbolnega pomena, ki ga imajo konji v dunajskem turizmu in kulturni dediščini. Dunajski fijakarji so postali simbol in promocija avstrijske prestolnice, hkrati pa so predmet razprav o dobrobiti živali, etiki in vlogi tradicije v sodobni urbani družbi. Konji v tej praksi zavzemajo ambivalenten položaj, saj so na eni strani predstavljeni kot kulturne ikone, na drugi pa kot delovne živali, kar razkriva preplet tradicije in modernosti ter raznolike poglede stroke, javnosti in politike.

Članek predstavi, da medvrstno delo ni zgolj utilitarna praksa, temveč predvsem intimna in politična izkušnja, ki oblikuje odnose, skrb in sodelovanje med ljudmi in konji. Tovrstne interakcije dokazujejo, da so ljudje in konji soudeleženi v delovnem procesu, v katerem soustvarjajo delovno okolje. Prispevek odpira širša vprašanja o prihodnosti delovnih živali ter opozarja, da mestna okolja niso *a priori* neprimerna za konje.



TRADITIONES

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## HABSBURG ANIMALS HABSBURŠKE ŽIVALI

Daša Ličen, Habsburg History Beneath the Eagle: The Empire and Its Animals (*Habsburška zgodovina pod orlom: imperij in njegove živali*)

Corentin Gruffat, "Habsburg" Breeds? Breed Selection and the Construction of an Agricultural State in the 19th-Century Habsburg Empire (*»Habsburške« pasme? Selekcija pasem in oblikovanje kmetijske države v Habsburškem cesarstvu 19. stoletja*)

Tadej Pavković, Breeding Nationalism: Conceiving the Native Breeds (*Vzrejanje nacionalizma: spočetje avtohtonih pasem*)

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