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Hunting in the Eighteenth Century. An Environmental History Perspective

*Martin Knoll**

Abstract: The article analyzes game hunting in eighteenth century Europe as an activity that connected the elite's culture, agrarian society, and the natural environment. Early modern hunting was a highly regulated form of using landscapes and other natural resources. Monarchal hunting in particular was bound to extravagant techniques and enormous displays, resulting in significant ecological and social consequences. In this context, an environmental history approach is useful to analyze questions of historical ecology, of man's use of natural resources, man's attitude towards nature, and the relationship between man and beast. The article focuses on princely hunting practice and wildlife management, hunting infrastructure as a factor of wood consumption, the domination of nature as an instrument to communicate power, and poaching as an environmental crime. The aim of the article is to discuss the potential and results of this approach as well as methodological challenges and limitations.

In his discussion of the social meaning of hunting in late medieval Franconia, Joseph Morsel expresses doubts about the common explanations for the elite's penchant for hunting.¹ He claims that neither spending leisure time adequate to the nobilities' status, nor training for warfare, the supply of courtly kitchens with meat or even the protection of peasants from wild game could be proven as substantial motives.² The only aspect of these popular explanations that Morsel finds convincing is that hunting practice is related to space (*raumb-*

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¹ Joseph Morsel, "Jagd und Raum. Überlegungen über den sozialen Sinn der Jagdpraxis am Beispiel des spätmittelalterlichen Franken", Werner Rösener (ed.), *Jagd und höfische Kultur im Mittelalter* (Göttingen, 1997), pp. 255-287.

² Ibid., pp. 256-260.

zogen).³ Morsel focuses on the spatial relations in which hunting was embedded, not the act of hunting itself – the “blood ritual,” in the words of Simon Schama.⁴ Moving through a region while hunting, the monarch occupies the space and by doing so, displays his power over people living there. As this article will show, this aspect of Morsel’s concept marks an important contribution to the analysis of Old Regime hunting practice. But his concept could also gain greater explanatory power if it was ecologized: if Morsel had not decided to see space (environment) only as a social category.⁵

By catching wild animals, the hunter exploits natural resources. In the Europe of the Old Regime, a sophisticated legal system controlled the use of these resources. Robert Delort and Francois Walter stress that forest, hunting, and fishing laws tried to assure that the usufruct of woodlands, lakes, and rivers, and the domination of nature in general were reserved for a small portion of society.⁶ This legal situation points to the important role an environmental history approach can play in analyzing Old Regime European hunting. The premodern agricultural and socio-economic system as a whole underlines this importance. The vast majority of people living in early modern European societies spent their life and did their work in much more direct contact with their natural environment than nowadays. And, unlike in present industrialized European societies, the different sections of landscape (woodland, open land, arable land, pastureland, etc.) and the different forms of land use (forest culture, agriculture, etc.) were overlapping in many aspects. In the eighteenth century, hunting influenced nearly all parts of the regional environment: woodland, agricultural acreage, areas reserved for hunting, and waste land. In the light of the tight functional coherence of these parts in the early modern economy, it is not possible to treat socio-economic questions as isolated from ecological ones.

For a long time, historical research ignored the topic of hunting. The statement of the German forest historian Kurt Mantel describing a well-developed field of hunting history is far less convincing than that of Joachim Radkau, who claims a lack of scholarly literature dealing with this topic.⁷ While historians have not paid much attention to game hunting in general, what hunting research

³ Ibid., p. 260.

⁴ Ibid., p. 280; Simon Schama, *Landscape and Memory* (New York, 1995), pp. 144-145. Analysing the Anglo-Norman régime in medieval England, Schama describes hunting as the most important blood ritual besides warfare “through which the hierarchy of status and honor around the king was ordered” in a historical “warrior state.” Definitions of the human action of hunting are given and discussed by Matt Cartmill, *A View to a Death in the Morning. Hunting and Nature through History* (Cambridge and London, 1993), pp. 29-30; and Kurt Lindner, *Jagd. Verteidigung einer Definition* (Bonn, 1978), pp. 15-35.

⁵ Morsel, p. 280.

⁶ Robert Delort, Francois Walter, *Histoire de l’environnement européen* (Paris, 2001), p. 84.

⁷ Cf. Kurt Mantel, *Wald und Forst in der Geschichte. Ein Lehr- und Handbuch* (Alfeld and Hannover, 1990), p. 28, as opposed to Joachim Radkau, *Natur und Macht. Eine Weltgeschichte der Umwelt* (Munich, 2000), p. 68.

there is has concentrated on questions of hunting techniques, legal norms, and living traditions.⁸ Scholars of the last thirty years have opened up a broader social history and cultural history perspective.⁹ Hunting as part of court culture is attracting growing scientific as well as public interest; several historical exhibitions have dealt with this topic.¹⁰ Surprisingly, only a few attempts have been made to examine the ecological dimension of Old Regime hunting as an aspect of the relationship between man and environment.¹¹ It seems to have been the norm that forest and hunting historians did not acknowledge the environmental aspects of the issue while environmental historians showed no interest in hunting. Recently, however, there have been signs of a growing interest in game hunting as subject of historical research. And recent research on hunting increasingly takes environmental aspects into consideration.¹²

⁸ Werner Rösener, "Jagd und höfische Kultur als Gegenstand der Forschung," Rösener, *Jagd und höfische Kultur*, pp. 11-28, here p. 12.

⁹ See Hans-Wilhelm Eckardt, *Herrschaftliche Jagd, bäuerliche Not und bürgerliche Kritik. Zur Geschichte der fürstlichen und adligen Jagdprivilegien vornehmlich im südwestdeutschen Raum* (Göttingen, 1976); Philippe Salvadori, *La chasse sous l'Ancien Régime* (Paris, 1996) and the survey recently published by Werner Rösener, *Geschichte der Jagd. Kultur, Gesellschaft und Jagdwesen im Wandel der Zeit* (Düsseldorf and Zürich, 2004).

¹⁰ The most recent German example is the exhibition "Hofjagd", shown February 19, 2004 to April 12, 2004 at the German Historical Museum in Berlin. Catalogue: Gerhard Quaas (ed.), *Hofjagd. Aus den Sammlungen des Deutschen Historischen Museums* (Wolftratshausen, 2002).

¹¹ In his study on man's changing attitudes towards the natural world in the early modern period Keith Thomas directs a lot of his attention to the relationship between man and beast. In this context he also analyzes hunting practice and the ethical discourse about hunting; see Keith Thomas, *Man and the Natural World. Changing Attitudes in England 1500-1800* (London and New York, 1984), pp. 143-147, 161-165, 181-191. An influential essay of the American anthropologist Matt Cartmill is not only interested in a critical analysis of the "Man the Hunter" theory. Cartmill studies the role of hunting in the history of Western civilisation as one central aspect of the shifting borders in the relationship between man and animal and man and nature; see Matt Cartmill, *A View to a Death in the Morning. Hunting and Nature through History* (Cambridge and London, 1993). The first German study that claimed to discuss hunting as an aspect of historical human ecology was published by Dietrich Stahl in 1979; see editor's preface in: Dietrich Stahl, *Wild – lebendige Umwelt. Probleme von Jagd, Tierschutz und Ökologie historisch dargestellt und dokumentiert* (Freiburg and Munich, 1979), pp. 7-10. In a comparative study of Germany, Great Britain, Italy and the United States, Christoph Spehr tries to find a model to describe the historical development of wildlife management according to the relationship between society and nature; see Christoph Spehr, *Die Jagd nach Natur. Zur historischen Entwicklung des gesellschaftlichen Naturverhältnisses in USA, Deutschland, Großbritannien und Italien am Beispiel von Wildnutzung, Artenschutz und Jagd* (Frankfurt, 1994). For a critical discussion of Stahl's and Spehr's approaches see Martin Knoll, *Umwelt – Herrschaft – Gesellschaft. Die landesherrliche Jagd Kurbayerns im 18. Jahrhundert* (St. Katharinen, 2004), pp. 341-344.

¹² The German historian Charlotte Takec is working on a comparative study on the development of the game hunt and society's attitude towards nature in Germany and Italy in the late nineteenth and twentieth centuries: see Charlotte Takec, *Jagd und gesellschaftliches Naturverständnis. Nationalsozialismus und italienischer Faschismus im Vergleich*, announcement of a presentation at the "Zentrum für vergleichende Geschichte Europas" at

The following pages aim to explore and discuss the goals, potentials and limits of an environmental history perspective on Old Regime European game hunting. Special attention will be given to the eighteenth century, because this time period not only saw the climax in the development of feudal hunting and the problems arising from it but in general can be viewed as a phase of transformation – a “Sattelzeit,” to use Koselleck’s famous term¹³ – in man’s relation to his natural environment.¹⁴ This article seeks to identify areas where an environmental history perspective promises good results. It also considers the methodological problems and limits of this approach.

Early Modern Hunting: A Socio-Ecological Positioning

When using an environmental history approach to analyze the historical game hunt, it is important not to begin with a simple dichotomy between human society and natural environment – often misunderstood as some kind of untouched wilderness. Game hunting is part of a complex socio-ecological constellation. In order to map it out, it may be useful to introduce a model that guides the approach in reference to the early modern agrarian society as well as to the natural environment.¹⁵ In a first step, eight determinants can be isolated: the agents “man,” “the game hunt,” “wildlife” and “livestock,” and the parts of landscape which can be classified as “hunting preserve,” “woodland,” “agricultural acreage” and, finally, “wasteland” (see fig. 1). A second step is necessary to differentiate among actors within human society against the background of the Old Regime’s political and social hierarchy (see fig. 2).

As a first step, game hunting particularly influenced the four parts of the landscape mentioned above. Under early modern conditions, game preserves were big areas enclosed by fences, where wildlife was kept for hunting purpose and where other forms of land use were partially or totally abolished. Especially the technique of coursing, which became *en vogue* at the courts of European monarchs and princes during the seventeenth and eighteenth century,

Free University, Berlin, December 16, 2002, cited from: www.fu-berlin.de/zvge/frame/coll0203.html. Her colleague Bernhard Gißibl is doing research for a Ph.D. project on “Hunting, Environmentalism and Popular Images of African Wildlife in Germany 1884-1945.” See www.iu-bremen.de/directory/faculty/32736/.

¹³ Reinhard Koselleck, “Einleitung,” *Geschichtliche Grundbegriffe. Historisches Lexikon zur politisch-sozialen Sprache in Deutschland* vol. 1 (Stuttgart, 1972), pp. XIII-XXVII, here p. XV.

¹⁴ Günter Bayerl, “Die Natur als Warenhaus. Der technisch-ökonomische Blick auf die Natur in der Frühen Neuzeit,” Sylvia Hahn, Reinhold Reith (eds.), *Umwelt-Geschichte. Arbeitsfelder, Forschungsansätze, Perspektiven* (Vienna and Munich, 2001), pp. 33-52, here p. 50, adopts the term to the context of eighteenth-century environmental history.

¹⁵ See Knoll, *Umwelt*, pp. 346-351.

required this type of preserve.¹⁶ In the case of Max Emanuel, who governed the Bavarian Electorate from 1679 to 1726, we can study the spatial dimension of such preserves. He built a hunting park near his residence in Munich that measured approximately 37 km in circumference and covered an area of 4,633 hectares.¹⁷ Hunting parks not only could enclose different types of landscape and vegetation but also agricultural acreage (and even settlements).¹⁸ Apart from the hunting preserves, there were also large areas that were not enclosed by fences but that nevertheless were intensively used for the purpose of hunting. In these areas, we find hunting and other options of land use conflicting even more.

Agricultural acreage included arable land, temporary fallow fields, meadows, pastures and gardens for the production of vegetables. Due to the conditions of early modern agriculture and the rural economy, no strict border separated the agricultural sphere from woodland or wasteland. Cattle grazed not only on special pastureland, but also on arable land and meadows that already had been harvested; we also find cattle in woodland and wasteland. On the other hand, wild game moved into the agricultural sphere and extracted or destroyed agricultural products.

The category of “woodland” under early modern conditions marks an area of multifunctional use that has been characterized by Christoph Ernst’s three functional types: hunting woodland, agricultural woodland, and timber-producing woodland.¹⁹

Finally “wasteland” means grounds that were not covered by human settlement or used for economic purposes and only played a minor role in agriculture because of their lack of fertility (poor soil), their surface (moor, steepness, rocky ground) or their peripheral location.

In these four types of landscape the agents “man,” “the game hunt,” “livestock” and “wild game” can be located. “Man” indicates the regional human society that runs hunting practice and wildlife management as well as agricultural production. The agents are related to each other and to the different parts of landscape. These relations consist, in the first place, of the exchange of products and energy. Additionally, parts of the landscape serve as habitats. Wild game living in enclosed preserves often needs more forage than is provided by

¹⁶ Susan Richter, “Der kurfürstliche Parforce-Park in Käfertal,” *Die Lust am Jagen. Jagdsitten und Jagdfeste am kurpfälzischen Hof im 18. Jahrhundert* (Ubstadt-Weiher, 1999), pp. 43-54; Salvadori, *Chasse*, pp. 209-215. While coursing hunters riding on horseback follow wild game (particularly single stags, wild boars, foxes or hares) with packs of hounds until the tracked animal is no longer able to flee.

¹⁷ Franz Kriegelsteiner, *Der Forstenrieder Park im Wandel der Zeiten* (Munich, 1987), p. 15.

¹⁸ Knoll, *Umwelt*, pp. 84-88; Joachim Allmann, *Der Wald in der frühen Neuzeit. Eine mentalitäts- und sozialgeschichtliche Untersuchung am Beispiel des Pfälzer Raumes 1500-1800* (Berlin, 1989), pp. 239-245.

¹⁹ Christoph Ernst, *Den Wald entwickeln. Ein Politik- und Konfliktfeld in Hunsrück und Eifel im 18. Jahrhundert* (Munich, 2000), pp. 14-19.

the area's vegetation. Therefore, additional forage is necessary in enclosed preserves and in regions where high populations of wildlife are kept for hunting purposes.

Fig. 1: Early modern hunting – a socio-ecological positioning – step 1

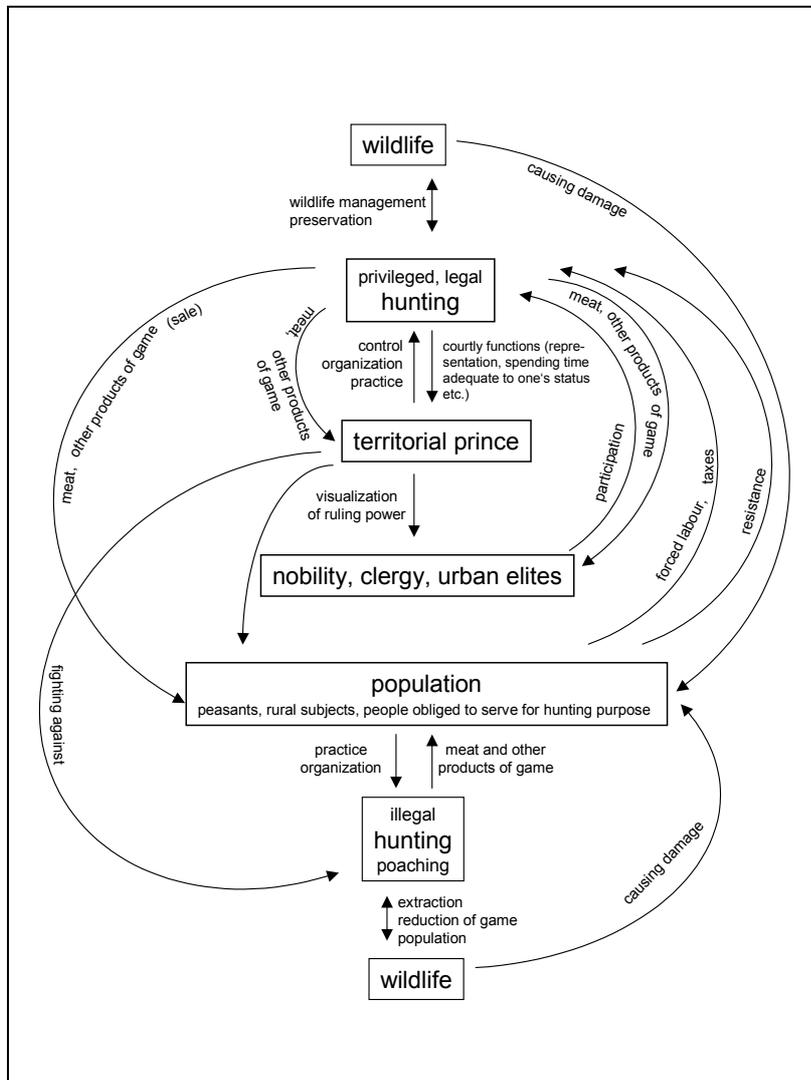
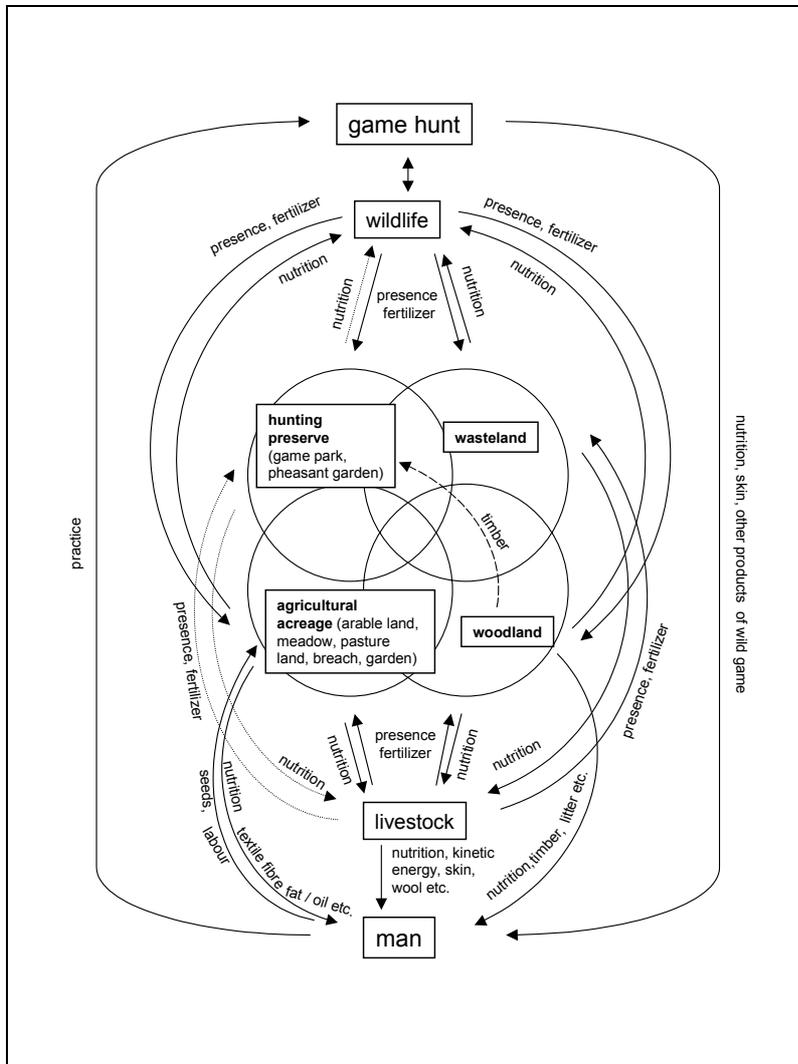


Fig. 2: Early modern hunting – a socio-ecological positioning – step 2



In agricultural acreage and in woodland, wild game and livestock are directly competing for forage (as it is proven by the example of wild boars and pigs who both eat acorns and beechnuts, so that the princely hunting-interest could lead to the abolition of peasant's pig-feeding in the wood). When wild game extracted agricultural products, it directly diminished humans' nutritional re-

sources. Wildlife, livestock and human use could cause damage to the reproduction and growth of a wood's vegetation.

In the model introduced above (figures 1 and 2), there is the category "man" / human society (fig. 1) that demands further differentiation according to the early modern political and social order (fig. 2). Hans-Wilhelm Eckardt describes Old Regime hunting privileges as the exclusive rights of a privileged minority to go hunting. They belonged only to members of the upper social and political ranks. Hunting privileges included the right of these groups to appropriate for their hunting activities the property and working power of those who did not possess any hunting privileges. That meant they had the right to go hunting on the private property of the unprivileged, who were obliged by law to provide support and labour to the hunters (*Jagdfronen*). The hunters were usually not liable for any damage to private property caused in this context. On the contrary, they had particular laws and means of coercion at their disposal to exercise and protect their rights and privileges.²⁰

With the formation of feudal society during the Middle Ages, ordinary subjects had lost more and more of their opportunities to hunt legally. In the end, most of them were not even allowed to hunt on their own property. In the Holy Roman Empire, Electors and other princes in the territories claimed the right to hunt as their exclusive right by the end of the fifteenth century. The lower nobility, clergy and urban elites were left with only minor hunting rights. With few exceptions, citizens, farmers and the rest of the society were completely excluded. In this context, the period of relative legal stability lasted until the end of the eighteenth century. In France the 1789 Revolution transformed the ancient legal system controlling the game hunt, whereas in most German territories, after growing protest and minor reforms in the first half of nineteenth century, the revolutions of 1848 brought substantial legal change.²¹ The short-lived German National Assembly in Frankfurt's Paulskirche passed a federal law on December 20, 1848 that abolished hunting privileges and bound hunting rights to the ownership of a property.²² Hunting practice would thenceforth be regulated by territorial laws. Even after the failure of the revolution, most of the territorial laws recognized the principle of ground owners' hunting rights, but introduced the legal distinction between owning hunting rights and being allowed to practice hunting personally. The practice of this right was bound to a certain minimal extension of surface. For example, the hunting law that was established in Prussia on March 7, 1850 gave the right to practice hunting to owners of lots larger than 300 acres (75 ha).²³ Owners of smaller properties had

²⁰ Eckardt, *Herrschaftliche Jagd*, p. 17.

²¹ Gerald Kohl, *Jagd und Revolution. Das Jagdrecht in den Jahren 1848 und 1849* (Frankfurt, 1998).

²² Werner Rösener, *Geschichte der Jagd*, pp. 365-367.

²³ *Ibid.*, p. 368.

to rent out the hunting collectively, so that often the old privileged hunters could regain their former hunting grounds.

In central Europe, the eighteenth century may be seen as a period of culmination in the development of game hunt. The late absolutist courtly culture required extravagant techniques of hunting, which only could be guaranteed by a sophisticated system of hunting-parks and transport of living animals. In the second half of the century, however, writers and even civil servants began to discuss the social, economic, and fiscal dimension of the ruler's hunting. Having been privileged for centuries, the hunting administrations now faced enlightened and cameralist criticism. Concepts of rationalization in forestry and agriculture collided with the traditional demands of the elite's hunting. The common complaint concerning woodland as a resource – once an argument for the rulers to legitimize keeping peasants out of the forests – now returned like a boomerang. The anonymous author of a memorandum discussed in the Bavarian Electoral administration in 1782 argued that “There can be no doubt, that both red deer and wild boar cause damage to the forests because they ruin the young seeds of timber plants and rip the trunks of trees in winter. There is no possibility in forests where red deer and wild boar are preserved that any seed can root and can be grown in time. In such regions the timber won't grow at all or only misgrown and damaged wood will appear.”²⁴ And Simon Rottmanner (1740-1813), a prominent Bavarian promoter of agricultural and forestry innovations, complained, “The damage to the forests which is caused by major hunting events is beyond any description. Millions of trees could be where there are only small bushes, pathways, alleys.”²⁵ What made the baroque hunting culture inflict the severe impact on landscape and natural resources that Rottmanner complained about, and how can the dimensions of this impact be measured?

Hunting Practice and Wildlife Management

First of all, when the historical game hunt and its ecological consequences are analyzed, clear distinctions between different holders of hunting rights with their different positions in the social hierarchy and different types of hunting practice have to be made. Absolutist courts were not the only social frameworks in which hunting was practiced legally. In many German regions the nobility possessed a minor hunting right limited to a certain number of hunting

²⁴ “Kurze Beantwortung einiger beträchtlicher Fragen, welche das Forstwesen in Bayern angehen und höchster Orten eine Entscheidung nöthig hätten, wenn besagtes Forstwesen zum höchstlandesherrlichen und allgemeinen Besten in eine bessere Ordnung gerichtet werden soll”. (Bavarian General State Archive Munich, GR Fasz. 454 Nr. 1; transl. M.K.)

²⁵ Anon. (Simon Rottmanner), *Nothwendige Kenntnisse und Erläuterungen des Forst- und Jagdwesens in Bayern* (Munich, 1780), p. 95; transl. M.K.

grounds, techniques, seasons or species.²⁶ Concerning the species of hunted animals, a distinction was made between wild game of a higher status (*hohes Wild*), which was reserved for the higher nobility, and wild game of lower status (*niederes Wild*), which was available for owners of minor privileges. Definitions differed by regions, but usually red deer, fallow deer, wild boar, wood grouse, hazel grouse, black grouse, pheasants, swans and most of the predatory birds were considered wildlife of high status.²⁷ Hare, fox, badger, partridge, snipe and duck were more often classified as wildlife of low status. The classification of roe deer was subject to regional differences.

The minor nobles and their hunting practice often only appear in the historical records when they got into conflict with their neighbours or the monarch's administration. The historical research has not yet sufficiently focused on the socio-economic and cultural circumstances of the early modern landed gentry's hunting. Not surprisingly, there is also a lack of environmental history research in this sector. Most ordinary noblemen lived on their domains, which were situated all over the country. As a result, noblemen's everyday life – including their hunting practice – was a relevant social and socio-ecologic factor in rural life. On the other hand, there are facts indicating that clear distinctions have to be made between the hunting practice of rulers' courts and those of average noblemen. Even if the landed gentry cannot be seen as a homogeneous group, noblemen's hunting may be characterized as significantly smaller-scale than rulers'. As a result, the lower nobility's game hunt caused less interference in landscape and ecosystems than did princely hunting. Particularly, it was an extractive use of natural resources, which played an important role for the economy – and kitchen – of the landed gentry. Beate Spiegel's study on the everyday life of a small noble domain in eighteenth-century Bavaria shows that wild game was important for the family's meat supply.²⁸ Spiegel's calculation also proves that the family's profit from its hunting privilege was ten times higher than its hunting expenses.²⁹ The opposite was true for the monarchs.³⁰ Eckardt's calculations for the courts of Württemberg and Brandenburg-Ansbach show expenses three times higher than the income.³¹ The Bavarian example offers similar figures.³²

It is not difficult to explain why the monarch's hunting was so expensive. Baroque courtly culture required extravagant hunting techniques as a display of splendor. These techniques had enormous financial, social and ecological costs.

²⁶ Eckardt, *Herrschaftliche Jagd*, pp. 37-46.

²⁷ *Ibid.*, p. 40.

²⁸ Beate Spiegel, *Adliger Alltag auf dem Land. Eine Hofmarksherrin, ihre Familie und ihre Untertanen in Tutzing um 1740* (Münster, 1997), pp. 132-135, 196-198.

²⁹ *Ibid.*, pp. 133-135.

³⁰ Eckardt, *Herrschaftliche Jagd*, pp. 66-76.

³¹ *Ibid.*, pp. 72-73.

³² Knoll, *Umwelt*, pp. 150-163.

In the seventeenth and eighteenth centuries, falconry played an important role at the European courts. Margrave Carl Wilhelm Friedrich of Brandenburg-Ansbach (1712-1757) became famous for his expensive falconry. Using this technique, he caught approximately 34,500 animals in 26 years (1730-1755).³³ His expenses on falconry and those of his son on coursing are seen as important reasons for their territory's debt.³⁴ The falcons were not only taken from domestic populations but also imported from different Scandinavian, eastern European and Asian regions.³⁵ Herons were preferred as hunting game because of the spectacular air fights they fought when being attacked by falcons. Even though sometimes the birds survived the fight and therefore could be "used" several times, the heron supply had to be guaranteed, and they became subject to legal protection as a result.³⁶ In Bavarian legislation this protection was fixed since the early seventeenth century.³⁷ As herons are predators of fish, this protection policy should have influenced fish populations. Research on this aspect of historical ecology requires the consideration of fishery's historical records and makes evident once more the socio-ecologic interrelations of historical hunting and wildlife management. Studying these interrelations on the basis of records from different administrative and economic backgrounds promises substantial results for an environmental history approach to Old Regime game hunting.

In late medieval and early modern France, coursing had been developed to a technique of elaborate formal arrangement and high social distinct. Since the late seventeenth century, German courts had adopted the French model and installed specialized coursing crews.³⁸ They often employed French specialists for this purpose. Particularly the coursing of red deer and wild boar communicated high prestige. Heinrich Wilhelm Döbel, author of a hunting manual first published in 1746, indicated the high expenses required for coursing as its central advantage: He argued that the costs of this technique underscored the ruler's power because minor princes and nobility could not afford to practice

³³ Sigrid Schwenk, "Von der hohen Kunst zu jagen. Jagdmethoden im 18. Jahrhundert," *Die Jägerey im 18. Jahrhundert. Kolloquium der Arbeitsstelle 18. Jahrhundert, Bergische Universität Gesamthochschule Wuppertal* (Heidelberg, 1991), pp. 39-47, here 45. For a list of species caught see Franz v. Kobell, *Wildanger. Skizzen aus dem Gebiete der Jagd und ihrer Geschichte* (Stuttgart, 1859), p. 448.

³⁴ Schwenk, *Kunst zu jagen*, pp. 46-47.

³⁵ Kobell, *Wildanger*, pp. 427-428.

³⁶ Bandages around the heron's neck, rewarding the falcons with meat immediately after landing and other methods avoided bad injuries or killing by the predators; see Kobell, *Wildanger*, pp. 430-431.

³⁷ Georg Döllinger, *Die über das Jagdwesen in Bayern bestehenden Verordnungen* (Regensburg, 1842), pp. 264-266.

³⁸ Schwenk, *Kunst zu Jagen*, pp. 42-43.

it.³⁹ Horses and big packs of hounds had to be maintained. Hunting parks as the spatial dimension of coursing have already been mentioned above.

Wildlife management as a basis of these hunting parks occurred in two ways. Inside the park's fence, wildlife management had to face the problems of game populations living in enclosed areas: limited natural forage supplies, genetic impoverishment, high danger of infectious diseases, etc.⁴⁰ How did the administrations handle these problems? Did they realize the specific causes? Is there any evidence of problems with infectious diseases being transferred from the park's game populations to livestock or vice versa? The park's wildlife management was interconnected with the regional wildlife management outside the fence and even with that of other regions. It is well known that red deer and wild boar were caught alive, transported over long distances, and delivered to the coursing parks.⁴¹

From November 10 to 24, 1735, the Bavarian Elector Karl Albrecht (1726-1745) and his court were out for a hunting trip in the Geisenfeld region in Upper Bavaria. They killed 1105 wild boars.⁴² In 1763, Duke Karl Eugen of Württemberg celebrated his birthday with two weeks of festivities. One of the highlights was a splendid hunting spectacle held in Degerloch, where more than 5,000 wild game animals were forced into an artificial lake.⁴³ Both events represent a third hunting technique common to eighteenth-century courts— and a third challenge to the monarch's wildlife management. The practice of shooting rounded-up game in Germany was called “eingestellte Jagd” or “gesperrte Jagd,” in French “la chasse dans les enceintes.”⁴⁴ This kind of hunting event required a complex preparation.⁴⁵ During a period of several days – sometimes even several weeks – the mobility of wild game from a huge section of landscape had to be more and more constrained. Hunters and peasants who were obliged to assist drove the animals into a smaller and smaller space by using ropes, nets, and fire. Finally, the wild game was stored in a small fenced pen, from which it was forced into the shooting area during the hunting event. Ob-

³⁹ Heinrich Wilhelm Döbel, *Jäger-Practica oder der wohlgeübte und erfahrene Jäger. Eine vollständige Anweisung zur Hohen und Niedern Jagd-Wissenschaft* (Leipzig, 1746 [reprint Neudamm, 1912]), p. 302.

⁴⁰ Lutz Fenske, “Jagd und Jäger im früheren Mittelalter. Aspekte ihres Verhältnisses,” Röse-ner, *Jagd und höfische Kultur*, pp. 29-93, here pp. 70-71.

⁴¹ Knoll, *Umwelt*, pp. 93-97.

⁴² Kobell, *Wildanger*, p. 128.

⁴³ Eckardt, *Herrschaftliche Jagd*, p. 55.

⁴⁴ Johann Elias Ridinger, cited from Deutsches Jagd- und Fischereimuseum (ed.), *Jagd und Wild gestern, heute und morgen* (Munich, 1981), p. 29. There is no direct English translation of “eingestellte Jagd.” Dalby's and Brander's encyclopedias don't mention it. Thomas uses no term but describes one similar hunting event: “Henry VIII's manner of hunting did not differ very much from that of the eighteenth-century King of Naples: he had two or three hundred deer rounded up and then loosed his greyhounds upon them”. (Thomas, *Man*, p. 145.)

⁴⁵ See Döbel, *Jäger-Practica*, pp. 234-239, 242-251.

vously, only a dense population of wildlife could guarantee the success of this kind of hunting. Therefore – together with the steadily occurring damages to the agricultural production and the conflicts arising from this issue – the documented hunting practice itself can act as another indicator of the size of wildlife populations and the princely wildlife management that was particularly interested in providing these populations.

Measuring Historical Wildlife Populations and Wildlife Management

Obviously, a certain type of wildlife management was necessary to make possible these types of hunting practices. Therefore, the precise character of wildlife management that the princely authorities chose is one of the key issues to be examined by an environmental history approach to early modern hunting. What dimensions of populations arose from the administration's policy? Was there a high stand density of wildlife maintained all over the country? What can be said about the ecological compatibility of the wildlife stands to the regional habitats?

Hans-Wilhelm Eckardt has already tried to reconstruct figures for the size of wildlife population and stand density in the early modern Duchy of Württemberg.⁴⁶ Peter-Michael Steinsiek, who is doing his research on the historical biodiversity in the marshy landscape of the Eastern German "Oderbruch," is quite optimistic that a combination of data received from the historical records and models of present ecology can provide reliable information on former species diversity.⁴⁷ But at last, it has to be considered that there is a host of methodological problems that make it difficult to reconstruct data on the quantity of historical wildlife populations and to derive qualitative conclusions from this information. The main problem arises from the structure of the early modern historical records. Often they do not provide the full range of data needed for the discussion of the above-mentioned questions.

In Germany, systematic statistics on hunting (which were still far from providing precise data) were not produced before the nineteenth century.⁴⁸ In the eighteenth century, statistical data were gathered in two different types of records: reports on the stand of regional wildlife populations that were based on the visual monitoring of living animals and reports on the results of hunting

⁴⁶ Eckardt, *Herrschaftliche Jagd*, pp. 76-80.

⁴⁷ Peter-Michael Steinsiek, "Approaches and Archival Sources for Transforming Historical Data into Reliable Ecological Information," Leos Jelecek (ed.), *Dealing with Diversity. 2nd International Conference of the European Society for Environmental History, Prague 2003, Abstract Book* (Prague, 2003), pp. 119-120.

⁴⁸ Sigrid Schwenk, *Jagd in Deutschland und Österreich. Geschichtliche Entwicklung im Spiegel der amtlichen Zahlen des 19. und 20. Jahrhunderts* (Frankfurt, 1987), pp. 8-24.

that documented the number of animals killed during single chases or by the party of a certain ruler, in a certain territory or in a certain region during a given time.

The most common occasion for foresters or hunters to be asked to estimate the size of the wildlife population in their district was the organization of princely hunting events.⁴⁹ The authorities wanted to know whether a region's population of red deer, wild boar, etc., promised good results for the chase. From a methodological point of view, the estimation of wildlife populations by visual monitoring is a problem that has not been solved to the present day.⁵⁰ Animals are counted twice or not at all; therefore, the counts cannot claim precision. As a general rule, the counted results are below the real figures; in the case of the red deer, there is sometimes a difference of 100 percent.⁵¹ Even foresters in the eighteenth century discussed the fact that wild game was difficult to count because of its mobility.⁵² Rudolf von Wagner, who studied the reports of wildlife stands produced for the early modern princely hunting of Württemberg, indicates a second source of error: The results of monitoring could be influenced by subjective motives and interests of the reporting foresters and hunters.⁵³ Knowing that the decision of the superordinate authorities as to whether a hunting party would visit the region depended on their reports, the local officers of the hunting and forest administration found themselves in a difficult situation. They knew that certain expectations of the ruler and his entourage had to be met. In case the hunting party was surprised by a high number of animals that could be killed, there was no problem. An unexpected disappointment, however, could be seen as an indicator of the local forester's incapability. Therefore, it is likely that the local hunters and foresters reported figures below the real stand. For one incident, Wagner could compare the figures given in a report on the stand of wild boar with the results of a chase held in the same region about one month later.⁵⁴ The report given by the "Forstmeister" of Waldenbuch in the Schönbuch forest on September 30, 1607 noted 396 wild boars. During a wild boar chase that took place in Schönbuch from November 3 to December 1, 1607, however, 722 animals were killed. The bag was almost twice as high as the stand reported before. In addition, it is safe to

⁴⁹ See Stahl, *Wild*, pp. 146-149; Rudolf v. Wagner, *Das Jagdwesen in Württemberg unter den Herzogen. Ein Beitrag zur deutschen Kultur- und Rechtsgeschichte* (Tübingen, 1876), pp. 130-150.

⁵⁰ Wilfried Bützler, *Rotwild. Biologie, Verhalten, Umwelt, Hege* (Munich, 2001), pp. 159-165. See also the articles "Wildzählung" and "Wildstand" in Ilse Haseder, Gerhard Stinglwagner (eds.), *Knaurs Großes Jagdlexikon* (Munich, 1996), pp. 930, 936. For similar experiences with the elk population of the US Yellowstone National Park see Karl Jacoby, *Crimes against Nature. Squatters, Poachers, Thieves and the Hidden History of American Conservation* (Berkeley, 2001), p. 119.

⁵¹ Bützler, *Rotwild*, p. 161.

⁵² Knoll, *Umwelt*, p. 357.

⁵³ Wagner, *Jagdwesen*, pp. 137-138.

⁵⁴ *Ibid.*, p. 138.

assume that a certain number of animals managed to escape. Wagner does not believe that the difference between the reported stand and the bag can be sufficiently explained by animals moving into the district between counting and hunting. As a consequence, he argues that the figures given in the reports have to be doubled to give an impression that comes closer to reality.⁵⁵

There are two more situations that could produce reports on wildlife stands based on monitoring. Following peasants' complaints about the damage done to their agricultural production by wild game, authorities reacted by ordering the inspection of the farmers' arable land and the estimation of the wildlife stand. Finally, reports on wildlife stands could result from efforts to rationalize and commercialize the state's forest property in the late eighteenth century.

All these reports provide figures on wildlife stands. But all of them also provide methodological challenges for the historian who seeks to gain reliable information. Apart from the limited precision of monitoring and the subjectivity of those reporting the information, the spatial dimension has to be considered. The density of population, i.e., the number of animals of one species living in a habitat of a certain size, needs to be reconstructed. But foresters often did not give precise descriptions of the spatial frameworks. Thus, reliable data on population density can only be achieved where figures on population stands can be related either to precise contemporary cartography or to descriptions providing geodata that can be identified in present landscape or cartography.

Finally, the judgement that certain population densities are tolerable for certain habitats has to be based on a broad variety of morphologic, biotic and anthropogene influences. In the cultural landscape of eighteenth-century Europe, the development of wildlife populations and ecosystems is closely connected to the development of human society and its economy. Long before a population of wild beasts reaches the limits of the capacity of its habitat given by climate, ground, vegetation etc., it may interfere with agricultural production. There are examples indicating a remarkable sensibility of eighteenth-century experts towards this socio-ecologic nexus. In his answer to a questionnaire that was issued in 1779 by the Bavarian authorities in order to investigate the conditions of Bavarian state forests, the "Überreiter" (officer of forest and hunting administration) Theodor Hörmann from Moching and Etzenhausen near Munich reported that there was no wild boar and no red deer permanently positioned in his district.⁵⁶ But red deer regularly moved into the district from the nearby princely hunting preserve, so that at least seven male and eight female red deer and eight roes needed to be shot per year in order to prevent the

⁵⁵ Ibid., pp. 149-150.

⁵⁶ "In disem Gezirk ist kein schwarzes Wildpräth und ist in seinen beeden Amtern ken Stand von schwarzem Wildpräth, in gleichn auch kein Stand von hohem rothen Wildpräth [...]". (Bavarian General State Archive, Staatsverwaltung 1217, fol. 175r-185r, here fol. 180v-181r.)

spread of wild game over the river Amper, which would cause damage to the arable land nearby. How can Hörman's statement be characterized? Since he was a professional hunter, it is not surprising that his report is obviously based on a precise monitoring of the behaviour of the wild game. Far more remarkable is Hörmann's sensitivity both to mechanisms of population dynamics and to the relationship between ecological and economic requirements. From his observations, Hörmann knows that there is a certain level of population density that causes a further movement of wild game into the nearby farmland. He can quantify this level – at least he gives an indirect value when he recommends that a certain number of deer be shot – and with his distinction of sex he also takes the red deer's population dynamics into account.⁵⁷ Without being asked, Hörmann takes a wide range of issues into consideration: hunting strategy and habitat capacity as well as the prevention of damage to the agricultural production. Thus he shows – in the sense of Radkau's broad definition – a remarkable degree of environmental awareness.⁵⁸

Archival sources documenting the results of the princely hunting practice do not include all the data needed for a total reconstruction of historical wildlife stands. Nevertheless, this material can help to get relative figures on the development of populations and to check the results of an analysis of the above-mentioned reports. For example, the reports that were ordered for the organization of courtly hunting events often concentrate on male red deer and capital wild boar because these prestigious beasts were very important for the rulers' hunting festivities. By studying only these sources, one can get the impression that in the case of red deer the princely wildlife management as a whole had been concentrated on the male animals in a one-sided manner. However, the account books of the Munich "Wildbretgewölbe" (a central institution for the distribution of wild game from the princely hunting) indicate a balanced bag, if not even a majority of females.⁵⁹

Recognizing the significant limits of the different historical sources, it may not be possible to gain figures of high statistical precision, but it is possible to reconstruct dimensions of princely wildlife management and the consequences for game populations and habitats. Further research could analyze material of certain regional focuses and combine these results with the indirect indicators (like the documented dimensions of damage done to the local agricultural production). By comparing the results from different regions in a second step a wide range of information could be achieved on the ecological impact of the wildlife management the princely hunting practice was based on.

⁵⁷ See Heribert Kalchreuter, *Jäger und Wildtier. Auswirkungen der Jagd auf Tierpopulationen* (Mainz, 1994), pp. 228-229.

⁵⁸ Joachim Radkau, "Was ist Umweltgeschichte?" *Geschichte und Gesellschaft* Sonderheft 15 (1994), pp. 11-28, here 17-18.

⁵⁹ Bavarian General State Archive, Department III "Geheimes Hausarchiv," Hofjagdintendanz Nr. 142-147.

Hunting, Parks and Fences: Material Dimensions

The construction of wooden fences for hunting preserves and for the protection of agricultural acreage against wildlife demanded enormous amounts of timber. These needs must have had serious consequences for the development of the regional woodlands. If historians want to prepare the ecologic balance sheet of the historical hunting practice, it is here that they find one substantial field of research. The examination of the administrative records of different regional focuses could provide a large scale of data and make it possible to compare the different situations. This issue at the frontier of environmental history is particularly interesting when set into relation with the contemporary fear of wood scarcity.

Two examples underline the potential. In 1668, the Bavarian Elector Ferdinand Maria ordered the construction of a hunting park on the banks of lake Starnberg south of Munich.⁶⁰ The small preserve was designed for keeping red deer that were to be forced into the water and shot there in the course of some special kind of baroque hunting festivities. The fence, which measured 2,866 meters, was built of palisades. The timber was taken from the nearby forests. Only a few years later, local authorities faced serious problems in gathering the timber necessary to maintain the wooden construction. The fence had to be repaired several times. In 1677, 6,000 further palisades were needed, but it was not possible to take any more timber from the regional forests. As a letter written by the Starnberg authorities proves, a paradoxical situation had arisen: the princely hunting park had led to an overexploitation of the nearby forests, and as a result, these forests lost their quality as a habitat for princely wildlife.⁶¹ In 1681, the park was given up. The records documenting this case provide information on the amount of timber needed for the project and where it was taken from. In addition, there are documents on discussions between various officials of the Electoral administration in charge of the problems.⁶²

More than a hundred years later, four villages situated in the big hunting park near Munich mentioned above succeeded in getting their agricultural acreage protected against wildlife by a new fence. The local Electoral forester was ordered to do the planning. His documents provide information about the mode of construction and the amount of wood that was needed for the 14.8 km

⁶⁰ Bavarian General State Archive, GL Fasz. 3798 Nr. 84. For further details see Knoll, *Umwelt*, pp. 76-81.

⁶¹ Letter of the local Electoral administration (*Pfleggericht*) of Starnberg to Elector Ferdinand Maria, July 5, 1677. (Bavarian General State Archive, GL Fasz. 3798 Nr. 84.)

⁶² Further research could try to specify the real situation of the region's forests and could search for other factors that could have worsened the crisis (such as the wood consumption of the contemporary construction of Electoral leisure ships on the lake).

fence.⁶³ The forester calculated 7,275 posts and the same amount of 6 m horizontal poles. In addition, over 436,500 “Hanichel” (small trunks of young trees) would comprise the vertical cover of the fence. The local woodlands were situated near the town, they were part of the hunting preserve with its dense wildlife population and they had to supply the local peasants with wood. Could they supply these amounts of material without being exhausted? Recognizing that this fence was not the only one intensifies the question marks. More than 18,000 posts were needed to build the fence at the outer border of the hunting park (if calculated by the length of approximately 37 km in 1715). Because of its durability, oak was used for these columns. It is not a difficult calculation: 1,500 columns could be made out of 40 big oak trees, as the “Oberstjägermeister” (chief of the Electoral hunting authority) Sigmund von Preysing calculated in 1739, so that 480 oaks had to be cut for the 18,000 columns – the material for the horizontal construction not included!⁶⁴ Finally, the files provide plenty of evidence that the fence was frequently damaged by storm, rain, wild game, livestock and resisting peasants. In short, it had to be repaired constantly, which required further timber.

Simon Rottmanner criticized,

I know well that they suggest fences as a method to prevent damage caused by wild game. But these fences have to be built very high, very strong and very narrow and they have to be maintained over years, so that they cause exhaustion of forests and other costs.... One other forester ordered the construction of a fence made of planks. One can easily imagine how much timber and money was spent on this. As the woodlands of this forester are in the worst condition, one may doubt that in one century there will grow trees as have been cut into planks. ... Recently I have seen a coursing-garden being erected, which was fenced in with the best young timber. This will hurt the nearby forest for centuries.⁶⁵

Domination of Nature and the “Culture of Power”

Hunting played a vital role in courtly ceremony and everyday life. It was part of the “culture of power” described by Timothy Blanning.⁶⁶ Environmental

⁶³ Calculation of the local forester Max Anton Jägerhuber, October 6, 1798. (Bavarian General State Archive, FA Fasz. 311 Nr. 794.)

⁶⁴ Letter of Sigmund von Preysing to Elector Karl Albrecht, Munich January 20, 1739. (Bavarian General State Archive FA Fasz. 404 Nr. 40.)

⁶⁵ Rottmanner, *Kenntnisse*, pp. 82-84; transl. M. K.

⁶⁶ Timothy C. W. Blanning, *The Culture of Power and the Power of Culture. Old Regime Europe 1660-1789* (Oxford and New York, 2002). In his comparative study of France, Great Britain and several German monarchies Blanning analyzes the cultural frameworks of political power and political change at the end of the Old Régime. Adopting the concept of a ‘representational’ public sphere from Jürgen Habermas’ *The Structural Transformation of the Public Sphere*, he notices a ‘representational culture’ where princes and nobility

history research is not only interested in the human impact on natural environment. Man's attitude towards nature and the motives that influence his dealings with nature are also a key issue. Therefore, concerning the early modern rulers' game hunt, there seems to be a need to explain how far the use of nature for, and the structuring of nature around, hunting fulfilled a function in the visualization of dominion and in communicating a claim to absolute power. Alexander Schunka, drawing from the testimony in late sixteenth and seventeenth century lawsuits before the Reichskammergericht concerning the hunting rights of the Counts of Öttingen, shows the connection between acquiring space by hunting and the social construction of dominion.⁶⁷

Turning to the late seventeenth and the eighteenth century, there is a kind of princely architecture that – whether by means of elaborate trick fountains, artificial canals or self-supporting vaults – went to the limits of what was technologically possible. It restructured the space that was meant to be dominated into a space that clearly *was* dominated.⁶⁸ Scenic morphologic conditions and physical postulates were replaced by an artificial formation and arrangement. Absolute power over a country was not limited to power over the people: the country in a precise physical sense had to be – at least when it formed a part of court life – subjected to the sovereign's will. This in turn was meant to be a signal to the ruler's subjects. Therefore, the domestication of nature was a medium for a program of dominion and communicated a claim to absolute power.⁶⁹

represent their power *before* the people instead of *for* the people. Particularly for the prototype absolutist court of Louis XIV of France Blanning states: "It should never be supposed that the representational culture of the kind which reached its climax at Versailles was an expression of unbounded confidence. On the contrary, the greater the doubts about the stability or legitimacy of a throne, the greater the need for display." (Blanning, *Culture of Power*, p. 32).

⁶⁷ Alexander Schunka, *Soziales Wissen und dörfliche Welt. Herrschaft, Jagd und Naturwahrnehmung in Zeugenaussagen des Reichskammergerichts aus Nordschwaben 16.-17. Jahrhundert* (Frankfurt, 2000), p. 12.

⁶⁸ See Heidrun Kurz, *Barocke Prunk- und Lustschiffe am kurfürstlichen Hof zu München* (Munich, 1993), pp. 241-260. In the political life of the Bavarian Elector Max Emanuel (1679-1726) Kurz sees an interrelation between the periods of the prince's building activities and his political projects. In her analysis of baroque garden architecture Cornelia Jöchner refers to the architectural-spatial approach of Juliette Hanson, Bill Hillier and Alan Penn, who assume the structuring of space as being one of the indispensable conditions for social organization. See Cornelia Jöchner, "Barockgarten und zeremonielle Bewegung. Die Möglichkeiten der Alée couverte. Oder: Wie arrangiert man ein incognito im Garten?" Jörg J. Berns, Thomas Rahn (eds.), *Zeremoniell als höfische Ästhetik in Mittelalter und früher Neuzeit* (Tübingen, 1995), pp. 471-483, here 473; Juliette Hanson, Bill Hillier, *The Social Logic of Space* (Cambridge, 1984); Bill Hillier, Alan Penn, "Visible Colleges. Structure and Randomness in the Place of Discovery," *Science in Context* 4 (1991) Nr. 1, pp. 23-49.

⁶⁹ Louis de Rouvoy Duc de Saint Simon (1675-1755) who was a political adversary and critic of the French king Louis XIV also criticized the garden architecture of Versailles in his memoirs: "It was a pleasure to the king to tyrannize nature and to tame it with the help of art and money [...] One feels disgusted by the force that is exerted upon nature every-

Princely hunting practice as described in this article played a vital role in this functional and cultural context. For example, the practice of coursing required special arrangements within the hunting ground. The demands of this method of hunting for optimal observation and accessibility of the premises, were an ostensible motivation for a system of alleys, pathways and radial aisles. Of course, the roots of star-shaped division of space and route planning in the history of architecture can be traced much earlier and had at first been developed without reference to hunting. This is also true of landscape and urban planning in the Italian Renaissance of the 15th century and for the star-shaped arrangement of alleys and paths in Italian and French garden planning, and also for street-, urban-, and fortress-planning in various European countries in the early seventeenth century.⁷⁰ In the process of this development, the mere aesthetic principle of order was complemented by the integration of architecture at the intersection of pathways. By being polygons, rotundas, star- or cross-shaped buildings, they often were adapted to their positioning.⁷¹ The reception of such ensembles of landscape architecture for the hunt at German courts has to be seen in connection with the establishment of coursing. Thus, the 1682 concept of a game park by Johann Tüntzer shows a star of forest aisles with an integrated rotunda.⁷²

A merely technical explanation of the aisle- and star-shaped arrangements would not reach far enough. In fact, the origins of these demands have to be investigated. It was coursing that, unlike earlier hunting methods, asked for a long-lasting reordering of the landscape. Earlier, the court had gone hunting in more or less “naturally” formed areas that had been segmented only temporarily by cloths or nets; but now parts of the landscape had to be transformed into a landscape especially designed for hunting, a scenery of princely presence. The sovereign’s hunt was another reason for the manorial interference with space. While the staged death of hundreds of animals during the “Eingestellte Jagd” embodied princely power, this was achieved in the case of coursing even without the act of hunting, with the visible control over the geometrically or-

where.” cited from Norbert Elias, *Die Höfische Gesellschaft* (Neuwied and Berlin, 1969), p. 338; transl. M. K. Norbert Elias emphasizes the tight connection between system of rule, garden architecture and the perception of nature which is visible in the statement of St. Simon.

⁷⁰ Albrecht Graf Egloffstein, “Jagd und Architektur,” *Die Jägerey im 18. Jahrhundert* (Heidelberg, 1991), pp. 187-212, here 201; Hans Eugen Pappenheim, “Die Ursprünge einer radialen Jagdanlage bei Fürstenried und ihre Weiterbildung in höfischen Forstbauten der Zeit,” *Zeitschrift für bayerische Landesgeschichte* 11(1938), pp. 222-231, here 222-223; for the affinity of the baroque elite culture to geometric form see Gernot Heiss, “Die Liebe des Fürsten zur Geometrie. Adelserziehung und die Wertschätzung der höfischen Gesellschaft für Symmetrie und Regelmäßigkeit,” Peter J. Burgard (ed.), *Barock. Neue Sichtweisen einer Epoche* (Vienna, 2001), pp. 101-119, and Henning Eichberg, “Geometrie als barocke Verhaltensnorm,” *Zeitschrift für historische Forschung* 4 (1977), pp. 17-50.

⁷¹ Egloffstein, *Jagd und Architektur*, p. 202.

⁷² *Ibid.*

ganized landscape. Salvadori analyses the example of the forest of Compiègne that had been made accessible for hunting by star-shaped aisles and polygonal systems of pathways by the French Kings since Francois I. In 1763 the network of roads and paths had reached an approximate total length of 1,600 km. Salvadori draws the picture of a landscape where a self-enhancing system of crossing pathways creates the impression of myriads of stars, polygons and optical axes. In this system with its ever-changing perspectives and the continuous traffic of carts and carriages, the impression of wilderness has given way to an impression of skillfully designed civilization. Salvadori regards this structure as “une démonstration géométrique de la puissance du roi sur la nature,” a geometrical representation of ruler’s power over nature.⁷³

In Chapter Five (“Von der Macht und Gewalt der Obrigkeit” [Of Power and Force of the Authority]) of his *Vernünfftige Gedancken von dem Gesellschaftlichen Leben der Menschen* (Reasonable Thoughts on People’s Life in Society) (1721), Christian Wolff states, “The average person, dependent on his senses and unable to reason, is incapable of comprehending the majesty of the king. But through the things that meet the eye and in turn activate the other senses, he receives a clear, if imprecise, idea of his majesty, or power and authority.”⁷⁴

“Mundus christiano-bavaro-politicus,” a Bavarian political theory treatise of 1711, explicitly argued that hunting was a means for sovereigns of being seen everywhere in their domain and “displaying their power all over by showing their splendor and magnificence.”⁷⁵ For the hunt of Elector Karl Theodor of the Palatinate (1742-1799), this meant that a pompous hunting festivity taking place on August 13, 1764 in honour of the Elector of Mainz was observed by about 10,000 people – by no means just the court’s society.⁷⁶

After all, some delicate parallel in attitude towards landscape and woodlands can be found both in aristocratic hunters and in the enlightened cameralist reformers who criticized them: they both wanted to gain control over the whole surface of a territory, and they both tried to gain this control by introducing a

⁷³ Salvadori, *Chasse*, pp. 213-214.

⁷⁴ Cited from Samuel John Klingensmith, *The Utility of Splendor: Ceremony, Social Life and Architecture at the Court of Bavaria 1600-1800* (Chicago, 1993), p. XVI. For the position of Wolff’s statement in the context of court ceremony and the visualization of power see Andreas Gestrich, “Höfisches Zeremoniell und sinnliches Volk. Die Rechtfertigung des Hofzeremoniells im 17. und frühen 18. Jahrhundert,” Jörg J. Berns, Thomas Rahn (eds.), *Zeremoniell als höfische Ästhetik in Mittelalter und früher Neuzeit* (Tübingen, 1995), pp. 56-73, here pp. 56-61.

⁷⁵ Cited from Peter Volk, “Die höfische Jagd,” Hubert Glaser (ed.), *Kurfürst Max Emanuel, Bayern und Europa um 1700* (exhibition catalogue, Munich, 1976), vol. 2, p. 246. Transl. M. K.

⁷⁶ Frieder Hepp, “Gar lustig ist die Jägerei. Die kurpfälzer Jagd im 17. und 18. Jahrhundert,” Werner, *Jagd – Vergnügen und Verderben*, pp. 63-83, here 77-78.

geometrical order.⁷⁷ The above-mentioned prince's "love of geometry" in the words of Gernod Heiss corresponded to the enlightened vision of "nature as a department store."⁷⁸ The network of alleys and multicrossing pathways in the princes' hunting preserves was both different and similar to the rationalist chess-board-segmentation of woodlands promoted by forest reformers.

Environmental Policy and Environmental Banditry

When Karsten Küther characterized one of the most popular poachers in German history, Matthäus Klostermayer (also called "Bayerischer Hiesl," 1736-1771), as the only prototypical social bandit in Germany in the eighteenth and early nineteenth centuries, he adopted Eric Hobsbawm's concept of social banditry for the analysis of poaching.⁷⁹ But while the concept of social banditry as a protopolitical form of social protest is subject to controversy in general, there is also a vivid discussion on whether the complex reality of poaching in Old Regime Europe can accurately be described as a social crime.⁸⁰ Winfried Freitag characterizes early modern poaching as an economized everyday crime, carried out by a broad socio-economic network including members of all levels of the social hierarchy.⁸¹ Even the one-sided designation of Matthias Klostermayer as a typical social bandit has provoked scepticism.⁸² Karl Jacoby studies the conflicts that arose between the promoters of the conservation movement and members of the rural society in late nineteenth- and early twentieth-century United States, when national parks were erected and a new kind of legislation redefined practices of using the natural environment.⁸³ Jacoby's research on the "hidden history of American conservation" indicates once more that it makes

⁷⁷ For a recent case study on this aspect see Rainer Beck, *Ebersberg oder das Ende der Wildnis. Eine Landschaftsgeschichte* (Munich, 2003).

⁷⁸ See Gernot Heiss, *Die Liebe der Fürsten; Bayerl, Natur als Warenhaus*.

⁷⁹ Karsten Küther, *Räuber und Gauner in Deutschland. Das organisierte Bandenwesen im 18. und frühen 19. Jahrhundert* (Göttingen 1987), p. 52.

⁸⁰ Cf. Eric J. Hobsbawm, *Sozialrebellien. Archaische Sozialbewegungen im 19. und 20. Jahrhundert* (Neuwied and Berlin, 1962), pp. 28-47 [english original: *Primitive Rebels. Studies in Archaic Forms of Social Movement in the 19th and 20th Centuries* (Manchester, 1959)], and Gerd Schwerhoff, *Aktenkundig und gerichtsnotorisch. Einführung in die historische Kriminalitätsforschung* (Tübingen, 1999), pp. 142-147.

⁸¹ Winfried Freitag, "Das Netzwerk der Wilderei. Wildbretschützen, ihre Helfer und Abnehmer in den Landgerichten um München im späten 17. Jahrhundert," Andreas Blauert, Gerd Schwerhoff (ed.), *Kriminalitätsgeschichte. Beiträge zur Sozial- und Kulturgeschichte der Vormoderne* (Konstanz, 2000), pp. 707-757. For poaching in Old Regime France see Salvadori, *Chasse*, pp. 277-365. For further literature on poaching in Great Britain, see Jacobi, *Crimes*, p. 5, note 15. For further literature on Klostermayer and poaching in Bavaria and the archbishopric of Salzburg, see Knoll, *Umwelt*, pp. 293-299.

⁸² See Knoll, *Umwelt*, pp. 323-331.

⁸³ Jacoby, *Crimes*.

sense to take the environmental dimension of political and social problems into consideration. His concept of “environmental banditry” provides explanatory power even for early modern European history.⁸⁴ In early modern Europe, the social conflict concerning the socio-economic basis of agriculture and rural society was stiffened by the rulers’ forest and hunting policies that restricted traditional usufruct rights of natural resources and enclosed landscape. Judged by its effects, this policy can also be described as environmental policy. And here as well new forms of crime occurred that can be described as environmental banditry. In spite of the differences in the socio-political frameworks of the different centuries and regions, it is striking to see the great degree of similarity between parts of the process that took place in Europe between the sixteenth and eighteenth centuries and the process that was initiated by America’s conservation movement in the nineteenth and twentieth centuries: enclosures of hunting preserves / national parks, criminalization of traditional usufruct activity, different forms of deviance, protest, and criminality. Even the stereotypes used in the early modern mandates and in the arguments of the urban promoters of conservation seem quite similar: both throw discredit upon the peasants as being backward, lazy and depraved, and both assume that peasants abused wood and wildlife.⁸⁵ Jacoby’s concept can help to understand and to describe early modern conflicts over the control of nature and traditional usufruct rights. It may be useful to consider the environmental and socio-economic frameworks that caused quite similar developments in different periods of time and different parts of the world.

⁸⁴ Adopting and developing Hobsbawm’s conception, Jacoby defines: “Law and its antithesis – lawlessness – are therefore the twin axes around which the history of conservation revolves. To achieve its vision of a rational, state-managed landscape, conservation erected a comprehensive new body of rules governing the use of the environment. But to create new laws also meant to create new crimes. For many rural communities, the most notable feature of conservation was the transformation of previously acceptable practices into illegal acts: hunting or fishing redefined as poaching, foraging as trespassing, the setting of fires as arson, and the cutting of trees as timber theft. In many cases, country people reacted to this criminalization of their customary activities with hostility. Indeed, in numerous regions affected by conservation, there arose a phenomenon, that might best be termed ‘environmental banditry,’ in which violations of environmental regulations were tolerated, and sometimes even supported, by members of the local rural society.” Jacoby, *Crimes*, p. 2.

⁸⁵ A Bavarian mandate of 1567 argues that hunting peasants were in danger of idleness, alcoholism, gambling, and other forms of loose behaviour (“leichtfertige sachen”) and that they would neglect their work and their property. (Bavarian General State Archive, Kurbayern Mandatensammlung 1567 X 24.) J. P. Lunde, who visited the Adirondack Mountains in the 1870s characterized the region’s typical inhabitant as looking “upon all physical and mental superiority with aversion or disdain ... He trapped a little, and too often sold the pelts for whiskey and tobacco instead of procuring food for his hungry wife and children,” cited from Jacoby, *Crimes*, pp. 19-20. For the 18th century discourse see Werner Trossbach, “Gelichtete Wälder, verstümmelte Eichen. Bäuerliche Waldnutzungen und das Projekt von Waldabschließung und “Nachhaltigkeit” im 18. Jahrhundert,” *Der Tropenlandwirt* Beiheft 56 (1996), pp. 51-73.

Man and Beast

Hunting plays a critical role in the relationship between man and his next neighbours in the biotic environment, the animals. Therefore, a society's attitude towards hunting can be seen as an indicator of this society's relationship to animals and – as it is suggested by the works of Matt Cartmill and Keith Thomas – in the last instance, to its natural environment. The drastic complaints of Magnus Schwantje who in 1897 accused the hunters of murder are part of a long tradition.⁸⁶ Already in the sixteenth century, authors like Erasmus of Rotterdam, Thomas More, Michel de Montaigne or William Shakespeare criticized hunting as a cruel and immoral activity; in several instances they even used the term “murder.”⁸⁷ Up to the present day, hunters and their critics are engaged in a vital ethical debate.⁸⁸

The German historian Paul Münch, editor of an anthology on the “precarious relationship” between man and animal in history, claims that apart from philosophical, theological and juridical frameworks, man's dealing with animals in everyday life should be subject to historical research.⁸⁹ The sources that document early modern everyday life, however, do not promote this approach. The research done by Jutta Nowosadtko and Werner Troßbach on the relationship between early modern man and production animals makes evident the methodological challenges of the issue.⁹⁰

⁸⁶ Sigrid Schwenk, “Das Töten im Zentrum des Jagens – ein neuralgischer Punkt,” Thomas Werner (ed.), *Sonst wird dich der Jäger holen. Die Jagd – Vergnügen und Verderben* (exhibition catalogue of the “Kurfürstliches Museum,” Heidelberg, 1999), pp. 191-206, here 196-201.

⁸⁷ Cartmill, *View to Death*, pp. 76-84.

⁸⁸ Sigrid Schwenk, who is doing research on hunting culture, published several articles dealing with this topic. Also the German controversy around the problematic paradigm of “Waidgerechtigkeit,” a rather obscure set of ethical norms that oblige hunters to observe certain traditional ways of hunting, to protect wildlife populations and to avoid unnecessary cruelty against the animal, is to be seen in this context. In 2000, the hunting magazine *Deutsche Jagdzeitung* 20/12 (2000), pp. 20-31, moderated a debate on “Waidgerechtigkeit.” For a critical position towards the recent efforts by the hunting community in defining and legitimizing its ethical stance, see Brian Luke, “A Critical Analysis of Hunter's Ethics,” *Environmental Ethics* 19/1 (1997), pp. 25-44.

⁸⁹ Paul Münch, “Die Differenz zwischen Mensch und Tier. Ein Grundlagenproblem frühneuzeitlicher Anthropologie und Zoologie,” Paul Münch, Rainer Walz (eds.), *Tiere und Menschen. Geschichte und Aktualität eines prekären Verhältnisses* (Paderborn, 1998), pp. 323-347, here p. 332.

⁹⁰ Jutta Nowosadtko, “Zwischen Ausbeutung und Tabu. Nutztiere in der Frühen Neuzeit,” Münch, Walz, *Tiere und Menschen*, pp. 247-274; Werner Troßbach, “Von Bauern und Öchslein. Anmerkungen zum Mensch-Tierverhältnis im 18. Jahrhundert – zugleich ein Versuch über die Grenzen des Verstehens (und des Verstanden-sein-Wollens),” Axel Lubinsky, Thomas Rudert, Martina Schattkowsky (eds.), *Historie und Eigensinn. Festschrift für Jan Peters zum 65. Geburtstag* (Weimar, 1997), pp. 361-377. A recent research project tries to reconstruct the development of the human perception of birds during the last three hundred years; see Johannes Klose, “The Socio-economic Significance of Birds in Bran-

Early modern man's attitude towards the animal as it has been studied by Keith Thomas is a phenomenon of great complexity and even paradoxical developments. Besides general factors like the brutalizing potential of the Cartesian automation theory or the growing compassion and narrowing gap between man and animal as a consequence of growing scientific knowledge about the human position in universe and evolution, what animals had to suffer from man also depended on their species and the role this species played in human economy and culture.⁹¹ At early modern rulers' courts, dogs were highly esteemed – not in the least because of their role in game hunt.⁹² On the other hand, eighteenth-century hunting was often characterized by the huge amount of wild game killed and by techniques that exerted particular cruelty on the hunted animals. In fact, there was contemporary criticism of this hunting practice.⁹³ Recognizing a sensitive faculty of the animal, Immanuel Kant argued against cruelty towards animals in general.⁹⁴ In his *Antimachiavell*, the young Frederic II of Prussia shared this criticism of game hunt.⁹⁵ While it is not clear whether the enlightened claim for the prevention of cruelty to animals was motivated primarily by an anthropocentric-pedagogic paradigm, the statement of Matthias Claudius' satirical letter of a cursed red deer to his princely hunter indicates the recognition of animals' individual rights.⁹⁶

It would be even more interesting to analyze the attitude of the hunting members of the social elites. This effort bears obstacles because the contemporary description of court hunting events – like court festivities in general – is dominated by panegyric hymns that do not provide any critical perspective. But nonetheless a careful search will uncover remarkable nuances. What about Maria Theresia's compassionate order to set free wild game that had already been fenced in for a hunting event?⁹⁷ Analysing the circumstances of this anecdote could prove whether we face the expression of real compassion with animals or a calculated propagandistic action. There are further examples indicat-

denburg (Germany). Towards the Perception of Biodiversity in the last Three Hundred Years," Leos Jelecek (ed.), *Dealing with Diversity. Proceedings* (Prague, 2003), pp. 352-355.

⁹¹ See Thomas, *Man*, pp. 33-36, 165-181.

⁹² *Ibid.*, pp. 103-109.

⁹³ See Hester Hastings, *Man and Beast in French Thought of the Eighteenth Century* (Baltimore, 1936), pp. 265-269; Dieter Narr, Roland Narr, "Menschenfreund und Tierfreund im 18. Jahrhundert," *Studium Generale* 20/5 (1967), pp. 293-303, here 301-302.

⁹⁴ Heinz Meyer, "Frühe Neuzeit," Peter Dinzelbacher (ed.), *Mensch und Tier in der Geschichte Europas* (Stuttgart, 2000), pp. 293-403, here 392.

⁹⁵ Eckardt, *Herrschaftliche Jagd*, p. 143.

⁹⁶ Matthias Claudius, *Sämtliche Werke* (Munich, 1968), pp. 156-157. According to Kant and Frederic II. cruelty to animals carries the danger of a brutalizing man's interaction with other human beings. This anthropologic-pedagogic argumentation can already be found in the medieval theology of Thomas Aquinas. See Dinzelbacher, *Mensch und Tier*, p. 288.

⁹⁷ Roland Narr, "Zwischen Parforcejagd und Empfindelei. Vom Verhältnis zwischen Tier und Mensch im 18. Jahrhundert," *Journal für Geschichte* 5 (1985), pp. 17-25, here 23.

ing that research on this issue could provide substantial results. In the early eighteenth century a “Fuchsprellen” took place at the court of the Palatinate Elector Karl Philipp (1716-1742).⁹⁸ On the occasion of this kind of courtly entertainment, foxes, badgers and other small animals were thrown into the air with belts or rags and suffered bad injuries when falling back to the ground. One participant reported that the game was very amusing, with many surprises, and that the ladies did not feel any horror or compassion. On closer examination, this argument shows that the author had to anticipate the possibility of being confronted with the ladies’ horror and compassion in regard to the cruelty done to the animals. After all, it was king Louis XV of France whose brutal behavior against animals was interpreted by contemporaries as a sign of decadence.⁹⁹ Further research should analyze autobiographical records of the members of hunting elites. A broad knowledge of their letters, diaries etc. could provide us with more information about the attitudes towards animals – and nature – of those who were engaged in the baroque hunting practice.

Conclusion

Hunting holds a key position in the complex relationship between man and the natural environment. Hunting marks one of the oldest forms of man’s use of natural resources. Being the nobility’s leisure activity for centuries, it may be seen as one of the most important sources of man enjoying his natural environment.¹⁰⁰ In current European societies there is a kind of love-hate connecting the communities of hunters and environmentalists. Tracing back the game hunt as a topic of environmental history allows us to detect roots of these tensions even centuries ago: competing interests in the use of natural resources, differing attitudes towards nature and divergent ethical positions concerning the relationship between man and animal.

The aim of this article was to analyze the game hunt in eighteenth-century Europe as an activity that tightly connected the elite’s culture, agrarian society and the natural environment. Research in this field has to depart from two key assumptions: first, under conditions of the early modern agrarian society the game hunt was practised in cultural landscapes and was part of a complex socio-ecological constellation where different options for land use competed with each other. Second, according to their position in the social hierarchy of the Old Regime, different holders of hunting rights were only allowed to pursue different species of wild animals and to practice different techniques of hunting. As a consequence, the environmental impact of the game hunt varied.

⁹⁸ Hepp, *Gar lustig ist die Jägerei*, p. 73.

⁹⁹ Salvadori, *Chasse*, pp. 239-241.

¹⁰⁰ Radkau, *Natur und Macht*, p. 68.

Unlike the hunting practices of the lower nobility, game hunting at the courts of eighteenth-century monarchs was bound to extravagant hunting techniques and enormous display. An elaborate wildlife management system was necessary to provide the wildlife populations that were required. The example of falconry indicates the ecological interrelations that could be detected by an environmental history approach: herons were animals of high prestige to be hunted with falcons and therefore under particular legal protection. As herons also are predators of fish, historical sources of different types (files from institutions responsible for hunting and fishing, market account books, etc.) could be used to investigate possible interferences with fish populations and the problems arising from this in regions important for falconry.

In order to analyze the efficiency and the ecological impact of princely wildlife management, it is necessary to quantify historical wildlife density. This marks an important but nonetheless difficult challenge for an environmental history approach. While the estimation of wildlife populations by monitoring living animals is a methodologically unsolved problem up to the present day, the data provided by historical sources holds additional difficulties. Research with a regional focus, combining quantitative data with other types of information, promises results that may not enable us to reconstruct precise figures but allow us to get a reliable impression of the dimensions.

Wild animals were not the only natural resource that was used by baroque hunting culture. The example of hunting infrastructure (fenced hunting parks and game preserves, fences to protect agricultural acreage from wild game, etc.) makes obvious that in a time when the fear of wood scarcity gained great relevance in contemporary discourse, huge amounts of wood were used for hunting. In this case, research from an environmental history point of view could choose a regional focus to detect this material dimension: How much wood was needed? What were the consequences for regional forests and regional wood supply? These regional results could provide a basis for a comparative analysis.

In the baroque courtly culture rulers used the game hunt for the display of power. Domination of nature – whether by overcoming hunted animals or by shaping landscape for hunting purposes – was an instrument for the communication of their sovereignty. On the other end of the social hierarchy, illegal hunting by the ruler's subjects could gain from being analyzed not only as an issue of social protest but also as one of environmental conflict.

Finally, hunting is one factor in the relationship between man and beast. Concerning this issue research on man's attitude towards the animal has already analyzed the intellectual criticism against hunting. However, contemporary reports of hunting events and cruel practices often do not show any critical attitude. The effort that remains to be done is to find documents that allow us to analyze the attitude of those members of the social elites who were personally engaged in the baroque hunting culture.

Within 10 years the Bavarian Elector Max Emanuel (1679-1726), who spent a considerable part of his life with warfare and fighting for glory, territorial gain, and dynastic success, killed 39,715 animals.¹⁰¹ He went out hunting nearly every other day. Once, he wrote: “What I need are country houses, gardens, and forests, and chases, furniture and things like that. As for the rest, I am not sensitive; I do not even react to it.”¹⁰² There was only an indistinct border between nature and baroque culture, between *locus amœnus* and battlefield.¹⁰³

¹⁰¹ Hunting diary of Elector Max Emanuel 1715-1725. (Bavarian General State Archive, HR I Fasz. 187 Nr. 27.)

¹⁰² Max Emanuel to Countess Arco, Brussels January 4, 1705. (Bavarian General State Archive, Kasten schwarz 8289. Translation: Klingensmith, *Utility of Splendor*, p. XV / M. K.)

¹⁰³ I want to say thank you to my colleague Maria Wüllenkemper for translating one section of this essay. Further thanks for their corrections to Michael Schem, Waltraud Sennebogen and Maria Wüllenkemper, and last but not least the editor of this volume for strengthening this article.