Therapist, laboratory animal, mouse catcher?

On the Agency of Dogs and Cats in hospitals from the Middle Ages up to the 19th century

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Cats and dogs are among the most popular pets in Europe.[1] The boundaries between working animal and companion have become largely invisible. The fact that the animal companion brings happiness usually counts more than the fact that it catches mice or drives strangers away from the garden fence. In addition, it has been scientifically proven that in the home environment pets help to stabilize the immune system and psyche. They reduce stress and blood pressure, increase self-confidence, and have a positive effect on the perception of pain. Furthermore, their presence leads to the reduction of feelings of loneliness, the promotion of trust, improvement in communication, the quality of life and physical functioning as well as the reduction of anxiety.[2] Because of these characteristics, dogs and cats are also used therapeutically in hospitals and other medical facilities in animal-assisted medicine.

The constant coexistence of humans and animals and the question of their ability to act contributed to a new interdisciplinary field of research in the 1990s on the initiative of various disciplines: the Human-Animal Studies. The impulses that have emerged from the Anglophone world have so far produced countless publications – within the last year alone, two handbooks[3] were published – and all these writings sometimes also bear witness to the difficulty of mediating between disciplines as well as of approaching the viewpoint of other scientific fields. Therefore, there is no single coherent theory of Human-Animal Studies. Nevertheless, the goal of all efforts is the same: to explore webs of relationships between humans and animals and to scrutinise modern conceptions of animals. Within the investigating disciplines, prehistory and early history seem primarily focused on domestication research but are conspicuously reticent in light of the sometimes very complex relationship issues within human-animal research. This may be due to the challenge of trying to prove theories of interconnectedness beyond domestication with the help of our sources, and requires a distinctly interdisciplinary approach to the topic, departing from the anthropomorphic view often exemplified.

The focus of the study on dogs and cats can lead rather hastily to the assumption that a present-day topic can be transferred to the past in order to work out the interrelations. Many of us own such a pet and are convinced of seeing almost human traits in them, even a mutual understanding. We are probably largely unaware of the danger of projecting. And this supposed „knowledge" of the pet, may also be one reason why our so-called companion animals have increasingly become the object of study in Human-Animal Studies. The term „companion animals", which has become so common, was coined primarily by the historian of science and biologist Donna Jeanne Haraway. According to her, humans and non-humans enter into a relationship, a „co-constitutive relationship" with each other.[4] Animals are thus not actors alone, instead they possess an „agency" that co-determines the everyday life of humans. The French sociologist Bruno Latour expanded on these reflections and understands humans and animals as a network in which relationships can arise, exist and end, and more importantly, in which relationships are always renegotiated (ANT = Actor-Network-Theory).[5] Consequently, relationships do not have to be permanent, but are primarily changeable due to various cultural, societal, and social influences. These discontinuities generally make it very difficult to interpret historical sources and at the same time find a common consensus with all scientific disciplines involved.[6] However, this

1 With regard to the number different data are available: https://www.splendid-research.com/de/statistiken/studie-haustiere-beliebteste; https://de.statista.com/themen/174/haustiere/#dossierKeyfigures (both page view 23.3.2022). The Trend, however, is rising.

2 Prothmann 2011, 190.

3 Kompatscher-Gufler et al. 2021; Roscher/Krebber/Mizelle 2021.

4 Haraway 2015, 12; in relation to dogs see Haraway 2008.

5 Latour 2018.

6 See, for example, the following publication, which was produced in connection with a workshop on the human-animal relationship in scientific discourse and clearly illustrates the different perspectives of different disciplines (Otterstedt/Rosenberger 2009).

should not stop archaeologists from trying to go against the grain when interpreting their findings with methods from other scientific disciplines, such as sociology, psychology, biology, art history, historical studies, etc. In the present case, this means taking a closer look at dog and cat bones from hospitals, often mentioned only briefly by zooarchaeologists, and not just regarding them as a marginal phenomenon. Their presence had a meaning and this is to be worked out in the following.

Research subject: the hospital

Hospitals, as locally and socially delimited living spaces, are ideal for investigating human-animal relationships in a micro-study. In the Middle Ages, these institutions provided temporary or permanent care mainly for „pauperes et infirmi" – people unable to work and without social/family and financial support. It was not until the end of the Middle Ages that hospitals gradually became more specialized. Some, for example, exclusively admitted orphans, the poor, paying benefactors, or people with particular infectious diseases. Alongside this, hospitals continued to exist for a broad clientele. However, it was not until the 18th/19th centuries that hospitals for the exclusive purpose of medical treatment with the temporary admission of patients grew increasingly. Depending on the region, the will of the foundation, trade influence, religion or epoch, and the clientele, there was furthermore variation in the offer, regulations and duration of admission. It becomes clear that there was no such thing as a hospital par excellence in the pre-modern era.

Strategically, pre-modern and modern hospitals enable the study of socio-economic issues. For a long time, they were locally and socially limited, usually self-sufficient living spaces – forming a macrocosm within a microcosm. As in a small community of their own, there were rules that all inhabitants had to follow; violating these could lead to expulsion and thus to leaving the community. The everyday life of poor and paying inmates, such as their nutrition, employment and medical care, can be reconstructed with the help of archaeological sources – though with reservations. Animals have so far been studied in this context mainly as a contribution to nutrition = as a livestock ensemble. This is true for archaeological as well as economic and social-historical disciplines. Dogs and cats are barely a topic within these studies and are in fact conspicuously underrepresented archaeologically. The low number of individuals (Tab. 1) clearly contradicts findings – wells, ditches – from other urban and rural settlement areas. Neither considerations about their occurrence nor their function in pre-modern hospitals have been the basis of discussion so far. This is only changing with finds in modern hospitals of the 18th/19th centuries, whereby special attention seems to be paid to investigations in Anglophone regions. In the following, I describe exemplary reasons for the observed divergence, the possible use and the agency of dogs and cats in hospitals in a diachronic comparison. A particular novelty within archaeological research in Human-Animal Studies is the attempt to create a picture of emotional relationships between humans and animals from the archaeological finds.

The starting point of the present contribution are archaeologically investigated and published hospitals north of the Alps, with the geographical focus on Germany, Great Britain, Denmark and Sweden. The 113 sites compiled in a monograph include monastic institutions, hospitals for the sick and the poor, as well as specialised institutions, houses of various medical representatives (such as bathers, barber surgeons, apothecaries and executioners), hospitals only for medical treatment and special places of medical teaching.[7] In view of the limited scope of the article, the focus in the following is on the 49 hospitals recorded in the urban area. Few of these hospitals were fully recorded, some old excavations lacked archaeozoological investigations and thus the number of institutions usable for this study, which is with evidence of dogs and

7 Kahlow 2020.

Site	Date	Context of finds	Minimum number of individuals (MNI)	Age of death	References
Höxter Heilig-Geist-Hospital	12th–13th c.	cesspit	dogs (8), cats (19)	dogs = adult, cats incl. new-born	Reichstein 1990, 187 f.
London St. Mary Spital	12th–16th c.	waste pit	dogs (129 bone fragments), cats (57 bone fragments)	unknown	Haward et al. 2019, 129 und 285
Stein am Rhein Hospital zum Heiligen Geist	13th–14th c.	latrine	dogs (5 bone fragments), cats (46 bone fragments, at least 2)	immature to mature	Rehazek 2006, 148, Tab. 14
North Yorkshire Hospital of St. Giles by Brompton Bridge	13th–15th c.	waste pit/latrine	dogs (at least 3)	unknown	Cardwell 1995, Tab. 6
Kent Hospital of St. Mary of Ospringe	13th–16th c.	waste pit/latrine	dogs (22 bone fragments), cats (28 bone fragments)	dogs = adult, cats = immature to mature	Wall 1981, 248 und 263–264
Magdeburg Hospital of St. Annen/ Heilig-Geist-Hospital	13th–18th c.	latrine, faecal pit	dogs (10 bone fragments), cats (3 bone fragments), MNI unknown	unknown	Nickel 1980, 50
Lübeck Hospital zum Heiligen Geist	14th–19th c.	cistern = waste pit, cesspit	dogs (4), cats (18)	dogs under 6 months up to at least 18 months; Cats between 9 to 12 months	Pudek 1980, 140, Tab. 7
Höxter Heilig-Geist-Hospital	16th/17th c.	cesspit	dogs (2), cats (3)	younger than 13 months	Hoffmeister 1994
Oxford Old Ashmolean Museum (Teaching Collection for medical students)	17th c.	pits, together with human bones	dogs (approx. 30), cats (at least 3)	dogs from immature to mature, cats = adult	Hamilton-Dyer 2003
London Craven-Street (Private Anatomy School)	19th c.	pits, together with human bones	dogs (at least 4), cats (at least 5)	dogs from immature to 15 months, cats from 0–24 months	Hillson et al. 1999; Kausmally 2015, 301–308
London London Hospital	19th c.	graves, together with human bones	dogs (probably 13), cats (more than 4)	dogs and cats (neonates, juvenile, adult)	Fowler/Powers 2012, 160 f.

Tab. 1 Evidence of cats and dogs in hospitals and institutions for medical teaching from the Middle Ages up to the 19th century (chronologically ordered).

cats, is limited to ten institutions. The limitation seems even more severe given the time horizon at hand. It extends from the Middle Ages to the 19th century. Many finds are difficult to date precisely to a century. At first glance, the distribution listed in Tab. 1 may therefore seem statistically inadmissible for a study if the aim were to collect countless examples that prove that dogs and cats lived in hospitals. But this is not the intention of the present study. Instead, it aims to expand the means of an actor tableau, against the background of a specific spatio-temporal setting. Given their mortal remains, it is therefore sufficient to know initially that dogs and cats lived in hospitals, what physical condition they were in at the time of their death and where or how they were buried.

Dogs and cats in hospitals from the Middle Ages to the 17th century

The institutions listed in Tab. 1 provided the following results for hospitals from the Middle Ages to the 17th century with regard to the examination of dogs and cats:

Sites Dogs and cats were disposed of along with other waste in latrines, cesspools and waste pits. Some of these findings are conspicuous by the absence of normal food waste, as in the Hospitals „zum Heiligen Geist" (of the Holy Spirit) of Höxter and Lübeck. Dead animals were possibly discarded separately from animals processed for food. This is also suggested by the association with complete chicken skeletons.[8]

Completeness As a rule, only partial skeletons are present. In particular, the repeated emptying of latrines or the leaving of pits open could have caused this finding.

8 Reichstein 1990, 184.

1 Activities of a cat (parchment, 13th century, Bodleian Library MS. Bodl. 764).

Total number of individuals In general, dogs and cats are only detectable in small numbers compared to edible livestock. Dogs often dominate over cats. An exception is the Hospital in Lübeck with 18 individuals, most of them died at about eleven months of age.[9]

Age/health The age at death is consistently young. Cats rarely reached 13 months of age, many died as neonates, an observation that is consistent with findings from other medieval settlements (e. g. Lübeck, Schleswig and Haithabu) and is probably related to the deliberate disposal/killing of newborn and unwanted cats (see excursus: castration).[10] The young individuals were rather small in size and already showed traces of deficiency diseases. Dogs, on the other hand, often reached adulthood though still died quite early at around two years of age.

… of economic benefits

To my knowledge, there are no written sources that mention the economic benefit of dogs and cats in hospitals of that time. Wills, foundations and account books, which could provide clarification on acquisition, disposal or medical[11] treatment, are silent on the subject. Assuming that the recovered animals did not die accidentally on the hospital grounds – and this cannot be completely ruled out with regard to cats, as they like to hide in the face of approaching death – two purposes in particular emerge, supported by written historical sources and art-historical evidence: the economic and medical/emotional benefits.

The economic benefits of dogs and cats are similar in many ways. They were used, for example, in pest control, for meat and fur delivery as well as for medical care. Of course, it is not possible to provide detailed archaeological evidence of cats and dogs in their function as mouse and rat catchers. Here, circumstantial evidence, the use of written and art historical sources as well as modern empirical values have to be sufficient to support the thesis.[12] Rodents have always been a problem in the vicinity of settlements where people lived and ate. Hospitals, as archaeological sources show, were no exception; farm buildings, i. e. kitchen, grain and feed stores, were usually located directly on the site. The skeleton of a cat from the well of the hospital kitchen at St. Mary Spital in London was accordingly described as a „priory servant".[13] However, it is doubtful whether servant is the correct term in the current debate in Human-Animal Studies. The hunting instinct of dogs and cats as well as the placing of traps[14] by humans tended to lead to collective success in pest control. In this relationship, both humans and animals benefited without either side being forced into the relevant role. Just as humans were free to decide whether to accept cats on the property, possibly also feeding them, so cats were free to remain or to look for other catchment areas.[15] This observation is elementary for research within Human-Animal Studies and directly applicable to Latour's Actor-Network-Theory (see above). Written and pictorial sources for similarly economically and socially isolated spaces can be used comparatively to capture words and drawings of those who were able to perpetuate themselves by virtue of their profession and ability (Fig. 1): Behind monastery walls, female as well as male members of religious orders left evidence of both affection for and aversion to dogs and cats (see Emotional benefits); the latter are not uncommonly praised as mouse catchers.[16] This comparison indicates that the „non-mention" of some animals and activities consequently depends on many factors and is by no means equivalent with a „non-occurrence". The reason for the absence of written and pictorial sources might therefore be, on the one hand, that very few inmates of hospitals put things down on paper and thus little survived in the archives. On the other hand, the lack of corresponding evidence is also to be sought in the self-evident way in which cats were perceived in their function as mousers. That the omnipresence of the cat – as well as for the dog – could have led to its „literal" absence

9 Pudek 1980, 180, Tab. 7.

10 Among other places, there is evidence of the frequent disposal of unwanted puppies from Villingen with more than 40 puppies in a well (den Driesch/Kokabi 1979, 376 f.).

11 Among other things, veterinary costs have been handed down for livestock animals. The Hospital d'En Colom in Barcelona documents the treatment of larger working animals. They were an expensive acquisition and their survival was therefore essential. However, after examining the account books, the historian Uta Lindgren states: „No less attention was paid to the pain of animals […] than to that of humans." (Lindgren 1980, 38 f., translated by the author.) In her opinion, emotions played a greater role than the mere acquisition value would have justified.

12 Among others, see: Walker-Meikle 2019.

13 Harward et al. 2019, 129.

14 Mouse and rat traps can be traced archaeologically, e. g., by steep-sided pots lined with bait (Haynes 1970; Szédeli 2006).

15 Even in modern times feral cats deliberately stay near elderly people, hospitals and churches, as a study from Hull showed (Griffiths/Poulter/Sibley 2000). The location chosen by the cats seems to be related, among other things, to the willingness of the people living there to feed them.

16 For example: https://wellcomecollection.org/works/xggbks3t (page view 10.3.2022).

can be seen, for example, in the 16th century chronicle of the Cologne councillor Herrmann von Weinsberg (1518–1597). In an account of his stay in the countryside as a five-year-old boy, he names in detail farm animals that he did not see in the city. Cats and dogs, however, remain unmentioned, even though, according to historian Wolfgang Herborn, they „undoubtedly existed in every village and on every farm."[17]

The Swiss physician and naturalist Conrad Gessner (1516–1565) listed in his „Thierbuch" (Book of Animals) the hunting of mice as the most useful function of the cat, followed by its potential as a supplier of meat and medicine.[18] The few cat bones hospital sites presented do not indicate any such usefulness. The studies do not mention scraping, cutting or breaking marks; in fact, they sometimes decidedly indicate the absence of such. A larger production of fur – the winter fur of almost one-year-old cats was particularly desired – or of meat has been handed down from other settlement contexts, such as Turku in Finland.[19]

In medieval hospital complexes, dogs are archaeozoologically more common than cats (Tab. 1). Until modern times, dogs were used differently, especially as guard dogs, draught animals and rat catchers, but nothing has been archaeologically attested in hospitals, for example through pathological changes. Although small dogs in particular are often interpreted as rat catchers or entertainment animals – for example, small specimens come from the hospital in Höxter[20] – in my opinion, this association cannot be generalised.

Written sources show that dogs had an agency, for example by co-shaping geographical and social spaces. In particular, regulations, which gradually increased in the course of the early modern period, reflect the forced restrictions on the freedom and scope of action of urban animals.[21] The same applies to cats. Furthermore, corresponding regulations for dogs are available from hospital ordinances. They thus indirectly prove the repeated presence of the dogs. According to these, in the 16th century the residents of the Hospital of the Holy Spirit in Munich had to reckon with punishments or expulsions if they „kept dogs or small livestock."[22] Bringing dogs with when moving in or staying overnight for a short time was also unwelcome in many places. In 1511, for example, a hostel in St. Gallen, Switzerland, expressly forbade „the admission of tinkers, vagrants and people with dogs."[23] These restrictions were possibly a socio-political instrument; alms recipients and thus also poor hospital inmates were considered non-needy as long as they seemed able to feed an animal.[24] In fact, this justification is unlikely to be valid: Many owners let their dogs run around freely and search for food on their own – until this was also restricted by law. The threat of alms cuts sometimes led to tragic events, as shown by the case of an out-pauper and dog owner from Southampton. Faced with the threat of sanctions, the woman allegedly killed her dog and presented the dead body as evidence to the Court of Guardians in order to obtain further support.[25]

Although the above-mentioned regulations confirm the presence of dogs in hospitals, it is not yet clear whether this was always temporary – travellers with dogs are likely to fit into this picture – or whether hospital inmates, such as paying benefactors, were also allowed to own a dog in individual cases. From St. Mary Spital in London there are the remains of a large adult hunting dog.[26] They could be evidence of such a case, as long as they did not come from a group of travellers who stopped there for a short break. In a hospital in Kent, the bones of an old dog with arthritis were found. This dog could have been cared for and its presence of more than functional value.[27] Animals that supported the community as carriers or courtyard guards may also have been emotionally close to the inhabitants. Both the dog as a pack animal and humans are genetically predisposed to such an interrelationship, as will be seen. Written records from monastic institutions, and thus from comparably isolated living spaces where prayer

17 Weinsberg 1886, 35; Herborn 2000, 401 (translated by the author).

18 Gessner 1583, 99.

19 Furthermore, the study also mentions evidence for the skinning of dogs Tourunen 2008, 109 f.

20 For example Reichstein 1990, 189; Ewersen 2012.

21 On regulations in the early modern period, see Steinbrecher 2008.

22 Scheutz/Weiß 2008, 223, translated by the author.

23 Landolt 2007, 283, translated by the author.

24 Griffin 2018, 332.

25 Southampton Herald, 31 May 1824.

26 The individual came from a pit and died around 1350–1400 (Harward et al. 2019, 95).

27 Wall 1981, 248.

and work were part of everyday life, can also be used to interpret the human-animal relationship in hospitals. Members of the order repeatedly complained about the mess and noise caused by dogs as well as by other animals of temporarily admitted guests. At the same time, some members of the order did keep cats and dogs, which was often viewed with displeasure by the church.[28] Dog skeletons have survived archaeologically from such institutions, but only in small numbers. From the Gravenhorst Monastery, Westphalia, for example, there are bones of food remains with traces of bitemarks, as well as the remains of a dachshund and several cats, which date to the early modern period.[29] From the evidence cited, I conclude that dogs and cats lived both temporarily and permanently in hospitals.

28 Walker-Meikle 2013, 72.

29 Holtfester 2007, 183.

30 Kahlow 2012; Kahlow 2020, 479–490.

31 Wilbertz 2003.

32 In contrast to the hospital specimens, the basement of the executioner's house in Stralsund revealed complete dog and cat skeletons as well. The condition of the teeth also indicates an older age of the animals (Volksdorf/Möller/Holst 2004). Quade 1984, 124.

… of medicinal and emotional benefit

Medicines made from so-called cat or dog lard, such as described by Conrad Gessner, may have been used in hospitals. However, these were rarely prepared on site – only a few hospitals had their own pharmacy in the Middle Ages – but rather brought or prescribed by a medical representative. From the early modern period onwards, these also included executioners. Executioners visited hospitals, took in the sick for care in their own homes, held consultations there and prepared medicines.[30] In addition, executioners worked as knackers in many places and thus had access to a large number of dead animals.[31] This may explain the number of animals recovered from the Lübeck executioner's well. The findings revealed at least 62 dogs and 61 cats who died in the 15th to 17th centuries. In terms of body size, more than half of the dogs fall into the „dwarf dog group". Many individuals were incomplete, and the carcasses may have been misused.[32] Their use as a source of fur and lard could also be considered.

If making animal fat describes the way of using leftovers, special attention should be paid to the effect of living animals. The court physician John Caius (1576) described the therapeutic effect of small dogs in his work „Of Englishe Dogges". He considered it proven that they aided recovery as a kind of heat plaster – placed on the chest or stomach. More in the superstitious direction is his reference to dogs curing patients by supposedly absorbing diseases.[33]

The possible use of guide dogs in hospitals also seems particularly exciting to me. The Austrian researcher Andreas Rhoby studied them in this function in early Constantinople. Their role as guides for the blind was emphasised there in a eulogy of the 12th century on the usefulness of dogs.[34] Archaeologically, however, we would need an interplay of several results to formulate a corresponding thesis. I would like to illustrate this with the example of the Hospital of St.-Annen in Magdeburg, whose latrine yielded the remains of at least ten dogs and 38 walking sticks (Fig. 2).[35] The canes were probably used as aids for better orientation in the environment not only by the walking impaired, but also by the visually impaired. They are difficult to date and, due to repeated emptying, can be narrowed down to the period from the Middle Ages to the early modern period. Depictions of blind people based on certain attributes have been known since antiquity as well as for the Middle Ages. Understanding the language of pre-modern images, however, is sometimes impossible. They do not necessarily reflect reality, which makes the interpretation of such images difficult.[36] Nevertheless, compositions and attributes, such as blind people with closed or blindfolded eyes, a dog, a leash and a stick, are striking and corresponding models in everyday life are to be expected. The historian Irina Metzler encountered blind people in both illustrated and written records, who were led mainly by other people, sometimes also by children, and more rarely by dogs. Metzler therefore refers to dogs as a „last resort" and this seems quite convincing since the poor in particular were led by dogs (Fig. 3).[37] This negative connotation is probably due to the fact that dogs are easily distracted. The necessary training to become a guide dog requires time, knowledge and closeness to the animal. How

33 Caius 1576, 24 f.

34 Rhoby 2018.

35 Nickel 1980, 35. „It can be assumed that the elderly or infirm people took their dog to the hospital as a friend and companion. But perhaps the waste from the kitchen and the leftovers from the meals were so plentiful that the dogs were attracted and stayed on the grounds of the hospital, tolerated by the residents."(ibidem, 50, translation by the author).

36 Murchison 2019. At the same time, however, it may also make sense to be less critical of iconographic sources. Historian Aline Steinbrecher (2009, 279) and other scholars repeatedly appeal for accepting what is shown as reality at times. Steinbrecher refers here, among other things, to depictions of dogs in church interiors and to cityscapes.

37 Metzler 2015, 178.

2 Walking sticks, St.-Annen-Hospital Magdeburg (Germany).

advanced the knowledge of training guide dogs would have been in the Middle Ages cannot be answered here. However, due to the reciprocal bond between people and animals, Metzler interprets the medieval guide dog more as a „companion animal".[38] The first documented use of guide dogs in hospitals dates back to the 18th century. The Parisian hospital for the blind, „Les Quinze-Vingths", tried to train them. At the beginning of the 19th century, Georg Joseph Beer and Johann Wilhelm Klein published books with training instructions based on individual cases – this shows that small dogs such as Spitz and Poodles, but also German Shepherds, were considered particularly suitable.[39] That training a dog to become a guide dog is time-consuming also contradicts the thesis of the Magdeburg finding discussed here. All the dogs recovered had died young – in my opinion too young to have been used as guide dogs.

Positive interactions between humans and animals are, as mentioned at the beginning, used in modern medicine to improve the well-being and pain perception of humans. And as the example of Caius shows, this benefit was also used in historical times, most likely without understanding the complex mechanisms and effects behind it. In the 18th century, William Tuke (1732–1822), a Quaker living in York, used animals to stimulate his patients' emotions in a private „madhouse" he founded.[40] The aspect of well-being through social interaction partners was therefore known, but could not be explained. And even in the present day, not all mysteries in this regard have been solved. First of all, there is the question of why humans feel the urge to communicate with the living environment in the first place. According to the biophilia hypothesis of the psychologist Edward O. Wilson, the affection for other living beings among humans is evolutionary.[41] According to this hypothesis, Homo sapiens successfully prevailed in history, among other reasons, because its nervous system and its innate behaviour are tuned to understanding the behaviour of other living beings and their reflection on a complex environment. But attention alone does not make a relationship. For this, it is important to possess or build empathy as a central process of lived relationships. According to the Dutch primatologist and behavioural scientist Fransiscus B. M. de Waal, empathy „allows one to quickly and automatically relate to the emotional states of others, which is essential for the regulation of social interactions, coordinated activity, and cooperation toward shared goals."[42] In 2011, the psychologist Ehrhard Olbrich presented the preconditions and effects of empathy. He also assessed its added value as a biological survival advantage. In particular, „empathic perspective-taking" and „sympathetic concern" are understood as „evolutionarily advanced forms of empathy." The first seems to result primarily from transactions between humans, animals and their whole social environment. This means that the caring and understanding behaviour towards certain animals is passed on from one generation to the other, and that this behaviour remains ingrained. At the same time, this is also reflected in our behaviour towards animals we dislike or are inclined towards. Few people like spiders or rats, but cats and dogs have a very different place in our evaluation and are therefore also used in animal-assisted therapy. In short, it takes positive experiences to connect with animals – in this case mammals – on an emotional level even when they have outgrown the „cuteness".[43]

„Sympathetic concern" is genetically rooted and results in people normally wanting to immediately help suffering animals. This feeling also exists in the reverse case, whereby animals suffer with humans. The fact that these feelings manifest themselves differently in communication and interaction has been scientifically proven, especially for dogs. However, empathy is also controlled by hormones; the development and maintenance of relationships in particular are to be seen in this context. The neuro-humoral systems responsible for this – the pleasure system, the attraction system, and the attachment system – are interconnected and

3 Blind beggar with dog, etching by Jacques Callot (1592–1635), around 1622.

38 Metzler 2015, 178.
39 Beer 1813.
40 Prothmann 2011, 190.
41 Wilson 1984.
42 de Waal 2008, 282.
43 Olbrich 2011, 120.

both emotionally and behaviourally related. The effects in the attachment system should be emphasised for the present topic of investigation, since processes that take place there affect human-animal relationships.[44] In particular, the production of serotonin, dopamine and norepinephrine in the oxytocin system is released, for example, in response to touch, and promotes a sense of belonging. Serotonin influences the perception of pain, the sleep-wake cycle and general mood.[45]

These physical and psychological prerequisites are a firm constant when it comes to examining the emotional value of animals in historical times marked by social upheaval – for example, the aversion to cats in times of witch hunts. The treatment of animals is changeable and above all a cultural phenomenon. Customs in antiquity or even in the present should not be transferred to other historical times without consideration. Moreover, researchers are still divided on the question of whether emotions are universal, ergo innate, or socially constructed.[46] Because of this difficulty, some do not even try to understand animals, but evaluate only the statements of human actors and how they describe the feelings of animals. As comfortable as this path may seem, it also bears the danger of anthropomorphism, including false projections.[47] There is a chance to get closer to the truth only by transdisciplinarity and interdisciplinarity, always considering that feelings are unstable and can be influenced by various circumstances. At the same time, it must be taken into account that human emotions also represent evolutionary predispositions and chemical reactions of the body, thus reflecting to some extent a congenital feeling/affection for non-humans.

Therefore, a simple „There was no such thing!" does not apply when it comes to examining the relationship between humans and four-legged friends in historical times. And again, comparative sources from the clerical sphere help to illustrate the affection members of religious orders had for dogs and cats. Life in the monastery was also similar to life in the hospital; it was primarily filled with work and praying, less with social exchange and active togetherness. Against this background, the observation of the developmental psychologist Andrea M. Beetz[48] seems significant to me: „The more human bonds are present, the lesser is usually the penetration of the human-animal bond." In the opposite case, animals can be a substitute for a person, i. e., a replacement for an exchange partner, such as in the case of „loneliness due to a lack of social contacts" and „mistrust or feelings of powerlessness towards people."[49] The bond with the animal offers the promise of closeness and security. In historical times, too, corresponding relationships could help hospital inmates and members of religious orders to compensate for the breakdown of traditional relationship structures caused by leaving their families, in order to feel less „disintegrated, left alone, isolated and frustrated," as is assumed for parts of modern society.[50] However, Beetz makes another point: Attachment is not necessarily the same as a relationship. A relationship exists primarily because of a balance on both sides, whereas attachment represents „aspects such as the need for dominance or prestige, the need for companionship and friendship, or instrumental use (e. g., in hunting)."[51]

References to the keeping of dogs and cats in monasteries can be found repeatedly. Both female and male members of the order sometimes saw them less as working animals than as companions. The funeral poem of Abbot Theoderich of St. Trond († 1107) about his dog Pitulus[52] dates to the 11th century. The heartrending lines describe the hare-like size of the 5-year-old animal (rather a pet), its white fur, its sparkling dark eyes and its usefulness:[53]

> *„What was his purpose? Something useful, wasn't it?"*
> *„That the great master would have something small to enjoy.*
> *That was all his job was, to play before his master."*

44 Olbrich 2011, 116–122.

45 Online Lexikon für Psychologie und Pädagogik (https://lexikon.stangl.eu/6392/serotonin [page view 29.3.2022]).

46 Cockram 2021, 414.

47 Cockram 2021, 420.

48 Beetz 2011, 144. However, according to Beetz the need for a pet is not solely dependent on social factors. Accordingly, people with a good social network can also form emotional bonds with dogs and cats (ibidem, 147).

49 According to the psychologist Monika A. Vernoij (Vernoij 2011, 173).

50 Vernoij 2011, 161.

51 Beetz 2011, 147.

52 Throughout the present period of investigation researchers agree that this practice did not arise out of individualism, but for reasons of communication (Steinbrecher 2014, 36).

53 Kompatscher/Classen/Ditzelbacher 2010, 84 f., translated by the author.

„What use was there in that?" „None, except laughter:
The laughter no one suppressed , he saw him stand or walk
whatever he performed, it was funny to watch him:
Sometimes he was obstinate, sometimes cuddly, sometimes impetuous,
then immediately gentle again."

The historian Kathleen Walker-Meikle lists further examples of human-animal relationships in the clerical sphere: „In the margins of Beaulieu Abbey's thirteenth-century account book there is a small rough drawing of a pet cat with the name of ‚Mite' inscribed above. At Westminster Abbey, where Walter of Wenlock had passed statutes against pet keeping less than a century before, a collar was bought in 1369 for a dog called Sturdy, owned by the abbot himself. In the fifteenth century the prioress of St Helen's, Bishopsgate was ordered by the local dean of Kentwood to remove most of the dogs, but allowed to keep one or two. Similarly a letter was sent by the chancellor of Bishop Nykke of Norwich in August 1520 to the prioress of Flixton, Elizabeth Wright, ordering her to remove all dogs within a month except the one that she would prefer to keep."[54] This list could be extended. But once again it is the regulations in particular that give an idea of the actual state of affairs. Some orders forbade the keeping of these animals entirely, while others at least tried to limit the number and consequently the ostensible distraction.[55] What is certain, however, is that dogs and cats not only interacted with humans, but also built relationships with them. Other things seem unthinkable due to the isolation and lack of joy in the institutions of monasteries and hospitals – after a formerly secular life – given the psychological and biochemical components. Nonetheless, affection is an individual decision, so a harmonious relationship between humans and animals also depends on each individual.

Excursus: Castration/Neutering as a method of birth control

The repeatedly found remains of newborn dogs and cats that were probably killed after birth raise the question as to when castration as a means of birth control was carried out. The castration of animals has been known since ancient times and can be proven for mammals such as cattle, pigs, horses as well as sheep/goats.[56] It arose primarily from the desire for obedience in animals that were no longer subject to the sexual instinct.[57] In livestock farming, this also led to an increased yields; castrations are therefore documented in Central Europe as early as the Roman period, especially for cattle.

A distinction is made between bloody and non-bloody castrations. While the first method results in a surgical intervention, the bloodless procedure aims to break the testicles and the spermatic cords they contain.[58] The first cat castrations are said to have been performed in medieval monasteries.[59] As learned representatives of their subject, the members of the order were able to read and write medical writings and, as seen, record their relationship or bond with these animals for later posterity. The transition from livestock to pets may also have been one of the reasons for neutering cats. In the 16th century, Gessner counted among the advantages of „beschnittenen Katzen" (‚circumcised cats') not the reduction of births, but a higher life expectancy, i. e., more than seven years, and they would also become fat and „nicht ausschweiffig" (‚not excessive').[60] They were to be kept from roaming around. Archaeologically, a correspondingly high age of cats has not been proven so far, but this may also be due to the general difficulty of macroscopically diagnosing the age of dogs and cats after they have reached their first year of life.

A wall fresco in Trento with what is probably the oldest depiction of the castration of a cat also dates to the 16th century (Fig. 4). The subject by the Italian painter Girolamo Romanino (1484/87–1562) was created around 1532. In a lunette, it shows a cat lying on its back, screaming,

54 Walker-Meikle 2013, 71.

55 Women's convents in particular received injunctions (Walker-Meikle 2013, 69) – an exciting aspect for Gender Studies.

56 On ancient possible instruments of castration, see Francis 1926; Kolling 1973; Reusch 2013, 43 f.; on the archaeology of castration with the focus on human individuals, see Reusch 2013.

57 Bartosiewicz/Gal 2013, 81 f.

58 Kostyra 1972, 177 f.

59 Altmann 1977, 42, without reference.

60 Gessner 1583, 99.

4 Castration of a cat (Fresko, Girolamo Romanino, Castello del Buonsonsiglio, Trient, around 1532).

and being held by its extremities while a man described as a „physicus" applies a knife to the animal's abdomen to perform a scrotal incision.[61] The procedure is attended by assistants and courtiers who witness the scene. In my opinion, the interpretation of the surgeon as a „physicus" is not correct. These studied physicians did not carry out bloody operations in the 16th century; consequently, operations were the responsibility of the hand-trained medical representatives as possibly seen in another picture with a similar scene by the Italian painter Sebastiano Florigerio (1500–1545).[62] This time a man, marked by additional attributes as a working traveller, perhaps a craftsman, performs the intervention. The fact that here, too, the female owner of the cat is sitting by, crying, proves the use of the subject matter as a metaphor. There is, by the way, no evidence of veterinarians as a profession in Western Europe until the 18th century. The profession arose in connection with the prevention and treatment of animal diseases.[63]

The question of whether the castration or sterilisation of dogs and cats can also be proven archaeologically is not easy to answer. For a basic understanding, it should first be noted that sterilisation can be carried out on both male and female individuals and is limited to the cutting of organ components – hormone production remains intact – while neutering refers to the removal.[64] The procedure on female individuals seems to remain generally invisible archaeologically. Neutering is therefore preferred because of the hormonal changes and is possibly reflected archaeologically in the unusual size of individuals. This is more visible in cat skeletons – as long as they do not come from wild cats – while the size of dogs varies depending on the breed.[65] Especially cats that have been neutered before reaching sexual maturity can become somewhat larger than other members of their species, while their skulls remain relatively small in comparison. This phenomenon is caused by a delayed closure of the epiphysis due to a lack of testosterone secretion. Factors influencing the recognition of neutered animals are therefore the age of the animal during the procedure, but also husbandry conditions, nutrition, labour input and phenotypic differences; this has been particularly well studied for four-legged livestock such as cattle, goats and sheep.[66]

61 For the professional interpretation, see Henry 2020, 49.

62 Frangi 2006, 246.

63 Driesch/Peters 2003, 133–144; Gardiner 2021, 494.

64 Reusch 2013, 35.

65 Bartosiewicz 2013, 84.

66 Brännäng 1971, 74 f.; Tourunen 2008, 65.

Dogs and cats in teaching and hospital institutions of the 17th to the 19th centuries

Hospitals of the 17th to the 19th centuries served the purpose of medical treatment and education; only a few institutions consequently admitted patients for their entire lives, such as insane asylums. Both the deceased

5 Parts of an articulated teaching skeleton of a cat (London Hospital, deposit 650).

and the living were the focus of study and research. Animals were also used for experiments and vivisections to acquire knowledge. The preference was for animals with a high reproductive rate; they also had to be easy to keep and inexpensive to feed.[67] Among these were also dogs and cats. Exotic animals, on the other hand, often entered the anatomy department only after their death.[68] An impression of the amount of animals that were used by some physicians for experiments is given by the complaint of a student of the French experimental physiologist Claude Bernard (1813–1878), who performed vivisections without anaesthesia: „In that laboratory we sacrificed daily from one to three dogs, beside rabbits and other animals, and after four months' experience, I am of opinion that not one of those experiments on animals was justified or necessary."[69] This holds true at least for the 19th century. However, animal testing has been around since antiquity. From the 17th century onwards, animal experiments increased, which, according to the historian Axel C. Hüntelmann, clearly differed from animal testing in their approach, as experiments were now carried out according to a specific research plan.[70] With the 19th century, the experimental zone also shifted from the study room to the laboratory, which was particularly due to the now standardised and mechanised experiments. Archaeologically, however, there is also evidence of animal experiments in the households of anatomists in the 19th century.[71]

Compared to hospitals of the 12th to the 17th centuries (for the poor and the sick), in teaching and hospital buildings of the 17th to the 19th centuries (only for the sick) cats and dogs are represented archaeologically in greater numbers. In summary, the following observations result from evidence listed in Table 1:

Sites The remains are no longer from latrines, but from graves and pits containing waste from medical teaching, usually mixed with partial human skeletons. The graves rarely represent regular Christian burials; instead they contain what accumulated in the anatomy department, i. e. body parts of individuals that were dissected over a longer period of time.[72]

67 Hüntelmann 2021, 510. However, the desired characteristics are additionally dependent on social and cultural factors, which meant that the choice of experimental animals could be fundamentally different in time and space (ibidem).

68 Kahlow 2018.

69 Greek/Greek/Goodall 2003, 29 f.

70 Hüntelmann 2021, 511.

71 Kahlow 2021.

72 Kahlow 2021.

6 A woman knitting while a cat plays with the wool in the women's ward (Trinity Hospital, Edinburgh, Line engraving by T. Stewart after D. Wilson, 1845).

Completeness The remains of the animals are present both complete and as partial skeletons. They show traces of human manipulation, such as cut marks, drill holes and green discolouration of stabilisation wires – as illustrated, for example, by the remains of a cat for teaching purposes from the London Hospital (Fig. 5). Consequently, they were used for display and teaching purposes.

Total number of individuals Dogs continue to dominate over cats. This is probably due to the contemporary view that the gastrointestinal tract of dogs was directly comparable to that of humans. Nevertheless, there are comparative experiments with cats, for example with the testing of prussic acid and the question of how quickly the animal dies after ingestion.[73]

Age The dog and cat carcasses were mostly described as adult. Exact age information is lacking in most cases.

First of all, there is the question of the usefulness of dogs and cats in hospitals of that time. In this regard, the archaeological and written sources speak an almost uniform language: the animals were the object of knowledge acquisition. However, contemporary sources also report that hospitals performed autopsies on „domestic animals", which had increased by leaps and bounds in the cities, especially with the age of industrialization.[74] The deceased pets were sent to the hospital by post; in the British Isles, for example, the results of the post-mortem examination appeared in newspapers such as „The Bazaar" and „Fancier's Chronicle".[75] It is therefore possible to include among the recovered animals individuals that were autopsied at the request of their owners. Furthermore, it can be assumed that cats in particular still lived in hospitals as pest controllers (Fig. 6). For instance, a statute of the St. Georgen Hospital in Mansfeld states, „§ 23 Hunde, Katzen, Vögel und andere Thiere können nur in so weit und so lange geduldet werden als sie den Hausfrieden nicht stören" (‚Dogs, cats, birds and other animals can only be tolerated to the extent and for as long as they do not disturb the peace of the house').[76] In 1867, another source for insane asylums in the Westphalian provinces – certainly safekeeping facilities rather than pure teaching and hospital institutions – requires that rats be caught only with the aid of set traps. In addition, cat

73 Fowler/Powers 2012, 162.

74 There are different positions on what a domestic animal is and from when they existed in the first place. For instance, the historian Sarah Amato sees pet keeping as a mass phenomenon only in the 19th century, while Thomas and Hellenistic tombstones name pet keeping already in antiquity (Amato 2015, 22; Thomas 2005, 94). Dogs and cats were not always the first choice. In ancient Rome, for example, ravens were considered to be pets (Thomas 2005, 94). In rural husbandry, this also applied to goats (Amato 2015, 24). Certainly, interaction and proximity are decisive factors for considering animals as pets.

75 Amato 2015, 38.

76 Monatsschrift für Preußisches Städtewesen 2b, 1856, Nr. 8, 106.

7 Hospital staff with dog (Royal United Hospital, Bath, 1870).

8 Staff and patients at a hospital in Yorkshire (photograph by T. Holey, ca. 1891).

flaps should not be installed „zum Durchgang der Katzen, wie sie sich in verschiedenen Irrenhäusern noch befinden, angebracht werden" (‚for the passage of cats, as they still are in various asylums').[77] Another well-founded line of evidence of the presence of dogs and cats, outside the experimental zone and anatomy departments, is enabled by the achievement of photography in the first half of the 19th century. Repeatedly, they show photographs of the staff, doctors and nurses, sometimes even with patients, together with a dog or a cat (Fig. 7 and 8).[78] Although the function of these animals of different sizes remains unknown, whether they were carriers, mousers or companions, they were considered important enough to be photographed together with the staff. This suggests that they were seen as part of a community, part of a network.

The next question of about how these animals got into the hospitals can also only be answered by speculation. Cats in particular may often have made their way into the facility by their own initiative. Dogs may have come there with their owners – who were probably staff rather than patients. Written evidence for the acquisition of animals for experiments is more evident. They were purchased, among others, by middlemen who took stray animals – dogs as well as cats – from the streets or found other ways to cope with the demand. Sometimes, the animals were stockpiled. The English surgeon and anatomist Sir Astley Cooper (1768–1841) kept more than 30 dogs in his hayloft for this purpose. A servant looked after

77 Tigges 1867, 26.

78 See also: Bellevue Hospital, New York City: a nurse's sitting room (?), or end of ward, with seated nurse, cat in lap, talking to seated man (https://wellcomecollection.org/works/h8p77qy6).

the animals until their final use. Since Cooper paid half a crown to acquire a dog, his nephew also expressed fears that thieves might steal the animals to gain the desired reward.[79] Indeed, contemporary newspapers repeatedly published search notices from owners; in addition, warnings were given about animal thieves.[80]

Conclusion

In summary, the find context as well as the „agency" of dogs and cats in hospitals changed over a longue durée – depending on the purpose of the animals. However, the context of finds does not initially reveal anything about the treatment of the animals during their lifetimes. Instead, the disposal of a carcass in a waste pit or in a grave attests to social practices and functional aspects in a particular time. Thus, in the hospitals studied, the remains of dogs and cats from waste pits in the Middle Ages and the early modern period contrast with graves in the modern period. And yet the graves are the ones that give a clear indication that the recovered animals changed their position from subject to object at the latest in death. Furthermore, it should be noted that emotional and materialistic concerns are not necessarily exclusive of each other: An animal that was loved during its lifetime could still be exploited for economic profit after its death. This ambivalence between objectification and subjectification of animals will have existed in all times and is not merely a social choice, but also an individual one. Archaeological sources, however, rarely give any information about what individual animals meant to individual people during their lifetime and what the relationship between both was like. In any case, the find context is not exclusive evidence for this.

In a longue dureé, the agency or actor-network theory of dogs/cats and humans in hospitals becomes clear: Dogs and cats could possess an agency from the Middle Ages to the early modern period. It depended on their function in the community. Cats as loners, in particular, had the ability to change locations and thus provisioning situations. Dogs, too, may have lived with a certain freedom and may have had a range of movement as a transport or guard animal – the leashing of dogs was not regulated until at least the early modern period. As pack/group animals, they were eager to interact with the community and this obliging behaviour may also have been individually accepted and welcomed with gratitude by the people who lived there. Nevertheless, I think that the balance of power was unequal. To end the relationship due to unsatisfactory conditions, animals, especially cats, could leave the community, but people had the power to restrict the range of movement of dogs and cats, to confine or even kill them.

For the teaching and hospital institutions of the 17th to the 19th centuries, there were both experimental animals and those that had another use, and were possibly even understood as companions. With regard to captive animals, however, I am convinced that they had no real agency, because no animal will have voluntarily undergone vivisection or similar tortures. They were forced to do so or killed in order to advance scientific knowledge. Even today, by the way, this discussion is controversial. While Haraway, for example, sees laboratory animals as „work companions" in a co-constitutive relationship, the historian Mitchell G. Ash expresses a critical view and refers comparatively to slaves who were able to free themselves from an imposed labour contract only by death.[81]

The agency of dogs and cats in hospitals, families, and other communities is a topic that raises many questions, but just as many possible interpretations. Future archaeological studies and material collections should offer and take advantage of the opportunity to explore the relationship between humans and our animals even more intensively and to offer further impetus to Human-Animal Studies.

79 Cooper 1843, 334–338.

80 Amato 2015, 28.

81 Haraway 2008, 69–93; Ash 2021, 272.

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Abbildungsnachweis

Abbildung 1: Photo: © Bodleian Libraries, University of Oxford, CC-BY-NC 4.0 Bodleian Library MS. Bodl. 764

Abbildung 2: Kulturhistorisches Museum Magdeburg, Photo: Stefan Blume

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Abbildung 5: Fowler/Powers 2012, Fig. 158

Abbildung 6: Wellcome Collection, Public Domain Mark, https://wellcomecollection.org/works/qe3cwn79 (call up 15.6.2022)

Abbildung 7: Wellcome Collection, Public Domain Mark, https://wellcomecollection.org/works/fxqng8t6 (call up 15.6.2022)

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Table 1: S. Kahlow