

Bodily Traces: Animal Matter, Historical Books and the ‘Lifelessness’ of Writing

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Abstract

Throughout the medieval and early modern periods in Europe, animal-derived materials were routinely used in book production, and thousands of animals thus left their bodily traces in and on supposedly human cultural artefacts. Acknowledging their presence requires us to rethink how we conceive of life, embodiment and response in relation to writing and of animals in relation to textuality. The animals whose remains were turned into books not only embody meaning but their bodies became meaning in the shape of text. This article sets out to follow the material traces of these animals rendered invisible centuries ago to draw attention to the tangible animality of our literary heritage. By raising consciousness for the essential, yet often neglected role other animals played in its creation, my research troubles traditional animal-human and nature-culture binaries, calling for a more nuanced appreciation of animal lives in- and outside (human) texts.

Keywords: *animal bodies, traces, textuality, book history, materiality, animal ethics*

Following Animal Traces

In manifold ways, animals and their remains permeate human lifeworlds, be it in the form of pets or pests, food or clothing. Animals, it seems, are omnipresent in our lives even if they widely remain overlooked or disregarded. Given this ubiquity of animal presence, it stands to reason that their traces can also be found in ‘culture’ – a sphere allegedly separate from nature, and thus reserved for the human. Troubling this nature-culture dualism,¹ my article examines a seemingly inconspicuous cultural object in which human and animal characteristics converge. This object, namely the book in its late medieval and early modern form, stands at the centre of the following analysis that explores how animality emerges through the materiality of historical texts. In other words, by examining the materials early modern books were made of and the instruments as well as ingredients required for creating them, I wish to demonstrate how the ‘animality of writing’² – to borrow a phrase from Jacques Derrida’s *The Animal That Therefore I Am* – manifests itself in the shape of animal-made books.

¹ The theoretical questioning of a dualistic distinction between nature and culture is probably best epitomized by Donna J. Haraway’s term ‘*naturecultures*’ in *When Species Meet* (Minneapolis, MN and London: University of Minnesota Press, 2008).

² Jacques Derrida, *The Animal That Therefore I Am*, ed. Marie-Louise Mallet, trans. David Wills (New York: Fordham University Press, 2008), 52; hereafter *ATTIA* with page references in the text.

While Derrida investigates conceptual rather than material animality in relation to language, his reflections on both writing and ‘the animal’ still inform my argument throughout. For one thing, because it builds on premises rooted in Derridean philosophy, such as a rejection of logocentrism in favour of a more-than-human conceptualization of writing. And, further, because Derrida himself followed animal traces in his later work while his earlier writings explored a different sort of trace, still linked to the question of ‘the animal’ insofar as Derrida’s idea of the trace gestures towards the ‘completely other’, transcending binary oppositions – like animal and human or ‘*natural*’ and ‘*cultural*’ – and paving the way for a no longer exclusively human philosophy of language.³

When supposedly unique human traits, such as the capacity for speech and writing, are at stake, animals frequently get cast as those absolute others. Others without culture, without language.⁴ By drawing attention to the looming animal presence in historical book production, my article will muddy the already murky waters of this linguistic divide between humans and other animal species. To my knowledge, there is only a small body of work in literary and cultural studies that speaks to the way animal remains lie exposed before us when we enter archives, study manuscripts or otherwise draw on texts recorded and preserved via animal-derived means.⁵ Instead, ‘the animal’⁶ discussed in these disciplines is localized either within the text or as a category outside of it, possibly but maybe not fully preceding it.⁷ Rather than delving deeper into these theoretical debates, already comprehensively covered by other contributions to this special issue, I chose to focus on a specific material form of written text that collapses – and so complicates – any animality-textuality distinction in quite another way. In doing so, I aim to address some anthropocentric blind spots in our scholarly practice – those that make animal traces go unnoticed, no matter how plainly visible they may appear.

The argument I will develop here is informed by a more-than-human ethics underlying much of animal studies research which urges us to take other-than-human animals seriously as sentient beings whose lives matter.⁸ Secondly, this study also touches upon the counter-linguistic turn that ‘recalled the concreteness of existential

³ Jacques Derrida, *Of Grammatology*, corrected ed., trans. Gayatri C. Spivak (Baltimore and London: Johns Hopkins University Press, 1997), 47-8, original emphasis.

⁴ Apart from Derrida’s influential discussion of this linguistic human-animal divide, a concise account of its intellectual genealogy and problematic implications can also be found, for instance, in Matthew Calarco’s *Thinking through Animals: Identity, Difference, Indistinction* (Stanford, CA: Stanford University Press, 2015).

⁵ Relevant works include Bruce Holsinger, ‘Of Pigs and Parchment: Medieval Studies and the Coming of the Animal’, *PMLA* 124.2 (2009): 616-23, hereafter *OPP* with page references in the text, and ‘Parchment Ethics: A Statement of More than Modest Concern’, *New Medieval Literatures* 12 (2010): 131-6, as well as Sarah Kay, ‘Legible Skins: Animals and the Ethics of Medieval Reading’, *Postmedieval: A Journal of Medieval Cultural Studies* 2 (2011): 13-32, and Nancy Turner, ‘The Materiality of Medieval Parchment: A Response to “The Animal Turn”’, *Revista Hispánica Moderna* 71.1 (2018): 39-67, hereafter *MMP* with page references in the text.

⁶ For a profound critique of ‘the animal’ as abstract singular category, see Chapter 1 of Derrida’s *ATTIA*.

⁷ See Rodolfo Piskorksi, ‘Animal as Text, Text as Animal: On the “Matter” of Textuality’, in *Tiere, Texte, Transformationen: Kritische Perspektiven der Human-Animal Studies*, ed. Andreas Oberprantacher, Alejandro Boucabeille, Gabriela Kompatscher, Karin Schachinger, Reinhard Heuberger and Reingard Spannring (Bielefeld: transcript Verlag, 2015), 245-62.

⁸ See Cary Wolfe, ‘Human, All Too Human: “Animal Studies” and the Humanities’, *PMLA* 124.2 (2009): 564-75, and Lori Gruen, *Ethics and Animals: An Introduction* (Cambridge: Cambridge University Press, 2011).

experience'⁹ in its response to social constructionism. This becomes relevant when considering the significance of 'immaterial things'¹⁰ like meaning and language and asking how these considerations may factor in the tools and resources used throughout history to record writing – artefacts which, in their materiality, attest to the radically material nature of language in its written form. The case in point here is that when once-living beings are turned into objects to be imbued with linguistic meaning, the distinction between them gets blurred and we can no longer meaningfully separate dichotomous pairs such as material and immaterial, matter and mind.¹¹

As Serenella Iovino observes, such a materialist take on meaning could counterbalance the 'narcissism of our species' which tends to put humans 'not only in charge of the world but also of the word'.¹² By foregrounding matter as vibrant and active, eloquent in its own non-linguistic ways, new materialism challenges this position of humans as 'the world's sole meaning-maker'.¹³ For Jeffrey J. Cohen, decentering the human in our thinking ushers in an alternative perception of the world as a 'multiply centered expanse where we are one of many entities possessing agency, narrative power, philosophical weight, and dignity'.¹⁴ His posthumanist ethics for engaging with the nonhuman, be it objects or animals, intersects with the 'resistance to anthropocentrism' that Jane Bennett, author of *Vibrant Matter: A Political Ecology of Things* (2010), identifies as a distinguishing feature of her 'vital materialism' as opposed to historical materialism.¹⁵ She speaks of a 'narcissistic reflex of human language and thought' and explains how a new vital materialism works against this tendency through putting extra emphasis on 'nonhuman forces'.¹⁶

Thus, similar to a Derridean deconstructionist approach that unsettles categorical dichotomies from within,¹⁷ new materialism lends itself to my study's objective: to reassess the materiality of historical texts from a more-than-human perspective, thereby giving precedence to animals and matter or, more accurately, animals appropriated *as* matter. To do so, a better understanding of how books were produced, what they were made of and how other-than-human animals were involved in these processes is essential. The main part of this article is, therefore, devoted to a detailed analysis of animal materials in historical book production, drawing on the scattered evidence that can be found in book history and related studies.

⁹ Serenella Iovino and Serpil Oppermann, 'Theorizing Material Ecocriticism: A Diptych', *Interdisciplinary Studies in Literature and Environment* 19.3 (2012): 452.

¹⁰ Diana Coole and Samantha Frost, *New Materialisms: Ontology, Agency, and Politics* (Durham, NC and London: Duke University Press, 2010), 2.

¹¹ Serenella Iovino and Serpil Oppermann, 'Introduction: Stories Come to Matter', in *Material Ecocriticism*, ed. Serenella Iovino and Serpil Oppermann (Bloomington and Indianapolis: Indiana University State Press, 2014), 2.

¹² Serenella Iovino, 'Steps to a Material Ecocriticism: The Recent Literature about the "New Materialisms" and Its Implications for Ecocritical Theory', *Ecozon@* 3.1 (2012): 142.

¹³ Jeffrey Jerome Cohen, 'Introduction: All Things', in *Animal, Vegetable, Mineral: Ethics and Objects*, ed. Jeffrey Jerome Cohen (Washington, DC: Oliphant Books, 2012), 7.

¹⁴ Cohen, 8.

¹⁵ Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC and London: Duke University Press, 2010), xvi.

¹⁶ Bennett, xvi.

¹⁷ See Arthur Bradley, *Derrida's 'Of Grammatology'* (Edinburgh: Edinburgh University Press, 2008), 4-7.

In the final section, I will again take up the intersecting theoretical approaches just outlined to make sense of the animal nature of historical books. In this context, I also draw on Erica Fudge's concept of the 'animal-made-object' that unites both the objectified animal, made into an object, and the object made from an animal.¹⁸ According to Fudge, 'living animal and animal matter' are inseparable and therefore need to be considered in conjunction – which ties in with a new materialist understanding of matter as 'lively' and 'active'.¹⁹ What implications does this have for the western philosophical take on writing as 'lifeless substitute for the spoken word'²⁰ which Derrida contests in his work on grammatology? And what about animals who long ago lost their lives and were more alive as cow, sheep or goat than afterwards as books bound in and written on their skin? Yet it is in the shape of books that their bodily remains remain intact until this day, granting to these animals a dubious immortality, provided that their remains are recognized as what they are. To this I hope to contribute, ultimately as a tribute to all animals who were utilized in book production – as writing surfaces and sizing, as quill, ink or binding.

The Material Animality of Literature

When a dusty, old volume lies before us, some animal traces may seem obvious while others remain hidden in plain sight. And even the obvious evidence tends to be overlooked for equally obvious reasons. Our continued unawareness of what these books are – or what they once were – may well be the result of uneasiness, the uncanny sense of touching dead skin when opening a leather-bound book or turning a parchment page. An animal studies approach cannot stop short here, however, if it aims to appreciate even these invisible animals, paying attention to them in their 'specificity', not as generic nonhuman other.²¹ From this vantage point, it needs to be acknowledged that these animals lived lives that mattered before their bodies were utilized to become textual heritage supposedly belonging to humans only. Such an observation should also remind us of the 'prostheticity' of the human diagnosed by Cary Wolfe. Through a posthumanist lens, he argues that humans should be recognized for what they are – a species that 'coevolved with various forms of technicity and materiality' to be made human by that which is 'radically "not-human"', including language.²²

Meanwhile, for language and literature to be claimed as exclusively human, the animals involved in text production had to be made absent from those very texts. Conceptually separated from their material remains, which could thus be perceived as 'books' rather than 'a stack of dead animal parts' (OPP, 619), the animals themselves became what Carol J. Adams termed 'absent referents' in the context of meat consumption.²³ Not incidentally, this term resounds with the linguistic terminology deployed by Ferdinand de Saussure and scrutinized by Derrida in *Of Grammatology*.

¹⁸ Erica Fudge, 'Renaissance Animal Things', in *Gorgeous Beasts: Animal Bodies in Historical Perspective*, ed. Joan B. Landes, Paula Young Lee and Paul Youngquist (Pennsylvania: Penn State University Press, 2012), 42.

¹⁹ Coole and Frost, 7-9.

²⁰ Bradley, 48.

²¹ Wolfe, 'Human, All Too Human', 567.

²² Cary Wolfe, *What Is Posthumanism?* (Minneapolis, MN: University of Minnesota Press, 2010), xxv-vi.

²³ Carol J. Adams, *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory* (New York and London: Bloomsbury Academic, 2016), 20-22.

Derrida explores how writing is still relegated to a sphere outside of language by Saussurean linguistics and, therefore, marks an absence as opposed to the immediate presence conveyed by speech.²⁴ In this sense, animals turned into absent referents in the process of being turned into *writing* would remain doubly outside language – as that which is not human and as that which only represents and mediates but never actually speaks. This twofold conceptual absence of animals-as-writing despite their corporeal presence as books is striking and might explain the conspicuous gap in research on the material animality of literary texts, even following the 1980s when renewed interest in book history and the history of reading also drew scholarly attention towards the materiality of literature.²⁵

Ethics of Parchment

Asking what became of these 'absent referents' – the sheeps,²⁶ goats, cows and others implicated in book production – calls for a conscious shift towards perceiving animals as sentient beings with moral status. This, however, entails complex ethical questions that Bruce Holsinger reflects on in his article on 'parchment ethics.' Through DNA analysis of parchment, so Holsinger, the animals from whose skins parchment was made emerge as individual beings and 'their distinctive contributions to literary tradition' are rendered visible again.²⁷ Once we recognize their unsettling presence in the form of book covers, bindings and pages, it gets more difficult to dismiss the distinctively nonhuman essence incorporated into books and one begins to realize the scope of 'animal suffering and animal death' involved (*OPP*, 621). This realization impacts how we conceive of animals in relation to textuality and calls for a reconceptualization of embodied meaning and 'storied matter'.²⁸ The animals whose lives ended before their skins began an objectified, yet 'storied' existence as parchment were made to embody (human) meaning in an ultimate, nonmetaphorical sense. A transformation so thorough that it mostly eclipsed the former living beings who were nevertheless indispensable in the processes of literary production (*OPP*, 621-2).

Also, parchment was by far not the only animal-derived material utilized to create late medieval and early modern books. Traces of animals can still be found in and on historical texts from 1450-1500, when book printing was introduced in early modern England²⁹, and well after the turn of the century. Paper might have replaced parchment eventually as writing surface, but advances in printing technology rather led to a changing than decreasing demand for animal skins, bones and fats in book production. Of all those animal remains that ended up as material parts of literature, parchment and

²⁴ Derrida, *Grammatology*, 33.

²⁵ Jennifer Richards and Fred Schurink, 'Introduction: The Textuality and Materiality of Reading in Early Modern England', *Huntington Library Quarterly* 73.3 (September 2010): 346-8.

²⁶ The plural 'sheeps' is used intentionally throughout this article to promote a differentiated perception of these animals as a group of individuals, just as preference is given to the term 'fishes' rather than referring to them generically as 'fish'.

²⁷ Holsinger, 'Parchment Ethics', 131.

²⁸ Iovino, 136.

²⁹ Due to the unfeasibility of including evidence for varying book production practices throughout the early modern world, this study's geographical focus on early modern England was a practical choice, also determined by the availability of sources in English. These studies suggest, however, that similar uses of animal-derived materials were common in wider parts of Western Europe at the time.

leather seem most ‘corporeal’ and have been the object of a broad range of studies. Researchers have investigated the practical aspects of parchment production,³⁰ have discussed the allegorical meanings of skin as surface for the written word,³¹ and started to apply DNA analysis to reveal signs of ages past that have been preserved in the form of books.³²

In their function as writing material, animal skins proved invaluable for literary production but professional interest in them tends to be marked by anthropocentrism – prioritizing the text on the surface and disregarding the animal(s) underneath. Sarah Kay, for instance, explains in an article on ethical concerns related to medieval readings of skin how scholars might overlook the animal origin of parchment, just as she herself initially did.³³ She states that in her research on flayed skin, she failed to take into account that the very skin from which parchment was made once belonged to an animal that had to be slaughtered and flayed before any text could be written. In her subsequent work, Kay problematizes this gap between the animals themselves and parchment as objectified material by acknowledging that parchment gives permanent evidence of its animal origins. When inspected closely, Kay writes, it is recognizably skin with fine pores, veins and hairs remaining, and when touched it ‘*feels like skin*’.³⁴ Yet, although one can see, feel and even smell the ‘animality’ of parchment, we fail to actually notice it when the page is instead perceived as lifeless matter, mere support for writing. Here, Kay detects a problematic ‘decorporealization’ of parchment, abstracting the skin from the animal body it belonged to.³⁵ Moreover, she argues that the boundary between humans and other animals needs to be put into perspective if we acknowledge that they, over a long span of time, served as our means for writing and reading. For Kay, the book made from parchment represents both the exploitative treatment of animals by humans and the interdependence of culture and the natural world which all human-nature relations, exploitative or otherwise, are rooted in.³⁶

Covered with writing and bound into often precious books, hundreds of parchment sheets have survived until today, whereas other traces of medieval animals are hard or impossible to find. Timothy Stinson thus emphasizes the potential of DNA analysis applied to the remains of animal skin to yield new evidence about the origin and construction of manuscripts, patterns of animal husbandry and trade and, most importantly from an animal studies perspective, about the animals themselves.³⁷ For Holsinger, ‘their lives as individual animals’ can come to the fore through studies of parchment DNA that reveal aspects of the animals’ ancestry and origin. However, he also points out an impediment to this kind of research – historical books are often

³⁰ Ronald Reed, *Ancient Skins, Parchments and Leathers* (London: Seminar Press, 1972), hereafter *AS* with page references in the text, and *Pergament: Geschichte, Struktur, Restaurierung, Herstellung*, ed. Peter Rück (Sigmaringen: Jan Thorbecke Verlag, 1991).

³¹ Sarah Kay, *Animal Skins and the Reading Self in Medieval Latin and French Bestiaries* (Chicago and London: University of Chicago Press, 2017).

³² Timothy L. Stinson, ‘Knowledge of the Flesh: Using DNA Analysis to Unlock Bibliographical Secrets of Medieval Parchment’, *The Papers of the Bibliographical Society of America* 103.4 (2009): 435-53.

³³ Kay, ‘Legible Skins’, 14-15.

³⁴ Kay, ‘Legible Skins’, 14, original emphasis.

³⁵ Kay, ‘Legible Skins’, 17.

³⁶ See also Kay, ‘Animal Skins’.

³⁷ Timothy L. Stinson, ‘Counting Sheep: Potential Applications of DNA Analysis to the Study of Medieval Parchment Production’, in *Codicology and Palaeography in the Digital Age 2*, ed. Franz Fischer, Christiane Fritze and Georg Vogeler (Norderstedt: Books on Demand, 2010), 193-4.

'priceless' treasures that cannot easily be obtained for analysis (*OPP*, 620). This reverence for 'surviving books' stands in stark contrast to the status of 'dead animals' who were 'sacrificed [...] for the purposes of the book' (*OPP*, 620-2). As gruesome as this may sound, it captures the material reality of medieval literature, and it is this very 'animalness of medieval writing' that Holsinger stresses in his work on medieval manuscripts (*OPP*, 619-20). According to Holsinger, the burden of all those extinguished animal lives weighs especially heavy on medievalists because 'medieval literature survives to us primarily *on* and *as* animal' (*OPP*, 619, original emphasis).

Sheeps as Sheets, Cows as Cover

While the use of parchment for medieval manuscripts was certainly extensive, it did not cease with the paper revolution or the introduction of printing techniques at the beginning of the early modern period. Nor was paper a product entirely free of animal substances, as will become clear later on. Before discussing parchment in detail, let me note that technical studies of parchment use specific terminology, for instance when referring to parchment made from calf skin as 'vellum' (from Latin *vitulus*: calf) – a particularly fine type of parchment which united the sought-for qualities of 'thinness' and 'strength' (*AS*, 126). Often, however, both 'vellum' and 'parchment' are used interchangeably in the literature, as if synonymous in meaning which can be misleading, also when it comes to assessing which animal species the parchment in question was made from. In general, parchment was normally produced from the 'skins' of smaller animals like sheeps, calves, goats or pigs, while the 'hides' of large animals like horses and full-grown bovines were more commonly processed into leather (*AS*, 13). Besides, the quality of finished parchment sheets depended on the animal's age. The skins of young animals were thinner and could be turned into smooth writing surfaces. In later stages of an animal's life, their skin was less even and more likely to have irregularities caused by injuries such as scratches or insect bites (*AS*, 36). Kay further notes that an important factor in the selection of animals for parchment production was their skin's colour. Sheeps were often preferred due to the typical whiteness of their skin which resulted from the practice of selective breeding for wool production.³⁸

While most in-depth studies of parchment conducted so far foreground either ethical concerns related to the animal origin of parchment³⁹ or its material history and physical properties (*AS*), both perspectives have seldom been combined. Pointing out this gap, Nancy Turner argues that parchment as material and the writing it carries can only be meaningfully studied when the 'surface lying beneath the text' is examined in detail (*MMP*, 41). She thus turns her attention toward technical factors of parchment production such as varying manufacturing methods and how parchment materiality was shaped by these. However, in choosing this practical approach, Turner tends to push back the actual animals yet again and focuses instead on parchment as the 'product of human intervention', reduced to an abstracted object of scientific inquiry (*MMP*, 64).

As to the procedures involved in parchment manufacture, details can be found in both Turner's and Reed's studies and will only be given in brief here. An animal's skin had to be treated thoroughly to turn it into a suitable writing surface – this treatment

³⁸ Kay, 'Legible Skins', 18.

³⁹ Holsinger, 'Parchment Ethics' and Kay, 'Legible Skins'.

included unhairing, soaking and subsequent stretching on a frame (*MMP*, 42). Ronald Reed stresses the importance of stretching the skin while it is wet. This, he explains, constitutes the core difference between parchment and leather as the former was stabilized by drying under tension whereas leather was usually stabilized by tanning (*AS*, 119-21). Both parchment and leather could also be dyed using different sorts of pigments, some of which were of animal origin (*AS*, 47).

For parchment to be evenly coloured, it was furthermore crucial to bleed the slaughtered animals and let all blood drain from their bodies, otherwise 'a coloured pattern of arteries, veins and other blood vessels' could remain visible (*AS*, 127). Parchment marked by these patterns was known as 'veined' and was used for book bindings if considered aesthetically pleasing. Depending on the animal species, the patterns left by the animal's blood could assume different shades of colour, ranging from green in the skins of goats to dark brown-black traces on skins of sheep. The example of 'veined' parchment illustrates how individual animals could leave distinctive marks on the sheets made from their skin. Each blood pattern would be unique, its colour revealing which species the animal belonged to, reminiscent of the life that once was. This, along with qualitative differences between the skins that were used, resulted in parchments that were diverse in appearance and characteristics.⁴⁰ As Turner states, parchment makers in the medieval period must have been conscious of this variety, knowing that 'no two animal skins are ever alike' (*MMP*, 60).

Due to the durability and flexibility of parchment it was also used for other purposes than writing. For instance, medieval book binders manufactured 'strong, durable yet flexible cover[s]' out of so-called limp vellum which, according to Reed, was a common material for book bindings up until the year 1520 (*AS*, 167). Otherwise, bindings were widely made of leather obtained from the skins of sheep or calves. The bindings were sewn onto leather thongs, and strips of either leather or parchment were integrated into the book's spine to reinforce it. To close and fasten the finished manuscripts, leather thongs or leather ties were applied⁴¹ which mostly originated from domesticated animals reared and slaughtered for human consumption (*MMP*, 47-8).

Related to patterns of animal husbandry and consumption is the controversial question how many skins were needed to produce the average amount of parchment for one book. As Kay points out, the fact that parchment manufacturing was integrated into an agricultural system, and thus linked to overarching economic processes, contradicts the notion of 'mass slaughter' for literature's sake.⁴² Recent calculations consequently put into perspective earlier estimates that thousands of animals had to be killed and rather speak of a dozen skins processed for a medium-sized manuscript, possibly hundreds for particularly extensive volumes.⁴³ Medieval books in a large format, however, still required the skins of more than a hundred individual animals, a prime example being the *Codex Amiatinus* that contains the skins of over five hundred calves.⁴⁴ Similarly, Kay states in her latest study that a 'substantial codex' could not

⁴⁰ Gullick, 147.

⁴¹ M. M. Foot, 'Bookbinding 1400-1557', in *The Cambridge History of the Book in Britain. Vol. 3: 1400-1557*, ed. Lotte Hellinga and J. B. Trapp (Cambridge: Cambridge University Press, 1999), 110-13.

⁴² Kay, 'Legible Skins', 18.

⁴³ Lucien Febvre and Henri-Jean Martin, *The Coming of the Book: The Impact of Printing 1450-1800* (London: Verso, 1997), 17-18.

⁴⁴ Stinson, 'Counting Sheep', 197.

have been produced without hundreds of animal skins.⁴⁵ Even in consideration of Turner's argument that in medieval societies animal husbandry formed an essential source of subsistence and animals were killed for various purposes, not merely for parchment production (*MMP*, 47-8), these numbers are far from trivial. The more so because they remind us that, in a quantitative sense, a parchment manuscript is something that 'a single piece of meat is not' (*OPP*, 619).

As noted above, the use of parchment changed, yet did not cease altogether when printing on paper became more widespread. In fact, a considerable amount of animal skins was utilized in the early stages of book printing. Producing a parchment copy of the 42-line Gutenberg Bible, for instance, required the skins of 170 calves, so almost six thousand calves had to be slaughtered for the thirty-five copies that were printed (*AS*, 167). Estimates given by Lucien Febvre and Henri-Jean Martin confirm that, due to the technical requirements of printing, the demand for raw material rose significantly and hundreds of animal skins would have been necessary for even small parchment editions.⁴⁶ Although Reed notes that parchment producers seem to have been able to keep pace with this increasing demand until about 1520 (*AS*, 167), the need for large quantities of parchment affected the price balance between parchment and paper. In the long run, paper proved to be the more convenient and less costly material for printing.⁴⁷

During the so-called paper revolution in the latter half of the fifteenth century,⁴⁸ the spread of printing technologies in Britain led to an increasing demand for paper which came to replace parchment as the main component of books. This gradual development was still under way in the middle of the sixteenth century and it also took some time before book printing became established as standard procedure of book production instead of manuscript writing.⁴⁹ Thus, parchment as surface for hand-written texts was not suddenly abandoned at the beginning of the early modern period, and neither were books solely printed on paper. According to Lotte Hellinga, early British printing presses could be used with either paper or 'vellum' and, being more robust than paper, well-processed parchment was preferred when printing texts that would be handled often, such as liturgical books.⁵⁰

To produce similarly durable books when printing on paper, animal sizing could be applied to the page by soaking it in a solution 'rendered from animal bones and hides'.⁵¹ This procedure, also known as gelatine sizing, was not necessarily required for paper production but, as Joshua Calhoun demonstrates, papermakers as well as customers knew that well-sized paper was of 'premium' quality and better suited as writing surface. '[W]ithout the aid of boiled-down animal parts', explains Calhoun, 'early handmade paper was not viable as a writing substrate.' (*NP*, 99) Ink would blot

⁴⁵ Kay, 'Animal Skins', 4.

⁴⁶ Febvre and Martin, 30.

⁴⁷ Febvre and Martin, 17-18, 30.

⁴⁸ R. J. Lyall, 'Materials: The Paper Revolution', in *Book Production and Publishing in Britain 1375-1475*, ed. Jeremy Griffiths and Derek Pearsall. (Cambridge: Cambridge University Press, 1989), 11.

⁴⁹ Lotte Hellinga, 'Introduction', in *The Cambridge History of the Book in Britain. Vol. 3: 1400-1557*, ed. Lotte Hellinga and J. B. Trapp (Cambridge: Cambridge University Press, 1999), 3.

⁵⁰ Lotte Hellinga, 'Printing', in *The Cambridge History of the Book in Britain. Vol. 3: 1400-1557*, ed. Lotte Hellinga and J. B. Trapp (Cambridge: Cambridge University Press, 1999), 79-94.

⁵¹ Joshua Calhoun, *The Nature of the Page: Poetry, Papermaking, and the Ecology of Texts in Renaissance England* (Philadelphia: University of Pennsylvania Press, 2020), 105, hereafter *NP* with page references in the text.

and run on unsized paper which also meant that readers could only annotate their books if they were printed on sized paper. Consequently, ‘annotations in a printed book indicate the presence of sizing’ (*NP*, 100) and gelatine sizing, in turn, indicates the presence of animals whose skins, bones, horns, hoofs or even heads ended up in the sizing pot. Their invisible traces are revealed via the visible traces of human writing by readers who annotated their books. Sizing also – ironically if viewed in the context of animal *death* – contributed to ‘paper’s chances of long-term *survival*’ (*NP*, 99, emphasis added). Ironically, too, Calhoun cites evidence that the sizing room became known as the ‘slaughter house’ where many sheets of paper were damaged beyond repair. There is something ‘provocative’, he writes, about this obvious connection between ‘slaughtered animals’ body parts [that] make sizing, which in turn “bruise[s]” and “slaughter[s]” the sheets of paper in the process of coating them.’ (Dard Hunter cited in *NP*, 105) Given the invisibility of animal sizing on the finished sheet, Calhoun observes that the animals whose presence can still be detected on plant-based paper ‘haunt the paper leaves we turn in archival libraries’ (*NP*, 99) – much like their conspecifics whose skins were turned into parchment; this leads him to emphasize the ‘hybrid plant/animal nature of the page’ which belies the simplistic notion of book production’s progress from animal- to plant-based materials (*NP*, 99 and 121).

While the use of paper – in its sized and unsized variations – spread, printing on parchment became rare, acquiring a ‘deluxe character’ in the Tudor Period.⁵² Around the turn of the century and after 1500, the increase in book production led to a high demand for materials that were cheap and readily available. As a result, book binders used large amounts of limp vellum as well as tanned skins of sheeps to construct plain covers that were less expensive than stiff bindings, which were usually constructed out of wooden boards covered with either parchment or leather (*AS*, 217).⁵³ By re-using waste material from manuscripts, limp-vellum bindings could be produced at even lower costs just as end-leaves and paste-downs attached to printed books were frequently manufactured from such manuscript pieces.⁵⁴ Moreover, sewing strips of parchment into quires could increase their stability and sheets damaged by a tear or hole could be mended using parchment scraps.⁵⁵ Since parchment was known to be a very durable material, it was economically reasonable to re-use it in such ways. Almost paradoxically, Hellinga speaks of vellum being ‘past its useful life’⁵⁶ in this context, when in fact many animal lives had to end before any ‘useful’ object could be made from their dead skins. Bits and pieces of parchment seem to have acquired a life of their own, though, given the various ways in which they endured when paper became more widespread. And while parchment end-leaves as well as leather used for bindings remained visible animal parts of early modern books, book production at the time also involved other, less visible animal-derived materials.

⁵² Lyall, 12-13; see also Hellinga, ‘Printing’, 94, where Hellinga states that as a ‘luxurious material’ parchment was then employed to distinguish printed books intended for a special purpose or a wealthy, high-ranking recipient.

⁵³ See also Joseph A. Dane, *What Is a Book? The Study of Early Printed Books* (Notre Dame, IN: Notre Dame Press, 2012), 143-56.

⁵⁴ Foot, 110-14.

⁵⁵ Hellinga, ‘Printing’, 93.

⁵⁶ Hellinga, ‘Printing’, 93.

Ink, Quills, Dyes and Glue

Engaging closely with the materiality and human-animal hybridity of early modern writing and printing, makes one become aware of numerous hidden animal remains that permeated these practices. Materials employed in handwriting, for instance, included feather quills (to which the modern word 'pen' can be traced back, deriving from the Latin word *penna*: feather) (*AS*, 6). The split point of this bird feather was dipped into ink, usually of a dark blue or black colour that resulted from the use of black pigments. Ink mixtures often contained lamp black which was indirectly of animal origin if it was obtained from burning animal oils (*AS*, 155). Thus, for both the quill as tool for writing and ink as the means to render this writing visible, humans relied on resources taken from other animals. As zooarchaeological findings for certain areas in post-medieval London suggest, their usage was integrated into a medieval cycle of carcass processing, with oil producers as well as hornworkers situated in close vicinity to butcheries.⁵⁷

In the case of ink, animal oils for producing lamp black might have been dispensable since other black pigments were sometimes used as well (*AS*, 155). But ink was not always of a bluish black shade, as evidenced by richly illuminated medieval manuscripts. They contain texts and ornaments in hues ranging from red to gold and blue which reflect the variety of colours that scribes had at their disposal. Depending on the desired colour, different pigments were used that could be plant-, mineral- or animal-based. Red ink, for example, frequently owed its colour to substances of animal origin such as kermes made from the crushed eggs of the kermes insect, or crimson from the cochineal insect. Sometimes even whole sheets of parchment were dyed with these pigments, for instance during the Carolingian period (*AS*, 159). For the preparation of coloured inks, the pigments themselves had to be mixed with a carrier substance that was usually water-based and contained whipped egg white. Albumen used for this purpose was known as 'glare' and formed a basic component of inks for manuscript illumination (*AS*, 160). In addition to this, parchment glue frequently contained egg white along with other substances of animal origin such as honey and the bones as well as swim bladders of fishes. These ingredients were then mixed with wheat flour and vinegar to prepare a strong adhesive that could be used to mend tears or holes in parchment (*AS*, 210-20). Animal-derived substances were also a common feature of recipes for printing ink which was oil- rather than water-based and often contained lamp black from animal oils, egg white or even occasionally animal bones (*AS*, 210-20). Adding up this evidence, we find that a printed book or a sheet of parchment that was patched with glue not only consisted of skins from sheeps, cows, goats or pigs but also carried invisible traces of other animals like hens, fishes or even insects. This serves to demonstrate that medieval and early modern book production relied much more heavily on materials derived from animals than apparent at first glance.

⁵⁷ Lisa Yeomans, 'The Shifting Use of Animal Carcasses in Medieval and Post-Medieval London', in *Breaking and Shaping Beastly Bodies. Animals as Material Culture in the Middle Ages*, ed. Aleksander Pluskowski (Oxford: Oxbow Books, 2007), 112.

Animal Bodies as Matter Made Text

In the face of such sundry evidence for animal parts turned into components of historical books, it seems safe to say that animal imprints became inseparable from written as well as printed cultural artefacts. The animals who were indispensable for producing written texts simultaneously became a part of these texts – they were *turned into* text. As such, books made from animal-derived materials challenge us to a quite literal interpretation of material ecocriticism's understanding of the body 'as a text'.⁵⁸ In their work, Serenella Iovino and Serpil Oppermann use this notion that cultural, political or societal realities are scripted onto bodies metaphorically. It does not seem that what they primarily had in mind were animal bodies flayed for their skins to be actually written upon. And yet, there is something telling about Iovino's choice of words when she describes matter that can be read like text as 'a corporeal palimpsest',⁵⁹ since a palimpsest is nothing less than parchment reused after the original writing was scraped off. What exactly this original text inscribed on matter was or whether Iovino likens it to a palimpsest because matter as text is constantly changing, rewritten or rewriting itself again and again, we can only guess at. Still, the term evokes another association – that of writing carved into skin, persistent enough for layers of it to be scraped away, long after any tangible signs of the surface's animalness have been removed.

This animal-made palimpsest, so Jonathan G. Harris, is a 'polychronic assemblage of material *agents* [...] that enables, even as it is transformed by, the writing on it.'⁶⁰ What Harris indicates here is a dynamic interplay between the writing surface and the text inscribed upon it, both shaped in relation to each other. Here, the 'agentic properties'⁶¹ of matter, specifically parchment, emerge through its corporeality and its material function in enabling written discourse. From this new materialist perspective, the animal-made parchment page deeply unsettles 'beliefs about human agency'⁶² and, I would add – recalling Wolfe's notion of human prostheticity –, beliefs about culture and human uniqueness. Fudge consequentially exposes human culture as 'so-called human culture' if we acknowledge the agentic power of animal-made objects entailed in processes of cultural production – a power that persists 'even when the animal as sentient presence has been removed.'⁶³ Parchment as palimpsest, as the result of animal bodies made to embody meaning, exemplifies that meaning in its richness and complexity is 'irreducible to human-depending dynamics'.⁶⁴

Thinking through this 'porosity of biosphere and semiosphere'⁶⁵ engenders an understanding of meaning and matter as interconnected – just as language and materiality can be conceived as co-dependent rather than 'opposed'⁶⁶ by recognizing that attempts to understand materiality necessarily make use of language which, in turn,

⁵⁸ Iovino and Oppermann, 'Introduction', 6.

⁵⁹ Iovino and Oppermann, 'Theorizing', 451.

⁶⁰ Jonathan G. Harris, *Untimely Matter in the Time of Shakespeare* (Philadelphia: University of Pennsylvania Press, 2009), 17, original emphasis.

⁶¹ Coole and Frost, 20.

⁶² Coole and Frost, 4.

⁶³ Fudge, 45.

⁶⁴ Iovino and Oppermann, 'Theorizing', 454.

⁶⁵ Iovino and Oppermann, 'Introduction', 5.

⁶⁶ Piskorski, 253.

necessarily emerges from a material reality it refers to. Books made from animal remains exemplify this co-dependence of matter and meaning, materiality and language, by blurring dualistic categories such as nature-culture, human-animal, sentient-nonsentient, animate-inanimate. The way so-called 'natural' and 'cultural' features intertwine in animal-made books illustrates that nature and culture cannot be thought as two distinct realms but rather 'as a circulating system'⁶⁷ where human and other-than-human bodies interact and carry meaning. One could take this further and infer, as Iovino does, that in such an interrelated system even the 'clear-cut boundary between life-forms and other material entities' gets blurred.⁶⁸

Thus, books made from animals – in Fudge's terms simultaneously 'animal-made objects' and 'animals made-object'⁶⁹ – could be seen as a radical manifestation of a new materialist approach. When it comes to the boundary between animate and inanimate, however, these books may equally be understood as reinstating this boundary, confronting us with the plain fact that, regardless of how porous the line between biosphere and semiosphere may seem, a sheet of parchment is still very much less alive than the calf or sheep who lived before. And yet, there appears to be enough of the animal left in the book to make it more than an 'inert object'.⁷⁰ In fact, Fudge voices her concern that a focus on animals *as* matter risks eclipsing them all over again as living beings *who* matter as long as we continue to conceptually separate 'living animal and animal matter'.⁷¹ Where do these living animals come in, then, if 'there is no definite break between sentient and nonsentient entities',⁷² and how do we assess the moment of death, the inevitable killing involved in turning a sentient animal into an object? A danger of blurring this particular line – between life and death, animate and inanimate – could be that we fail to notice the vital change which occurs when a life is ended to produce matter which may prove agentic in itself, yet never quite in the same way as a living being.

Accordingly, the line between Fudge's 'animal-made object' and the 'animal made-object' is a thin one to walk indeed. What remains of once lively creatures when we shift our attention away from them to books made of their silent remains? What or who are we looking at, whose traces are we following, and does someone respond? Or does the text, like the animals themselves, remain irresponsive – an 'irresponsibility' which, as Derrida observed, writing and animals share in Western philosophy? (*ATTIA*, 52) Yet, this nonresponse of the animal turned into an object is, I would argue, not that of someone who 'never responded', incapable of response in general (*ATTIA*, 112). Instead, it was the animals' death at human hands – their 'appropriation' (*ATTIA*, 121) for the purpose of writing – that left them unable to respond. Their lingering bodily presence, however, seems to say that once they might have responded and this, in itself, is still a response, one that nonverbally declares that whoever was once there is 'no longer responding' (*ATTIA*, 56). The eerie silence left by the words' and the animals' irresponsibility could likewise be read as a refusal to respond. Thus, even after having

⁶⁷ Iovino and Oppermann, 'Theorizing', 454.

⁶⁸ Iovino, 139.

⁶⁹ Fudge, 42.

⁷⁰ Fudge, 42.

⁷¹ Fudge, 42.

⁷² Coole and Frost, 10.

been forcibly turned into a part of language, the ‘unappropriatable otherness’⁷³ of the animal would persist, manifested in the form of remains that remain silent.

With these material animal traces lying before us, we might once more be reminded of the Derridean trace and its link to death and the other. According to Derrida’s reasoning in *Of Grammatology*, the trace is what makes writing, language and meaning possible. It is present-absent in the sense of being imperceptible yet always already preceding the meaning of any linguistic sign. While this makes the Derridean trace elusive and difficult to grasp, it could be said to bear resemblance to the animal traces in and on historical books. They, too, hint at a ‘presence-absence’⁷⁴ of something – or rather someone – who was once there and whose existence preceded the meaning recorded as writing on animal skin. Similar to Derrida’s description of the trace as the ‘enigmatic relationship of the living to its other’⁷⁵ required for meaning to take shape, we likewise sense the other and its absence after death when contemplating animal-made books. Like the ‘différance’⁷⁶ implicated in Derrida’s conceptualization of the trace, the animals whose bodily remains we are looking at are not fully present but still implicated in the production of text and the process of meaning-making entered into by (human) writers and readers alike. For Derrida, this meaning-making starts with the trace and the ‘infinitely other’ and, as he proclaims in *The Animal That Therefore I Am*, any profound consideration of the other needs to ‘privilege the question and the request of the animal’ (*ATTIA*, 113). Doing so means to recognize our species’ ethical responsibility towards the (animal) other – in whichever form it may take. If only we look closely enough, even the unassuming, rectangular shape of a leather-bound book or a parchment page can open up a ‘radical new vision of our relation to the world around us’.⁷⁷

In ending on the question how awareness of the other could aid us in forming ethical relations with other animals, I propose regarding historical book production as a matter of the present as much as it is about the past. My article may have focused on a time long gone, centuries removed from today’s ‘discursively fast-changing world’.⁷⁸ But nothing other than the prized durability of animal materials assured that they would matter up to this day, being present still as pages, ink and bindings. Thus, their remains were preserved, carefully stored and treasured, while most of their conspecifics who lived and died hundreds of years ago simply disappeared. At this study’s outset, I called this material permanence of animals made-object – made book – a ‘dubious immortality’ and it remains so, a silent imperative to extend our ethical considerations beyond ‘all too human’⁷⁹ realities and lifeworlds. If not to the sheeps, cows or goats killed centuries ago, then to those animals who share their fate today, still farmed and exploited to be turned into products,⁸⁰ animal-made objects for human purposes, be it eating or reading.

⁷³ Piskorski, 248.

⁷⁴ Derrida, *Of Grammatology*, 71.

⁷⁵ Derrida, *Of Grammatology*, 70.

⁷⁶ Derrida, *Of Grammatology*, 62-3.

⁷⁷ Bradley, *Derrida’s ‘Of Grammatology’*, 138.

⁷⁸ Coole and Frost, 4.

⁷⁹ Wolfe, 564-73.

⁸⁰ See Margo DeMello, *Animals and Society: An Introduction to Human-Animal Studies* (New York, Chichester: Columbia University Press, 2012), 126-44.

In this, concern about the animal origin of medieval and early modern books intersects with present-day issues and concerns about exploitative, one-sided human-other animal relations that require us to look with heightened attentiveness for traces of animals made absent. The endeavour of this article to collect even the smallest evidence of these traces in historical books has been an exercise in such attentiveness. What it revealed is the 'hybrid' (*NP*, 121) nature of animal-made books that makes it impossible to disentangle human meaning from animal matter. The question remains, then, what to make of this entanglement and how to respond to past suffering that cannot be undone.

In her book *What Comes after Entanglement?* (2019), Eva Haifa Giraud explores answers to similar questions regarding multispecies relations. She argues that acknowledging our entanglement with other lifeforms is not enough if recognition is not followed by action. Entanglement, she writes, calls for an 'ethics of exclusion'⁸¹ that pays attention to those relations which have not been realized or to that which had to be excluded for certain relations to develop. This notion, I propose, applies equally to the ethical dilemma posed here – the tension between venerating books and minding animals who were rendered invisible as bits and pieces of these very books. As such, they became simultaneously entangled in and excluded from literary production as mere tools reduced to object status. Yet, becoming aware of the 'flickering presence of the animal' in our libraries filled with 'books that have been backed in "sheep" and "goat"',⁸² is a vital step towards recognizing their exclusion and erasure from cultural heritage that humans can no longer claim for their own once the 'actual animal's presence [...] overlaid by human culture'⁸³ resurfaces. As it does so, this centuries-old, corporeal presence reminds us that humans did not develop language and produce writing in isolation from other animal beings. Rather, to borrow Julian Yates's words – once again evoking an echo of the Derridean trace –, writing was and is a 'multi-species impression'⁸⁴ of which historical books stand as material proof.

While humans created text to preserve their written marks for posterity, other animals became implicated in this process and left their marks alongside them. As a result, these animals' presences got enmeshed in what might appear, at first, as a uniquely human accomplishment. Throughout this article, I aimed to show that human cultural existence and the 'seemingly ahistorical existence' of natural life indeed collide and converge on the 'parchment page'.⁸⁵ This convergence of the natural and cultural sphere destabilizes any alleged divide between the human and the more-than-human, breaking with the dated opposition of nature and culture. Once we look beyond the text at the materials which, over a long span of time, made writing possible, animal traces abound and materially entrench 'our' cultural artefacts with 'their' animalness. Consequently, we need to ask how we can acknowledge and ethically relate to these animals not as mere parts of books but as once living beings. Here, I offered a tentative answer that pointed out erasures rather than resolving past and present entanglements. A response to such erasure could be asking precisely what, or rather who, was excluded

⁸¹ Eva Haifa Giraud, *What Comes after Entanglement? Activism, Anthropocentrism, and an Ethics of Exclusion* (Durham, NC and London: Duke University Press, 2019), 171-82.

⁸² Julian Yates, 'Sheep Tracks: A Multi-Species Impression', in *Animal, Vegetable, Mineral*, ed. Jeffrey Jerome Cohen, 191.

⁸³ Fudge, 41.

⁸⁴ Yates, 191.

⁸⁵ Kay, 'Animal Skins', 2.

and rendered invisible, raising awareness for the individual animal lives affected by book production, and beginning to see how we are inextricably connected – and likewise deeply indebted – to them.

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Amprente corporale: probleme ale animalității, cărți istorice și „lipsa de viață” a scriiturii

Rezumat

De-a lungul perioadelor medievale și moderne timpurii în Europa, materialele de proveniență animală erau folosite în mod frecvent în producția de volume și mii de animale își lăsau amprentele corporale în și pe ce reprezentau așa-zise artefacte culturale umane. A le marca prezența necesită o regândire a modului în care concepem viața, corporalitatea și reacția la acestea în relație cu scriitura și cum concepem animalele în relație cu textualitatea. Animalele ale căror rămășițe au fost transformate în cărți nu doar încorporează un înțeles, dar trupurile lor devin înțeles sub forma unui text. Articolul pornește în urmărirea acestor amprente materiale ale animalelor care au fost invizibile cu secole în urmă pentru a atrage atenția asupra animalității tangibile a moștenirii noastre literare. Prin conștientizarea rolului esențial pe care animalele l-au jucat în creație, rol care adesea a fost neglijat, cercetarea mea rediscută binaritățile tradiționale animal-uman și natură-cultură, susținând o evaluare a animalității mai nuanțate în și în afara textelor (umane).