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More-Than-Human Borderlands of Wilderness — Transactional Relationships and Intra-Active Entanglements Between Wolves and Humans in the Swiss Calanda Region

***Christian Steiner*[1*], *Verena Schröder*[2]**

[1]*Human Geography, Catholic University Eichstätt-Ingolstadt, Ostenstraße 18, 85072 Eichstätt, Germany; christian.steiner@ku.de; https://orcid.org/0000-0002-0231-5888*

[2]*Human Geography, Catholic University Eichstätt-Ingolstadt, Ostenstraße 18, 85072 Eichstätt, Germany; verena.schroeder@ku.de; https://orcid.org/0009-0007-5313-6744*

**corresponding author*

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Abstract

Human attempts to draw clear boundaries between the wild and the civilized are typically subject to negotiations, discourses, and conflicts between environmental authorities, environmentalists, and the local population. However, this perspective often overlooks the agency of nonhumans in b/ordering space. Against this background, this paper offers a new conceptualization of more-than-human borderlands of wilderness. They are understood as spaces of continuous negotiation processes co-constituted by complex, relational, and hybrid entanglements of humans, animals, materialities, regulations, politics, discursive-material practices and transactions, in which the boundaries between the civilized and the wild are constituted, enacted, and challenged. Using the empirical study of returning wolves to Switzerland, this paper exemplifies the transactional constitution of more-than-human borderlands of wilderness. It demonstrates that the returning animals challenge human b/orderings of wilderness by following their prey, hunting (domestic) animals or entering settlement areas, whereas humans attempt to restabilize the boundary between the wilderness and the civilized by putting the wilderness back in place through new regulations and b/ordering practices that allow, for instance, the hunting of "problem wolves." Thus, the boundaries between the wilderness and the cultivated are always being challenged by the transactions and intra-actions of humans, wolves, and other more-than-human entities, thereby constituting the borderlands of wilderness that cut across human territorial and b/ordering claims. Therefore, investigating wolves' actions and the intra-active human attempts to restabilize their ideas of the "right place" for the wild allows a deeper understanding of wilderness in a co-created, fluid, and dynamic way.

Keywords wolves, borderlands, wilderness, place, more-than-human geographies

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1. Wildlife Across Boundaries

Wolves are inconvenient animals. Since they have become an "epitome of the wild" (Urbanik, 2012, p. 143), their uncontrolled return to the cultural landscape of Central Europe has challenged the human demarcation between the wild and the civilized. Wolves are crossing territorial borders and imaginative boundaries that are crucial to human self-orientation in the world and the way humans shape it (Cronon, 1996). They represent, one could say, the wilderness intruding into civilization, the wilderness that is *out of place* (Cresswell, 1996; Philo & Wilbert, 2000).

With their conceptual and territorial boundary crossings, wolves challenge the Western understanding of the world (Poerting et al., 2020). Accordingly, wilderness is understood as that which is uninhabited and untouched by human influence (Ward, 2019, p. 35). In contrast, its antonym, cultural landscape, is understood as nature that humans have "cultivated, cleared and settled" (Castree, 2013, p. 24). The boundary between the two is therefore crucial to the idea of human mastery over nature. The mastered nature is always the civilized one; nature that has been cultivated, tamed, and domesticated. It is nature's dangers that have been controlled and subdued by medicine, technology, or even weapons. In this process, Western European societies have seemingly subjected even the wilderness by assigning it a place in nature reserves and national parks (Hinchliffe, 2007). The boundaries between places of wilderness and places of civilization are socially produced through discursive-material negotiations and conflicts among environmental authorities, environmentalists, and local populations, and then often territorially fixed through administrative bordering processes (Cronon, 1996; Kangler, 2009).

From this perspective, the mobility and actions of nonhuman entities in shaping the borderlands of the wild are often seen as problematic, since human attempts to draw clear lines between the wild and the cultivated are fundamentally called into question by the everyday practices and mobilities of nonhuman species (Frank & Heinzer, 2019). By following their prey and hunting (domestic) animals, wolves, for instance, prey on livestock, overcome herding protection fences, and enter or come close to settlements at times and to an extent that is unacceptable to humans and causes indignation, fear, and anger. Setting aside the emotional reactions to livestock predation, it can be argued with reference to Cresswell (2014, p. 715), that these reactions are quite typical, since many such "moral panics about animals have had mobility at their heart."

As we will show through exploring the example of the return of the wolves to the Swiss Calanda region, when animals "invade" the human sphere, they question human demarcations of wilderness and cause dynamic changes in human-animal transactions. In doing so, their mobile lives across human boundaries challenge human intentions in putting them in place. It is the very precariousness of these human boundaries of wilderness that the practices of wolves are now disruptively bringing to the attention of human societies, thereby also challenging the very idea of human mastery over nature.

In response, humans attempt to restabilize the boundary between wilderness and cultivated areas by *b/ordering processes* (e.g., van Houtum et al., 2005a), which are intended to put the wilderness back in place. They transform, for instance, their everyday hunting practices and invent new administrative regulations, which define and allow the hunting of "problem wolves." For their part, wolves develop new "tactics," practices, and mobility patterns that again question and undermine the allegedly clear (human) notion and demarcation of wilderness (Schröder & Steiner, 2020; Schröder, 2024).

Along the lines of Fleischmann's notion of more-than-human borders (2020, p. 250), we understand more-than-human borderlands of wilderness as spaces of continuous negotiation processes co-constituted by complex, relational, and hybrid entanglements of humans, animals, materialities, regulations, politics, discursive-material practices (Barad, 2003; 2007; 2012; 2015), and transactions (Schröder & Steiner, 2020; Steiner, 2014; Steiner & Schröder, 2022), in which the boundaries between the civilized and the wild are constituted, enacted, and challenged.

Or, in short: We think of borderlands of wilderness as a discursive-material and transactional space in which the everyday realities of civilization, wilderness, and wildlife are played out. Such a more-than-human approach to borderlands raises the question of how the human boundary between the civilized and the wild is called into question, challenged, and (re)b/ordered by more-than-human entities. It assumes that nonhuman entities such as wolves possess an agency

within the network that places them as autonomous political actors in the field, who challenge the governance practices and b/ordering processes directed towards them, thereby revealing ruptures in the world's existing human spatial orders. Investigating wolves' mobilities and practices alongside humans' trans- and intra-active attempts to restabilize their notions of the "right place for the wild" therefore allows for a deeper understanding of wilderness more widely as co-created, fluid, and dynamic.

2. Trans- and Intra-Actional Perspectives of a More-Than-Human World

More-than-human geographies (MTHG) represent a heterogeneous theoretical field that emerged around the turn of the millennium, primarily within the Anglo-Saxon context (e.g., Braun, 2005; Greenhough, 2014; Whatmore, 2002), but increasingly also in German-speaking geography (e.g., Fleischmann, 2020; Steiner et al., 2022). Beyond the previously dominant human geographical focus on meaning and representation, the approaches gathered in this research field emphasize the extent to which the world is co-created by human entanglements with materiality and other living beings (e.g., Jackson, 2000; Lorimer, 2005; Thrift, 2008; Thrift & Dewsbury, 2000; Whatmore, 2006). MTHG therefore aim to overcome the dualistic separation between human and nonhuman entities and instead seek to better understand human existence in relation to its intense interweaving with nonhuman beings in co-produced co-worlds (Whatmore, 2006). Hence, it is not surprising that one of the concerns of MTHG is to reach a comprehensive understanding of how humans, in their complex relationships with animals (e.g., Buller, 2014; Haraway, 2008; Philo & Wilbert, 2000; Pütz & Schlottmann, 2020; Urbanik, 2012), microorganisms (e.g., Lorimer, 2016), viruses (e.g., Greenhough, 2012), plants (e.g., Gesing, 2021; Head & Atchison, 2009), or machines and technological devices (e.g., Haraway, 1991; Whatmore, 2002), co-constitute the world. Thereby, agency is also attributed to nonhuman entities (Panelli, 2010) and understood as emerging from relational ties within assemblages (e.g., Anderson & McFarlane, 2011; Mattissek & Wiertz, 2014) or actor-networks (e.g., Thrift, 2000).

This shift in focus creates a new emphasis on themes of change and dynamic relational relationships through which our world is transactively (Bridge, 2008; Dewey & Bentley, 1949; Schröder & Steiner, 2020; Steiner, 2014) co-produced and constantly (re)constituted in processual entanglements or intra-actions (Barad, 2003; Barad, 2007).

A transactional perspective has its origins in John Dewey's anti-fundamentalist and ontologically agnostic classical pragmatism. It assumes that we cannot understand entities independently of their environment; they have to be considered as "organisms-in-environment-as-a-whole" (Dewey & Bentley, 1949, LW.16.103). In this holistic view, the dynamic mutual interaction of all parts of a system is necessary for its preservation. Accordingly, complex objects and relationships must be understood relationally, emphasizing their procedural and dynamic interdependence. All transactors, within the framework of their transactional processes, performatively and recursively transform the conditions under which they and other transactors exist and transact—the world is inherently co-produced. It is thus characterized by emergent processes that produce a historical sequence of situationally unique events. This largely explains why pragmatism understands relationships in the world as a temporary expression of a continuous, dynamic, and fundamentally unpredictable process of change. In this process, all transactors—human and nonhuman—are subject to events in their environment. These events significantly determine the transactional possibilities of all transactors. Agency is therefore conceived, similarly to Actor-Network Theory or assemblage theory, as something "distributed" among the relationally interwoven transactors. The logical consequence of such a perspective is that no transactor has full control over unfolding events (Steiner & Schröder, 2022).

The idea of intra-actions can be traced back to Karen Barad's (2003, 2007) draft of an agential realism. At its core, Barad posits that entities do not exist independently and outside of their relations to each other; rather, they emerge from these relations through specific intra-actions that shape the concepts or material delineations of the world, creating meaning and boundaries (Barad, 2012, p. 19). The result is a fabric in which things are no longer ontologically separated from each other but understood as a kind of entanglement (Barad, 2015, p. 130).

From this perspective, matter does not simply exist; it is inherently entangled with the discursive. Materiality generates meanings and vice versa (Barad,

2012, p. 34). Neither discursive nor material phenomena are ontologically pre-existent; rather, they are intertwined in material-discursive practices, through which both relevancies are formed and boundaries constituted (Barad, 2012, p. 22).

To elaborate on this idea, Barad introduces the concepts of the *apparatus* and the *agential cut*. The apparatus is to be understood as a material-discursive practice, a set of intra-actions that produce phenomena in their becoming, shaping both matter and meaning (Barad, 2012). The agential cut occurs within the apparatus and represents the moment when the phenomenon emerges from the void (Richthofen, 2021, p. 30). Neither the subject precedes the object nor vice versa, ontologically or epistemologically. Both come into existence through agential cuts that separate, for example, wilderness from culture or human from animal.

Agential cuts thus produce opposing pairs. They are two sides of the same coin in terms of a cutting-together-apart (Barad, 2015, p. 182). Barad therefore refers to material-discursive apparatuses as "boundary-drawing practices" (Barad, 2012, p. 35), setting in motion what is "relevant in specific constellations and what is excluded from relevance" (Barad, 2012, p. 34). Apparatuses produce differences that matter and are simultaneously the result of these differences. Humans and more-than-human entities participate in the practices that constitute the apparatuses, organizing our world and manifesting boundary-drawing.

3. Conceptualizing More-Than-Human Borderlands of Wilderness

However, in political geography in general and border studies in particular, MTHG and animal geography approaches remain rare (Fleischmann, 2020; Smart & Smart, 2012). For decades, political geographical research has focused exclusively on humans, largely overlooking nonhuman entities such as animals and their role in political configurations (Hobson, 2007; Srinivasan, 2016). Border studies are no exception in this regard—the human ordering of space has traditionally been their main focus.

According to Fleischmann (2020), there are only a few exceptions to this: Sundberg (2011), for instance, investigates how deserts, rivers, and cats inflect, disrupt, and obstruct the everyday practices of boundary enforcement. Mather and Marshall (2011) diagnose an emerging geopolitics of animal health, which is defined by a complex patchwork of "secure" and "unruly" spaces, exploring how spaces in South Africa were (re)configured and (re)territorialized after an outbreak of classical swine fever in pig farms in 2005. Cudworth and Hobden (2022) examine political responses to zoonotic pandemics. While doing so, they focus on the predominant bordering practices of surveillance, securitization, and bodily separation and conclude that the boundaries between species are notoriously leaky and are regularly being breached. Fleischmann (2020) and Svendsen (2023) explore how animals, other nonhuman beings, and materialities are implicated in power relations that materialize in spatial border delineations by investigating the complex more-than-human bordering processes following the African swine fever pandemics in the EU and Denmark, respectively. In particular, Fleischmann thereby demonstrates how animals become focal points for spatially effective governance practices and discourses, leading to the establishment of specific spatial b/ordering patterns. At the same time, nonhuman beings become political subjects with agency, challenging, shifting, and producing existing border delineations and territorializations. In short, these new perspectives on borders call for a shift in focus from a human ordering of space to more-than-human b/orderings.

In doing so, these studies align with processual approaches (Brambilla, 2021; Sparke, 2009a) within border studies that focus on practices of bordermaking (Newman, 2006; van Houtum & van Naerssen, 2002), or what many call (re)b/ordering (for instance Newman, 2002; van Houtum, 2002; van Houtum et al., 2005a). These approaches emphasize the performativity, the ongoing (re)negotiation of borders, and the spatial ordering of the world based on othering processes (van Houtum & van Naerssen, 2002). B/ordering, in this sense, can be understood "as the strategic fabrication and control of a bounded sphere of connectivity," constituting "a reality of (affective) orientation, power, and ease, thereby expressing desire for protective distance from the outside world. … B/ordering … decides what is to be included and excluded" (van Houtum et al., 2005b, p. 3).

Drawing on Dewey and Barad, we aim to expand the understanding of b/ordering processes in two ways. Firstly, we understand b/ordering, in the sense of the concept of transaction, not only as a human phe-

nomenon but also as a process that is relationally configured in the coexistence of humans, wolves, and other entities. Therefore, the b/ordering practices of one are intertwined with the b/orderings of all others. Like two sides of the same coin, the b/orderings of one entity make the b/orderings of others mutually visible. Secondly, we see b/ordering as a process in which the material and the discursive are intricately interwoven. Therefore, b/ordering always implies a discursive-material dimension. Hence, boundaries are set up in agential cuts that b/order the world. In this sense, materialities and nonhuman entities involved in b/ordering practices are not to be seen as something separate from discursive b/orderings. Rather, they must be interpreted as materializations of agential cuts, in which the discursive-material boundaries of our everyday lives are constituted.

In this paper, we therefore follow Fleischmann's idea of more-than-human borders and border-making in the sense of b/ordering and extend it to boundaries and borderlands. Understood as geographical, constitutive makers and markers of regulative power relations (Sparke, 2009c), boundaries are central to the ordering of our world. Our notion of borderlands transgresses the traditional notion of the term as referring to the geographical regions surrounding international borders (e.g., Sparke, 2009b, p. 53). Instead, we use the term borderlands in a more metaphorical way (Pratt Ewing, 1998) to point to "spaces where the everyday realities of boundaries are played out" (Morehouse, 2004, p. 19). In this sense, cultural and social boundaries "are also characterized by borderland spaces …, even if these cannot be defined in spatial or territorial terms" (Newman, 2011, p. 38). Their meaning results from transactions within and across boundaries and their rules (Morehouse, 2004). These transactions often have a disruptive effect on b/ordering attempts, which is why state and civil actors often try to control and/or destroy these disruptions through various combinations of state-, economic-, and civil-society-mediated violence (Sparke, 2009b, p. 53). Ultimately, the resulting b/ordering practices and territorial regulations are "all about tying flows to places" (Agnew, 2009, p. 747). They are intended to put people, animals, and things in place and to inhibit unwanted movements. It is precisely this connection between putting wilderness (and wolves) in place (e.g., Urbanik, 2012, p. 144, 154) that is at the very heart of this paper. In this sense, the "unruly" animals' mobilities (Hodgetts & Lorimer, 2020) conflict with all sorts of human practices of b/ordering wilderness.

Wilderness itself is a fuzzy, multifaceted concept (Castree, 2013, p. 27; Kirchhoff & Vicenzotti, 2017). As a social construct (Cronon, 1996), contemporary perspectives often regard wilderness as a remote, unpopulated area of "nature out there," untouched by and entirely independent of human societies (Castree, 2005, p. 137; Hinchliffe, 2007, pp. 10–14).[1] Generally, it is imbued with positive, romanticized connotations, representing an intact other to the over-civilized human world (Cronon, 1996, p. 7; Fletcher, 2014). It has come to be valued as "a place of freedom and escape from the ostensive pressures and constraints of mainstream social life" (Fletcher, 2014, p. 123), as a "space of unique authenticity" (Fletcher, 2014, p. 128), as a place "to invigorate life forces," a "location of good primordiality," and as a "source of individual strength" (Kirchhoff & Trepl, 2009, p. 43) as well as "energy" (Snyder, 1990, p. 11). Consequently, the concept of wilderness has been "idealized" and held "sacred" by the culture that created it (Cronon, 1996, p. 10). This favorable perception of wilderness is extremely influential in environmentalism, ecotourism, and the arts.

Nonetheless, wilderness is a Janus-faced concept. In earlier times, it carried negative connotations, being equated with terms such as deserted, savage, desolate, barren, or waste (Cronon, 1996, p. 8). It stood in opposition to all that was orderly and good (Cronon, 1996, p. 9); it was "threatening, unruly and fickle" (Castree, 2005, p. 139), uncontrollable, and thus (life) threatening, dreadful, and unpredictable. In short, wilderness was regarded as the antithesis of the morally judged cultural order (Kirchhoff & Trepl, 2009, p. 22). It was associated with chaos, Eros, the unknown, taboos, ecstasy, and the demonic (Snyder, 1990, p. 11). It embodied the menacing "other" and served as an evil counter-world to civilization and domesticated nature (Kirchhoff & Trepl, 2009, p. 43). Wilderness was, therefore, a place where no one went by choice (Cronon, 1996, p. 9). It was somewhere humans could only make a home by conquering, by taming, by using the wilderness—even if this meant killing some of its elements (Castree, 2005, p. 13; Cronon, 1996, p. 24).

The boundaries between "wild" and "cultivated" have always been precarious and uncertain (Cronon, 1996, p. 10). Large, wild animals such as foxes, deer, wild boars, beavers, or wolves have often been perceived as "transgressive ('out of place') and abject" (Philo & Wilbert, 2000, p. 63) as soon as they crossed the all-too-often unspecific thin line between wilderness out

there and cultivated land. At the same time, human groups tend to insist on maintaining the boundary between civilization and wilderness to prevent "merging of culture and nature" (Philo & Wilbert, 2000, p. 63). In the same vein, Urbanik (2012, p. 143) has argued that many animal-human conflicts arise from an "uncertainty over the significance of social categories, a circumstance that often generates conflict over where boundaries are to be drawn and what is permissible within them." Consequently, nature conservation often falls into a "territorial trap … in which nations, nature reserves, and other politicalized units become the bounded containers for Nature. Wildlife transgressing or living outside their boundaries is deemed lost" (Lorimer, 2015, p. 164). Therefore, the uncontrolled movement and actions of wild animals challenge human boundaries between the wilderness and the cultivated. These boundaries imply a territorial as well as a categorical dimension and become guiding principles in transactions, often clashing with the real-life circumstances and mobility of wolves.

In line with Whatmore (2002), we therefore think of wilderness in a complex, relational, and hybrid order. Things, animals, or other entities are not inherently wild or domestic. They are always hybrid, configured, and drawn together (Hinchliffe, 2007, p. 53). Wolves are a prime example of this, as their biological and cultural evolution and that of humans are closely entangled (Kotschral, 2014). Wilderness, therefore, cannot be seen as separate from humans. Rather, it "dwells everywhere within and around us" (Cronon, 1996, p. 25), is everywhere "e.g., in fungi, moss, mold and yeast, animal encounters on the back porch, the freeway or the city parks" (Snyder, 1990, p. 15). Wildlife exists and persists in every part of our everyday life (Lorimer, 2015, p. 7). Therefore, humans and nonhumans transactionally create the borderlands of wilderness, in which boundaries are inherently dynamic and fluid in time and space, as they are played out in the situationally changing and evolving everyday lives of the respective entities. This more-than-human relativity of boundary-making is the reason why we speak of more-than-human borderlands of wilderness.

4. Case Study

The setting for this case study was Switzerland's Calanda region, situated between the cantons of Grisons and St. Gallen, near the city of Chur. In 2012, a wolf pack established itself here for the first time, marking the first presence of these animals in Switzerland in 150 years. Calanda was selected as the study region because the parent animals of the pack reproduced continuously for seven years, and humans and wolves have thus been coexisting in the area for an extended period. Furthermore, the density of pre-existing informational materials was crucial. Over the years, the area has become one of the best-known wolf regions in the Alps, primarily due to numerous newspaper articles, the annual public Wolf Report from the Grisons Office for Hunting and Fishing regarding the Calanda pack's situation, genetic studies, and wolf observations.

The Calanda region's valleys are relatively densely populated. The largest town at the foot of the Calanda mountain is Chur, with just under 40,000 inhabitants. Mountain tourism on Calanda is thriving, with two mountain huts run by the Swiss Alpine Club plus numerous alpine pastures. As is the case across the entire Alpine region, most livestock farmers work part-time, often with just a few animals. For centuries, farmers from the same village have brought their animals—mainly sheep but also cattle—to the mountain pastures for the summer grazing, while the meadows in the valleys are used for haymaking to feed the animals in the winter months. This farming system is deeply rooted in the region, and alpine farming is valued as part of Calanda's cultural heritage. From an ecological point of view, there is also a benefit in the management of alpine pastures, as pasture farming is associated with a high level of biodiversity. As a result, the farmers receive extensive state and societal support to maintain the established economic system.

Since the wolves were eradicated, the animals on the mountain pastures have not typically been herded, penned, or stabled at night. Today, there are sheep and cattle pastures (suckler cow husbandry, dairy farming) run by cooperatives as well as private farms, on which—depending on animal numbers and topography—various herd protection measures such as herding, guard dogs, and electric fences have been used for several years. The grazing areas are characterized by very steep, rocky terrain as well as extensive hilly and hummocky areas. They reach an altitude of between 560 m and 2,500 m, are between 15 ha and 250 ha in size, and it is often impossible to fence off their upper areas.

In contrast with the widespread district hunting systems, in which the local authorities lease the hunting rights for a specific district to a hunting association, the canton of Graubünden has a "patent hunting system" that allows hunting across the canton, with the exception of game reserves. Hunting as a practice is therefore broadly rooted in society.

5. Methods

The empirical approach of our study consists of 48 episodic interviews (Flick, 2000) with representatives from agriculture, alpine farming, wildlife management, hunting, and forestry. The interviews followed an ethnographic go-along approach (Kusenbach, 2003), taking place in the field as the interviewees went about their daily activities. These included working in the stables, milking, visiting herds, feeding livestock guardian dogs and sheep, or accompanying individuals to the hunting grounds. This approach aimed to provide a deeper understanding of the performative events and embodied experiences of the respondents.

Furthermore, field walks and observations (Lüders, 2000) in the Alpine region played a significant role. Even though humans can barely sense the "being-in-the-world" of wolves, we can learn to appreciate animal perspectives by developing an understanding of their social and spatial behavior, their hunting strategies, and their food preferences depending on habitat conditions. To achieve this, the second author of this paper completed a course on "Mammals: Species Knowledge, Ecology, and Management" at the Zurich University of Applied Sciences. This course provided insights into wildlife relationships and field methods in wildlife biology while also training the author how to interpret the lived animals' mobilities and geographies ("beastly places"; Philo & Wilbert, 2000), which have received less attention than "animal spaces" (Philo & Wilbert, 2000; Hodgetts & Lorimer, 2015; Gibbs, 2020).

The results of the ethnographic work were recorded in a field diary and, together with the transcribed interviews, fed into a content analysis (Kuckartz, 2012).

6. Contested Borders and Places of Wilderness

In the following, we discuss some of our empirical findings. In doing so, we face a systematic challenge. While on the one hand, we assume from a theoretical perspective that all actions of the entities involved are entangled with each other, it hardly seems possible to narrate the events simultaneously from different perspectives. We therefore describe all events—purely analytically—from a specific perspective. However, it is important for us to emphasize that the discursive-material actions of humans, wolves, and other entities are always transactionally interconnected. As "boundary-drawing practices," they have to be understood as a matter of "cutting-together-apart" (Barad, 2015, p. 182); they represent two sides of the same coin. That said, we distinguish analytically between normative b/orderings, transgressional b/orderings, and b/orderings in transactional zones.

6.1 Normative and Categorical B/Orderings

As indicated in the interviews, wolves are often associated with a wilderness that does not belong to "our cultural landscape." Wolves are thus seen as being in contrast to humans, as creatures that are generally accepted but should live elsewhere:

> The wolves have no place here because they can't live wild among us. That's the problem! I can imagine it's not a joy for the wolves either because they always encounter something human and civilization. (Farmer, interview [ITV] 5, 2018)

> The wolf is not the problem, it's the fanatics who feel like we have to have lynxes, bears, and wolves in this small space again. It doesn't fit. We are too small. If it's in Sweden, Norway, or Canada, then it's okay, but we are too confined. (Hunter, ITV 31, 2018)

From this perspective, wolves are interpreted as wilderness out of place and should be kept at a distance. However, by othering wolves or embodying them as wilderness, b/ordering processes ensue, aiming to fix and stabilize spatial orderings in coexisting with the species.

In contrast to such primarily discursive b/ordering practices, bodily and material b/ordering practices in terms of herd-protection measures such as fenc-

ing, penning livestock at night, integrating livestock guardian dogs into herds, and permanent shepherding aim to achieve the surveillance and protection from wolves and to bodily separate them from their potential domestic prey. These measures are therefore designed to stabilize the boundaries between the wild and the domesticated and to keep the wild in its place.

Therefore, it is perhaps not surprising that people feel irritated and uncomfortable when wolves are spotted "out of place" near settlements or livestock enclosures. A precondition for this discomfort is that wolves are sighted during their boundary crossings or leave traces, such as animal predation.

In the evaluation of wolf-hunting practices as threatening and unruly, the moral judgment of wilderness as alienated and evil becomes obvious:

> Our deer die miserably and painfully at the hands of the wolf because it simply takes a piece of their thigh. … For our animals, the wolf is actually a murderer. (Hunter, ITV 31, 2018)

When such events and livestock predation occur and become public, many representatives of the agricultural sector immediately demand that the wolves be shot. In doing so, these actors attempt to (re)stabilize the boundary between cultivated areas and wilderness.

Yet on the other hand, some of the respondents welcomed the return of wolves and saw them as actors representing "an intact nature" (Hunter, ITV 43, 2019), and "crucial for maintaining balance" (Hunter, ITV 13, 2018). From this perspective, the presence of wolves is categorized as a contribution to re-establishing wilderness as a location of good primordiality. Thus, from their perspective, wolves belong in the Calanda region.

At the same time, placing and timing are essential for b/ordering practices in terms of a spatially effective governance. For instance, the Swiss National Wolf Concept, published in 2016 and updated in 2023 (Bundesamt für Umwelt [BAFU; Federal Office for the Environment], 2023), reveals the discursive-material categorizations of place-time-dependent human b/orders of wilderness and their consequences: If a wolf appears "multiple times (more than twice) during human activity times (between 6 a.m. and 10 p.m.) in a settlement" (BAFU, 2023, p. 26), or if a wolf "kills a domestic dog in a settlement" (BAFU, 2023, p. 26), it is classified as a problem wolf and faces being shot.[2] When animals roam through settlements at night, people tend to be more tolerant of wolves' mobilities.

> When a wolf passes by the village, or even runs through the village at night, that's his business. It's different at night than during the day. … But if wolves enter stables, that's unacceptable! (Hunter, ITV 14, 2018)

If a wolf kills a dog "near an occasionally inhabited cabin" (Hunter, ITV 14, 2018), its behavior is considered "undesirable," according to the Swiss National Wolf Concept, and it is subject to deterrent measures. Again, being in or out of place in relation to timing is essential for categorizing wolves when it comes to their transactions with hunters:

> One shot and five minutes later the wolves are there. They've learnt that when something is shot, there are entrails left behind, and there's food. (Hunter, ITV 33, 2018)

Wolves' b/ordering processes during the hunting season are therefore different from those in previous months. Humans, specifically hunters, and wolves get closer than usual during this time. However, the wolves do not "know" that such behavior will lead to their categorization as undesirable individuals in Switzerland. However, if they take more than "ten minutes after the removal of the bait by the hunter" (BAFU, 2023, p. 25), there is no categorical consequence for them.

Finally, if a wolf kills prey or livestock near "an inhabited single house or settlement in a situation without herd protection" (BAFU, 2023, p. 25), its behavior is deemed to be "harmless," but the animal will be monitored more closely. In terms of Barad's agential realism (2003, 2007), these categorizations can be interpreted as agential cuts, which are intended to sustain, stabilize, and defend the boundaries between wilderness and civilization.

6.2 Transgressional B/Orderings

Unfortunately, the agency of wolves makes them uncontrollable by humans; they create moments of unruliness. Thus, wolves' everyday practices trans-

actionally challenge and question human boundary-making. In other words, human practices of b/ordering disregard wolves' lifeworld by b/ordering space according to their own needs. For example, wolves follow their prey, which moves along game trails. These trails sometimes run close to settlements, across roads, and through fields. Since wolves do not hunt exclusively at night (when people are asleep and thus unaware of wolves' movements), human-wolf encounters are inevitable. For example, deer, the main prey of wolves in the Calanda region, tend to move into the agricultural pastures near human settlements at dawn—and wolves will naturally follow. Since the time of dawn varies according to the season, the time at which wolves approach settlements may vary, too. Furthermore, in a snowy winter, prey tends to be found at lower altitudes, and thus so do the wolves. In consequence, they (and deer) "ignore" human b/ordering practices, which point to distinct and inflexible timeframes, such as those set out in Switzerland's National Wolf Concept. Instead, these observations demonstrate that wolves and other animals have their own spatio-temporal relevance systems, create their own geographies (Lorimer et al. 2019), and in doing so constantly cross and unravel human b/orderings.

This regular transgression and deconstruction of human b/orderings, and thus the agency of wolves, is especially evident in their approach to stables. They repeatedly roam around these buildings at night, causing anxiety among cows with calves, or sheep, which farmers then notice the next day. In the municipality of Turn (outside the territory of the Calanda pack), a wolf even entered a stable—a crossing of boundaries for many people and also for the Grisons Office for Hunting and Fishing, which interprets such behavior as "highly unnatural" (translation by authors; Amt für Jagd und Fischerei [Office for Hunting and Fishing], 2017, p. 13) and as requiring immediate intervention. However, one hunter interviewed about the incident empathized with the wolf:

> In our vicinity, a wolf entered the barn. Now we just have to close the doors again. You didn't have to do that for years, and now you just have to do it again. So, if I were the wolf, I would go in too! So, I can't understand why they make such a scandal out of it. (Hunter, ITV 33, 2018)

6.3 B/Ordering in the Transactional Zones

These examples demonstrate that the b/ordering processes at Calanda are a continuous negotiation between human and animal entities. Despite, or rather because of, the activities of humans and wolves in the "transactional zones," where agential cuts regularly form, the lifeworlds of humans and nonhumans are closely entangled. They are continuously evolving in transactional relations in which each species learns and develops new practices according to the behavior of the other. One example that can be highlighted in this regard is the issue of baiting sites, which are hunting facilities near settlements where people hunt foxes, martens, and badgers. To attract them, animal carcasses are laid out as bait. Afterwards, the hunters just have to wait until their prey appears. Unfortunately, scavenging wolves quickly learned that baiting sites offered a set table. Baiting sites therefore encourage wolves to come close to neighboring settlements. As a result, state authorities have banned these baiting sites near settlements, which, in turn, has changed hunters' practices:

> The ban on baiting sites near settlements has deeply affected me. Now, I go hunting on the other side of the valley, at around a thousand meters. But when there's snow, I have a hard time reaching my baiting site. The decision has been a limitation for me, but I accept it. (Hunter, ITV 14, 2018)

However, not all hunters seem to be as accepting of the ban. Some local hunters were accused of disregarding the new regulations, actively luring wolves with slaughterhouse waste near settlements to legitimize wolf removal.

A second example is the dissolution or "elimination" of wildlife protection areas which have become redundant since the wolves' return:

> At the beginning, we actually benefited from the wolves because with designated wildlife protection areas, we made the behavior of deer very predictable. After the first hunting day in September, they [the deer] moved there because they knew nothing would happen to them. The wolves waited in those areas, almost driving the animals towards us [hunters]. … But the protected areas have become unnecessary because the deer no longer retreat there. (Hunter, ITV 14, 2018)

This example shows that the relationship between all involved species—humans, wolves, and deer—evolves and changes transactionally over time, as each species takes into account the actions and learnings of the other. Thus, this example shows how the Calanda pack completely reversed human and more-than-human b/ordering processes. The boundaries, which previously remained stable for both hunters and deer, have dissolved in recent years at Calanda. Within the context of this paper's topic, this means that wolves develop new b/ordering processes that undermine the human demarcations of wilderness. Instead, the wolves' mobilities have led to dynamic changes in human-animal transactions and have made hunting more challenging and unpredictable. This loss of control over nature has prompted some older hunters or those seeking larger hunting yields to change their hunting grounds.

Nonetheless, these entanglements of human and animals' geographies can sometimes benefit alpine farmers and livestock:

> We have our Alp on the border of the Calanda pack's territory, and the wildlife warden said that if there are two packs and you're on the edge of both packs, you're least likely to encounter any issues. That's because they mark their territories with feces, urine, and howling, and if you're on the edge, you're in the protection of both packs. (Farmer, ITV 3, 2017)

So at Calanda (and in other regions where wolves have returned), we have observed entanglements between humans, wolves, and other animals, in which the everyday trans- and intra-actions of entities can only be understood in relation to others. The agency of all the species involved makes the situation uncontrollable, dynamic, and unstable.

In summary, the spatio-temporal b/ordering processes of humans and wolves often come into conflict with each other. They are not congruent, as we can see from the fact that wolves are indifferent to or unaware of human spatio-temporal attempts to b/order the wilderness. Similarly, these animals will not accommodate themselves to, or be disciplined by, categorical boundaries that humans draw up (through the Swiss wolf concept). Rather, non-overlapping spatio-temporal b/ordering practices result in conflicting human-animal relationships and contested, more-than-human borderlands of wilderness that make it almost impossible to draw clear, shared boundaries across species between the wilderness and the cultivated—either empirically or in a categorical-conceptual way.

7. Conclusions: Uncontrollable Nature out There

More-than-human borderlands of wilderness are constituted both by the discursive-material cuts through which humans put wilderness in or out of place in time and space, and by the transgressional practices and transactions of nonhuman entities such as wolves and deer. Therefore, clear boundaries between the wilderness and the civilized and cultivated cannot be drawn, either conceptually or empirically. The trans- and intra-actions of wolves, humans, and other more-than-human entities constantly challenge the b/orderings of other entities and subject them to conflict, sometimes with deadly consequences. These territorially and conceptually contested spaces constitute the borderlands of wilderness, "where the everyday realities of boundaries are played out" (Morehouse, 2004, p. 19). Those more-than-human borderlands cut across human territorial and b/ordering claims. Of course, nonhuman species such as wolves are unaware of the normative and categorical b/ordering of the world by humans. Tragically, and independently of their agency, the relationship between humans and wild animals such as wolves is also characterized by an imbalance of power, since wild animals may not be consciously aware of the discursive-material cuts humans make, but they are nonetheless connected to them through their material consequences, such as fences, bait, livestock guardian dogs, or—ultimately—bullets.

As all species involved follow their own spatio-temporal b/ordering strategies and relevance systems, b/ordering processes between humans and wildlife remain precarious, and the boundaries between wilderness and civilization remain unstable in time and space. Therefore, investigating wolves' practices and the intra-active human attempts to re-stabilize their ideas of the right place for wilderness allows for a deeper understanding of wilderness in a co-constituted, fluid, and dynamic way.

We therefore think of borderlands of wilderness as a discursive-material space in which the everyday realities of civilization, wilderness, and wildlife are played out. This space is topologically folded in the sense that

the notion of wilderness is "a relational achievement spun between people and animals, plants and soils, documents and devices in heterogeneous social networks which are performed in and through multiple places and fluid ecologies" (Whatmore, 2002, p. 14). The intense transactional relationships and intra-active entanglements between wolves and humans in Calanda are a prime example of this. Therefore, wilderness cannot be separated from humans by drawing clear-cut boundaries. Instead, the borderlands of wilderness are continually negotiated, contested, and imposed between and upon the entities involved.

Notes

[1] Concurrently, this idea laid the groundwork for European colonial conquest, in which land owned, settled and cultivated by indigenous groups was assumed to be "virgin," pristine, and uninhabited—and therefore available for European settlement. This idea made indigenous peoples' ownership and agency over the land invisible, categorized them as savage and uncultivated, and legitimized the violent colonial dispossession and removal of indigenous groups from their homelands (Ward, 2019, p. 41).

[2] Exploring the legal territory of human-wolf geographies, Ojalammi and Blomley (2015, p. 59) have also stated that such "legal/spatial codings are immensely important in producing an animal biopolitics of life and death, while also governing human relations."

References

Agnew, J. (2009). Territory. In D. Gregory, R. Johnston, G. Pratt, M. Watts, & S. Whatmore (Eds.), *The dictionary of human geography* (pp. 746–747). Wiley-Blackwell.

Amt für Jagd und Fischerei [Office for Hunting and Fishing]. (2017). *Wölfe im Kanton Graubünden 2016* [Wolves in the canton of Graubünden 2016]. Chur.

Anderson, B., & McFarlane, C. (2011). Assemblage and geography. *Area, 43*(2), 124–127. https://doi.org/10.1111/j.1475-4762.2011.01004.x

Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of Women in Culture and Society*, *28*(3), 801–831. https://doi.org/10.1086/345321

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press. https://doi.org/10.1215/9780822388128

Barad, K. (2012). *Agentieller Realismus. Über die Bedeutung materiell-diskursiver Praktiken* [Agential realism: How material-discursive practices matter]. Suhrkamp.

Barad, K. (2015). *Verschränkungen* [Entanglements]. merve Verlag.

Brambilla, C. (2021). Revisiting 'bordering, ordering and othering': An invitation to 'migrate' towards a politics of hope. *Tijdschrift voor Economische en Sociale Geografie, 112*, 11–17. https://doi.org/10.1111/tesg.12424

Braun, B. (2005). Environmental issues: Writing a more-than-human urban geography. *Progress in Human Geography, 29*(5), 635–650. https://doi.org/10.1191/0309132505ph574pr

Bridge, G. (2008). City senses: On the radical possibilities of pragmatism in geography. *Geoforum 39*, 1570–1584. https://doi.org/10.1016/j.geoforum.2007.02.004

Buller, H. (2014). Animal geographies I. *Progress in Human Geography, 38*, 308–318. https://doi.org/10.1177/0309132513479295

Bundesamt für Umwelt [Federal Office for the Environment]. (2023). *Konzept Wolf Schweiz. Vollzugshilfe des BAFU zum Wolfsmanagement in der Schweiz* [Concept Wolf Switzerland. Implementation aid on wolf management in Switzerland]. https://chwolf.org/assets/documents/woelfe-ch/CH-Konzepte/Konzept_WolfCH_Vollzugshilfe_Stand-19-01-2016-Rev2020.pdf

Castree, N. (2005). *Nature. Key ideas in geography*. Routledge.

Castree, N. (2013). *Making sense of nature*. Routledge.

Cresswell, T. (1996). *In place/out of place: Geography, ideology, and transgression*. University of Minnesota Press.

Cresswell, T. (2014). Mobilities III: Moving on. *Progress in human geography, 38,* 712–721. https://doi.org/10.1177/0309132514530316

Cronon, W. (1996). The trouble with wilderness: Or, getting back to the wrong nature. *Environmental History, 1,* 7–28.

Cudworth, E., & Hobden, S. (2022). Zoonotic politics: The impossible bordering of the leaky boundaries of species. *Millennium, 50,* 647–668. https://doi.org/10.1177/03058298221110921

Dewey, J., & Bentley, A. F. (1949). Knowing and the known. Boston: Beacon. In J. A. Boydston & L. A. Hickman (Eds.), *The collected works of John Dewey, 1882–1953 (electronic edition 1996*; LW16.1-298). Intelex.

Fleischmann, L. (2020). Mehr-als-menschliche Grenzen: Die Neuverhandlung des europäischen Grenzregimes im Kontext der Afrikanischen Schweinepest [More-than-human borders: Renegotiating the European border regime in the context of African swine fever]. In F. Weber, C. Wille, B. Caesar, & J. Hollstegge (Eds.), *Geographien der Grenzen. Räume – Ordnungen – Verflechtungen* (pp. 249–267). Springer VS. https://doi.org/10.1007/978-3-658-30950-3_11

Fletcher, R. (2014). *Romancing the wild. Cultural dimensions of ecotourism*. Duke University Press.

Flick, U. (2000). Episodic interviewing. In M. Bauer & G. Gaskell (Eds.), *Qualitative researching with text, image and sound: A practical handbook* (pp. 75–92). Sage.

Frank, E., & Heinzer, N. (2019). Wölfische Unterwanderungen von Natur und Kultur: Ordnungen und Räume neu verhandelt [Wolfish infiltrations of nature and culture: orders and spaces renegotiated]. In S. Groth & L. Mülli (Eds.), *Ordnungen in Alltag & Gesellschaft. Empirisch-kulturwissenschaftliche Perspektiven* (pp. 93–124). Verlag Königshausen & Neumann.

Gesing, F. (2021). Towards a more-than-human political ecology of coastal protection: Coast care practices in Aotearoa New Zealand. *Environment and Planning E: Nature and Space, 4*, 208–229. https://doi.org/10.1177/2514848619860751

Gibbs, L. M. (2020). Animal geographies I: Hearing the cry and extending beyond. *Progress in Human Geography, 44*(4), 769–777. https://doi.org/10.1177/0309132519863483

Greenhough, B. (2012). Where species meet and mingle: Endemic human–virus relations, embodied communication and more-than-human agency at the Common Cold Unit 1946–90. *Cultural Geographies, 19,* 281–301. https://doi.org/10.1177/1474474011422029

Haraway, D. (1991). *Simians, cyborgs and women: The reinvention of nature*. Routledge.

Haraway, D. (2008). *When species meet*. University of Minnesota Press.

Head, L., & Atchison, J. (2009). Cultural ecology: Emerging human-plant geographies. *Progress in Human Geography, 33*, 236–245. https://doi.org/10.1177/0309132508094075

Hinchliffe, S. (2007). *Geographies of nature. Societies, environments, ecologies*. Sage.

Hobson, K. (2007). Political animals? On animals as subjects in an enlarged political geography. *Political Geography, 26*, 250–267. https://doi.org/10.1016/j.polgeo.2006.10.010

Hodgetts, T., & Lorimer, J. (2015). Methodologies for animals' geographies: Cultures, communication and genomics. *Cultural Geographies, 22*(2), 285–295. https://doi.org/10.1177/1474474014525114

Hodgetts, T., & Lorimer, J. (2020). Animals' mobilities. *Progress in Human Geography, 44*, 4–26. https://doi.org/10.1177/0309132518817829

Jackson, P. (2000). Rematerializing social and cultural geography. *Social & Cultural Geography, 1*, 9–14. https://doi.org/10.1080/14649369950133449

Kangler, G. (2009). Von der schrecklichen Waldwildnis zum bedrohten Waldökosystem – Differenzierung von Wildnisbegriffen in der Geschichte des Bayerischen Waldes [From the terrible forest wilderness to the endangered forest ecosystem—differentiation of wilderness concepts in the history of the Bavarian Forest]. In T. Kirchhoff & L. Trepl (Eds.), *Vieldeutige Natur. Landschaft, Wildnis und Ökosystem als kulturgeschichtliche Phänomene* (pp. 263–278). Transcript.

Kirchhoff, T., & Trepl, L. (2009). Landschaft, Wildnis, Ökosystem: Zur kulturbedingten Vieldeutigkeit ästhetischer, moralischer und theoretischer Naturauffassungen. Einleitender Überblick [Landscape, wilderness, ecosystem: On the culturally conditioned ambiguity of aesthetic, moral and theoretical concepts of nature. Introductory overview]. In T. Kirchhoff & L. Trepl (Eds.), *Vieldeutige Natur. Landschaft, Wildnis und Ökosystem als kulturgeschichtliche Phänomene* (pp. 13–66). Transcript.

Kirchhoff, T., & Vicenzotti, V. (2017). Von der Sehnsucht nach Wildnis [Of the longing for wilderness]. In T. Kirchhoff, N. C. Karafyllis, D. Evers, B. Falkenburg, M. Gerhard, G. Hartung, J. Hübner, K. Köchy, U. Krohs, T. Potthast, O. Schäfer, G. Schiemann, M. Schlette, R. Schulz, & F. Vogelsang (Eds.), *Naturphilosophie. Ein Lehr und Studienbuch* (pp. 313–322). Mohr Siebeck.

Kotschral, K. (2014). *Wolf, Hund, Mensch: Die Geschichte einer jahrtausendealten Beziehung* [Wolf, dog, man: the story of a millennia-old relationship]. Pieper.

Kuckartz, U. (2012). *Qualitative Inhaltsanalyse. Methoden, Praxis, Computerunterstützung* [Qualitative content analysis. Methods, practice, computer support]. Belz.

Kusenbach, M. (2003). Street phenomenology. The go-along as ethnographic research tool. *Ethnography 4*(3), 455–485. https://doi.org/10.1177/146613810343007

Lorimer, H. (2005). Cultural geography: The busyness of being "More-than-representational." *Progress in Human Geography 29*, 83–94. https://doi.org/10.1191/0309132505ph531pr

Lorimer, J. (2015). *Wildlife in the Anthropocene. Conservation after nature.* University of Minnesota Press.

Lorimer, J. (2016). Gut buddies: Multispecies studies and the microbiome. *Environmental Humanities 8*, 57–76. https://doi.org/10.1215/22011919-3527722

Lorimer, J., Hodgetts, T., & Barua, M. (2019). Animals' atmospheres. *Progress in Human Geography, 43*(1), 26–45. https://doi.org/10.1177/0309132517731254

Lüders, C. (2000). Beobachten im Feld und Ethnographie [Field observation and ethnography]. In U. Flick, E. von Kardorff, & I. Steinke (Eds.), *Qualitative Forschung. Ein Handbuch* (pp. 384–401). Rowohlt.

Mather, C., & Marshall, A. (2011). Biosecurity's unruly spaces. *The Geographical Journal, 177*, 300–310. https://doi.org/10.1111/j.1475-4959.2010.00392.x

Mattissek, A., & Wiertz, T. (2014). Materialität und Macht im Spiegel der Assemblage-Theorie: Erkundungen am Beispiel der Waldpolitik in Thailand [Materiality and power in the mirror of assemblage theory: Explorations

on the example of forest policy in Thailand]. *Geographica Helvetica, 69*, 157–169. https://doi.org/10.5194/gh-69-157-2014

Morehouse, B. J. (2004). Theoretical approaches to border spaces and identities. In V. Pavlakovich-Kochi, B. J. Morehouse, & D. Wastl-Walter (Eds.), *Challenged borderlands. Transcending political and cultural boundaries* (pp. 19–39). Ashgate.

Newman, D. (2002). Boundaries. In J. Agnew, K. Mitchell, & G. Toal (Eds.), *A companion to political geography* (pp. 123–137). Blackwell.

Newman, D. (2006). Borders and bordering: Towards an interdisciplinary dialogue. *European Journal of Social Theory, 9*, 171–186. https://doi.org/10.1177/1368431006063331

Newman, D. (2011). Contemporary research agendas in border studies: An overview. In D. Wastl-Walter (Ed.), *The Ashgate research companion to border studies* (pp. 33–48). Ashgate.

Ojalammi, S., & Blomley, N. (2015). Dancing with wolves: Making legal territory in a more-than-human world. *Geoforum, 62*, 51–60. https://doi.org/10.1016/j.geoforum.2015.03.022

Panelli, R. (2010). More-than-human social geographies. Posthuman and other possibilities. *Progress in Human Geography, 34,* 79–87. https://doi.org/10.1177/0309132509105007

Philo, C., & Wilbert, C. (2000). *Animal spaces, beastly places. New geographies of human-animal relations*. Routledge.

Poerting, J., Verne, J., & Krieg, L. (2020). Gefährliche Begegnungen. Posthumanistische Ansätze in der technologischen Neuaushandlung des Zusammenlebens von Mensch und Wildtier [Dangerous encounters. Posthumanist approaches in the technological renegotiation of the coexistence of humans and wild animals]. *Geographische Zeitschrift, 108*, 153–175. https://doi.org/10.25162/gz-2020-0006

Pratt Ewing, K. (1998). Crossing borders and transgressing boundaries: Metaphors for negotiating multiple identities. *Ethos, 26,* 262–267. https://doi.org/10.1525/eth.1998.26.2.262

Pütz, R., & Schlottmann, A. (2020). Geographien von Mensch-Tier-Verhältnissen [Geographies of human-animal relationships]. *Geographische Zeitschrift, 108,* 150–152.

Richthofen, F. (2021). Von den (Un-)Möglichkeiten eines agentiell-realistischen Staatsbegriffs. Eine Suchbewegung zwischen Karen Barad und Louis Althusser [On the (im)possibilities of an agential-realist concept of the state. A search movement between Karen Barad and Louis Althusser]. *New Research in GPE, Working Paper,* No 1. https://doi.org/10.17170/kobra-202101213017

Schröder, V., & Steiner, C. (2020). Pragmatist Animal Geographies: Mensch-Wolf-Transaktionen in der schweizerischen Calanda-Region [Pragmatist animal geographies: Human-wolf transactions in the Swiss Calanda region]. *Geographische Zeitschrift, 108,* 197–222. https://doi.org/10.25162/gz-2020-0003

Schröder, V. (2024). *Mensch-Wolf-Beziehungen in der alpinen Kulturlandschaft: Eine mehr-als-menschliche Geographie des Verbundenseins* [Human-wolf relationships in the Alpine cultural landscape: A more-than-human geography of connectedness]. Transcript.

Smart, A., & Smart, J. (2012). Biosecurity, quarantine and life across the border. In T. Wilson & D. Hastings (Eds.), *A companion to border studies* (pp. 354–370). Wiley. https://doi.org/10.1002/9781118255223.ch20

Snyder, G. (1990). *The practice of the wild*. North Point Press.

Sparke, M. (2009a). Border. In D. Gregory, R. Johnston, G. Pratt, M. Watts, & S. Whatmore (Eds.), *The dictionary of human geography* (pp. 52–53). Wiley-Blackwell.

Sparke, M. (2009b). Borderlands. In D. Gregory, R. Johnston, G. Pratt, M. Watts, & S. Whatmore (Eds.), *The dictionary of human geography* (p. 53). Wiley-Blackwell.

Sparke, M. (2009c). Boundary. In D. Gregory, R. Johnston, G. Pratt, M. Watts, & S. Whatmore (Eds.), *The dictionary of human geography* (p. 55). Wiley-Blackwell.

Srinivasan, K. (2016). Towards a political animal geography? *Political Geography, 50,* 76–78. https://doi.org/10.1016/j.polgeo.2015.08.002

Steiner, C. (2014). Von Interaktion zu Transaktion. Konsequenzen eines pragmatischen Mensch-Umwelt-Verständnisses für eine Geographie der Mitwelt [From interaction to transaction. Consequences of a pragmatic understanding of human-environment relations for a geography of the connatural world]. *Geographica Helvetica, 69,* 171–181. https://doi.org/10.5194/gh-69-171-2014

Steiner, C., Rainer, G., Schröder, V., & Zirkl, F. (Eds.). (2022). *Mehr-als-menschliche Geographien. Schlüsselbegriffe und Basiskonzepte* [More-than-human geographies. Key terms and basic concepts]. Franz Steiner Verlag. https://doi.org/10.25162/9783515132305

Steiner, C., & Schröder, V. (2022). Agentieller Realismus und klassischer Pragmatismus: Potenziale der Ideen von Intraaktion und Transaktion für die Mehr-als-menschlichen Geographien [Agential realism and classical pragmatism: the potential of the ideas of intraaction and transaction for more-than-human geographies]. In C. Steiner, G. Rainer, V. Schröder, & F. Zirkl (Eds.), *Mehr-als-menschliche Geographien. Schlüsselbegriffe und Basiskonzepte* (pp. 41–70). Franz Steiner Verlag. https://biblioscout.net/book/chapter/10.25162/9783515132305/00004

Sundbeg, J. (2011). Diabolic caminos in the desert and cat fights on the Río: A posthumanist political ecology of

boundary enforcement in the United States–Mexico borderlands. *Annals of the Association of American Geographers, 101*, 318–336. https://doi.org/10.1080/00045608.2010.538323

Svendsen, M. N. (2023). Pigs, people and politics: the (re) drawing of Denmark's biological, politico-geographical, and genomic 'borders'. *BioSocieties, 18*, 714–732. https://doi.org/10.1057/s41292-021-00244-6

Thrift, N. (2000). Afterwords. *Environment and Planning D: Society and Space, 18*, 213–255. https://doi.org/10.1068/d214t

Thrift, N. (2008). *Non-representational theory: Space, politics, affect*. Routledge.

Thrift, N., & Dewsbury, J. (2000). Dead geographies—and how to make them live. *Environment and Planning D: Society and Space, 18*, 411–432. https://doi.org/10.1068/d1804ed

Urbanik, J. (2012). *Placing animals. An introduction to the geography of human-animal relations*. Rowman & Littlefield.

van Houtum, H. (2002). Borders of comfort: Spatial economic bordering processes in and by the European Union. *Regional and Federal Studies, 12*, 37–58. https://doi.org/10.1080/714004772

van Houtum, H., Kramsch, O., & Zierhofer, W. (2005a). *B/ordering space*. Ashgate.

van Houtum, H., Kramsch, O., & Zierhofer, W. (2005b). Prologue: B/ordering space. In H. van Houtum, O. Kramsch, & W. Zierhofer (Eds.), *B/ordering space* (pp. 1–16). Ashgate.

van Houtum, H., & van Naerssen, T. (2002). Bordering, ordering and othering. *Tijdschrift voor Economische en Sociale Geografie, 93*, 125–136. https://doi.org/10.1111/1467-9663.00189

Ward, K. (2019). For wilderness or wildness? Decolonising rewilding. In N. Pettorelli, S. M. Durant, & J. T. du Toit (Eds.), *Rewilding* (pp. 34–54). Cambridge University Press.

Whatmore, S. (2002). *Hybrid geographies: Natures, culture, spaces*. Sage.

Whatmore, S. (2006). Materialist returns: practising cultural geography in and for a more-than-human world. *Cultural Geographies, 13*, 600–609. https://doi.org/10.1191/1474474006cgj377oa