



Zoocialization: Learning Together, Becoming Together in a Multispecies Triad

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Abstract

Herding cattle across the landscape requires three species – horse, cattle, and human – to move together in a goal-orientated, albeit human-centered, activity. In this multispecies activity, they must synchronize through embodied communication and develop a shared understanding of moving conjointly. Together, all three species are socialized, or "zoocialized," to learn to engage in a shared community of communication where they develop a sense of "timing" and "feel" of the others to enable their directed movement together. While not denying or downplaying the power and pain integral to cattle ranching, we explore and interpret the interspecies, multispecies communication, collaboration, and choreography. Based on a multispecies ethnographic methodology, we draw on experiences from cattle herding in the USA, Canada, and Sweden. What emerges are intricate relations of agency, shaped by meanings of species, where human and nonhuman social actors learn to meet and construct a vibrant multispecies community of communication.

Keywords

Zoocialization – multispecies – human-horse relation – cattle – communication – ethnography

The work of cattle ranching requires humans to learn to communicate with different species, namely with cattle and horses, and sometimes with dogs. Depending on the task at hand, communication may be between two species, three species, and occasionally even four species. Moments of interaction can consist of two individuals or hundreds of individuals at one time. Here, we explore how three species – horses, humans, and cattle – learn to meet (Birke, 2017) and communicate to move together.

On a cattle ranch, the task of movement is defined by humans, and most often means moving a group of cattle from one location to another or sorting out individual cattle from the larger herd. These kinds of "jobs," as they are often called, can be as quick as twenty minutes or as long as twelve hours or anything in between; they can be a single day-long job or one that requires consecutive days of work together. The setting varies from a vaguely bounded space of a cattle ranch with fenced pastures, or specifically within corrals, to a nearly unbounded space of wide-open mountain ranges. No matter the job, what is remarkable is that all three species work in communication together to move as a collective at a particular speed. How this triad of different species – humans, cattle, and horses – become together in the moment of the conjoint interaction of herding is the central question of this paper.

Without a doubt, relations with nonhuman animals in the context of agriculture are framed by exploitation and capitalist production. We acknowledge that exploitation of animals is real and worthy of serious, ongoing consideration and, at the same time, we find that seeing beauty is possible, too, in the world-making taking place in this context. Many animal rights activists and scholars may take issue with this sentiment, yet our intention is not to mystify the exploitation of animals in agriculture as other scholars have noted is all too common (Ellis, 2013; Gunderson, 2013; Stuart & Gunderson, 2020). Here, we take a both/and approach to our experience and acknowledge that there is both exploitation and agency in the context of animal agriculture. We take seriously the work of Viktor Frankl (1984) who coined the concept of "tragic optimism" in which he asks, "can life retain its potential meaning in spite of its tragic aspects" (p. 137). No doubt, there are many tragic aspects of life for animals in agriculture. For the bounds of this paper, however, we choose to focus on the creative meaning-making process in which three species become-with

(Haraway, 2008) one another through an ongoing exchange of teaching and learning, that we call "zoocialization."

There is now a sizable body of literature that explores how humans becomewith other nonhuman animals, particularly in dyadic relations (Alger & Alger, 1999; Birke & Hockenhull, 2015; Haraway, 2008; Irvine, 2004; Maurstad et al., 2013; Sanders, 1999; Wipper, 2000). Additionally, research that explores how humans engage with nonhuman animal species groups, or herds, is growing (Hovorka, 2012; Buller, 2013; Petitt & Hovorka, 2020). We move beyond the species dyad and into the multispecies triad (Petitt 2021, forthcoming) to analyze the herding of cattle, where humans and horses must coordinate through an embodied language system (Brandt, 2004; Game, 2001), and together create a shared understanding of the process of synchronization with a third species. Cattle, too, must learn over time how to engage calmly in relation with humans and horses.

Drawing from Birke (2017) and Armstrong Oma's (2013) concepts of "meeting points" and "life-spaces," we develop a nuanced understanding of how specific places and spatial relations shape relations within the triad. We argue that as agentic social actors, all three species learn together how to be in what Lestel (2002) calls a "community of communication." In this multispecies community of communication, all three species, with their embodied situated knowledges (Haraway, 1988) informed by their species-specific bodies and minds, are socialized by each other – what we call zoocialized – to learn how to communicate through enacting and performing appropriate bodily displays and behaviors toward one another. Without this learning process, the work of herding cattle would consist of over excited, fear driven animals and humans alike, who would have difficulty moving as a calm collective of multispecies. All three species must develop a sense of "timing and feel" of one another to move together from start to finish. Here, we think through the tri-directional, multispecies expressions of emotion, intention, power, hierarchy, and feel to understand how horses, cattle, and humans become-with each other through processes of zoocialization in the moment of herding. Finally, looking at agriculture and animal husbandry from between the horses' ears gives us a new perspective.

Situating Authors and Animals in Context

While we, the authors, have only recently worked within a specific triad together, our previous experiences of the triad overlap. Together we share a fascination with the human-horse-cattle triad for its analytical and practical implications and take great joy in the multispecies experience.

For Andrea, while she has ridden horses since an early age, her analytical interest in multispecies encounters started with cattle. Spending her academic time with women and cattle in the Kalahari of Botswana and with breeders of rare cattle breeds in Sweden, cattle and humans have been her central focus. Her ethnographic research among cowboys in the Canadian West immersed her in the process of communication within the triad, and she takes this focus into her current ethnographic work on cattle ranching and Western style horse riding in the United States and Sweden.

Keri has worked and played within the human-horse dyad most of her life, but in the last 12 years has been living and working on a cattle ranch in the American West and is fully immersed in the setting. The transition from a focus on the dyadic relationship between humans and horses shifted to the triad as she learned to include a third species, cattle, into her interactions with horses. Originally, she thought of it more as humans and horses partnering to dominate cattle, but greatly underestimated the complexity of the triad experience. As she became more immersed, she began to understand the agency of all three species and see that indeed a dynamic form of communication made their coordinated movement together possible.

Now, we are both engaged in independent research projects using multispecies ethnography exploring cattle ranching and had the good fortune to connect. The multispecies triad we explore meet on working "cow-calf" ranches and on the (summer) mountain range. Specifically, we draw on experiences from ethnographic research on ranches in Colorado, United States, British Columbia, Canada, and all over Sweden.

In what follows, we tease out the conceptual frame we call *zoocialization*, for theorizing multispecies encounters. First, we situate our contribution at the crossroads of research on agricultural animals, herding with animals, and equestrian sports. We then theorize zoocialization and go on to look at the zoocialization process in practice. After pondering aspects of power and relationality, we finally offer some conclusions on the theoretical and practical implications of understanding human and animal communication through the lens of zoocialization.

Writing at the Crossroads of Agriculture, Herding and Equestrian Sports

For many animals in agriculture, their entanglement with human lives is shaped by their commodity status (Ellis, 2014; Hansen, 2014; Petitt, 2016; Wilke, 2010). Conceptualized by Arluke and Sanders (2008), the sociozoologic scale – the ranking of animals based on their meaning and value in human

society – shapes human thinking of animals and is employed "to justify the inconsistent treatment" of animals by humans (p. xx). This ranking is easily observable in agricultural settings where multispecies encounters are, not in the least, encounters on equal terms. Animals with a commodity status, like cattle, pigs, and sheep, are often ranked lower on the scale and are sometimes seen less as individual, minded actors and more like a general herd with a collective, simplistic subjectivity. However, animals that "partner" with humans as individual actors in agriculture, such as working cowhorses, tend to be placed higher on the scale. While Grandin (2008, 2017) has thoroughly explored how cattle respond to humans and non-animate structures, her work seldom includes horses.

Regarding herding, interspecies accounts of herd dogs have shown how communication between humans and dogs in the act of herding works primarily through human vocals, whistles, and embodied signs from afar. While dogs are commonly used in herding activities of both sheep and cattle, as predatory animals they draw on predator-specific behaviors and skills to engage in herding (Coppinger & Coppinger, 2019; Spady & Ostrander, 2008). Herd dogs are specifically bred for these predatory behaviors such as stalking, eye-stalking, chasing, and grab-biting behaviors found in many of the herding dog breeds. Once trained, herd dogs, as well as dogs trained for hunting activities, can work independently to execute an order from the human.

Research exploring human-horse partnerships primarily focus on the context of equestrian sports (Birke & Hockenhull, 2015; Blokhuis & Lundgren, 2017; Brandt, 2004, 2006; Game, 2001; Thompson & Birke, 2013; Whipper, 2000) and far less is known about human-horse partnerships in agricultural livestock contexts (Lawrence, 1984; Petitt, 2013, 2019, 2021, forthcoming). In equestrian sports, performance is the central focus, where highly attuned relationships between the horse and rider are paramount, as is the refinement of communication for the achievement of "discipline" specific goals (Birke & Thompson, 2017). This communication between rider and horse strives towards a "togetherness" which is dependent on what is often described by riders as having a "feel" and, as Brandt (2006) points out, is necessarily linked to species.

The human-horse-cattle triad meet in a variety of contexts: industrial spaces such as feedlots and sale barns, or spaces for performance, competition, and art, such as bull fighting (Thompson, 2010), rodeo (Lawrence, 1984), tourism (Templeton & Lee, 2016), and Western horseriding competitions (Ford, 2020). However, the interaction between a rider and working cowhorse in cattle ranching (Petitt, 2013, 2019, 2021) is quite different from the human-horse interaction in equestrian sports or leisure riding, as the context, skill-set and goals are different – even from the western-themed equestrian sports and ranch rodeos. When horses and humans join in an agricultural livestock

context, most often it is centered around a specific "job" at hand and exactly how the dyad accomplishes a "job" is less important.

To be sure, humans herding with horses is qualitatively different from herding with dogs. The most obvious difference is the tactile interaction between horse and rider, the physical joining of two bodies, two species, to work in tandem with a third. Additionally, like cattle, horses too are prey animals and engage in displays of dominance rather than predatory behavior.

While the principles of a nuanced, embodied, tactile language system of communication (Brandt, 2004; Game, 2001) between humans and horses span across multiple contexts, the human-horse dyad in agriculture must incorporate communication with a third species. In this sense, the dyad is decentered and the ability to work effectively within the triad is of the foremost importance.

Thinking With the Triad: Introducing Zoocialization

The space where horses, cattle, and humans meet shapes the systems of communication they develop. To understand the shared social worlds of humans and animals, contextualizing interactions in their specific places and spatial relations, what Birke (2017) and Armstrong Oma (2013) call "meeting points" and "life-spaces," is vital. The "meeting points" (Armstrong Oma, 2013; Birke, 2017) where we engage the triad in this paper are often spaces of minimal structure, characterized by open landscapes, rather than confined industrial spaces. Indeed, the very specific environment and terrain also shape the becoming-with of species, as flat meadows, steep hills, and river crossings affect the way both horses and cattle can move, shaping communication.

Birke (2017) argues that "interspecies social engagements are thus shaped by where they occur" (p. 58), and it is precisely the lack of industrial structure that makes the cohesive movement of the triad so intriguing. On cow-calf ranches, where our research takes place, breeding, birthing, and nursing are central and there is a kind of intimacy among humans and animals, where cattle are not companion animals, nor are they mere commodities (Ellis, 2014; Wilke, 2010). Nor are horses solely companion animals but also coworkers (Coulter, 2019), and their lives and experiences are shaped around each other.

Individuals, Haraway (2016) argues, "become-with each other or not at all" (p. 4). Her material-semiotic emphasis on how beings become-with each other and their surroundings means that the physical reality of an interaction and the meaning-making that the interaction entails are created together. Relations are always situated in specific contexts and materialize together (Haraway, 2008). Humans become-with other humans as well as nonhuman animals (Haraway, 2008, 2016). Further, human individuals become differently

with different animal species and different human beings become differently with the same species (Petitt, 2016; Petitt & Hovorka, 2020). Horses and humans become-with each other differently, we argue, when a third species – cattle – are integrated into an interaction (Petitt 2021, forthcoming). So do cattle and humans, as well as horses and cattle (ibid).

To work within the herding triad requires the synchronizing of horse and human bodies, who then must also join with cattle. Horses and humans "pay attention to each other through their bodies" (Birke 2017, p. 64) and in the triad the horse and rider learn to pay attention together to a third, an individual cow or a herd of cattle. The shift to the triad necessitates that all three species learn to be part of what Lestel (2002) calls a community of communication, inhabited by agentic actors. Communities of communication, argues Lestel (2002), are "hybrid human/animal communities of sharing meaning, interests, and affects. These hybrid communities are first of all semiotic communities" (p. 205). As such, social actors of different species can engage in meaning making together (Birke &Thompson, 2017). In the context of the working cattle ranch, all three species develop ways to communicate and understand intentions and emotions of multiple species in simultaneous interaction.

Communities of communication take shape when "a creature is seen as a semiotic creature" and "is allowed to become a member of the community of semiotic creatures" (Lestel, 2002, p. 206). Becoming a member of a multispecies community requires learning how to be in communication with other members, in which all members of the community are affected through their sociality. Together they learn how to be in communication such that the boundaries between the three soften to create a sense of cohesive movement between three species, although here initiated by humans.

Socialization is a process of learning social rules of the group which, through engagement, teaches appropriate behavior and interaction with others. The concept tends to center humans and is often even thought of as a phenomenon of a singular species. We refer to interspecies socialization as *zoocialization*, where appropriate behavior and interpretation of interactions between species is a learned process of multispecies engagement. Zoocialization is, like socialization, an ongoing process where norms and behaviors are internalized to allow for more stable interspecies interaction over time.

Zoocialization is an iterative process between the way that humans see or envision animals, how other species perceive humans and each other, and the action and interaction of human and animal bodies and minds. Humans' horse views (Andersson, 2016) and cattle views (Petitt & Eriksson, 2022) affect how humans read the body and actions of the cattle and horses, while the body and actions of the animals affect the horse view and cattle view. Similarly, how horses and cattle view the other two species shape, and are shaped by,

interactions. Drawing from Barad (2003), all three species "are part of the world in its on-going intra-activity" (p. 828), a "dynamism" of activity influencing one another, connected through movement. Conceptualizing zoocialization thus highlights how they are engaged together in a simultaneous process of learning and teaching each other how to engage in interaction based on shared meaning.

Mutual Multispecies Zoocialization in Practice

Importantly, this herding triad, while including three species, often include more than three individuals. Sometimes an individual cow is herded by a horse-human team, but often a herd of cattle is moving with incitation of one or several horse-human teams. The horse-human teams then interact with a herd rather than with many individuals at once. This is not the same as seeing animals as a mindless mass (e.g., Buller 2013) in the sense that they are not afforded the status of individuals – a cattle view that is sometimes attributed to ranchers. Rather, communication with a herd is one form of interaction with its own unique nuances. About moving cattle as a mass, Temple Grandin (Hibbard, 2013) argues that skilled handlers use the knowledge of "loose bunching behavior" of cattle, which is the tendency of cattle "to form a loose bunch for protection under the threat of a predator" (p. 9). What is important in terms of zoocialization is, as Grandin puts it, that "instinctual bunching behaviour is gradually replaced with calm learned behaviour" (Hibbard, 2013, p. 12). This knowledge and skilled communication between all social actors – cattle, horses, and humans - is developed through zoocialization, where all social actors are learning how to enter a larger community of communication.

Within the triad exists layered forms of communication that are non-verbal and embodied differently. These practices are direct, tactile relations between bodies and also nontactile, relational movements of bodies in space. Nontactile communication requires visualizing bodies in relation as a form of communication. Developing language skills within this multispecies community of communication is to a large extent centered around understanding the perspective of cattle. Bud Williams, a well-known stockman and advocate for low-stress handling of cattle, says that "you need to be observant of cattle and the effect that your actions are having" (Hibbard, 2012, p. 10) in order to work with cattle in a way that keeps them calm and directed.

In our triad, both the horse and the human keep their focus on the cattle, while also continuing to pay attention to each other. There are, thus, two or three conversations going on at once, all in different languages, moving beyond binary relations. Within the triad, each species brings their communication

strengths to the interaction and each species teaches – zoocializes – the others how to communicate. It is a simultaneous learning and teaching that refines overtime. In what follows we look at each species individually to articulate how each enters the triad.

The Human in the Triad

Humans learn from other humans, as well as from horses and from cattle themselves, how to communicate with cattle. About communication with cattle, Bud Williams says, "the way we move is everything" (Hibbard, 2012, p. 19). Humans develop a form of embodied communication with cattle that is not tactile, but rather based primarily on movement and positioning in space – something we argue that people develop a "feel" for – sometimes referred to as "cow sense."

Communication with cattle can be characterized as a system of pressure and release, but unlike communication with horses where the system of pressure and release is often tactile (Brandt, 2004), with cattle, pressure and release works through movements and positioning in space. "To release pressure," Williams (Hibbard, 2012) suggests, "you might slow down, turn away, or back up" to create space for the cattle to move in your desired direction (p. 25). The goal is to move with cattle or position yourself in just the "right" place to put pressure on the cattle to move away from the human-horse team.

Without question, it takes a great deal of experience and observation to know how to read and communicate calmly and effectively with cattle. It is about developing a "feel" for where to be in relation to the cow. Failing to understand when to release pressure or where to position yourself can cause an interaction to be much more hectic and fast-paced and may make it impossible to achieve the intended (human) goal.

Birke (2017) talks about valuing when horses "help out" and make their own decisions despite their human's misjudgment. For example, an excerpt from Keri's fieldnotes recounts her experience of trying to move a bull from one pasture to another alone with her horse Cinco. She writes, "I had given up and decided that the bull had out-maneuvered us and thought we should head back in. In an instant, Cinco jumped right in front of the bull, turned him into the slough and then turned him again in the direction we needed to go. She did the job better than me. She took the lead. She negotiated both me and the bull making her own decisions." Through experiences and observation, humans can learn from horses how to communicate with cattle and negotiate movement in space to achieve the intended response. In the example above, Cinco is more skilled and can teach, through attentiveness and initiating movement, the human about the nuances of when and how much pressure to use in communication with cattle.

The Horse in the Triad

Becoming a cowhorse requires learning to intentionally initiate specific, appropriate displays of dominance in the act of cattle herding. A highly skilled cowhorse, like Cinco, learns to attune their body with the body of a cow, often referred to as *rating* a cow, to synchronize the timing of their movements with that of the cow (Martin, 2010). This means that they learn a "feel" for the cow or "read" the cow to anticipate their movements. Assisting a cowboy colleague to train his stallion colt Shade, throughout a one-year field work period, Andrea participated in the first flag-exercise, where the horse is asked to follow a flag tied on a remotely controlled string, simulating a moving cow. The idea is that the horse learns to rate the flag and dart back and forth with the flag, to learn how to stop a cow who is trying to run past the horse. Fieldnotes from that day states that "It was difficult getting Shade to stop and turn quick enough, and [my cowboy colleague] shouted to me to back him up and make him stop when I asked. He slowed the flag way down and, in the end, we did a nice run." Later Andrea saw Shade in action with cattle on the range and heard the cowboy's joyful tales of how his horse had taken initiative and "cut" a cow who tried to run past him. While some horses have a greater degree of "cow sense," horses learn and develop these skills with a human astride their back.

Subscribing to a horse view is common on the ranches where we have worked, since horses can offer humans a sense of cattle that they may otherwise not recognize, given that horses and cattle are both herd orientated and understand a communication system where emotions and intentions are expressed nonverbally through the body. Though the communication system of each species is unique, horses and cattle share some species-specific qualities in communication that are far less honed in humans. Horses can often sense more quickly when, where, and at what pace a cow decides to move, "reading" cattle with more fluency than humans. "I try and follow Cinco," writes Keri, "and let her take the lead on the timing and position" noting Cinco's superior skills. Developing methods and communication skills for working with cattle is a process of co-learning – zoocialization – where humans and horses teach each other how to read and interact with cows.

Horses behave differently towards cattle during herding interaction than they do when they encounter cattle in other settings, such as grazing pasture. While horses move cattle away from food with similar gestures as when herding, the intensity and length of such interaction when herding, caught throughout a year in chest-camera video footage by Andrea, far exceeds that noted when observing pasture interaction without humans. Horses thus "team up" with humans to herd cattle together and humans "team up" with the horses – although the unequal power relations in play frame this as a human led activity. In this species power relation, humans tend to understand horses

as both "others" and "partners," while cattle mostly as "others," marking how they are situated on the sociozoologic scale.

In learning to be in communication with cattle, some horses, but not all, become highly skilled and some need more practice. This speaks to the learning – the zoocialization – that must happen to participate in dialog, calmly and safely, within the triad. In this way, horses are zoocialized into expressing dominant behavior towards cattle that they are not allowed to express in relation to humans, or even other horses when engaged in communication with a human. Further, in "reading" cows, horses develop a way of being in relation to cattle that they learn from the cattle themselves, by paying attention to the cattle's responses. Thus, the zoocialization process is multidirectional, engaging social actors of all three species.

Cattle in the Triad

"Cows do more than simply function," write Porcher and Schmitt (2012); "they invest their intelligence and their affects in the work" (p. 55). Cattle are undeniably "thinking, feeling beings, who, though dominated for centuries, manage to actively negotiate and influence the human and mechanical world" (Hansen, 2014, p. 126). As agentic creatures, they must learn to be in relation with horses and acquiesce to the pressure from the horse-human dyad. They also learn that moving within the triad is safe, moving as a collective rather than bolt in flight and fear.

To be sure, cows, especially those with young calves, can be the ones to define an interaction. They can become aggressive to horse-human pairs and to humans on the ground. Moreover, cows who know, from previous years, the way to summer pasture can take the lead, teach young cattle and novice humans, and move without much pressure from other species. There is a wide range of responses from cattle when asked to move somewhere and this will depend not only on their individual temperament and degree of zoocialization, but also if they are sorted out individually, have young calves, or are asked to move with a group.

Moreover, cattle need to learn how to move with, or away from, humanhorse pairs. In accordance with a cattle view held on different ranches we have visited, cattle newly arrived on a Swedish guest ranch were trained to respond calmly to horses. Andrea's field notes state:

First, the cattle reacted strongly, and trotted away, as they were not used to horses, but also because the horses' movements were jerky in the boggy terrain, explained [the cowboss]. He instructed us to take it easy and stop or even back up as soon as we got a response from the cattle and they turned around or started walking away. When we reached the top of the

hill the cattle were already calmer, and the ground was also more even and easier for the horses to move evenly. I noticed a couple of times that I was a step or so too far ahead, because Luke [the horse] and I got too much of a reaction from the cattle, and then I adjusted so that we kept a distance that made the cattle walk calmly ahead, but not turn towards us.

This shows, as is common, how the cattle were very sensitive to pressure the first time they encountered a human-horse team but calmed down as they learnt what response gave them release. They were zoocialized – and in turn, zoocialized humans and horses – throughout the triad interaction.

All Together Now: Zoocialization in the Multispecies Triad

In the multispecies triad (Petitt 2021, forthcoming), human and animal bodies entrain to move in synch (Argent, 2012). If horseback riding is the "choreography of two," as Argent (2012) notes, we are exploring the choreography of three: three distinct species, often many individuals, moving collectively. The horse-rider pair needs to learn together how to place themselves in the "balance point" in relation to the cow to influence the cow to move in a particular direction or stop. This balance point shifts as the triad moves through space. Both horses and humans need to learn to recognize that balance point. The more skilled the horse-rider pair, the smoother and more successful they are at feeling for that balance point. Unexperienced horses make this hard, as do humans who lack experience communicating with cattle. Through the repetition of physical and social meanings of what it means to be in relation to cattle, the "cow-horse" and "cow-human" materialize into an allied unit to engage with cattle. Cattle, in turn, learn how to respond to the human-horse team who in turn learn from the cattle what kind of pressure is needed. All the while, horses, humans, and cattle are thus learning alongside each other as agentic actors of different species.

The herd and the individual come together here beyond dualistic distinctions, and they learn to meet (Birke, 2017) and enter a larger community of communication (Lestel, 2002) together: "The ability to predict and read the other's body language is an important factor in the ability to produce cohesion" (Birke & Hockenhull, 2015, p. 95). The horse-rider pair needs trust to be in communication with each other, and they also need to be able to read – and feel – cattle and predict their movements.

Cattle are thus zoocialized into a single-species herd and learn to seek out other cattle but walk away from humans and horses. Horses are zoocialized to a bi-species team and learn to engage in species-specific behavior towards cattle and humans. Humans are zoocialized into specific horse-views and cattle-views through interaction with the animals and also learn species-specific

modes of communication as well particular moving patterns to move specific cattle.

As Birke (2017) writes, "negotiating spaces requires joint decision making and constant revision" (p. 64). All social actors are engaged in relations of agency, while the power relations related to species hierarchies define the limits of agency for individuals involved.

Power and Relationality

The zoocialization of the triad is relational and shot through with power. Power is not something tangible and binary, writes Patricia Hill Collins (1990), but rather, "an intangible entity that circulates within a particular matrix of domination and to which individuals stand in varying relationships" (p. 274). Relations of power within the triad are shifting and complex and require a recognition that each being is a social actor, while at the same time acknowledging differential degrees of power.

While humans dominate the larger structure of the interaction, horses and cattle have varying degrees of agency in the specific moments of embodied interactions (e.g., Petitt & Eriksson, 2022) depending on the context. While we see that the cattle on the ranches we have studied are exploited and endure pain, for example during vaccination and branding, we find it important to distinguish between their time on these ranches, their time in feedlots and at the slaughterhouse. In her work on human-animal relations within the livestock industry, Wilkie (2010) argues that it is important to understand "the point at which the [human] worker's path intersects with that of the animal" (p. 135), to develop a more nuanced understanding of human-animal relationships in agricultural settings.

The triad we explore meet on working "cow-calf" ranches and on the (summer) mountain range, organized around caring for mother cows and their calves. From here, (some) calves are sold to feedlots, and from there, brought to slaughterhouses. Throughout this trajectory, cattle are decreasingly able to express their "species being," seen as "the totality of species-specific potentialities and capacities" (Stuart & Gunderson, 2020, p. 303). For cattle, this includes "foraging for grasses and woody plants, moving extensive distances, courtship, mating, suckling calves, cooperating with other cows in rearing young, socialization and play" (ibid). While cattle on the working cattle ranches where we encounter them are free to engage in all these activities, this is not the case at feedlots and even less at slaughterhouses.

The interactions at the ranches are no doubt organized around human centered goals, yet within the interactive moments of herding, all three species

are making decisions that fold into a dynamic "intra-active" process of embodied communication. In one interaction the horse-human dyad can be wielding more power and in another, cows, especially ones with their new calves, or bulls invested in displaying their dominance, can become the main actors shaping a particular interaction. Cattle can also initiate movement desired by humans, especially after years of moving through the same pastures, mountains, or corrals. "Agency is not an attribute whatsoever," writes Barad (2003), "it is a 'doing'/'being' in its intra-activity" (p. 827). We would venture to add that it is relational within a matrix of domination.

To be sure, questions of power and domination are important, especially in an agricultural context. However, the notion of agency is also crucial because, as Armstrong Oma (2010) notes, to use the dualism of domination/trust to frame our relations with domesticated animals does not take into account "the reciprocal system of order and care" that is often built between humans and animals when living together in a domesticated context (p. 178). Similarly, about riding horses, Argent (2012) notes that thinking only in terms of domination risks missing "part of the social picture in which horses are cooperative and effective communicators" (p. 124).

"The human-animal rhythm is a metaphor," writes Armstrong Oma (2013), "that is created within a place that is a shared human-animal life space" (p. 166). The choreography of three is about a kind of rhythmic dance to synchronize a multiplicity of bodies in time and space. This acknowledges the agency of all subjects who together cocreate a moving event. When the choreography of the triad is smooth, it is, in our experience, as if the "feel" – often referred to in accounts on human-horse interaction – is extended beyond the dyad and encompasses the whole triad.

Zoocialization is thus something that is done together through relational agency and power that highlights the interplay of emotional connection and disconnection. The limits of care and compassion as well as the limits of an interspecies "us" clearly differs between species.

Conclusion: Practical and Theoretical Implications

Shared language between humans and animals can be thought of as a "semiotic tool to live together" in a community of communication, rather than simply an ability to tell others what to do (Lestel, 2002, p. 205). We are all always existing in complex communities of communication where social actors learn to meet, intentionally or otherwise, and craft a coherent, shared life space. There is far more complexity in the herding of cattle than meets the eye. To make sense of the event as simply an act of domination obscures the dynamic systems of

communication that each species brings to the interaction, and the incredible ways that they learn together how to communicate meaning across species boundaries. This account on cowhorses contributes to a different empirical perspective on human-horse relations as well as human-animal relations in agriculture.

Through conceptualizing zoocialization we offer socialization as a multispecies process and thus not a merely human (centered) process. Zoocialization highlights the dynamic iterative process of simultaneous teaching and learning where each species is active in the production of shared meaning. This not a linear, top-down phenomenon. While cattle may be violently manipulated in different ways in agriculture and horses can experience harsh physical and mechanical restraints, on the working cattle ranches we observed, there are many moments of calm, multispecies communication from which we can learn about multispecies interaction.

Knowing more about how humans and animals build an understanding of the other "has some potential to improve animal lives" (Birke & Hockenhull, 2015, p. 96). In the context of agriculture, there is much work to be done to improve the life conditions for animals who will become food. Animals in agriculture exist in a particular structural and disciplinary domain of power and we need transformation in the overall institution of agricultural practices. If we agree on the minded qualities of all animals, we should reckon with their social ranking that shapes the meanings humans construct of them as well as their treatment.

Regarding cattle, Temple Grandin's work (2008, 2017) has had a measurable impact on improving the human and mechanical handling of cattle in industrial settings, but much more still needs to be done. Outlining the concept of zoocialization and furthering the understanding of the processes involved, we hope to bring positive changes to the "life side" of agriculture through reduction of stress for the cattle and unnecessary displays of aggression. We strive towards the goal that our work should be accountable to the animals we investigate, and hope that this work can add to the growing demand for better conditions for animals in agriculture.

Understanding the zoocialization of the herding triad can also have implications for horses. By paying attention to the horse views and cattle views negotiated through zoocialization, these species-specific premises used to read multispecies interaction, we can challenge those premises to learn more about the individuals and herds at hand. Some premises might also be strengthened, shaping interaction with other individuals and herds.

Theoretically, thinking through the concept of zoocialization allows us to operationalize a truly multispecies becoming-with in specific interactions. It

opens the possibility to understand agency as relational, dynamic and shaped by species. It helps us see how species is operationalized and future research could explore how zoocialization is done in different cultures and with different constellations of species. Indeed, as becoming-with is always intersectional (Petitt & Hovorka, 2020), the process of zoocialization can differ between places, times, and cultures, as it engages not only species but also other power relations such as gender, ethnicity, and class. More research is needed to explore specific processes of zoocialization in different cultural contexts as well as in different horse-centered and herding centered activities.

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