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Rethinking "Area" Through Appetite for Hot-Fresh Meat and the Cross-Border Cattle Trade Conditions

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Abstract

This "*engagement*" rethinks "area" as a set of multispecies entanglements linking humans, cattle, chemicals, and cultural tastes across borders rather than as a fixed geographic or political space. Drawing on ethnographic fieldwork along the Myanmar–Thailand frontier between 2021 and 2023, the article traces the journey of retired oxen from Myanmar's Central Dry Zone through Thailand's feedlots to Chinese hotpot tables. Rather than a bounded geopolitical space, "area" emerges as an entangled process shaped by metabolism, pharmaceutical interventions, and a chain of care and transformation that connects borderlands via commodity chains to consumers. These interconnected practices—of feeding, medicating, transporting, and consuming—reveal how areas are continuously made and unmade through human and non-human entanglements.

Keywords

cattle trade; entanglement; multi-species; area

Introduction

In the Central Dry Zone of Myanmar between Bago and Mandalay a now unemployed ox watches the "Chinese buffalo" (a popular two-wheeled hand tractor) ploughing the fields. It is blissfully unaware of the Chinese labourer almost a thousand kilometers northeast, in Kunming, China, thoughtfully picking out a piece of beef from the steaming bowl of hotpot in front of him.

This engagement argues that the two are nevertheless intimately entangled. Not only spatially, but also temporally (over a period of three to four months). Moreover, they are also entangled through food texture and taste preferences, through pharmaceuticals and local knowledges, through microbes and viruses, and through forms of inter-species care. As suggested by Casper Bruun Jensen and Fadjar Thufail in the introduction to this volume (Jensen and Thufail 2025), it might thus be fruitful to suspend with the usual spatial and ideological connotations of "area," and interrogate Southeast Asia from the point of view of multiple entanglements.

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This engagement is part of research into cross-border movements of large ruminants (cattle) in the non-human borderlands of Southeast Asia, particularly along the Myanmar-Thailand border. Based on multiple periods of ethnographic fieldwork during 2021–2023, I explore one set of entanglements, which take place in and around the borderlands of Myanmar and Thailand, and are oriented to producing healthy, meaty cows which appeal to Chinese taste buds. I seek to show that these entanglements make one consequential version of area.

Figure 1. Cross-border cattle are being transported out of the truck to the border of Thailand. Source: Author's own.

Hot-Fresh Meat

Over the past ten years, Chinese beef consumption has skyrocketed from 80,000 to 700,000 tons (Li Yuan, and Zan 2018). Domestic meat production in China is not able to meet demand due to a scarcity of agricultural land, which makes it difficult to raise large herds of cattle. This has turned China into a large beef importer. Australian, Latin American (and lately Russian) imports of "premium cuts" satisfy an increasingly globalized urban middle-class taste. In recent years, geo-political tensions with Australia have resulted in fewer beef imports and thus China has turned towards Southeast Asian neighbors to secure other sources of beef. More importantly, perhaps, the traditional preference for non-premium cut beef has by no means disappeared. Popular in the winter season in the south and southwest of China, hearty soups and hot pots are made with stewed meat: second cuts of cheaper meat such as chuck, which is leaner and tougher than premium cut, but still melts in your mouth after a long period of cooking. Those cuts come from the harder-working parts of the cow, which contains strong muscle, less fat, and more connective tissue, which turns into collagen during cooking. Aside from chuck, they include tendons, intestines, and some parts of the rumen, too. For reasons of taste and culture, these beef parts must be "hot/fresh." This means that the animal is supposed to have been slaughtered recently, typically the night before, after which it is

immediately cut, and the meat brought to the market early next morning to be sold to customers. What I call the "appetite for hot, fresh" meat in Southwest China has resulted in an import chain involving live cattle originating from the Central Dry Zone of Myanmar, sometimes Rakhine state, and even the Bangladeshi border, which is completely different from the one resulting in frozen premium cuts in supermarket freezers.

Cattle Cartography: From Bangladesh, Myanmar to Thailand

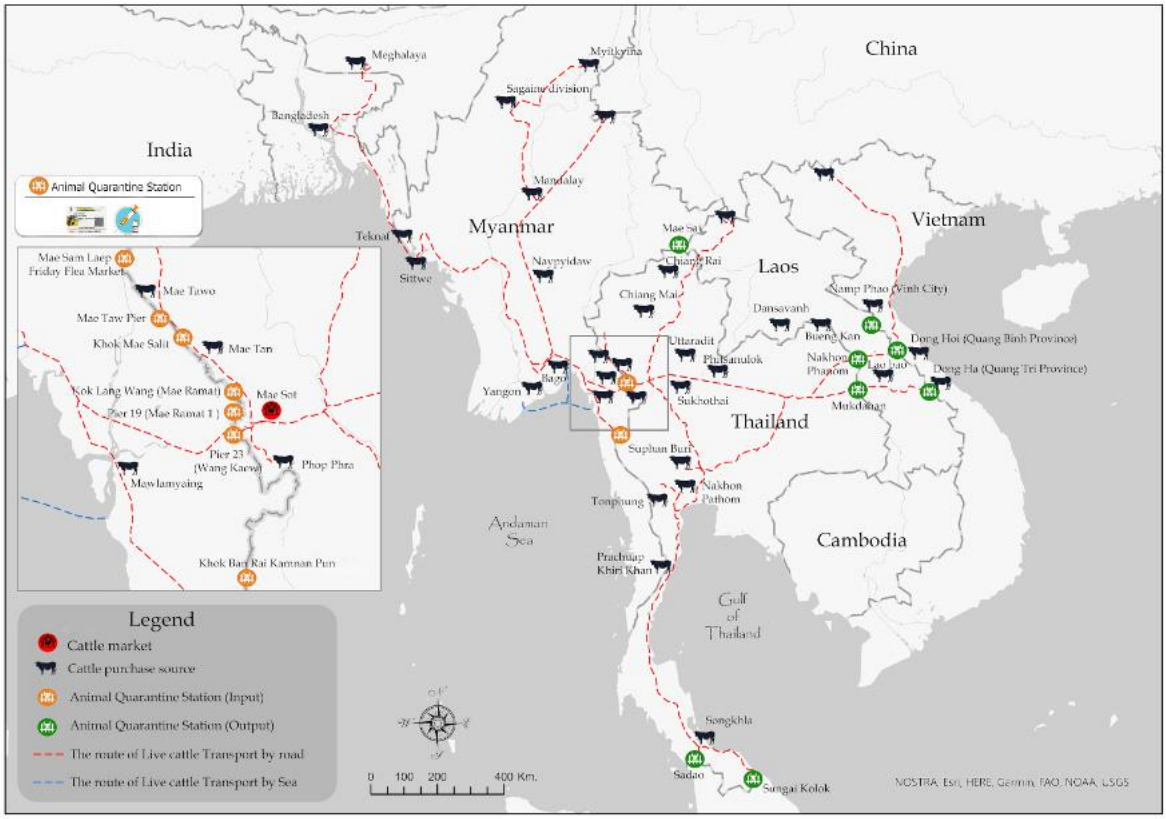

Figure 2. A map of the trajectory of cattle crossing borders from Bangladesh, transiting in Thailand and continuing its journey to Vietnam and China. Source: Author's own.

Each year, approximately 2–300,000 cattle cross the border from Myanmar into Thailand (Thai Department of Livestock Development 2020). The cattle come from different regions of Myanmar but mostly from the Central Dry Zone stretching from Bago to Mandalay. Many of the animals have been retired from work on rice plantations (because of old age). The cattle travels to Thailand by foot, on boat, or by road (see figure 1); however, their final destination is not Thailand but China (and to a lesser extent Vietnam). At the border of Thailand and Myanmar, in Mae Sot, the cattle undergo health checks, get vaccinated in order to be "free

from foot and mouth disease,"[1] and spend from 15 to 30 days in mandatory quarantine before moving on to fattening stations further inside Thailand (see figure 2).

There are three main reasons why cattle are transported through Thailand, particularly via the Mae Sot border crossing. First, the conflict and instability of the border between Myanmar and China affects cattle movement. Many times, fighting between ethnic armed groups and the Burmese military has led to border closures. The southeastern border between Myanmar and Thailand has been more stable, as well as better passable in winter conditions. Second, China requires cattle from Myanmar to be free from disease (Smith et al. 2015) and veterinarian knowledge as well as the numbers of veterinarians in Myanmar are limited. This means that most Burmese cattle do not receive vaccination for foot and mouth disease, which is the greatest concern of the Chinese government. Thailand, however, has veterinarian knowledge and practitioners as well as strict vaccination requirements. If cattle come via Thailand, they are thus guaranteed to be healthy. Otherwise, they would not have been able to pass the Mae Sot border. Finally, Chinese cattle buyers prefer to buy cattle that are around 4–500 kilograms. However, Burmese cattle are typically only around 2–300 kilograms and sometimes they arrive at the border scrawny or sick. In Thailand, they can be cured and fattened to the required size with concentrate feed. Thai veterinarians, cattle farmers, and feedlot owners accomplish this in a period of three to four months.

This means that the cattle will have to continue to "grow" and turn into "healthy, meaty" oxen while in transit. Keeping these live commodities alive and well during the entire journey requires complex infrastructures, forms of materiality, and care. Entire networks of actors are involved, including truck drivers, hay and grasses providers, suppliers and their concentrate feed ingredients, pens, hormones, and cattle caretakers.

This trajectory also involves what Maan Barua, Thomas White, and David Nally refer to as "metabolic labor," where—

> Metabolism is a plural concept. It refers to chemical pathways in cells, the practices of breakdown and repair in the body, the flows of energy and materials that connect countryside and city to the world ecology of capitalism. (Barua et al. 2020)

That is to say: cattle themselves participate in the process through their own metabolism. What they eat, and the care they receive, the vaccinations they receive, and the chemicals injected during the fattening process, are all entangled. These entanglements make their way through the bodies of the cattle, influencing how they grow, and the meat they produce.

[1] The lives of cattle during quarantine is further discussed in Laocharoenwong (2022).

Entanglements of Chemicals, Knowledge, and Care

Having outlined these geographic pathways through mainland Southeast Asia, and some of the actors involved in the live cattle trade, I now zoom in on the specific entanglements that I believe are crucial for "making" the meaty, healthy cow that match with Chinese food preferences. First, and visibly, it is about size and form: traders know right away that cows with a "square form" will yield the best price in the market. However, adjusting and ensuring the desired texture, taste, and "look-and-feel" of the meat after slaughter is a challenge of a different order, which is derived from years of practice and experimentation.

After cattle come out of quarantine at the Myanmar-Thailand border where the vaccinations and health checks take place, they are brought to a weekly market, where they are sold to Thai businessmen and transported to feedlots in inner parts of the country. This is where the process of fattening starts: Over the next 90–120 days, the cattle owners will do everything to ensure that their cattle is well taken care of, and, at the same time, that it will gain at least 1–2 kilograms every day. Feedlot is dedicated and requires a lot of attention and care. Here, migrant workers, who are employed by the Thai businessmen, will keep an eye on cattle almost 24/7 to observe and ensure the health of the cattle.

As the fattening process is crucial to make the ox grow, the cattle caretakers (mostly migrants from Myanmar) barely stray from their sides. They take care of the hoofs, which are sometimes injured because the cattle have walked long distances, and of bruises caused during transport by truck. Workers also keep the pens clean and change the food and water twice per day. They observe closely whether oxen in close proximity get along sufficiently well to not fight and injure each other. It is also important to pay attention to many other aspects of daily cattle behavior. For example, whether the animals eat and drink well is carefully observed to avoid potential loss of life due to diseases of the gastrointestinal tract (as a consequence of feeding them concentrate food). At the same time, the owners are clear that the provision of good care does not involve developing any emotional attachments to the cattle, which are livestock not pets. One owner explained that he will not give names to individual oxen to avoid a feeling of attachment and potentially unfair treatment that benefits some cattle over others. But even if there is no attachment, there are innumerable entanglements. Cattle will not grow or stay alive without the caretaker; and the caretaker, most often a migrant worker, would be without work were it not for the cattle.

The most important chemicals used in the fattening process are a female hormone and so-called leanness agents. After arriving at the feedlot, the cattle caretaker or owner will inject female hormone (see figure 3). This is crucial for the fattening process because it tames the aggression of the cattle and helps them to remain calm, while also stimulating appetite. The new arrivals in the station will get only hay and water for seven days before getting concentrate feeds. This is to ensure that they can adjust to a new place. Since cattle are quite sensitive to changes in their environment, many become stressed during transportation and may initially refuse to eat.

Figure 3. The owner injects female hormone into his ox before starting the feedlot. Source: Author's own.

After a week, the owner will start providing ruminants with roughages and concentrate feed. The cattle caretaker provides animal roughage feed such as hay and grasses for fiber. Each fattening station will have a different formula of concentrate feed mixing, dependent on the knowledge gained (and results obtained) by the cattle owner over the years. It may contain corn, cassava, grains, and coconut pulp or residue. Concentrate feed are energy-rich grains and molasses which are important to grow animal muscle. However, too much concentrate feed will cause cattle to fall ill or even die, due to diseases of the gastrointestinal tract. Excessive grain feeding will also affect ruminal microflora and change microbial population and pH-balance. Ruminants have a distinctive and complex metabolic system, which relies on microbes inside the rumen. These microbes will digest food and transfer energy and substance to the animal. The balance of roughage and concentrate feed is therefore crucial.

The other important chemical is a leanness-enhancing agent. The common chemicals used in the beef and swine industry are Salbutamol and Ractopamine. Both are banned in Europe and Asia but not in the US. Salbutamol (a phenol of the β2-agonist family) is widely used for the treatment of human respiratory diseases, asthma, and preterm delivery. In beef cattle and swine, it also acts as a nutrient repartitioning agent and has been used to improve the carcass leanness and production performances of livestock (Marchant-Forde et al. 2012). Moreover, it helps reduce drip loss and reduces nitrogen and phosphorus in their droplets. However, the use of this chemical product creates a negative effect for both humans and

animals. The presence of Salbutamol in food is a concern for vulnerable groups, including pregnant women, and people with diabetes, hyperthyroidism, cardiovascular disease, arrhythmia or tachycardia, as the chemical can worsen their symptoms. For animals, it causes ten percent of pigs to die and a few percent of cows to develop lameness after receiving high dosages (Thompson et al. 2015).

Salbutamol smells sweet like cake or milk powder and has a nickname among farmers as "Kanom [ขนม]." The fattening farms that I visited during fieldwork mix Salbutamol into the food of the cattle, although it is prohibited in China. If detected by Chinese authorities, the export process might be stopped for at least three months. Despite these countermeasures, many cattle farmers and owners said that they still need to use the drug because Vietnamese middlemen and Chinese customers demand it. Not only will usage result in more meat but it also ensures that the meat retains the red color cherished by Chinese customers after slaughter. One cattle farmer told me that his business was close to bankruptcy at the beginning of his career because he had no buyers from Vietnam and China. Due to secrecy among the farmers, it took him some time to figure out why his cattle were not desirable although he raised them well and they were healthy. Eventually, he learned that cattle raised without Salbutamol accumulate more fat, especially on their buttocks (around 50–60 kilograms) and less meat on the body. All the farmers I spoke with said they are aware that these chemicals are dangerous to humans. They also claim to usually stop giving Salbutamol at least ten days before selling the animal.

These multi-species entanglements make a tapestry of relational processes and co-becoming, in which materials and living beings together "emerge, are held in the world, and eventually die" (van Dooren 2014, 4; Tsing 2015). They create not only the conditions necessary for sustaining life but also the opportunity for diverse ways of living to emerge and thrive (van Dooren 2014, 4). Additionally, they foster meaningful interactions and relationships, generating what is referred to as "encounter value"—the unique worth found in moments of connection and exchange (Haraway 2008, 62). The specific outcome of the entanglement of concentrate feed, chemicals, cattle's bodies, care, and time spent in the fattening station is the becoming of the meaty, square cow.

The Making of an Entangled Area

This engagement moved from an ox in the Central Dry Zone of Myanmar who was first disentangled from his farmer, rendered "unemployed" by a Chinese buffalo, then sold to a Thai trader, converted into infrastructural and metabolic work, caught up in many entanglements, transformed into an appealing square, healthy, meaty ox, and eventually, 120 days later, ending up as a pieces of "hot, fresh meat" picked out of a steaming bowl of hotpot.

When viewed solely from an economic perspective, the cattle trade and its supply chain—stretching like an elongated corridor from Myanmar to China—can be seen as a conventional geographic and economic zone encompassing the infrastructure and people involved. Yet, as I have suggested in this engagement, these economic and spatial relationships merely scratch the surface of the intricacies of the cross-border cattle trade that produces meaty, healthy, and square oxen for the Chinese market. We must go beyond the straitjacket of areas as containers, encompassing all that happens "within" them. In this engagement, I have

invited you to see area as an entanglement of cultural preference and as the result of an entire food production and supply chain of livestock.

Beyond a mere relationship, entanglements are characterized by the fact that individual entities do not really exist in mutual independence, but rather "become" something together. Over a period of three to four months, a scrawny and perhaps sick animal arriving at Thailand via the Myanmar border is radically transformed into a healthy, meaty ox ready for the Chinese export market and, as a final destiny, "hot, fresh" meat. This process involves complex entanglements of cultural food preferences, inter-species care, the knowledge and experiences of owners and caretakers, many chemicals, specialized fodder, pharmaceuticals, microbes, and the animals' own metabolism.

In some ways, these entanglements resemble those of Anna Tsing's (2015) matsutake mushrooms with pine trees, degraded forest, Mien refugees, and Japanese buyers. They also relate to Kathryn Gillespie's (2018; 2021) studies of animal geographies, which focus on dairy cows and human relations in industrialized agriculture and show the making of an entangled landscape. Yet, where Gillespie's dairy cows live their lives on the farm and end up at an auction, this engagement takes the landscape entanglement farther—the retired ox seems to end but then extends its life by becoming entangled in the Myanmar-Thailand borderlands.

In all of this, time is of the essence: the cultural appetite for "hot fresh meat," the square ox, medicines, fodder, metabolism, and care come together for a single ox for 90–120 days to become something else: a commodity. For an ongoing stream of oxen transiting here this becomes the continuum that I argue constitutes a consequential version of "area."

Notably, the temporal dimension also means that the entanglements can quickly fall apart. When an outbreak of lumpy skin disease (with unclear origins) in 2021 caused a closure of the Thailand-Myanmar border for almost a year, the "area" was deactivated. It was only activated again when the border reopened—re-materialized through its entanglements.

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