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Milking a Nation

A decolonial intersectional study of
the Indian dairy system

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Introduction

This thesis focuses on the neo-colonialist quality of milk and its transformative power across the controversial interspecies conjunctures of post-Independence India. The specific socio-historical context of reference corresponds to the ecological and economic framework of Operation Flood, a political intervention developed in India during the last decades of the 20th century within the agrifood system, dictating policies on the domestic management of the natural resource of milk.

Each chapter of this thesis will open with selected words excerpted from different Hindu sacred scriptures, each of them depicting a distinctive yet complementary feature characterizing the Indian relationship between human and bovine, to eventually provide the reader with the occasion of reconstructing the fragmented narrative that confines the cow to the role of Mother of a Nation. The resulting political provocations that will arise challenge the objectification of nonhuman animals as mere property, the commercialization of animal lactation, and the exploitation of their body parts[1].

Firstly, I will investigate the versatile quality of the white animal protein, a real protagonist of what I will present as a more-than-human history of the making of a Nation. I will do so by introducing the cultural, religious and ecological features that are part of the rich historical heritage of today's largest dairy producer in the world. Milk will be analysed not only as paramount ingredient to the culinary traditions of India, but especially as powerful symbol that mirrors the anthropocentric and constructed dualism of Nature and Culture. The latter will be exposed as alarmingly thriving within the discriminative narrative of the Indian agrifood system, thus leaving space to a transversal approach for understanding. The intersectional quality of the topic in fact will be addressed in four sections, through a cross-analysis of Critical Animal Studies, Environmental Anthropology, Food Studies, Feminist Studies and Environmental Humanities of India.

My argumentation then retraces the historical facts and the socio-economic consequences related to the ecological context of 1970s India, submitted to the ambitious plans of the so-called White Revolution. The unsuccessful environmental transformations and anthropological changes triggered by Operation Flood will be examined as useful illustrations of the following deterioration in the management of natural resources, where milk appears as a neo-colonialist vehicle of exploitation of human and nonhuman lives. A postcolonial lens will be used to unfold the many insights of interspecies entanglement behind the huge development plan of international scale, questioning the sustainability of the interference of Western wealthier countries with their controversial food aids and

[1] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*"*, *Sophia,* 57(1), 2018, p. 147.

agreements. The European footprint left on the Indian soil, fertile to sociocultural persuasion and economic emulation, will reveal to be a clear piece of evidence when reconstructing the colonizing practice of dehumanization of oppressed individuals.

Animalization is the appropriate term through which the academia refers to the process of stripping humans of their rights and subjugate them to anonymous property and discriminated body. A neglected consequence resulting from the close encounter with the colonialist power of the British Raj struck the bovines' existences within the Indian management of natural capital. It is essential to recognize that nonhuman animals also endure dehumanization, to the extent that their bodies have been and still are objectified for financial gain within intensive dairy production facilities. Like human beings, cows are subjected to oppressive systems that prioritize economic profit at the expense of their well-being and inherent worth. This parallel dehumanization of both humans and nonhuman animals emphasizes the interconnected nature of justice struggles and underscores the urgency to confront exploitative systems in their various manifestations[2].

Achieved milk production and consumption data then will be addressed as problematic within the Indian context of speciesist and sexist inequalities. With this aim, I will focus on a specific phase of the industrial development plan, that involved breeding practices on the genes of domestic Indian bovines with the ones of more performative Western cows, under the illusion of post-Independence economic affirmation among wealthier States. The same exploitation of bodies is replicated on the lives of Indian rural women, employed at the lowest level of the dairy chain production, whose rights have been ignored by capitalistic ideologies. Milk, symbol of maternity and care, will be proposed as incarnation of a proper paradigm of growth that opposes its biological nurturing function and instead gets colonized, capitalized and violated within the sociocultural spheres of Indian societal hierarchies, still coping with problematic Gandhian beliefs on the profitability of feminine bodies. I will then discuss how the food policies of Operation Flood keep favouring uneven distribution of goods and unequal collective growth at the expenses of human and nonhuman female individuals, proceeding to silence the plurality of voices that, because of their reproductive power, are involved in the project and experience oppression.

The context in exam will disclose to the eye of the reader as marked by heightened violence against female nonhuman animals under the pretext of Hindu cow protection. Cattle marginalization will be object of a feminist vegan analysis, aimed at shedding a different light on the portrayal of cows and cow milk within the contemporary Indian Nation. Vegan studies delve into the histories of veganism

[2] Corman, L., "He (a) rd: Animal cultures and anti-colonial politics", in *Colonialism and Animality*, pp. 159-180, Routledge, New York, 2020, p. 165.

as a form of resistance, specifically because its aim is to eliminate animal exploitation from human existence. Moreover, by relinquishing animal exploitation, there are significant prospects for human liberation that should not be overlooked. The commitment to abolitionist ethics in vegan studies and ethics extends beyond the well-being of animals, recognizing the interconnectedness between animal liberation and the potential for broader human liberation[3]. Embracing a vegan alimentation means to unsettle[4], to dismantle the problematic aspects of human consumption of animals through aware engagement in activism.

Lastly, after having examined the contextual interconnections between women and animals, I will reflect upon existing responsive perspectives to this entanglement, transcending the bodily vulnerability of both human and nonhuman counterparts. In this light, the conclusion of this thesis will be based on my personal consideration of ecofeminism and veganism as valuable responses to dismantle the intricate conjunctures of power delineated by the Indian dairy industry, that intertwine with dietary and multispecies materialities and systems to this day.

[3] Hertweck, T., *Vegetarian and vegan histories,* The Routledge Handbook of Vegan Studies, Routledge, 31 Mar 2021, last accessed: 08/06/2023, p. 36.
[4] Hertweck, T., *Vegetarian and vegan histories,* The Routledge Handbook of Vegan Studies, Routledge, 31 Mar 2021, last accessed: 08/06/2023, p. 28.

1. Milk consumption in India, a more-than-human history

The mother was harnessed to the yoke-pole of the sacrificial reward;

her child stood up amid the penned cows.

The calf bellowed and looked toward the cow of every color,

three wagon-treks (in the distance).[5]

A young creature is watching his mother from afar, unaware of her upcoming departure; it is not an intimate goodbye he is bellowing, but a helpless farewell exposed to intrusive eyes, belonging to human and nonhuman beings, all standing together to assist to the ritual of *Mahāvrata*. The Vedic ceremony in question includes the recitation of the verses quoted above, whose narration of the distress behind a child and a mother's separation is part of the *Vaiśvadevaśastra*, a composition to be enounced during the midday offerings typical of the religious service.

The request of providing an animal tribute for the Hindu deity of *Prajāpati* is imposed by the *Mahāvrata* and praised throughout the recitation, scheduling the performance on the penultimate day of the *Gavāmayana* sacrifice. Together with the nonhuman death, a cup of *soma*[6] juice must also be offered, a plant-based inebriating substance sometimes mixed with milk or curds. According to Professor Yamini Narayanan, expert in the multidisciplinary field of South Asian Studies, the presence of dairy products in Hindu rituals is to be considered central, especially for religious beliefs that envision cow milk as essential to the birthing, purifying and sustaining of the Universal order itself[7]. Hindu mythologies in fact, similarly to the one mentioned, revolve around a proper concept of "Mother Cow" «as nurturing and sustaining the universe […] willingly diverting her lactation from her infant calf for her "human progeny" »[8] of India.

The latter, belonging to one of the most ancient civilizations ever discovered on the planet, undoubtedly thrived thanks to the mammals and their products, harnessing the multi-dimensional relevance of milk in India. One can surmise, indeed, that milk has a controversial yet intriguing

[5] *Rigveda*, 1.164.9 - Dīrghatamas Aucathya.
[6] Leonti, M., & Casu, L., "Soma, food of the immortals according to the Bower Manuscript (Kashmir, 6th century AD)", *Journal of ethnopharmacology*, 155(1), pp. 373-386, 2014.
[7] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), Springer Nature, Melbourne, 2018, p. 134.
[8] Ibid., p. 141.

quality, that allows it to be found among sacred verses of holy hymns but also in traditional culinary recipes, governmental plans of actions and activists' statements.

> Often described as "Nature's Perfect Food", milk is the foundation of life for all newborn mammals. It is an opaque liquid, which is synthesized and stored in, and ejected from, the mammary glands of female mammals, solely for the purpose of nourishing their newborns. It is the first food of mammals, providing all the necessary nutrients for survival and initial growth until weaning[9].

Then how come do humans keep consuming it throughout their life? What is the ecological impact of its ingestion? Nowadays the everyday gesture of bringing our human lips to a glass of milk may be taken for granted, but those sips hide long-standing dairy cultures that outdistance geographical borders and intersect with more-than-human stories, dwarfing the many concerning queries distilled in the white fluid of religious disputes, environmental injustice cases, unconscious eating habits, feminist issues and nonhuman domestication and violence.

[9] Velten, H., *Milk: A global history*, Reaktion Books, London 2010, p. 10.

1.1 The advent of the *first* and *perfect* food

During the second millennium BCE, a period of societal fragmentation and interspecies migrations, groups of agropastoralists settled within the Gangetic Plain, bringing cows with them[10]. «They produced an oral literature called the Vedas (~1500 BCE and 500 BCE) that was eventually transcribed into Sanskrit and forms the foundational texts of Hinduism. The oldest Veda, the Rigveda, contains over 700 references to cows, who symbolize endless bounty or blessings. Cows were *kamadugha*, meaning "milking desires" or "yielding objects of desire like milk" »[11]. The *palatable* commodity elevates the human perception of cows to the status of *desirable* and, hence, *respectable*. One could define milk as a heterogeneous mixture or a complex chemical substance in which a percentage of water is combined with fat, that gets emulsified as «globules, major milk protein (casein), and some mineral matters in the colloidal state and lactose together with some minerals and soluble whey proteins in the form of true solution»[12]. The energetic and high-protein liquid though is characterized by these nutrients in different quantities among species and breeds of mammals, depending on the nonhuman animal's health, diet, exposition to the environment, genetic factors, general emotional state and stage of lactation[13]. Further factors that contribute to the wide variation in milk compositions are listed below.

Table 1: Cheung, P. C. K., and Mehta B. M., (ed), Handbook of food chemistry, Vol. 11, Springer Berlin, Heidelberg, 2015, p. 531.

Factors affecting the composition of milk	
1. Species of animal	10. Infection of the udder
2. Breed of animal	11. Intervals between milking
3. Individual variation within a breed	12. Variations during milking
4. Breeding and crossbreeding	13. Variability of milk from different quarters of udder
5. Yield of milk	14. Excitement (frightening)
6. Age and number of lactations	15. Administration of drugs and or hormones
7. Stage of lactation	16. Feeds and nutrition
8. Heat or estrum	17. Season and weather conditions
9. Gestation	18. Exercise

[10] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 42.
[11] Ibid., p. 42.
[12] Mehta, Bhavbhuti M., "Chemical composition of milk and milk products", *Handbook of food chemistry*, Springer, Berlin, Heidelberg, 2015.
[13] Velten, H., *Milk*, cit., p. 10.

The fact that milk was available to our prehistoric predecessors may perhaps be one of the reasons why humans are still the only species among all living beings that ingest milk beyond their weaning phase. It is crucial to point out that most of the world's population cannot digest raw cow's milk, despite its commercial demand is constantly increasing nowadays; this is most likely due to the contemporary taste of milk, nearly unreal if compared to the one experienced by our ancestors. The white liquid that is currently requested and appreciated by more than 6 billion people worldwide, of which the majority lives in developing countries[14], is a thoroughly processed product that is very different from its original state. Pasteurization, homogenization, and standardization are the key procedures to which raw milk gets exposed to, with the aim of creating a safe, clean beverage that is very different from actual milk straight from the cow. Historical and scientific evidence though demonstrates that right before these processes were put into force during the seventeenth century, milk was labelled as "white poison"[15], as it was contaminated with germs, combined with chemical artificial additives and was often watered down. Previously, «based on the properties of milk, aside from the risk of disease transmission, the experience for humans of drinking fresh milk straight from an animal would have caused rather uncomfortable and embarrassing reactions in our ancestors, such as diarrhoea, bloating, flatulence and stomach cramps»[16]. These unpleasant consequences are linked to the fact that, after the age of six, humans stop producing the lactase enzyme, which breaks down the milk sugar lactose and renders it digestible to the organism. This biological shift, parallel to the growth of the milk consumer, could have evolved to stop adults and young children from consuming milk intended for infants, but this is not the case. «Until its sterilization or pasteurization in the 1920s, milk was one of the major public health issues of the latter nineteenth and early twentieth centuries, transmitting infections of various types, along with epidemic diseases such as scarlet fever, typhoid, and tuberculosis»[17]. If, before the introduction of aforementioned scientific procedures, the human inability to digest lactose may have discouraged early civilizations to consume milk, others were the expedients found by precursor populations to assure a safe ingestion. Some populations, in fact, discovered methods to get around the intolerance: the Indians were pioneering them by beginning to boil and ferment their milk to naturally break down the lactose, preferring soured milk drinks, cheeses and/or butter to the raw substance[18].

[14] "Milk and milk products", *Gateway to dairy production and products*, FAO, https://www.fao.org/dairy-production-products/products/en/#:~:text=More%20than%206%20billion%20people,people%20live%20in%20developing%20countries, last accessed 12/04/2023.
[15] Velten, H., *Milk*, cit., p. 55.
[16] Velten, H., *Milk*, cit., p. 21.
[17] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 608.
[17]Ibid., p. 596.
[18] Velten, H., *Milk*, cit., p. 22.

Therefore, an important turning point in human civilization was reached along with the expertise and mastery of breeding milch bovines and handling of their natural products. Even if archaeological sciences struggle to find well-conserved remains of past animals that lived in the Indus Valley because of the past climate, that was much more humid that today, important «evidence of milking was primarily derived from the research of animal bones», states former agricultural journalist Hannah Velten, revealing that «female stock were being held beyond customary meat slaughtering ages, indicating that they were being kept alive longer for other uses, such as milking»[19]. In fact, compared to today's standards of milk provisions, much more meagre supply of milk proved to be enough and essential to the survival of human civilizations of the past, such as the ones developed in the sub-Indian continent. Milk «provided sustenance in times of food and water scarcity […]; provided additional nutrients to a limited cereal-based diet (especially calcium and lysine); was an alternative to strong sunlight as a source of vitamin D, […] and was free from parasites, unlike water»[20]. It is probable though that milk would have contained plenty of bacteria, because of the milking processes that would involve a direct and bare contact between human and nonhuman.

The Brahamanas[21], commentaries on the Vedic literature, do confirm the existence and usage of milk and dairy products along the development of the civilization in support of the Vedic or Aryan populations, whose agricultural settlements and city-states kept flourishing into the Indian subcontinent. Their urban structures and relationships with the territory and landscape saw them engaging in human-nonhuman interactions. Right from the early Vedic period, corresponding to the 1500 BCE, «the lactating, fecund, mothering cow and her generous outpouring of milk symbolised fertility and material abundance»[22]. Yamini Narayanan further explains that in Hinduism, «the cow mother-goddess is exalted as not only the mother of the nation, but of the Hindu universe itself. In the *Bhagavad Gita*, one of the central texts of Hinduism, Lord Krishna equates the cow to the entirety of the Universe»: the portrayal of the cow in this historical period converged with the totality and genesis of the known universe[23]. A proper conception of holiness of the cow has always been unique only to Hinduism, and specifically to higher caste of Hindus[24]. The latter also dedicated particular veneration to dairy products, since «milk, curd, and ghee constituted three of the five sacred products

[19] Velten, H., *Milk*, cit., p. 15.
[20] Ibid., p. 13.
[21] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 43.
[22] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia,* 57(1), Springer Nature, Melbourne, 2018, p. 135.
[23] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!" Gaushalas as landscapes of anthropatriarchy and Hindu patriarchy", *Hypatia,* 34.2, 2019, p. 202.
[24] Ahuja, N., et al., *Messy eating: Conversations on animals as food*, Fordham University Press, New York, 2019, p. 71.

of the cow for Hindus (urine and dung being the other two) »[25]. English Professor of Religious Studies and Social Anthropology Anna S. King analysed the wide usage in *puja* (worship) practices, penance and life crisis rituals of the five products (*panchagavya*)[26] of the cow, underlining how these are believed to have purification and cleansing properties so strong that their absence would compromise any ritual offering in Hinduism.

An illustration to the entity of this visceral devotion is the protagonist of the aforementioned hymn and recurrent pick for Hindu ritual sacrifices, namely the Zebu cattle, or *Bos indicus*, a bovine species very dear to the extensive pastoral history of India, whose traces first appear in Northwest India around 2500 BCE and got firstly domesticated by communities within the Indus Valley. Not competing with the prestige nor the affection that the cow would receive, the Harappan empire would also domesticate buffalos typical of the territory, such as the Water Buffalo, or Asian or Domestic Buffalo, *Bubalus bubalis*, and the Wild Buffalo, *Bubalus arnee*, nowadays endangered species, and that is deductible from the many archaeological artistic and religious representations of bovines in that period. Useful historical evidence to distinguish the various breeds of domesticated animals in the Indus Valley civilization are in fact the steatite seals and terracotta sculptures of everyday life interactions between the humans and domesticated nonhumans.

Fig. 1: Seal with Two-Horned Bull and Inscription, c. 2000 BC, Courtesy Cleveland Museum of Art
http://www.clevelandart.org/art/1973.160

[25] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 43.
[26] King, A. S., "Krishna's cows: ISKON's animal theology and practice", *Journal of Animal Ethics*, 2(2), 2012, p.182.

1.2 Domestication, or naturalizing power relations with the nonhuman

To better tackle the Indian heritage regarding milking practices and cow domestication, it is necessary to address the metaphysical dualism of Culture and Nature, while briefly reflecting upon the commonly shared anthropogenic, speciesist and patriarchal perceptions upon which human agency and identities are constructed. Human beings, creatures that foreground biological bodies and cultural mindsets, are believed to differ from their nonhuman counterparts as they are the only living beings able to conduct a split-level life, one conceived within the ontological infrastructure of Nature and one outside of it.[27] Existing only within the natural dimension is a distinctive yet ordinary feature of nonhuman animals. Any qualitative change in environmental relations within a given civilization throughout history, namely contacts between the two mutually exclusive domains of *humanity* and *nature*, is likely to have analogue manifestations in human-animal relationships as well as in interpersonal bonds. Regardless of all animals, human and nonhuman, being part of the world of nature, the human creature stands out as sole exceptional one being able to transcend nature right because of its humanity. Nevertheless, "human animality" leaks throughout people's existences but gets contextualized and handled as unnatural, exceptional, deviant behaviours within social and cultural organizations[28]. One could state, paradoxically, that the animality dwelling in human beings also undergoes a variety of *domestication* or domination experiences, to guarantee civil wellness and peace is said, but causing consequent hierarchical inequalities and social injustice for more vulnerable categories of people. Similar, if not worse, forms of oppression are perpetuated by such human cultural infrastructures on nonhuman animals, often leading to their subjugation.

In support of this widely investigated scholarly debate on metaphysical discrepancies, philosophers «Marx and Engels argued that production was the essential criterion that set mankind apart from other animals. Men, they said, "begin to distinguish themselves from animals as soon as they begin to produce their means of subsistence" »[29]. As a matter of fact, then, if considering the practices of food production, domestication and animal husbandry as human interventions in nature, it is possible to observe that their development has and still manifests the presupposed human transcendence on the natural world and its resources.

Nonetheless, it is imperative to recognize how other animals beside the human animal have contributed to the construction of such world which can be defined as modern, that is actually not entirely "man-made", but actually "made for the man". Considering the history of this planet one of multispecies entanglements, one should acknowledge that nonhuman animals are, in all respects,

[27] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 4.
[28] Ibid., p. 4.
[29] Ibid., p. 3.

collaborators whose cooperation with human communities evolved in important result for historical achievements: nonhumans were employed in this process as much as human resources. It is for these reasons that everyday tasks performed by domesticated nonhuman animals can be recognized as devolved to specific productive goals, turning them into authentic workers.

Karl Marx however, argued that although men would proceed to domesticate other animals for the purpose of labour, that would not imply a change in their perception, let alone them being regarded and treated as labourers: according to the German philosopher, because of their employment in human productive activities, nonhuman animals would rather «became the 'material substratum'—the layers of foundation upon which the human superstructure was built. Animals were used as motive power or instruments of labour in a process of production guided by humans. Animals became commodities and forms of capital»[30]. American Professor Nicole Shukin, whose remarkable publications have been focused on biopower, animal studies and the politics of nature, aptly speaks of "animal capital". The definition she provides stresses the paradoxical juxtaposition of the two terms, interpreting it as an «anthropocentric order of capitalism whose means and effects can be all too posthuman, that is, one that ideologically grants and materially invests in a world in which species boundaries can be radically crossed (as well as reinscribed) in the genetic and aesthetic pursuit of new markets»[31], and I will later explain how post-Independence India fulfilled this picture.

Pertinently, speaking of domesticated animals within the Indian environment, cattle is an excellent example of nonhuman stakeholder that participated in building and shaping India's cultural, religious and culinary heritage but also provided for economic advantages; even so, cows were not spared from exploitation and the label of "labouring servants"[32]. American historian and anthropologist Jason Hribal reaches for the etymology of what he defines as "economic animal" to disclose a deeper meaning behind the bovines' status within human economies and social hierarchies. On sociolinguistic terms, the definition of "cattle" should be understood as:

> a mixture of the Latin *capitāle*, Old French and *chatel*, Middle English *catel*, the word during the feudal period described movable property or wealth. This wealth could include goods, personal property, or living stock such as cattle. Over time, the word came to be identified, in a more narrow sense, with just beasts held in possession; and, by the turn of the eighteenth century, spelling variances, notably *catel*, *cattel*, or *cattell*, became unified under the modern *cattle*.[33]

[30] Hribal, J., "Animals are part of the working class reviewed", *borderlands*, 11.2, 2012, p. 3.
[31] Shukin, N., *Animal Capital:Rendering Life in Biopolitical Times*, University of Minnesota Press, Minneapolis, 2009, p. 11.
[32] Smith, A., *The wealth of nations*, Thrifty Books, Blacksburg, 2009, p. 25.
[33] Hribal, J., "Animals are part of the working class reviewed", *borderlands*, 11.2, 2012, p. 5.

Adam Smith, Scottish economist and philosopher, retraced the creation of wealth right to the process of cattle domestication, but identified in it the origin of inequality as a simultaneous phenomenon. In the following chapters, I will delve into the productive economic system of which cattle are part, that functions under extraction principles for human profit: the context of reference will reveal in fact that what cows produce is conceived and used as a commodity, in the case of dairy, and that eventually, even their bodies become commodities as well, for scientific research and experiments. Evidence of cattle being part of an unrecognized unwaged working class emerges right from them being «superexploited living commodities»[34] under the dominion of humans.

According to Marx then, only humans could have been labourers, and hence the evolutive progress should only be owed to humans, as the human being «modifies and manufactures with a vision and creativity that other animals do not have», and even in their chores, nonhuman animals' effort is not comparable to humans': «labour is "an exclusively human characteristic"»[35].

This philosophical realization, insofar as it stands as touchstone of speciesist hierarchies, can be interpreted as the reason for which a determined portion of humankind felt the need of demarking a line of separation between the pristine and the man-made. British social anthropologist Tim Ingold also contemplates on the concept, suggesting that a utilitarian and essentialist vision of Nature exists and depicts it as mere raw material available to invasive transformations exactly as practical expressions of human intellect and creative talent. The interventions of humankind on the environment and other living beings considered part of it explain how anthropological attempts to decipher the entity of human engagement with the environment bring to the imposition of power. Ingold argues that such division of *humanity* and *nature* is to be regarded as «implicit in the definition of domestication», and it should be thought of as a «process of artificial selection reappears in a competing definition which emphasizes its social (or cultural) rather than its biological aspect»[36].

Accordingly, to make nonhuman animals objects of domestication means to make them subject to Culture. Following Ingold's discussion, the advent of domestication weaved humanity through the "cultivation of nature", hence the logic outcome following the prior cultivation of the human itself, namely becoming aware of one's powers and ethics[37]. Needless to say, these forms of human and nonhuman interactions, as they are known today, only evolved into being based upon power, and often cruelty, once the human species started to gather in societies where law and forms of governmental control were instituted, in order to foster social order and elevate their biocultural status

[34] Torres, B., *Making a killing: the political economy of animal rights*, AK Press, Oakland, 2007, p. 39.
[35] Marx, K. 1990, *Capital*, vol. I, Penguin Classics, New York, 1990, p. 284.
[36] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 6.
[37] Ibid., p. 6.

to entities free from the constraints of the natural world[38]. Revealingly, the historical breakthrough of domesticating plants and animals marks the inception of food production.

The one involving milking activities is a relationship between men and milch animals, cows in particularly, that can definitely be defined of pastoral nature. In the context of India, the human-nonhuman interaction embodies the intertwining of longstanding domestication traditions, that do not involve, however, companionship. A companionship can be described as a voluntary relationship, «freely terminable, [that] involves the preservation of the personal autonomy of both parties»; this connection is in contrast with the kind «that is involuntary, non-terminable and places the parties under obligation»[39], typical of breeding activities whose aim is accumulating milk.

Neglected nonhuman workers indeed demonstrated to be historically relevant "passive" actors whose role brought them to be mostly involved in farming and agricultural environments. What will later transform into a real industrial system, is the cradle for the economic concept of *surplus*, referring to the human habit of taking milk from female mammals. «This taking has always been about turning reproduction—the natural function of pregnancy and lactation—into a form of labour from which a surplus of milk can be extracted for other purposes, whether for use or for exchange»[40].

This the case of the Indian cow, domesticated to benefit from her precious products since the advent and the settlement of ancient civilizations in the sub-Indian continent, and even though the mammal has never been considered a "wild animal", the docility and peacefulness that characterize her herbivorous breed did not prevent her to experience the objectification and exploitation of her body. In Ingold's analysis, a wild nonhuman animal in fact is one that retains full control over their own destiny. The establishment of early human societies coincided with the evolution of pastoralism, a form of animal husbandry through which the so-called livestock relinquished the existential status of being in charge of their own life[41].

Even inside the complex Hindu theological framework there is a remarkable distinction between tamed and untamed living beings, that is somehow detached by the anthropological dualism of Nature and Culture. The notion of *paśu*, domesticated and educated, and *mṛga*, feral or wild, are conceived as polar extremities within the manifestation of the world, similarly to the opposition between male and female, that likewise categorizes the existence and mansions of living beings based on their taming condition. Human and nonhuman entities are divided in wild ones, that represent the chaos, the dynamism of the world that can be creative or destructive, and in domesticated ones, educated

[38] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 6.
[39] Ibid., p. 13.
[40] Hribal, J., "Animals are part of the working class reviewed", *borderlands*, 11.2, 2012, p. 13.
[41] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 16.

beings that belong to a structured system of rules and norms that govern their civil life. Curiously, human beings are considered *paśu* creatures, namely subject to the law, norms, that have allowed their intellectual to thrive in knowledge and prosperous civilization over the nonhuman realm. The latter is perceived as surrounding the human, but as interactive agent, conceived at an even level of domestication, to the point of almost sharing a familial bond with the human counterpart. It is also interesting to argument that, according to this Hindu classification of the natural world, every living species that is considered *paśu* presents, in parallel, a symbolic *mṛga* correspondent[42], to highlight the constant cosmic equilibrium that governs the universe.

Pastoralism is one of the various human approaches to the environment, whose essence reveal a main difference in human-nonhuman relationships; in Ingold's research, these can be either based on *trust* or *domination*[43]. In the attempt of contextualizing this theoretical thesis within the agropastoral framework of early Indian civilizations, it is useful to make reference to Ingold's description of the different roles assumed in this kind of interspecies interaction, where the speciesist hierarchy that divide the herdsman and the bovine is rooted:

> It is the herdsman who takes life-or-death decisions concerning what are now "his" animals, and who controls every other aspect of their welfare, acting as he does as protector, guardian and executioner. He sacrifices them; they do not sacrifice themselves to him. They are cared for, but they are not themselves empowered to care. Like dependants in the household of a patriarch, their status is that of jural minors, subject to the authority of their human master[44].

Otherwise stated, these relational principles are mutually exclusive; imposing one's will on another creature—whether through physical coercion or alternative forms of manipulation—will result in them becoming obedient and compliant yet, submissive. Thereby, according to Ingold's theoretical opposition of *trust* and *domination* as primary foundations of human-nonhuman relationships, I would agree on the violation of *trust* being the principal affinitive phenomenon that characterizes the contradictory bond between owner and owned. Pastoralism is hence a type of interspecies relation that emphasize this paradox, since it does not recognize the autonomy, free will and living necessities of the nonhuman on which the human depends, it rather denies them[45].

[42] For instance, the *paśu* Water Buffalo has his *mṛga* counterpart in the Wild Buffalo. From Beggiora, S., LMH070, Personal Notes, A.A. 2021/2022, Ca' Foscari University, Venice.
[43] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 13.
[44] Ibid., p. 16.
[45] Ibid., p. 16.

Nonhuman animals, cattle in this case, whose breed has been historically domesticated for human survival and benefits, have been occupying the lowest position of a speciesist hierarchical system that humans based on dominance since then. This is why they are frequently perceived more like property than as sentient beings with their own needs, regardless of their symbolic and cultural value within the society. Willing to give a definition to domestication, Tim Ingold argues that this process can be «said to exist when living animals are integrated as objects into the socio-economic organisation of the human group», slowly becoming objects of property that «can be owned, inherited and exchanged»[46]. Referencing the research of English zooarchaeologist and curator, Juliet Clutton-Brock, specialized in domesticated mammals, it is possible to identify a domesticated nonhuman animal as one whose existence has been characterized by life in captivity, through which the human community could retain total authority upon the nonhuman breeding, special organization and food supply[47].

A proper appropriation process hence emerges from these taming practices; a relation based upon ownership occurs within the Natural world, that conceives human beings, social individuals, as capable of *owning*, while animals, namely natural objects, are exclusively *ownable*. Therefore, « the concept of appropriation, just as the concept of intervention, sets humanity, the world of persons, on a pedestal above the natural world of things»[48].

The gradual introduction of the language of productivity could be hence simultaneous to the emergence of early cultural assets that relied on the contribution of milch animals to the sustainment of Indian human populations, as if their interspecies entanglement was founding on mutual exchange and cooperation. Instead, along with domestication and first knowledge upon animal husbandry and milking practices, forms of what Professor and Environmental Humanities enthusiast Rob Nixon defines “slow violence” were implemented in the cultural substrate of the societies.

The concept is to be intended as «a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all»[49]. The reason for which Nixon’s theory appears to be perfectly suitable to the situation in exam is because the type of violence that is exacerbated within the dairy system, from its agropastoral advent to the following evolutions that will later progress into an actual industrial sector, is one that is neither dramatic nor immediate, but whose repercussions perpetuate throughout

[46] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 6.
[47] Clutton-Brock, J., “The unnatural world: Behavioural aspects of humans and animals in the process of domestication”, *Animals and human society*, pp. 35-47, Routledge, New York, 2002, p. 26.
[48] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 6.
[49] Nixon, R., *Slow Violence and the Environmentalism of the Poor*, Harvard University Press, 2011, p. 2.

timescales of different range. The inherent violence of pastoralism and milch mammals husbandry is not tellingly explicit, but rather disguised as mere herding practices of human survival and primary economic activity of poorer societies, that rely indeed on the so-called “livestock”.

Effects of human agency that epitomize the themes of domestication and bodily profit of the milch nonhuman are hence the consequences of incremental violence. It is for their longevity, parallel to the evolution of human societies, that these echoes are reverbed through several sociocultural magnitudes, such as the religious, dietary and political ones, and are embedded in people’s memories and minds through traditions and myths, thus distorting critical thinking and questioning individual epistemological thoughts that could undermine such exploitative practices.

To acknowledge the ecological traces of domestication and address the impacts on nonhuman and human communities and ecosystems, Nixon suggests in fact to engage with the «representational, narrative, and strategic challenges posed by the relative invisibility of slow violence»[50]. Invisibility is a key term here, also appropriate to describe the human act of obscuring the identity, labour and independence of nonhuman animals who can be considered victims of slow violence. It is through the progressive yet abusive introduction to domestication that the cow, her body and soul were brought into the discourse of commodification, enforced to leave the charge of her final products to men. The value of life and labour productivity started to evolve into parallel notions of reciprocal genesis, namely the subtle normalization of nonhuman exploitation and slavery.

Invisible is also the perception of oppressive domestication behaviours whose repercussions are diluted in litres of milk extracted across secular temporal dimensions and hidden within the perimeter of actual sites of nonhuman taming, like *gaushalas*.

[50] Nixon, R., *Slow Violence and the Environmentalism of the Poor*, Harvard University Press, 2011, p. 2.

1.3 Gaushalas: the divine encaged

Overall, to preserve the nutritional safety and great quality of dairies on which the Indian population thrived, much care was needed, at least speculatively, to protect nonhumans' health; prioritizing the safeguarding of cattle well-being was encouraged under the theoretical input of religious faith and culinary relevance, gradually transforming from farming practices to internationally popular ethical theories of Cow Protection.

On this topic, Yamini Narayanan conducted a powerful and impactful ethnographic research on the physical spaces that are theoretically meant to welcome, protect, nurture and guard cows as for their unique status. The topology of care extends throughout the Indian sub-continent across the so-called *gaushalas*, frequently thought of as cow sanctuaries for unproductive and underutilized "dairy" cows, where they are ostensibly allowed to live out the rest of their natural lives rather than being put to death through slaughter[51]. Narayanan's research, which took place in Calcutta and ended in 2019, has been carried out by visiting both sites of bovine *production* and *protection*, locating the nonhuman condition through the "ethnographic approach of participant observation"[52] in "multispecies contact zones"[53]. *Gaushalas*, she learned, were mostly managed by «temples devoted to the cow-loving god Krishna and his various forms, Hindu political parties, state municipal corporations, private owners, or Hindu trusts»[54].

Krishna, the beloved avatar of Vishnu, is for the Hindu devotees an important holy figure that seamlessly blends the physical and the metaphysical realms through the presence of cows. As the sacred Scriptures demark, he spends most of his early life in a picturesque bucolic environment named *Braj*, that geographically locates within the region of Uttar Pradesh, depicted as a sort of idyllic paradise where he was surrounded by shepherds and cattle. The interaction between the sacred and the bovine is emphasized also in the promised paradise of Vishnu, the *Gauloka*, where cows are divine entities that herd freely, setting the inspiration model for the creation of modern *gaushalas*[55]. The ambiguous nature of these areas, and the intersectional conflicts surrounding them, emerge already

[51] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!" Gaushalas as landscapes of anthropatriarchy and Hindu patriarchy", *Hypatia*, 34.2, 2019, p. 196.
[52] Alger, J. M., and Steven F. Alger S. F., *Cat culture: The social world of a cat shelter*, Temple University Press, Philadelphia, 2003, p. 37.
[53] Collard, R., and Gillespie K., "Doing critical animal geographies: Future directions", *Critical animal geographies: Politics, intersections and hierarchies in a multispecies World*, ed. Gillespie and Collard, New York: Routledge, 2015, p. 206.
[54] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 197.
[55] Beggiora, S., LMH070, Personal Notes, A.A. 2021/2022, Ca' Foscari University, Venice.

from their management; gaushalas are in fact famous for being «sacred and political Hindu spaces where cows can be worshipped as living gods – and used as instruments of nation-building»[56].

In line with the etymological meaning of the term, *Go/Gau-* that stands for cow, and *-shala* as for shelter, within these spaces humane treatments are encouraged, to oppose the exploitive system of farming with no slaughter, no forced impregnation, no removal of colostrum and breastmilk from the calves and no mother-infant separation[57], that are known practices of violence in modern animal-husbandry. However, according to Narayanan research, *gaushalas* nowadays have been instrumentalized with xenophobic significance by Hindu fundamentalists to function as landscapes of nonhuman exploitation, incarceration and gendered abuse, often masked as places where, fundamentally, the cow is protected by her elevated status of fertility, being a fecund and nursing mother to the Hindus. The position and sufferance of bovines rescued and guarded inside the national structure of gaushalas appears to be instead analogous to "common dairy" cows[58].

English Professor Samantha Hurn, passionate about researching on human-nonhuman interaction and its symbolism, discusses how, in contrast to gaushalas, where they are autonomous self-determining beings that choose to breed and procreate, cows on dairy farms experience the denial of their rights and wills. Based on the constructed and human-made narrative of *gaushala* cows being treated differently from their doomed sisters, their privileged position allows them to be perceived as voluntary providers of surplus milk for human consumers[59]. Unfortunately, the truth is that even sacred cows are considered «symbolic entities whose physiological or behavioural characteristics are consumed by human imaginations»[60].

The biological, cultural and material qualities determining the identity of the nonhuman figure of the cow are hence blended in the significant spaces that are *gaushalas*. More specifically, being them areas where the complementary ideologies of ethnonationalism and Hindu patriarchy thrive, *gaushalas* represent a distinctive framework within the Indian dairy system, as they can be understood as actual *(re)production* topologies, because there the cow is a religious, commercial and political capital to splurge on. This is a nodal point that I will not miss to come back to in the following chapters.

In fact, «the material and the maternal are interlinked in the indistinguishably blurred reverential and production activity, where production sites of farming the breast milk of the infants of other animals,

[56] Ibid., p. 196.
[57] Ibid., p. 206.
[58] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 196.
[59] Hurn, S., "Animals as producers, consumers and consumed: The complexities of trans-species sustenance in a multi-faith community", *Ethnos: Journal of Anthropology*, 82 (2), 2017, p. 221.
[60] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 213.

are reconceptualized as spaces of warm and protective mothering»[61]. In *gaushalas*, supposedly consensual familial bonds are enacted through the human consumption of breastmilk destined to calves: since milk extraction and breeding constitute the primary production operations, in the gaushala the «notion of *sacrificing* motherhood is an exceptional resource to naturalize, and even sentimentalize, the inherent harms in these acts. Milk sourced from cows is not merely food, but *prasad* or sanctified food. When milk is elevated to an exceptional, sacred status, its consumption becomes an act of worship itself»[62].

Fig. 2: Narayanan, Y., "'Cow is a mother, mothers can do anything for their children!' Gaushalas as landscapes of anthropatriarchy and Hindu patriarchy", Hypatia, 34.2, 2019, p. 203.

Indian cultural anthropologist and ethnographer Naisargi N. Dave commented on the bovine condition of imprisonment and suffering inside *gaushalas*:

> I had seen . . . cow shelters in which a cow will spend her entire life tied on a short rope to a stake in the ground in the darkness of a shed, periodically milked. Of all the things I

[61] Ibid., p. 204.
[62] Ibid., p. 207.

have seen, the one thing I wish I could unsee was that. Saved from slaughter, yes, but for what? For life itself. For profit. To perform one's humanity.[63]

The concrete results of Narayanan's research in Calcutta in fact depict an outrageous situation that does not confluence with the theoretical structure of *gaushalas*. For instance, she reports that, after having interviewed several temple managers and operators, it was made clear that cows rescued from butchers, slaughterhouses and sickness were put into *gaushalas*, in debatable hygienic and sanitary conditions, and often left starving to death. This happens because, «when slaughter is prohibited, the number of abandoned ex-dairying animals needing rehabilitation far exceeds the limited capacity of gaushalas to house and feed them»[64]. Regardless being considered as «one of the oldest spaces of animal welfarism» in India, *gaushalas* are indeed closed areas overcrowded with cows, where ostensible discourses of humane animal production legitimize violence upon feminine bodies. The anthropatriarchal paradigm that will be further analysed in the following chapters of this thesis, reflects on the intersectionality that transpires from these places, that synthesises the human-nonhuman relationship into one of gendered, sexualized and reproductive abuse[65]. Cows, in contrast with their supposed holiness, are victims of "patriotic motherhood".

The biological power that arises from the status of mother indeed, is not the only of which the cow is characterized, as she is also assigned the role of guardian of a "pure" Hindu civilization. To further investigate and perceive the sociocultural relevance of milk, it is necessary to address the historical development that brought to the political instrumentalization of the cow as the Hindu mother, to the creation of a *Hindurashtra,* or an upper-caste Hindu Indian nation at risk from Muslim believers, and to the consequent institution of the *gaushalas* as physical representations of the illustrious Hindu civilisation.

Cow sacrifice was hypothesized, yet debated due to lack of sufficient evidence, to be a popular ritual during the Vedic period (2000-500 BCE), where Hinduism was the main faith recognized by Aryian and nomadic populations, but with the advent of Buddhism and Jainism (around 600–400 BCE) and their emphasis on *Ahiṃsā* (doing no harm), the practice of killing cows for consumption and sacrifice declined[66]. This is further supported by the literary heritage of the *Upaniṣad*, diffusing in the same period, in which this concept is well explained[67]. After the transition to the spiritual principles of *Ahiṃsā*, also approved and promulgated by Hindus but as political fundaments to cling to for

[63] Dave, N. N., "Something, everything, nothing; Or, cows, dogs, and maggots", *Social Text,* 35 (1), 2017, p. 48.
[64] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 207.
[65] Ibid., p. 206.
[66] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p.43.
[67] Beggiora, S., LMH070, Personal Notes, A.A. 2021/2022, Ca' Foscari University, Venice.

nationalistic purposes, pragmatic commitment into providing protection, shelters and safety to cows was reclaimed with more emphasis during the 17th century, namely during the occupation period where, under the British empire, Cow Protection «was conceived as an anticolonial endeavour and thus emerged in an unequal encounter with the foreign»[68].

[68] Dave, N.N., "WITNESS: Human, Animals, and the Politics of Becoming", *Cultural Anthropology*, by the American Anthropological Association, Vol. 29, Issue 3, 2014, p. 436. Cow Protection «exclusively concerns the cow, and the cow as a symbol separating those who eat or slaughter them (Christians, Muslims, and lower-caste Hindus) from those who do not (higher-caste Hindus)», *Ibidem*.

1.4 Locating the bovine condition across religion, appetite and history

The five elements of *panchagavya* embed centuries of refined animal husbandry at its finest, oscillating between being examples of motherly and representative rendering and opportunities of profit carried out as cultural habits of nonhuman bodily extorsion through domestication.

In Nicole Shukin's words, «it is the capacity of animal life to be taken both literally and figuratively, as a material and symbolic resource of the nation, that constitutes its fetishistic potency»[69]. The cow's omnipresence throughout Indian religion, cuisine and history certainly demonstrates the bovine's cultural and ecological relevance for the Indian population, but also premises the nonhuman animal's complete availability to human desires and timings. She refers to the "ambivalence of animals signs", as a nonhuman peculiarity that is instrumentalized through anthropogenic ontologies as «a pivotal means of depoliticizing volatile contradictions between species and speculative currencies of capital and between capitalism's material and symbolic modes of production»[70].

The metaphorical rendering of the animal's identity and life is obtained through actual physical violence; the latter might be considered a pillar of the so-called "question of the animal"[71], which holds that animal existence is culturally and carnally represented as capital at particular historical junctures, leading to the metaphorical representation of the animal's identity and life[72]. The sociopolitical, economic and environmental context of Post-Independent India will set the foundation for a controversial historical turning point in which the cattle will emerge as fetish for human grandeur and biopower.

It is right across the twentieth and early twenty-first centuries that specific cultural frameworks and material logistics have rendered the image, narrative and bodies of animals as French sociologist Pierre Bourdieu's *forms of capital*. « "Animal capital" simultaneously notates the semiotic currency of animal signs and the carnal traffic in animal substances across this period»[73]; Nicole Shukin argues that such recognition in animals as concrete profitable resources, «signals a tangle of biopolitical relations within which the economic and symbolic capital of animal life can no longer be sorted into binary distinction»[74], of corporeal and figurative, fleshy and ideal. Bourdieu speaks in fact of

[69] Shukin, N., *Animal Capital:Rendering Life in Biopolitical Times*, University of Minnesota Press, Minneapolis, 2009, p. 6.
[70] Ibid., p. 6.
[71] Wolfe, C., *Zoontologies: The Question of the Animal*, University of Minnesota Press, Minneapolis, 2003.
[72] Shukin, N., *Animal Capital:Rendering Life in Biopolitical Times*, University of Minnesota Press, Minneapolis, 2009, p. 7.
[73] Ibid., p. 7.
[74] Ibid., p. 7.

"interconvertibility"[75] of symbolic and economic forms of capital, of which the nonhuman animal is a protagonist whose bodily and cultural features get condensed through the anthropocentric process of giving fetishistic values to animal life. It was French philosopher and sociologist Michel Foucault to pioneer intriguing observations on this topic; via animal speciesist fetishism and biological commodification, the human being consumes nonhuman life to the extent of abstracting and rendering invisible its living functions[76]. On this concept, Foucault remarked how the representation of the animal achieved new meanings, at the expense of others, «at the "threshold of biological modernity," marking a shift to "untamed ontology" or "life itself" as the new object of power»[77].

Control over human and nonhuman individuals is surely exerted through cultural heritage, religious ideologies, but also through emphasis on bodies and bodily experiences, correspondingly objectified lives and normalized acts of exploitation and nonhuman consumption; this is how speaking of biopolitics will become uttermost significant in the future capitalistic society and largest dairy producer that will be India, thriving on biological, somatic and corporeal capital[78] of cattle.

The most prolific segment of Indian dairy industry is constituted by the production of ghee and curd, as their popularity benefits of their taste but also of their supposed holiness.

The chemical structure of *panchagavya* mainly revolves around them being fat resourced from animal bodies, that used in foods, are believed to be healthy for human sustenance, as they provide calories, vitamin E and favour the absorption of other fat-soluble vitamins. Moreover, «in addition to their nutritional properties, fats and oils carry flavours in foods and provide textural properties that enhance the sensory experience and enjoyment of foods»[79].

An up-close analysis of the fat-rich dairy products is made possible starting from the biological fluid of milk and reducing its complex composition of more than 100 substances that are either in emulsion, suspension, or solution in water[80] to simple raw material ready for anthropogenic processing. As for curd, the process of fermentation serves as base to the manufacturing of this dairy product, whose taste resembles the acidic one of commonly known yoghurts. The non-fatty components of buttermilk, such as casein, albumin, and milk sugar, as well as a minimal amount of minerals (that do not exceed 1.0%)[81], are what make up this dairy product. One of the crucial processes for bringing

[75] Bourdieu, P., "Structures, Habitus, Power: Basis for a Theory of Symbolic Power," *Culture/ Power/ History: A Reader in Contemporary Social Theory,* ed. Nicholas B. Dirks, Geoff Eley, and Sherry B. Ortner, Princeton University Press, Princeton, 1993, p. 173.
[76] Foucault, M., "The order of things: An archaeology of the human sciences", *Posthumanism*, Palgrave, London, 2000, pp. 27-29.
[77] Shukin, N., *Animal Capital:Rendering Life in Biopolitical Times*, University of Minnesota Press, Minneapolis, 2009, p. 7.
[78] Ibid., p. 8.
[79] Cheung, P. C. K., and Mehta B. M., (ed), *Handbook of food chemistry*, Vol. 11, Springer Berlin, Heidelberg, 2015, p. 398.
[80] Ibid., p. 512.
[81] Ibid., p. 393.

the pH down, characteristic of this food, is the development of lactic acid, which also has an impact on the body and texture of the fermented dairy product, rendering its consumption experience unique. Ghee instead is a butter fat concentrate that has less than 0.3% moisture and more than 99% milk fat, whose shelf life corresponds to 6 to 8 months at normal tropical temperatures. Its manufacturing includes «direct heating of cream or butter churned from fresh or ripened cream or *dahi* obtained by fermentation of milk with bacteria native to milk or selected starter cultures»[82]. Many are the methods to realize ghee, such as the *desi* or traditional or indigenous way, the creamery butter method, the direct cream method, and the pre-stratification method; all result in one of the most appreciated dairy products on the Indian market. Last components of *panchagavya* are nonedible substances, namely urine and dung. These can be used externally, such as washing hands with cow urine, cleaning utensils with cow dung, or applying caste marks with cow dung ashes; and can also be ingested, either by drinking directly from a urinating cow, as her urine is considered sacred like Ganges' water, or by consuming a mixture of the "five products" to remove impurities associated with traveling abroad[83].
If in Western cultures these would be considered as organic waste, Hindu religion and civilization still harness their sacred power and involves the two substances in rituals and practices of devotion, on the wave of making good use of the milch body in its integrity, against a wasting attitude that is more akin to Western and nonreligious cultures. An ecocritical analysis of the passage of the *Rigveda* 1.164.9 may demonstrate that, together with the *panchagavya,* the extent of cow's veneration as a *lactating* mother is expressed by the objectification of parts of her body, especially her udder, that is « "pure" (231) and "heavenly" (605), and it swells with "lordly nectar" (223), and the cow's milk is "nutritious, brightly shining, all-sustaining" (234) »[84].
It is hence evident, as demonstrated by the poetic images extracted from the *Rigveda*, the oldest document of Indian Literature and Civilization, that both the feminine bovine body and her biological power are subject to the cultural human infrastructure that is Religion. Yamini Narayanan in fact reflects on the transversal value of cow's milk, as it «attains significance in Hindu thought well beyond its role in providing nourishment to her infant; its greatest consequence in fact is its capacity to provide material and spiritual nourishment to humans»[85].

[82] Cheung, P. C. K., and Mehta B. M., (ed), *Handbook of food chemistry*, Vol. 11, Springer Berlin, Heidelberg, 2015, p. 391.
[83] J. Simoons, F., I. Simoons, F. and O. Lodrick, D., "Background to Understanding the Cattle Situation of India: The Sacred Cow Concept in Hindu Religion and Folk Culture", *Zeitschrift für Ethnologie*, Bd. 106, H. ½, pp. 121-137, 1981, p. 130.
[84] Jamison, S. W., and Brereton J. P., *The Rigveda: the earliest religious poetry of India*. Vol. 1. South Asia Research, Oxford University Press, 2014, "Rigveda IV.3", p. 562
[85] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*"*, *Sophia,* 57(1), Springer Nature, Melbourne, 2018, p. 135.

Dismantling the metaphoric and enigmatic language of Hinduism is an enthralling starting point to better understand the ecological and intersectional context of interest in this thesis. On this topic, the work of American Religious Studies scholar Catherine Albanese highlights a difference between the human cultural perception of nature, distinguished in "sacred" and "sacred *resource*". Upon this statement I want to underline how, considering nature as a sacred resource, its commodification involves forms of domination and domestication[86] in the Indian context. The global tendency of humans to achieve the mastery and objectification of nature emerges in this case through the exploit of the nonhuman figure and products of the cow, developed along the intrinsic history of religions in the Sub-Indian continent that experienced the juxtaposing of Hinduism, Buddhism, Islam and other faiths.

As transpired though, the bond between human and nonhumans was not restrained to pure religious purposes. Indeed, despite the changes in spiritual, social and political governance of the territory, the edible constituents of *panchagavya* were surely considered paramount blessings for ceremonial rituals, but their status also enclosed them as vital ingredients of South Asian cuisine. Milch mammals were essential to past agricultural societies and, imagining to sit at the many tables of families around the Indian subcontinent described by historian Om Prakash[87], it is easy to understand how milk represented a central part in past country lifestyle, religion and human nutrition and, consequently, the reasons behind its contemporary sociocultural value.

Despite the success of the Buddhist ideology of *Ahiṃsā* in reducing the number of cattle killings for consumption, no law was put into force regarding the prohibiting the consumption of cows after a natural death. «Prohibitions on the consumption of cows gradually emerged [only] during the early Common Era, but these were not specific to cows, as they encompassed meat consumption and animal slaughter in general»[88].

The bovine body demonstrated to be fundamental for milk and meat supply to Indian communities, rendering cows as primary, yet sacred, resources in animal husbandry. Practices put in place during ancient India saw cows being treated as domestic animals whose sacrality mentioned in the religious scriptures categorized them as worthy of safeguard and inviolable; they «were considered so sacred that if they did not get fodder one day students did not study on that day»[89], cow slaughter was considered a crime and those who would try to steal the bovine were to go through severe punishments. «For the protection of animals detailed rules are given in the Manusmṛiti. […] Animals

[86] Albanese, C. L., *Nature religion in America: From the Algonkian Indians to the new age*, University of Chicago Press, 1990.
[87] Prakash, O., *Economy and Food in Ancient India*, Bharatiya Vidya Prakashan, Delhi, 1987.
[88] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p.43.
[89] Prakash, O., *Economy and Food in Ancient India*, Bharatiya Vidya Prakashan, Delhi, 1987, p. 15.

were kept with great care in India but at the time of famines and epidemics many animals were killed»[90].

Because of their ambivalent condition, it is important to premise that the relationship with milch nonhumans concerning human nutritional sustenance gradually got restricted to the mere consumption of their dairy products as eating habit of the perfect Hindu devotee, while the consumption of meat remained a practice related to poorer and less faithful Hindus and other religions' believers.

The work of Mary Douglas, British anthropologist whose interests converged in symbolism, religion and society, points out how not only milk, but many other types of foods are eaten by some members of the society and specific devout followers, but other counterparts and faiths may classify the same food as polluting, unholy or filthy. Douglas argues that:

> these cultural variations in cuisine are a product of the way different societies order the universe and assign value and status to people, animals, plants and insects. Potential sources of food which are compatible with a culture's taxonomy will be classified pure and edible[91],

and that may give rise to discernment within the society. What may appear as a mere ancient difference in appetites, nutritional needs and religious beliefs, is instead an embryonal phase of contemporary hierarchization of Indian society, whose sociocultural discrimination of members started as religious choices but hid severe poverty and unequal accessibility to food resources.

Human evaluations on if, how and where to chew dairy products or drink liquid milk are part of what Pierre Bourdieu defines as "cultural capital", namely practices of the self, including the act of eating, that betray people's origins or *habitus* (intended as internalised form of class conditioning). Bourdieu argued in fact that «the body is the most indisputable materialization of class taste»[92], a topic that will be at the centre of 1980s Indian economic and marketing strategies on milk consumption, inheriting this sociocultural structure from this earlier period.

«There is unambiguous evidence of milk being widely consumed as a beverage», from the Vedic period and on, «whether fresh, boiled, or as buttermilk, whey, or with curd or spices of various kinds added»[93]. Such use of dairy products was featured more prominently in northern and north-western regions of the subcontinent, in comparison to eastern or southern areas where fish, rice and coconut

[90] Prakash, O., *Economy and Food in Ancient India*, Bharatiya Vidya Prakashan, Delhi, 1987, p. 21.
[91] Bell, D. and Valentine, G., *Consuming geographies: We are where we eat*, Psychology Press, London, 1997, p. 45.
[92] Bourdieu, P., *Distinction: a social critique of the judgement of taste*, Harvard University Press, 1984, p. 190.
[93] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 43.

milk dominated the diets. It is for these reasons that both Chinese Buddhist monk Xuan Zang and Italian Catholic missionary John of Montecorvino observed in their travel chronicles of India that milk, butter and cream were among "the most usual foods", and that «people of India were scrupulously clean, feeding on milk and rice»[94]. Thanks to their contributes, it is known that during Medieval eras, poorer people used to subsist on «rice and pulses with butter, chapatis (flatbreads made from wheat), suggesting greater usage of ghee than fluid milk or curds among the broader populace»[95]. In the same period, mentions are to be found also in Marco Polo's travel reports, in which he confesses his amazement at the Indian sanitary production and handling of milk and its products, reported as triumphs of modern hygiene.[96]

Extraneous to the right behavioural, intellectual and eating beliefs was also the community of Muslim people that kept on consuming cows' meat and milk since the advent of the Islamic sultanates in the sub-continent, back into the 8th century. « During the British colonial period ("The Raj," 1858–1947), there is little mention in administrative documents of dairy as an important indigenous food until the twentieth century»[97]; evidence to this statement is the first dairy animal census performed by colonial officials in 1916[98]. The international curiosity related to the survey started to burgeon in forms of increased production and commercialization of milk, since those businesses were highly popular to dairy consumers back to the colonialist motherland. Nonetheless, the registered data on low productivity of Indian dairy animals, especially cows, and the low intake of milk consumption of the colonized local population were recurrent complaint and obstacles to the development of the dairy industrial system in South Asia. Estimates of this piece of information accounted during the late colonial period are to be found in the "Wright Report," a deeply extensive document written by Norman Wright (1937) in which details about milk production and consumption in India are disclosed. « Based solely on what would have been available based on per capita production, Wright estimated a per capita intake of 7 ounces [190 g] per day, inclusive of all dairy products, the lowest of all of the major milk-producing countries at the time»[99]. Although he felt that this was insufficient and nutritionally inadequate for the needs of the population, estimates from dietary surveys revealed

[94] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 44.
[95] Ibid., p. 44.
[96] Gudger, E. W., "Marco Polo and Some Modern things Old in the Asia of His Day", *The Scientific Monthly*, *37*(6), 1933, p. 506.
[97] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 44.
[98] Ibid., p. 44.
[99] Ibid., p. 44.

significant some socioeconomic and regional variation in terms of intakes, ranging from higher levels (400 to 500 g) to almost no regular consumption.

Table 2: Cohen, M. and Otomo, Y., Making Milk: The Past, Present and Future of Our Primary Food, Bloomsbury Publishing, 2019, London, p. 45

Table 3.1 Wright's (1937) estimates of national milk production and consumption in selected countries

Country	*Milk production, 1930–34 (million gallons)*	*Population (thousands)*	*Daily per capita production (ounces)*	*Daily per capita consumption (ounces)*
New Zealand	870	1559	244	56
Denmark	1200	3551	148	40
Australia	1049	6630	69	45
Canada	1580	10377	66	35
Switzerland	607	4066	65	49
Netherlands	970	7935	54	35
USA	10380	122775	37	35
France	3150	41835	33	30
Great Britain	1474	45266	14	39
Italy	1050	41177	11	10
South Asia/India	6400	352838	8	7

The question of whether the apparent modest milk consumption was depending on poverty, location, animal husbandry methods, or cultural prejudices, as, paradoxically, the quantitative data on milch mammals domesticated in India, and possible potential supplier of dairy products, exposed an abundant number. As a consequence, Wright strongly suggested a raise in milk production as an agricultural priority in India to compensate the country's low consumption levels in comparison to those of wealthier nations with longstanding dairy histories and elevated levels of intake of proteins of animal origin. «The importance of milk to this recommendation was emphasized in relation to the high prevalence of vegetarianism and overall low meat intake in India, in contrast to Europe where animal protein was more commonly available and consumed»[100].

The nature of the data referenced by Wright was undoubtedly influenced by social and religious factors that had been consolidating throughout the then-colonized Indian population; the reported

[100] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, London, p. 45.

spread of vegetarianism among the Indigenous people, for example, revealed a dietary tradition with deeper significance and goals.

One of the most highly acclaimed studies on the sacredness of cows and *gaushalas*, "Sacred Cows, Sacred Places" by Asian Studies researcher Deryck O. Lodrick, reports that the "Muslim Invasion" and the following British colonial rule were catalyst events for the development of cattle protection[101] and intervention against their violent consumption as food, practices of other religious devotee and oblivious colonizers.

The intrusive quality of colonialism in India highly directed the development of the contemporary Nation and the consolidation of Indian reliance on dairy, providing purposes for an ecosystemic feeling of patriotism along cultural and economic revolutions: protecting and giving new value to humans, their talents and their needs, including nonhuman resources was a historical and identitarian priority. The experience of coexisting with the foreigner impacted the already established social hierarchies, gave emphasis to the caste system, outrun the cultural, religious and eating habits of local people, but also influenced the relationship of colonized populations with their domesticated animal capital.

In fact, neither the Indigenous nor the Hindu perspectives, converging on the vital importance of milk as a natural sacred resource to preserve, were really taken into account within the colonized society. The number of cows indicated by Wright's census demonstrated, after its publishing, to be impacted by Muslims' traditions of sacrificing cows for *Bakr 'Id* and British preference for beef[102], jeopardizing the lives of cattle, their provision of milk and the fulfilment of Wright's advice on appropriate dairy consumption.

The humane disappointment in the mistreatment of the holy motherhood of the cow and her blessings resulted in extreme trust in social movements arising from spaces of peaceful coexistence with the nonhuman. Accordingly, the spread throughout north India of agreement with the Cow Protection movement gave more authority and reliability to those who would adhere to the movement as political opposition to the Muslims and English colonizers. A renewed patriotic sentiment and political role was hence assigned to milk and dairy products, even by the conservatory extra-parliamentary organization, such as Vishwa Hindu Parishad[103], that strongly encouraged the expansion of *gaushalas* in India. The latter was actually conceived as form of promotion of Hindu revivalism, only solution

[101] Lodrick, D. O., *Sacred cows, sacred places: Origins and survival of animal homes in India*, Berkeley: University of California Press, Oakland, 1981, p. 59.
[102] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 49.
[103] Lodrick, D. O., "Goshalas", *Enclyclopedia of religion and nature,* vol. 1, ed. Bron Taylor, London: Continuum, 2008, p. 65.

against the dietary depredations of the foreigner against the nonhuman. Cow protection reached its peak right during the social agitations that led to India's Independence in 1947 and embraced a paramount symbolism to oppose the British imperial government, that allowed cow slaughter.

The sustenance and motherly duty of cows within the society was suddenly instrumentalized and invested of political and nationalistic power; milch mammals were focal stakeholders of an exceptional yet delusional case of human-nonhuman alliance against the external colonial strengths that imposed over internal hierarchies. The relevance of milk was highly enhanced by the anti-colonialist spirit of the time, crowning the cow, sacred milk supplier, as provider of a pan-religious nationalist food, uniting the different religions in India with the common goal[104] of freedom. The desire to achieve national independence outran the social and religious discriminations that had concerned the occupied area for centuries and generated much antagonism, particularly towards the Muslim community.

Despite being admirable though, the popular movement of Cow Protection did not really contribute to the implementation of animal welfare policies but was fundamental to the achievement of political Independence and reinforcing of the cultural imaginary of the bovine animal. «From 1946, gaushalas started to be formalized from religious spaces and quasi-sanctuaries as part of the economic growth program for dairying when the Indian Council for Agronomic Research, Ministry of Agriculture, recognized their potential as breeding centers for high yielding "dairy" cows»[105]. The Central Gaushalas Development Board was then founded in 1949, aiming at managing financial assistance for breeding and dairying, whose functions were improved during India's second and third Five-Year Plans, between 1955 and 1966[106].

In order to comprehend historical milk consumption habits, a cross-species conversation is needed in support of a brief historical premise of dairying in India. The specific meanings of milk I have examined have proved to be influential to the development of Indian social, political and economic domains throughout each historical event. Questioning the daily, intimate, visceral practices of food preparation and consumption is therefore crucial to adopt epistemological and constructive prospects on multispecies relationships.

[104] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, London, 2019, p. 48.
[105] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!" Gaushalas as landscapes of anthropatriarchy and Hindu patriarchy", *Hypatia,* 34.2, 2019, p. 205.
[106] Ibid. p. 205.

1.5 Consuming food, identities and ontologies: an intersectional analysis

The production, performance, and interpretation of speciesist, sexist, racist and colonial subjectivities and hierarchies appear to be largely mediated by food, drinking and eating.

Human interactions with the nonhuman reveal embodied experiences, paradoxes, and complexity that are also replicated in the provocative ways in which food is extorted and consumed, not only as source of sustenance. In the context in exam, it is fundamental to analyse milk, the high-protein liquid produced by cows, through its controversial narrative, which unfolds interspecies entanglements in which sense, history, religion and territory convey: «human history must be […] understood as interconnected with the history of animals. The links between cattle and capitalism run deep»[107].

The cow is a nonhuman entity whose contemporary status of commodified being intersects themes of exploited motherhood, industrial animal husbandry and alienating human-nonhuman relationships, that foster dominion and violence on objectified nonhuman bodies in all of their forms. The capitalistic quality that has been assigned to the animal protein of milk throughout the evolution of human societies perfectly functions as an introspective lens through which one can read the complexity of the Anthropocene[108].

The concept, born in 2000 by the academic collaboration of Dutch atmospheric chemist Paul J. Crutzen and American biologist Eugene F. Stoermer, argues for new, more comprehensive understandings of humans' role in shaping natural systems and nonhuman communities. Following the steps of the research carried out by Italian geologist Antonio Stoppani (1873), French catholic palaeontologist Teilhard de Chardin (1925) and Russian geochemist Vladimir I. Vernadskij (1926), the Anthropocene[109] is an elaborate geological theory. It revolves around the agency of mankind, which, thanks to great technological and medical evolution and wider access to plentiful natural resources, has expanded in numbers and per capita exploitation of Earth's resources[110]. An astounding example of how human societies have impacted the environment and its ecosystems to the point of being theorized as significant geological forces can be found right in the development of contemporary agriculture and intense animal farming for human nutrition. The latter has demonstrated to be outcompeting natural cycles, putting the survival of all living beings directly and indirectly involved at risk.

[107] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 260.
[108] Steffen, W., Crutzen, P. J. and McNeill, J. R., "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?", *AMBIO: A Journal of the Human Environment*, 36, 2007, pp. 614–621.
[109] Crutzen, P.J., "Geology of mankind", *Nature*, Vol. 415 - Concepts, Mc Millan Magazines Lrd, January 2002, p. 23.
[110] Crutzen, P.J.,"The 'Anthropocene'", in Ehlers, E., Krafft, T. (eds) *Earth System Science in the Anthropocene*, Springer, Berlin, Heidelberg, 2006, pp. 13-18. https://doi.org/10.1007/3-540-26590-2_3

Exploring the qualities of milk compiles information about the Anthropocene, while stressing the importance of acknowledging and talking about bovines as nonhuman agents of powerful transformative force. Puerto Rican PhD researcher Rosa E. Ficek, expert in environmental historical intersections with capitalism and colonialism, defines cattle as "creatures of the Anthropocene": through their employment as a proper working class within the modern dairy industry, « they are implicated in the creation of massive environmental disasters, from the clearing of huge extensions of tropical forest to the large-scale emission of methane and other greenhouse gases» [111]. Environmental consequences of disproportioned human exploitation of cattle, conceived as profitable natural resource in a capitalistic and expansionist logic, are to be included in this discussion and represent a flagrant reason for which I choose to investigate the transformative power of milk and its nonhuman provider.

The Food and Agriculture Organisation of the United Nations celebrates the biggest contributor to global heating, livestock, during the World Milk Day; since 2001, eating and cultural habits related to the precious dairy resource are exalted as examples of constructive and honest multispecies encounters. The World Milk Day was founded to recognize the importance of milk as a worldwide food, to market the health benefits of dairy products on a global scale and to underline how milk and dairy manufacturing, distribution and consumption supports the livelihoods of one billion of people. To honour and preserve the dairy industry's contemporary accomplishments, many reports get published in this occasion, exploring the vulnerability of milk and its supply in such challenging times. FAO's statements on World Milk Day claim that «climate change increases the chances of drought, floods and disease threats, which can affect the dairy sector in several ways (price volatility, milk yield, cow inventory adjustments) » [112]. The Organisation, that accurately describes the peculiarity of each dairy system per big economic nation involved in the markets as stakeholders in a global perspective, also worries about how «dairy trade flows could be substantially altered by changes in the trade environment. To date, the big dairy consuming countries, [among which] India […], are not integrated into the international dairy market as domestic production is projected to expand fast to respond to demand»[113]. Concerns are spread, regarding climatic and economic risks, but anything is said about dairy suppliers, whose sacrifices and suffering are drowned into the white liquid.

Suffice to say, a hybrid academic combination of disciplines is key to reveal the most authentic urgencies out of the argument, or to use Nicole Shukin's words, the juxtaposition of two terms,

[111] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 260.
[112] OECD/FAO (2019), *OECD-FAO Agricultural Outlook 2019-2028*, OECD Publishing, Paris, 2019, p. 188. https://doi.org/10.1787/agr_outlook-2019-en.
[113] Ibid., p. 189.

"animal" and "capital", has been rarely theorized in convergence that it inevitably «signals a double -edged intervention into two subjects whose dangerously universal appeal necessarily situates this study within the broader field of transnational cultural studies»[114]. It is for these reasons that, to address the plurality of voices involved in the context of analysis with dignity and transversal competence, I will investigate the intersectional quality of the topic through a cross-analysis of Feminist Animal Studies, Environmental Anthropology, Food Studies and Environmental Humanities of India.

After having introduced the cultural, religious and ecological features that are part of the rich historical heritage of today's first dairy producer in the world, my research will address milk not only for being a paramount ingredient to the culinary traditions of India, but especially because of its powerful symbolism that mirrors the anthropocentric and artificial dualism of Nature and Culture inhabiting the Nation and its human population.

The ontological opposition emerges as alarmingly thriving within the discriminative narrative of the Indian agrifood system, largely examined by posthumanist, multispecies and animal studies literatures, thus highlighting the urgency to discuss about what we ingest. Food must be interpreted not only as a mean of survival and nutrition, but also as the primary site through which interspecies interactions unfold in the contemporary world, and that is the human consumption of nonhuman animals[115]. One has to resonate on the «desirability and practicability of universal codes of ethics in relation to animals and foods»[116], mainly to discover that there are indeed differences between our ethical theories and our eating habits.

Who determines what is to be eaten, what is good to ingest? Can an atlas of taste be mapped? How do different cultures at different latitudes meet daily decisions on what meals to consume? Is the consumption of animal products influenced in any way by the place in which one is born? Everywhere in the world the ability of recognizing "good" food is a genetic given, it is innate, albeit preference in taste can be obviously subjective[117]. A proper culinary maturity is developed through one's personal growth, which is though part of collective heritage, memory, history: significant outcomes are produced by individual choices and reproduced at intergenerational scales.

[114] Shukin, N., *Animal Capital:Rendering Life in Biopolitical Times*, University of Minnesota Press, Minneapolis, 2009, p. 6.
[115] King, S., Carey, R. S., Macquarie, I., Millious, V., & Power, E., *Messy Eating*, Fordham University Press, New York, 2019, p. 2.
[116] Ibid., p. 6.
[117] Food to Action Academy, Slow Food, 2022, personal notes.

To this topic, Critical Animal Studies (CAS) represent a unique vehicle of comprehension that encourage a new lecture of human-animal relationships, starting from questioning the convergence of axes of power and exploitation that characterize the multispecies bond. It is because of perpetuated paradigms of gender, race, class and above all, species, that such connection with the nonhuman is recognized as alienating and fragmented by this discipline. The academic interdisciplinarity of CAS will set the basis of my methodological and theoretical framework, that mostly refers to the realm of Feminist Animal Studies (FAS), similarly identified by relational ontology and intersectionality. In particular, this field of study addresses themes of empathy, care and justice from a nonhuman animal standpoint, inherited by CAS, and allows for innovative critical thinking related to human-nonhuman dualism through feminist values. In this way feminism enters in conversation with the various kinds of inequalities that unify living beings oppressed by anthropocentric humanism; with reference to the Indian dairy system in analysis, FAS commits to the dismantling of power dynamics of animal rights negligence, colonial and speciesist hierarchies, material and symbolic aspects of animal and gendered oppression, interspecies sexual violence, commodification of reproductive work and the politicization of bodies. Therefore, a feminist approach of this type is to be understood as a theoretical and practical way of acknowledging individual responsibility for collective wellness across discriminations to re-situate «humans as ecologically embedded and embodied subjects of interspecies communities»[118].

Clearly, decoupling the structure of the Indian dairy system through a multispecies vision means to firstly untie the interweaving among religion and food studies. Religious disagreements on eating practices considered as acts of violence against creatures of the Divine, like the aforementioned Muslim quest, not only feed social discordance, but also express different cultural conceptions and consequent changes in behaviour regarding nonhuman animals. Religious beliefs influence human choices of whether consuming animals or not, and dictate what parts and products are to be eaten, in which circumstances, where and how.

The complexity of the food system is hence strictly tied to the foundations of the Nationalistic heritage, that embeds smaller scales of awareness, gradually shaped with every meal. It all starts within the domestic sphere, at the table, where familiar culinary traditions are an everyday mechanical replica of choices and habits, often unconscious, inherited by previous generations, determined by superficial scientific knowledge, rush and social priorities, economic availability, accessibility of goods, composition of the domestic nucleus. Each sip of cow milk contributes to the evolution of the ancient utilitarian and essentialist narrative that depicts the nutritive properties of dairy as sacred and ethically resourced, allowing for its exploitative consumption with divine consent and political

[118] Cudworth, E., McKie, R. E., Turgoose, D., Feminist Animal Studies: Theories, Practices, Politics, Routledge, London, 2022.

instrumentalization. On this topic, both Indian scholars Naisargi Dave and Neel Ahuja « extend their thinking about Hinduism beyond the personal and the familial to address how vegetarianism and the figure of the cow [got] mobilized in the context of Hindu nationalism and anti- Muslim violence. […] They share a commitment to theorizing the relationship of racial and colonial formations to animal oppression not as analogical or competitive, but as co- constitutive »[119].

A landmark to analyse the analogies across time and evolution of human societies through the oppressive phenomena of racism and colonialism is indeed the adoption of a decolonizing approach. Scholar Rosa E. Ficek also recognizes a strong mutual interdependencies of cattle, human and natural resources, but also notes that such multispecies connections powered colonial expansion in the past and later fostered the contemporary capitalist dynamics and hierarchies[120], that could be easily defined as "neocolonialist" practices. Accordingly, ecofeminist scholar Val Plumwood states that «forms of oppression from both the present and the past have left their traces in Western culture as a network of dualisms, and the logical structure of dualism forms a major basis for the connection between forms of oppression»[121].

The interspecies relationships in exam are usually subject to an exclusive Western historical retelling, since human and nonhuman paths generally take on distinctive patterns according to Western cultures; the opposition regarding the dualistic perception of man and cow was made clear to history through colonialism[122]. «Colonial cattle's indeterminate status as both private property and [religious nationalistic saviour] fuelled the multiplication of wealth and the expansion of territorial control for colonists, but it also created webs of social and ecological relations that challenged the colonial social order»[123], boosting antagonist civil movements against an intrusive Western way of living, that contextually gave rise to animalist movements like the Cow Protection Movement for example. The forced encounter among colonizers and colonized human beings also included one across different nonhuman species, cows among them, that, despite having been domesticated and put at service of men, were still considered as intertwined entity living with non-Western human species. Similarly, Australian philosopher and professor Philip Armstrong argues about animals and their cultural representations in contexts of colonialism, decolonisation and globalisation: he agrees that colonial legacies of European modernity owe their occurrence to a longstanding speciesist ideology of differentiation between humans and animals, that mirrors the racist attempt of imperialism to

[119] King, S., Carey, R. S., Macquarie, I., Millious, V., & Power, E., *Messy Eating*, Fordham University Press, New York, 2019, p. 11.
[120] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 261.
[121] Plumwood, V., *Feminism and the Mastery of Nature*, Routledge, London, 1993, p. 2.
[122] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 260.
[123] Ibid., p. 264.

eradicate indigenous cultural knowledge of the natural world, to impose Western values upon local communities[124]. On an academic level, he truly claims that «the most promising collaborations between postcolonial and animal studies lie in the production of sharp, politicized, culturally sensitive, and up-to-the-minute local histories of the roles that animals and their representations have played—or been made to play—in colonial and postcolonial transactions». That is a really crucial topic to this thesis, namely to restore value to singularity and uniqueness of nonhumans, humans, ethics and ecosystems through a multidisciplinary analysis.

To enter into dialogue with decolonizing more-than-human interpretations means to acknowledge in fact that certain historical turning points inevitably affect vulnerable categories of living beings, human, mainly women and minorities, and nonhuman animals, exposed, alongside colonized individuals, to imperialist oppressive subjugation whose scars manifest to this day across capitalistic economies, agrifood industries and human-nonhuman kinship. In this regard, Val Plumwood reflects on how ecologically intensive high technology agriculture and forestry in the third world remark and strengthen the control of elites and interspecies inequality, at the expenses of women and nonhuman animals.[125] Their sufferance is due both to the anthropogenic damaging of the environment and from the exact processes damaging it, since the latter «has disregard for needs other than those of an elite built into it. We die of the product (the destruction of nature) and also of the process (technological brutality alias technological rationality serving the end of commodification) »[126]. Nowadays, Southern populations who are experiencing instability or poverty happen to have inherited similar precarious living conditions, food scarcity and unsafe eating choices from colonized ancestors, whose survival would be jeopardized from severe effects of socio-ecological crises linked to the foreign immoral management of natural resources, nonhuman animals included. Once decolonized, nonhuman animals, have remained inherently constrained to the development of societies: they current cultural position in human hierarchies is problematic as they are still perceived as invisible and passive objects of capital, sinks of formerly repressed indigenous knowledge, insulting reference points to which comparisons with human suffering are made[127] and contemporary projections of neo-eurocentrism.

Core of my analysis concerns exactly the arising of «contemporary questions about the production of wealth through interventions in nature, showing how livestock create new frontiers for capital by supporting other extractive activities in the same location and by creating new opportunities for

[124] Armstrong, P., "The postcolonial animal", *Society & Animals*, Vol. 10.4, Koninklijke Brill NV, Leiden, 2002, pp. 413-419, p. 414.
[125] Plumwood, V., *Feminism and the Mastery of Nature*, Routledge, London, 1993, p. 13.
[126] Ibid., p. 13.
[127] Armstrong, P., "The postcolonial animal", *Society & Animals*, Vol. 10.4, Koninklijke Brill NV, Leiden, 2002, pp. 413-419, p. 413.

capitalization through the technoscientific manipulation of livestock genes»[128]. This argument exposes the extent to which humans have intervened through their cultural agency and have naturalized forms of supremacism with the conviction of being able to master the biological existence of others, nonhumans in this case, for mere profit. This point will be further examined in the following chapters.

Taking into account the nonhuman agency in such context, that highlights human civilizations' cultural, technical, and ecological achievements, as well as their promise for facilitating transitions towards environmental and social sustainability, means to provide posthuman and more-than-human perspectives on discourses that are usually filtered by privileged human points of view. Therefore, «demarcations between humans and animals are increasingly understood as historically produced, permeable, fluid, and contingent. Within these frameworks, the human emerges as just one life form among many»[129].

One must not forget though that, while considering posthumanism's attention to the agency of nonhumans, their chance of resisting and surviving anthropocentric structures of thought is highly dependent on the social and economic systems that reproduce interspecies and gendered injustice. In other words, adopting a posthumanist perspective must not absolve in any way human beings from the kinds of agency they impose over the Natural realm, especially when it is destructive[130]. The analogies, interchangeability and shared vulnerability of humans and nonhumans is underlined in a posthumanist and wholistic ecological analysis. It helps exposing « the way that control over and exploitation of nature contributes to, or is even more strongly linked to, control over and exploitation of human beings»[131]. It is for such similarities and joint experiences that one should regard human agency not as totally autonomous, but rather as an unconscious, spontaneous (or conscious, rational) encounter of voices; therefore, human agency corresponds to:

> the effect generated in multiple and unpredictable ways from a network of interactions between human, animal, and environmental actors. Such approach is consistent with how recent postcolonial critics, especially those influenced by Foucault's (1980) notions of power and resistance, understand the effects of agency in colonial and postcolonial contexts[132].

[128] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 260.
[129] King, S., Carey, R. S., Macquarie, I., Millious, V., & Power, E., *Messy Eating*, Fordham University Press, New York, 2019, p. 4.
[130] Ibid., p. 4.
[131] Plumwood, V., *Feminism and the Mastery of Nature*, Routledge, London, 1993, p. 13.
[132] Armstrong, P., "The postcolonial animal", *Society & Animals*, Vol. 10.4, Koninklijke Brill NV, Leiden, 2002, pp. 413-419, p. 418.

Domestication and dominance of human, nonhuman beings and nature have been the disputable and catastrophic results coming from the notion of progress, which, once having corrupted modern societies, conceives the human being as superior creature whose distinctive genius overtakes nonhuman beings. To even achieve the label of geological forces and determine the future of the planet and its inhabitants, mankind has undergone socioeconomic and technological processes moved by acceleration, that have in turn changed our relationship with space, environment, others and food. From the kitchen to the local *gaushalas*, both domestic spaces and natural landscapes in India register the presence of domesticated, dairy and feral cows without acknowledging the animal's agency, that actually calls for a study on spaces made and unmade by cattle. *Gaushalas* are, for instance, *tópoi* of domestication but mostly areas where multispecies intersections develop characteristics of abuse, indifference and death. An investigation of the geographical, political and ethical dimensions of animal's lived experience and human-animal contacts is made possible right by the anthropological exploration and ecocritical lecture of similar spatial realities. In fact, in accordance with Rosa E. Ficek, attention must be paid to heterogeneity and renewed significance of more-than-human ecological relations as well as how they are absorbed by human societies, in order to shed a light on how creatures of the Anthropocene actively contribute to the modification of shared places of interspecies interaction and to the creation of unsustainable environments in a given place and time[133]. The ecological, moral and intersectional disruptions that will materialize along this thesis, not only will demonstrate their damaging impact on both human and nonhuman lives but will point to the need of prioritizing forms of collective resilience above all[134].

When discussing food, a plethora of contemporary issues arise, going from questioning old production habits to the elaboration of new policies for the agrifood system, from the implementation of new industrial procedures to the massification of goods and loss of value in natural resources, from civil struggles for good, clean and fair food to equal remuneration for producers and transparent supply chains. Furthermore, discussing about food requires navigating current issues, such food distribution and the migratory, health, environmental, and climatic crises. As a result of the interconnectedness of all of these factors, it is vital to implement adjustments in our daily routines for better interactions with our surroundings and to recover interspecies relationships with other living beings with whom we share life on this planet.

The multifaceted inputs that emerge from this discussion cannot but question whether a mixture of academic and activist language might translate into an equal, committed and fair language to approach

[133] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 270.
[134] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 97.

such topics. Echoing the main themes of Critical Animal Studies, I came to believe that key interpretations can be found within the frameworks of anti-speciesism, veganism and ecofeminism, whose inclusive and vast vocabularies could decipher a path towards transitional futures. In tandem with such pressing concerns in fact, cases of activism in these terms do function as helpful approaches to unravel such pressing matters by persuading people to take action, best if immediately, both individually and collectively. In response, I hence refer to an ecofeminist approach, defined from influential ecofeminist scholar Greta Gaard as a *lingua franca*, able to articulate and interpret an interdisciplinary field of inquiry through which struggles on behalf of women, animals and the earth are tackled[135]. While analysing contexts, histories and spaces of oppression, the ecofeminist critique reclaims freedom, awareness and inclusiveness for everyone living under domination or in violation of their rights. Ecofeminism particularly targets what even socialist, animal liberationists, ecologists and feminist recognize as the privileged group, whose components are human, of upper-or middle-class, technologically and industrially "developed," male; an oppressed group is also believed to exist in contemporary dualistic heteronormative and patriarchal societies, formed by poor or working-class, nonhuman animal, "undeveloped" nature, and female beings.[136]

Accordingly, a distinction has to be exposed and then overturned, namely that, blinded by the same categorizing and discriminatory narrative, humans believe to interact with animals as objects, that are to be eaten, and animals as subjects, with whom humans relate[137]. «If all organisms are on one physical continuum, then we should also be on the same moral continuum»[138].

If extracting, preparing and consuming dairy products epitomize such anthropocentric and dualistic thinking, the perspective to adopt is one that tries to move its glance to a more-than-human vision, starting with the respect of animal rights and going beyond them with practical interventions and changes within human habits. A shift to more environmental and ethical behaviours is required by the contemporary challenges related to sustainability and the future of life on Earth. Transitioning compels every citizen to face the ramifications, significance and repercussions of their own decisions, and as US writer Jonathan Safran Foer[139] states, collective acts to eat differently to mitigate the scientific and rhetoric challenges of ecological crisis begin at breakfast, by asking ourselves: how can I not taste the darkness of all of this whiteness?

[135] Gaard, G., *Ecofeminism, Women, Animals, Nature*, Temple University Press, Philadelphia, 1993, p. 7.
[136] Ibid., p. 1.
[137] King, S., Carey, R. S., Macquarie, I., Millious, V., & Power, E., *Messy Eating*, Fordham University Press, New York, 2019, p. 3.
[138] Ryder, R. D., "Speciesism again: The original leaflet", *Critical Society*, Vol. 2.1, 2010, p. 1.
[139] Foer, J. S., *We are the weather: Saving the planet begins at breakfast*, Penguin UK, London, 2019.

2. Operation Flood: the White Revolution

They are the mothers of the universe. O, let kine [cows] approach me!

There is no gift more sacred than the gift of kine. There is no gift that produces more blessed merit. There has been nothing equal to the cow, nor will there be anything that will equal her.

With her skin, her hair, her horns, the hair of her tail, her milk, her fat — with all these together, the cow upholds sacrifice.

What thing is there that is more useful than the cow?[140]

The longest ancient epic poem in Indian Literature, the *Mahabharata*, composed in the 4th century BCE, contains a passage in Book 13, *Anusasana Parva,* where the cow's motherhood is presented as an instrument for human resource extraction, rather than as a natural, nurturing relationship between a mother and her offspring. This portrayal of the cow is in contrast with the popular image of cows, previously presented as sacred and deeply revered in Indian culture. The passage highlights the conflicting perspectives and attitudes towards cattle in Indian society and underscores the complex and evolving relationship between humans and cows throughout Indian history.

«The material and the maternal are interlinked in the indistinguishably blurred *reverential* and *production* activity, where production sites of farming the breastmilk of the infants of other animals»[141] will be censored by the Government as spaces where new interspecies interactions will be based upon competitive animal wellness, scientific development and massive international scales of production. A new spatial necessity emerged, generated out of material aspirations, desires of power and nationalistic competition in the capitalistic affirmation of a new independent India. The industry was born.

To investigate the rise of milk colonialism in India, one must retrace the historical events and the socioeconomic repercussions associated with the ecological context of the White Revolution. The newborn modern Nation of 1970s India committed to the bold action strategy named Operation Flood, an industrial growth plan projected onto the freshly independent agricultural economy on India to gain economic recognition among wealthy States.

[140] Narayanan, Y., "“Cow is a mother, mothers can do anything for their children!”", cit., p. 203.
[141] Ibid., p. 204.

The name, Operation Flood, seems to refer to a long-awaited dairy abundance, symbol of wealthiness, paying tribute to Hindu legend of an overflowing *flood* of milk churned from the oceans by the gods and demons, mimicking the long and laborious agricultural practice of Indian milk churning. «Flowing milk, whether from breastfeeding women or lactating cows, is auspicious for the whole world. The overflowing breast or udder symbolizes the intense love of mothers for their (male) children»[142]. The mythological story speaks of an ocean of milk, which proved to be a prophetic vision for India during the last quarter of the 20th century[143]. The reminiscent context is of impressive interdisciplinary significance, as it foreshadows India's achievement in the dairy industry during the last quarter of the 20th century. The prophetic vision coincides indeed with India's ambitious dairy development program, that allowed the country to become the world's current largest producer of milk.

The failing anthropological and environmental changes brought on by Operation Flood work as helpful illustrations of the subsequent decline in the management of natural resources, where milk emerges as an unfortunate component to an exploitative dynamic at expenses of cows and lower caste people.

[142] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia,* 57(1), Springer Nature, Melbourne, 2018, p. 140.
[143] Ibid., p. 138.

2.1 Beyond hunger: conscious eating with Mahātmā Gāndhī

What can be defined as a proper "White Revolution" is indeed a parallel and sub-phenomenon of the well-known Indian Green Revolution, a strategic huge change in the country's agriculture, pushed by the ambition of economic and industrial development in competition with other richer nations. Compared to the Green Revolution, the colour white stands instead in representation of a paramount ingredient to the achievement of India's modernity, milk. Started in line with global initiatives of investments in technological progress and environmental industrialization during the 1960s, both agri-food reforms can be analysed as anthropological case studies for their impressive impact on the ecological reality of India.

The nation entered the Green Revolution and embraced its spirit after having experienced colonization, famine and malnutrition, with urgent need of improvement in health research and agrifood management in order to provide food sustainably and equally to the population[144].

This was one of the principal requests advanced by philosopher, charismatic performer and Hindu believer Mohāndās Karamchand Gāndhī (1869-1948), better known for its honorific title, *Mahātmā*[145], great soul. His social and political commitments elevate his role of Indian lawyer to anti-colonial revolutionary, nationalist ethicist and inspirational icon for the occupied population of XX century India. To predate India's decolonization, independence and Green Revolution, the touchstones of Gandhian advocacy encompassed renewed attention of food distribution and consumption and stood out for their urgency. In fact, what Gāndhī's nonviolent protests of independence were engaging was not only a myriad of people hungry for freedom, but an actual hungry Nation to-be. Food became a focal and uncompromisable point of discussion in the struggle for decolonial liberation, because of its easiness in being a preferred path to provide insights into life for social change and identification. Of spontaneous comprehensibility and intersectional scale of interests, discourses around food and nutrition were an effortless way to gain popular support, as primary reason to establish a contact with people and diffuse effective messages of reclaiming justice. Put in simple words, the food question is of universal concern because everyone's survival depends on its qualitative and quantitative accessibility. The right to safe food, fair retributions for people involved in agricultural production, equal distribution of goods, governmental commitment in

[144] Swaminathan, M. S., "From Green to Ever-Green Revolution", *The Financial Express*, 10 August 2009.
[145] «Mahā- (S. "great, mighty, large, ..., eminent") + ātmā (S. "1. soul, spirit; the self, the individual; the mind, the heart; 2. the ultimate being."): "high-souled, of noble nature; a noble or venerable man"», McGregor, R. S., *The Oxford Hindi-English Dictionary*, Oxford University Press, 1993, p. 799. Last accessed: 03/05/2023.

righteous food policies to cure and prevent malnutrition among younger generations were at the centre of daily debates.

In particular contrast with the omnivorous colonizing behaviours and appetites of the imperialists, Mahātmā Gāndhī's nonviolent campaigns to uproot the tyrannical reign of the British from India were based on the awareness of one's body and mind, kept healthy through meditation, yoga, peacefulness and vegetarianism; individual behaviours of this kind, adopted within civil communities, were part of Gandhi's propaganda of rethinking of humble and automatized yet fundamental social rules to properly understand the hostile factors of the society,[146] starting from reinterpreting one's eating choices as a conscious gesture of purification and political act of opposition.

What he targeted was the sense of alertness in colonized people, that needed to be awakened through a recovered unifying relationship with Nature and other living beings. A feeling of coalition and synergy was underscored through performed and moralized bodies[147], fed with healthy and righteous nutrients.

It is easy to surmise that, even for the iconic figure of Mahātmā Gāndhī, religious beliefs had a paramount role in shaping moral behaviours for the collective and multispecies wellness, for which he hinted «how much importance the position of performance is of an individual in the nation building. […] He assert[ed] that self-confident makes the body perform and inspire others to challenge the evil forces of society»[148]. He was a leader of heroic reputation that pursued a revolutionary enlightenment of society by addressing the political and nationalistic struggles of his colonized territory: in such process, the role of the single citizen was seen as interwoven with culture, practices, other bodies and spaces, thus endeavour to reconsider of each one's daily efforts and actions was encouraged by nonviolent protests.

Suffice to say that, to preserve its spirit and social accountability of being an exemplary and enlightened being up to the British conquest, Gāndhī kept promise of remaining vegetarian throughout his life[149], for the vow he had made to his Hindu mother: he was in fact raised in a vegetarian family, even though he confessed of having tried a few bites of goat meat during his young years, with full remorse.[150] He came to believe that vegetarianism, hence the nonconsumption of animal flesh, was a proper moral ideology. As for European culinary devotion for animal meat, in the

[146] Yadav, M. R., Gandhi; His Body and Politics. *Nepal Journal of Multidisciplinary Research*, *6*(1), 68–76, 2023., p. 68.
[147] Ibid., p. 69.
[148] Ibid., p. 69.
[149] Ibid., p. 69.
[150] Slate, N., "Gandhi and ghee: Two lessons on diet and politics", *Mint*, 2019.

same way he was against any other Western European eating habits and any other form of violent practice that would harness animal bodies to the strive of civil and scientific progress, ideas that were in strong contrast and tabooed by Hindu and Buddhist faithful and ethical pillars[151].

With particular reference to Hindu traditions, Gāndhī believed that reverence and respect for all forms of life must be put in practice by understanding the surrounding reality as one of general and shared vulnerability that manifest through human and nonhuman life. Choosing not to consume nonhuman animals and their products demonstrated further protection of those who are least able to protect themselves is then conceived not only as an act of generosity, but of personal acceptance of one's own precariousness but also awareness of life's preciousness[152]. Animal activism in Hindu religious traditions is exemplified by Gāndhī's life and teachings, which highlight interspecies kinship and the sacredness of nature as teachings from *Upaniṣad* literature and Hindu history that encourage ties between religion and nonhumans.

The intense worship of cows, perhaps the most renowned aspect of Hinduism, is strictly linked to the concept of *Ahiṃsā*, as previously mentioned, to which Gāndhī assigned new value. Being this the foremost ethical principle of Hinduism, *Ahiṃsā,* literally translates into "noninjury," or into the imperative "not to harm", but it is not simply « a matter of refraining from actual, physical harm. *Ahiṃsā* is the absence of even a desire to do harm to any living being, in thought, word, or deed»[153]. Humans are believed to «have more obligations and duties» than other species, according to the Hindu worldview, which asserts that individuals "have no special privilege or authority over other creatures." The *Mahabharata*, mentioned at the beginning of the chapter, does an excellent job of illustrating this moral imperative, emphasizing the importance of animal welfare to both Hindu heroes and revered deities,[154] but, needless to say, the concept became imbued with new symbolism of nationalistic meaning.

Zooming into the analysis' background, Gāndhī's peaceful projections on nonhuman creatures, cows in this case, were in complete accordance with the population's beliefs influenced by Hindu devotion. Although based on the speciesist confidence of humans being superior species and hence guardians of the holy Nature by virtue, Gandhi's vegetarian philosophy remarked the human necessity and responsibility of «protecting cows, whom we might easily harm or kill, [as] an expression of compassion that acknowledges both our power over other creatures and our own vulnerability before

[151] Gandhi, M. K., *Hind Swaraj, or, Indian home rule,* Navajivan Publishing House, Ahmedabad, 1939, p. 53.
[152] Kemmerer, L., *Animals and World Religions*, Oxford Scholarship Online, 2011, p. 5.
[153] Long, J. D. *Jainism: an introduction*, Macmillan, New York, 2009, p. 97.
[154] Kemmerer, L., *Animals and World Religions*, Oxford Scholarship Online, 2011, p.7.
DOI:10.1093/acprof:oso/9780199790678.001.0001

the gods – *our* need for protection from that which is more powerful and potentially deadly»[155]. He stated:

> I myself respect the cow, that is, I look upon her with affectionate reverence. The cow is the protector of India because, being an agricultural country, she is dependent on the cow. The cow is a most useful animal in hundreds of ways[156].

During his British stay, he joined the London Vegetarian Society (1847)[157], as advocate of a meatless diet in contrast with the devouring and omnivore gluttony of European colonizers. He was born a vegetarian by caste, and his English journey represented for his family a real rupture point, since they were convinced that such Western experience would have corrupted his soul and righteous discipline. Together with meat, Gāndhī experimented with abstinence in further areas, such as sex, but mainly because he was a married man with his pregnant wife waiting for his return, in addition to diet: he sought advice from Rajchandra, a respected Jain scholar whom he referred to as Raychandbhai, who instructed him that *milk* would arouse his sex desire. Sex, intended as polluting for the pureness of the mind, was hence associated to the prime product of bovine motherhood. To avoid the corruption of the soul, Gāndhī interrupted the consumption of cow's milk from 1912, despite contrary medical advice of those years[158], and of any type of dairy. It is necessary to specify though that the choice of remaining celibate and renouncing to milk were decisions and theories that were contrasted and disputed by many of Gāndhī's collaborators and supporters, these choices of a productive and mature reasoning after the Western experience.

Once back from London, Mahātmā Gāndhī further questioned his diet and the cultural attachment to food when he was first imprisoned in 1908 in South Africa, guilt of having opposed the racial laws of the country. At the time, it is appropriate to mention that he was fond of dairy products, in particular of *ghee*. In a context of deep introspection, loneliness and lack of material comforts, such as the one of imprisonment, the staple food in Indian diets that is ghee appeared to be a luxurious type of food. Gāndhī stopped feeling the need to feed onto it anymore and « anticipated many of today's dietary preoccupations—from veganism to raw food to fasting. He cut salt and sugar from his diet; made his own almond milk and hunted for wild leafy greens»[159].

[155] Ibid., p. 5.
[156] Gandhi, M. K., *Hind Swaraj, or, Indian home rule,* Navajivan Publishing House, Ahmedabad, 1939, p. 46.
[157] Yeh, H., "Boundaries, Entities, and Modern Vegetarianism: Examining the Emergence of the First Vegetarian Organization", Qualitative Inquiry 19(4) 298–309, 2013, p. 299.
[158] Gandhi, Mahatma, *An Autobiography: The Story of My Experiments with Truth*, Vol. 39. Beacon Press, 1957, p. 262.
[159] Slate, N., "Gandhi and ghee: Two lessons on diet and politics", *Mint*, 2019.

Indeed, a lot about the Mahātmā's politics and performativity of nonviolent action can be revealed through his methodological adoption of fasting as an instrument of dissent, first put in action during his detention in a South African jail. But how can the refusal to eat be a successful form of protest? The answer lies right in the four decades of Gāndhī's political career in South Africa and the Indian subcontinent, where being incarcerated become a true personal distinctive hallmark: hunger strikes became a major part of his nonviolent campaigns[160], started right from a prisoner position where proselytism was encouraged against the colonizer. Dr. Sruti Bala, from the Faculty of Humanities at the University of Amsterdam and expert in Theatre Studies, conducted an interdisciplinary analysis of the performative traits of Gandhian fasting, delineating in such actions a combination of willing to conflict resolution, social change, brave act of personal purification, powerful nonviolent weapon to induce feeling of guilt in the colonizer.

The calm silence that pervaded Gāndhī's hunger abstinence was instead a charismatic call for commitment of pan-religious, moral and political nature, that transcended speciecism through the revived senses of Hindu solidarity and compassion. The two were synonyms of encouraged spiritual guidance to recognize human-nonhuman kinship and actually perform new interspecies relations through awareness of daily choices. Sharing the same pain, embodying what more vulnerable categories of living beings were suffering for, was for Gāndhī a way to surpass colonialist, social and intraspecies hierarchies and embrace more difficult positions, to comprehend shared challenges and social conflicts, in the hope of a brighter future of independence and socioecological justice.

Mahātmā Gāndhī's fasts were hence political responses of rejection and restraint to violence of higher castes of the Raj. In his typology of nonviolent actions, Gene Sharp[161] recognizes nonviolence according to the principles of omission and commission:

> Nonviolence involves renouncing and shunning violence on the one side, but intervention and active engagement in conflict on the other. Often it is a combination of acts of omission as well as commission, a refusal to perform certain acts on the one hand and explicitly performing other acts on the other. The hunger strike or fast as a type of psychological intervention can arguably be viewed as violent or at least aggressive, depending on the level of coercion and the self-injury and underlying objectives behind the act.[162]

[160] Bala, S., "The dramaturgy of fasting in Gandhian nonviolent action", In M. Wagner & W. D. Ernst (Eds.), *Performing the matrix: Mediating cultural performances* (pp. 289–306), ePODIUM, 2008, p. 290.
[161] Sharp, G., *The Politics of Nonviolent Action*, Extending Horizons Books, New York, 1973.
[162] Bala, S., "The dramaturgy of fasting in Gandhian nonviolent action", (pp. 289–306), ePODIUM, 2008, p. 291.

Between 1918 and his death in 1948, Gāndhī participated in at least 18 significant political fasts[163], which, because of their impactful and communicative efficiency, become registered in public memory as a key moment of civilian mobilisation. In times of national crisis, driven by the impulse to find calm via introspective periods of soul-searching, Gāndhī metaphorically « merged and conflated the purification of the self with the purification of the nation, linking self-discipline to the disciplining of the "unruly masses" »[164], in need of a charismatic leader. While describing its fasting experiences, he would say: « I have enjoyed peace because of a hungry stomach. I know that I cannot enjoy it after breaking the fast»[165].

Professor Bala concludes her research by addressing the popular exposition of Gāndhī's physical figure, slowly thinning and degenerating with each passing day of fasting, along with his emblematic representation of the self, as it was directly dependent on attendance of witnesses of the fast. « The fast was a way of being looked at». To make oneself visible, to retrieve self-value through enhanced visibility in a system based on violence and masculinity, where the heterogeneity and indigenousness of human and nonhuman individuals were rendered invisible, along with their identities: this was the main symbolic and factual victory of Gāndhī's hunger strikes. His fragility, representative of all suffering creatures, became the convincing strength that urged an empathetic reaction from the oppressor counterpart to its obvious nutritional and health vulnerability.

The spontaneous evolution of his thought followed historical and personal events, compelling him to an inevitable yet constant reconsideration of his dietary practices, and nothing exemplified Gāndhī's readiness to change—and change again—like his relationship with ghee and dairy; what he would say in fact was that «our diets must keep changing as we change, and as the world around us changes»[166].

Despite his previous vow to never to drink milk again, the relevance of goat's milk in his diet cannot not be ignored. This was evident in 1930, when he was arrested, and the colonial government had to purchase a dozen purebred goats to supply him with his favourite beverage: it was clear that goat's milk was more than just a preference for him, it was a necessity. While he had tried to create his own alternative with almond milk, it was difficult for him to stomach, and he had to reluctantly admit that goat's milk was the only viable option for him. This decision shows the lengths to which he was willing to go to maintain his dietary requirements, even in the face of adversity[167]. « It was a blatant

[163] Ibid., p. 292.
[164] Ibid., p. 292.
[165] CWMG, Collected Works of Mahatma Gandhi, (= «Speech reprinted in Young India»), Vol. 25, 21 November 1921, p. 139.
[166] Slate, N., "Gandhi and ghee: Two lessons on diet and politics", *Mint*, 2019.
[167] Ibidem.

mistake to describe goat's milk as Gāndhī's "favourite beverage". Gāndhī consumed goat's milk with deep regret and a haunting sense that he had failed to live up to his own ideals»[168].

Such important dietary changes were dependent on the effort of the philosopher to preserve coherence with his political and moral ideologies; he was convinced that dairy consumption would distract him from far more serious political and spiritual pursuits. In order to present himself as an apostle of *Ahiṃsā*, anticolonialist prophet and proper Hindu devotee, Mahātmā would be very careful to his mouth: he would choose wisely what to ingest and what to say, as he thought of food as always political[169].

Gāndhī's practice of abstinence from food was also a symbolic response to the plight of poorer populations in India, especially those living in rural areas, working in the fields and being forgotten by higher castes of Hindus and colonizers. Throughout the British Raj, these individuals were often victims of great suffering and tragedy, due to unequal distribution of resources which led to terrible episodes of mass famine and starvation. During these times, people who were starving and had no choice but to eat or trade their possessions would often sell their cows or barter them for food and other necessities: paradoxically, owning a cow was a symbol of wealth and prosperity, and these animals provided a lifeline for struggling communities[170]. «The people of India understood that *living* cows could carry them through famine much better than *dead* cows»[171]. Cows have been an integral part of Indian agriculture and economy for a long time due to their ability to provide both milk and a sense of self-sufficiency to their caretakers, or better, owners. Gāndhī recognized the importance of cows in Indian society and culture, and his own fasting was a form of protest against the unjust treatment of the poor and marginalized, as British colonial policies exacerbated famines in India during the late nineteenth century. Overall, his ethical and political diet highlights the deep connection between cows, agriculture, and social justice in India.

Both the Green and the Milk Revolution were presented as operationally and economically viable instruments for improving the lifestyle, health and technological advance of the country by smartly administering its natural resources after Gāndhī's guidance towards Independence in 1947. Yet, as historian Benjamin Siegel notices, «India's struggle for independence and its postcolonial accomplishments are both singular and spectacular– and its many success stories render the nation's

[168] Slate, N., "Gandhi and ghee: Two lessons on diet and politics", *Mint*, 2019.
[169] Ibidem.
[170] Greenough, P., "Cows, Famine, and the British Empire: The Case of India in the Late Nineteenth Century", *Comparative Studies in Society and History*, Vol. 27, No. 4, 1985, pp. 660-695.
[171] Kemmerer, L., *Animals and World Religions*, Oxford Scholarship Online, 2011, p. 5.

nutritional failures even more jarring»[172]. It is important unfortunately to premise that, besides the similar noble goals of the two operations, analogies also occur in the controversies carried on by the revolutionary plans that invested the post-Independence period in India.

[172] Siegel, B. R., *Hungry nation: Food, famine, and the making of modern India*, Cambridge University Press, 2018, p. 221.

2.2. Chasing progress with milk colonialism

The Indian dairy industry was organized and transformed into a commercial enterprise in the 1950s. Verghese Kurien, heralded as the father of India's White Revolution, believed in rethinking past agrifood policies as occasion for a pivotal shift « in revolutionising milk as a commercial product and advancing India from a milk-deficient to a milk-surplus nation»[173].

Both Indian and international medias often referred to him as "the milkman of India", or the man who made the White Revolution a concrete reality: Verghese Kurien (1921-2012) was an Indian social entrepreneur and engineer, best known for his contribution in giving rise to the cooperative dairy movement in India, which helped transform the agrifood asset of the country on a global dimension. His most notable contribution in fact was the establishment in 1946 of the Amul dairy cooperatives[174] in the State of Gujarat, a large dairy producer, where coincidentally, higher intakes of milk per person are observed[175].

During the 1950s and 1960s, the development of the dairy and animal husbandry sectors faced significant challenges. One major obstacle was the artificially low procurement prices, which discouraged producers from increasing their output. In fact, until the establishment of the National Dairy Development Board (NDDB) in 1965, small rural milk producers were disadvantaged. The importance of building a reliable marketing link between milk producers and consumers was not adequately addressed in policy efforts, and it was not recognized as a crucial step in building a sustainable system, with the exception of Amul (Anand Milk Union)[176]. The latter became a model for dairy development in India: Kurien's leadership and innovative approach to dairy development helped indeed to improve the lives of millions of small-scale milk producers in India. For his contributions to Indian agriculture and rural development, Kurien was awarded numerous honours and awards, including the Padma Shri, Padma Bhushan, and Padma Vibhushan, three of India's highest civilian awards[177].

[173] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia,* 57(1), Melbourne, 2018, p. 138.
[174] Also known as the Gujarat Cooperative Milk Marketing Federation (GCMMF), Amul is an Indian dairy cooperative born in 1946, well-known for its brand of dairy products. It was a response to the exploitation of milk producers by middlemen and private dairy companies. It operates on a cooperative model where milk producers, primarily small-scale farmers, are part of the management board. In the 1970s, during Operation Flood, the cooperative helped organize and empower dairy farmers, improved milk production techniques, and set up an efficient milk collection and processing system. Kurien, V., *I too had a dream*, Roli Books Private Limited, 2012, p. 178.
[175] Brown K. A., et al., *The role of dairy in healthy and sustainable food systems: community voices from India*, BMC Public Health, 2022, p. 2.
[176] Parthasarathy, S., "National policies supporting smallholder dairy production and marketing: India case study", *Smallholder dairy production and marketing opportunities and constraints*, ed. D. Rangnekar and W. Thorpe W. pgs, pp. 271-281, 2002, p. 272.
[177] Kurien, V., *I too had a dream*, Roli Books Private Limited, 2012, p. 130.

While acknowledging the many social and economic difficulties that would obstacle the production and commerce of milk at the local and indigenous level, and the consequent social issues that would influence that portion of the Indian population, Kurien agreed on the urgent need of making the country self-sufficient in milk production. Pushed by revolutionary fervour and profound patriotic beliefs coming from the Independence, he played a key role in the design and implementation of the White Revolution.

It is not until 1970 that the Indian dairy sector gained first significant political support, with that happening through a national transformative program called Operation Flood (OF), implemented by the NDDB. This initiative proved to be the turning point for the dairy industry in India and had a powerful impact on its following growth and development. Kurien[178] believed that his Nation needed to rapidly convert its dairy agricultural system to compete with already well-established dairy industries in other Western countries, that had been developing for many years at expenses of territories like India, occupied by one of these nations. Numerous countries did in fact achieve self-sufficiency in milk production, thanks to the implementation of effective national policies, appropriate breeding and management practices, and the utilization of modern technologies[179]. Multiple sorts of technical and social acceleration have affected contemporary civilizations, prioritizing the Northern Hemisphere, starting right from the pace of daily life and daily choices, but this rapid conversion of massive scales that was about to change India's economy was theorized not to compromise the quality of the techno-industrial chase after global progress[180].

The Operation Flood project was founded on the idea that progress should not be reached by lowering the quality of local raw materials, and that the revolution should improve the nutritional properties of dairy products, promote equal distribution of these goods throughout India, help alleviate malnutrition and improve human health. As a result, this initiative had a strong propagandic impact, that started as early as the 1960s, with the refusal of the same Kurien of a proposed national ban on cow slaughter, « declaring *en masse* that if India wanted cheap and plentiful milk, it had to slaughter its spent cows and unproductive males»[181]. Key factors contributing to this achievement included the introduction of new informed policy decisions, engagement in strategic planning and wise investments in both the farming and processing sectors of the dairy industry, efforts that collectively contributed to the overall

[178] Kurien's role during Operation Flood corresponded to the « chairman of the National Dairy Development Board, [for which] he has received countless awards, including the Ramon Magsaysay Award (1963), Wateler Peace Prize (1986), World Food Prize (1989) Padma Shri (1965), Padma Bhushan (1966) and Padma Vibhushan (1999) », Ibid., p. 130
[179] Gayathri, S. L., Bhakat, M., Mohanty, T. K., "An outlook on commercial dairy farming in India: A review", *Indian J. Anim. Prod. Manage*, 37(1), pp. 45-56, 2023, p. 47.
[180] Kurien, V., *I too had a dream*, Roli Books Private Limited, 2012, p. 130.
[181] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*"*, *Sophia,* 57(1), Springer Nature, Melbourne, 2018, p. 138.

settlement of the dairy sector within the young Indian Nation[182]. Operation Flood must then be recognized as the "world's largest food aid for development Programme"[183] and was undertaken in three distinct phases, I, II and III that spread across the last three decades of the 20th century, which will be illustrated in what follows.

Similarly to other countries subject to Colonialism and Imperialism, starvation and malnutrition data of children in India was so alarming that wealthier colonizer nations decided to collaborate with India in its domestic program for milk consumption development and invest their surplus food into food-aid campaigns. The nutritional value of milk was not a novelty to the Indian population that benefited of it along the course of its history; nevertheless, after the Independence, the Indian government realized that, besides the capitalistic aspirations, the country's agricultural infrastructures and technologies were not enough to fairly provide and supply for an always increasing economic demand[184] and to emulate Western standards in milk consumption. To compensate the shortage of the animal protein in question, huge amounts of milk were hence brought to India, especially in skim powder form, enhancing and profiting of milk's rich symbolic meaning in Indian culture. With the project starting in 1970, Phase I consisted exactly in a decadal collaboration between India and the EEC through the World Food Programme, based on the sale of imported skimmed milk powder and butter oil. In details, « Operation Flood involved an imaginative but pragmatic use of the funds generated by monetising the WFP gifts of milk powder (126 thousand tonnes) and butter oil (42 thousand tonnes) »[185].

OF started as a very ambitious plan, whose main objective was to produce and distribute clean and unadulterated milk in response to India's striving for self-sufficiency after the Independence. Foreign support was considered substantial as it involved the transferring and import of ECC's agricultural surpluses to sustain and stimulate the growing dairy industry in India but also to find balance between dairy production and environmental conditions.

As a matter of fact, the Indian milk system, like human and nonhuman life, is strictly dependent on the warm subtropical climatic factor of the Indian subcontinent, especially because of its characteristic phenomena, monsoons. This distinctive environmental feature is undoubtedly an

[182] Ibid., p. 47.
[183] National Dairy Development Board, "NDDB Corporate Film", Online Video, *YouTube*, 18 November 2018, Web. https://www.youtube.com/watch?v=p1F47R5dt-g&t=182s&ab_channel=NationalDairyDevelopmentBoard, last accessed, January 2022.
[184]«Under colonial rule famines were a regular occurrence in India. Even though hunger is still a huge problem there with rising economic inequality, the life expectancy in India shot up—way up—after independence». Ahuja, N., et al., *Messy eating: Conversations on animals as food*, Fordham University Press New York, 2019, p.163.
[185] Parthasarathy, S., "National policies supporting smallholder dairy production and marketing: India case study", *Smallholder dairy production and marketing opportunities and constraints*, ed. D. Rangnekar and W. Thorpe W., pp. 271-281, 2002, p. 274.

essential paradigm of the many aspects of culture and economy of India; for these reasons, one of the goals of OF was to bridge the gap between the constant demand of liquid milk throughout the year and its supply, which was seasonal and only granted during the flush season[186]. The import of milk powder and other milk solids was thus believed to be the solution against the deficit of the lean season, because of its optimal storage and recombination capacities, becoming the key product exchanged with the West. The practical objective was «to conserve winter surpluses by processing milk into skim milk powder and butter or butter oil and recombine this into liquid milk in summer»[187], fostering domestic milk production and consumption. The NDDB, along with the IDC (Indian Dairy Corporation) were the national stakeholders that designed and negotiated the details of the project, with the intention of "flooding" the nation with milk. «OF was initially implemented to be a programme directed to the rural population, considered fitting for replication across different geographical areas of India»[188], therefore directly addressing the poorer citizens of India, namely those who had been struggling the most with food resources, agricultural work and climatic disasters.

The local and international actors involved all agreed on insisting and strengthening the grassroots networks, by combining India's rural communities and higher castes in a «vertically integrated cooperative structure that would establish a direct linkage between those who produced the milk and those who consumed it, either as milk or milk products, eliminating all the middlemen»[189]. This was done mainly by the establishment of a National Milk Grid during Phase I: it constituted a geographical policy ensuring «the balancing of supply and demand across the boundaries of metropolitan milksheds by transferring milk from areas of surplus to areas of deficit»[190].

In details, the Grid was a monitoring instrument able to bond dairy producers across India, village milk cooperatives included, with consumers of metropolitan cities (or metro dairies) and smaller towns. The connection between «18 of India's premier milksheds with consumers in India's four major metropolitan cities, Delhi, Mumbai, Kolkata and Chennai»[191] was one of the first accomplishments derived from this system, observed in 1980. India's biggest urban areas, which included these four cities, served as the primary hubs for milk demand and measures of evaluation for the ongoing plan of action. The outcomes were highly impressive compared to the risks the cities faced during the

[186] Atkins, P. J., "Operation Flood: dairy development in India", *Geography*, Vol. 74, No. 3, 1989, p. 260.
[187] "Perspectives – Shades of Grey", *SAGE Journal*, Vol. 9, No. 3, 1984, p. 226.
[188] Doornbos, M. et al., "Operation Flood: impacts and issues", *Food Policy*, Vol.12, no.4, 1987, p. 376.
[189] "Perspectives – Shades of Grey", *SAGE Journal*, Vol. 9, No. 3, 1984, p. 226.
[190] Atkins, P. J., "Operation Flood: dairy development in India", *Geography*, Vol. 74, No. 3, 1989, p. 260.
[191] https://www.nddb.coop/about/genesis/flood

1950s and 1960s, with significant challenges such as decreased milk production during certain seasons and unfavourable weather conditions, which posed a serious threat to the milk supply[192].

The focus on promoting the organizational form of the cooperative within the dairy market was thought to be a democratic way to set the right foundations for infrastructures and institutions that would have furnished milk in a sustainable and fair manner to everyone, down to the village level[193], by providing remunerative prices. The tripartite project in fact aspired to mitigate rural poverty by letting the lower-class producers access to greater quantity of livestock, potential sources of income[194]. Furthermore, by intervening on the new cooperative milk marketing structure, OF was also introduced as an initiative to control and eventually eliminate the wasteful and exploitative private trade of milk used in India up to that time, reduce unemployed family labour in the milk sector and boost the amount of milk available for rural consumption, so that the concerning malnutrition levels of marginal citizens would have been mitigated[195].

The World Food Programme's support for India's dairy development initiatives for Operation Flood I was substituted by direct food assistance from the European Community and a loan from the World Bank/IDA during Operation Flood II and Operation Flood III. During Phase II (1981-1985), 10 million producer families were enrolled in the Programme, «to improve the milk supply of 150 cities each with a population of over 1 million»[196].

The NDDB saw a noticeable increase in domestic production of milk powder, whose reliance was now strictly tied to EEC and World Bank loans. The following and last phase, planned as one of consolidation, extended from 1987 to 1996; milk was now being supplied to 450 towns and cities through Operation Flood, with an estimate of 13 million litres of milk per day provided to feed the population[197]. The goals and approaches remained consistent with those of Operation Flood I, and, by the conclusion of the third phase, the program had achieved several noteworthy accomplishments across its three stages. These included the modernization and expansion of the dairy industry, the establishment of a national milk grid and improvements in the quality of milch animals, resulting in higher yields per lactation and reduced inter-calving periods. Such innovations translated into

[192] Parthasarathy, S., "National policies supporting smallholder dairy production and marketing: India case study", *Smallholder dairy production and marketing opportunities and constraints*, ed. D. Rangnekar and W. Thorpe W. pgs, pp. 271-281, 2002, p. 274.
[193] "Perspectives – Shades of Grey", *SAGE Journal*, Vol. 9, No. 3, 1984, p. 226.
[194] Doornbos, M. et al., "Operation Flood: impacts and issues", *Food Policy*, Vol.12, no.4, 1987, p. 380.
[195] Ibid, p. 379.
[196] Atkins, P. J., "Operation Flood: dairy development in India", *Geography*, Vol. 74, No. 3, 1989, p. 260.
[197] Ibid., p. 261.

increased earnings for producers. Overall, «the enormous urban market stimulus led to sustained production increase raising per capita availability of milk to nearly 210 grams per day»[198].

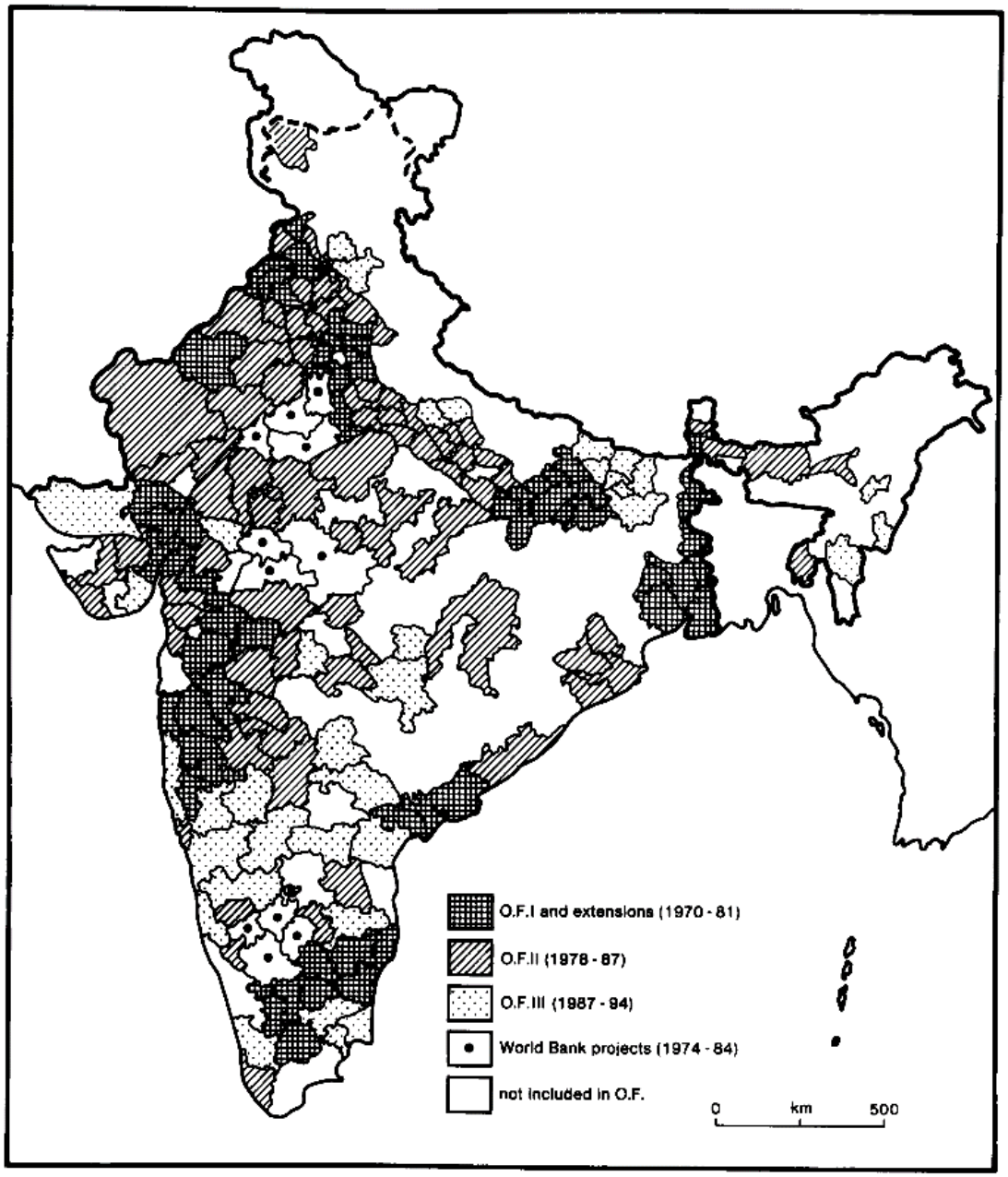

Fig. 3: geographical distribution of the three phases, from Atkins P. J., p. 261.

[198] Parthasarathy, S., "National policies supporting smallholder dairy production and marketing: India case study", *Smallholder dairy production and marketing opportunities and constraints*, ed. D. Rangnekar and W. Thorpe W. pgs, pp. 271-281, 2002, p. 275.

2.3. Patriotic foodways to socioecological failures

Although having such high moral purposes, the so-called White Revolution did not end in a great epilogue, but has rather been widely criticized, especially on by the domestic audience that assisted and acted as protagonist in this evolutionary design of majestic intentions. Operation Flood holds the distinction of being the world's largest initiative in this sector, yet it has also garnered considerable controversy. Several were the controversial points of discussion, but especially «the place of milk in India's agricultural economy and nutritional pattern, the relevance of Euro-American dairy technology in tropical areas, the dangers of relying on dairy aid from the European Economic Community, and the various conflicting interests at stake both within and outside the country»[199]. Most of the claims made by the NDDB were exaggerated, not fulfilled, and the results did not meet the expectations.

These are the listed outcomes[200] registered after Phase III of the White Revolution:

- Four "Mother Dairies" were established, in Bombay, Calcutta, Delhi and Madras, were solid milk products and butter oils were combined in milk-processing plants to produce milk for the urban target.
- A national milk grid was created, to manage the exchange and transportation of milk from the processing plants across the nation, which resulted in local producers around the Mother Dairies to lose their jobs.
- Amul became the largest producer of baby food at the domestic level and a strong opponent of the WHO's Code that would regulate the advertising of baby foods (examples will be provided later in the thesis).
- Important quantities of imported commodities of heterogeneous nature would be redirected from cities to Mother Dairies controlled by Amul.
- Verghese Kurien become a consultant for the World Bank, directing the expansion of the program in Bangladesh, Pakistan, Philippines, Sri Lanka and China.
- Indigenous cattle population experienced a declining in numbers comparable to the 48% after the end of the final phase of Operation Flood in 1996.

What went wrong was that food aid coming from abroad would not be distributed as direct charity to those in demand; instead, surplus dairies would be sold to the public, allowing in this way the Government and the NDDB to re-invest the generated turnover in long-term dairy development in

[199] George, S., "Operation Flood and Rural India: Vested and Divested Interests", *Economic and Political Weekly*, Vol. 20, No. 49, 1985, pp. 2163-2170, p. 2163.
[200] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 605.

the country. Business elites, to defend their privileged position, would argue that dairying was a primary mean to gain affluence and to measure progress as OF would organize small and landless farmers into cooperatives, with the aim of increasing milk production and the negotiation of product rates[201].

India's rural farmers, «victims of a government drunk on notions of industrialization»[202], were instead underrepresented in the programme; this negligence emerges as severe problem considering that India predominantly relies, to this day, on a milk production system that is mainly comprised of small-scale farmers. During OF, the commitment towards landless labourers and marginal farmers, making up for the 50% of the Indian population circa[203] was dwarfed in favour of richer producers, who would supply milk to wealthier urban consumers, not alleviating poverty at all. Poorer participants' incomes in fact seemed to be positively impacted by the introduction of a National Milk Grid only as an alternative way of disposing of the milk already produced [204], and not by additional and complementary claims of the Operation Flood, such as the disposal of additional livestock.

If the goal of this initiative was to enhance productivity, create efficient market systems, and provide better access to buyers, contributing to the economic well-being of marginalized farming communities, unfortunately the worsening shortage of cattle feeds and fodder disproportionately affected small producers, making it unlikely for them to benefit significantly from this project. The adoption of new milk production technology primarily occurred in highly irrigated and agriculturally prosperous regions of the country. Estimates of bovine feed requirements in India during the OF period were based on the projected population of bovine stock and their per capita feed requirements, as recommended by the National Commission on Agriculture, but such estimations had major limitations due to unrealistic assumptions and poor techniques of calculating animal feed requirements[205]. In many parts of India, the proposed lines of modernization, like better feeding practices or veterinary care, would not be granted to rural farmers. At the same time, the outcomes of OF were influenced by ownership and distribution of milch animals in India, an unequal factor that demonstrated a highly favourable result for upper classes households and a urban bias, ignoring that in rural landscapes animals would thrive at their best. Animal health and wellness were put apart in

[201] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 605.
[202] Siegel, B. R., *Hungry nation: Food, famine, and the making of modern India*, Cambridge University Press, 2018, p. 228.
[203] Doornbos, M. et al., "Operation Flood: impacts and issues", *Food Policy*, Vol.12, no.4, 1987, p. 380.
[204] Ibid, p. 379.
[205] Narayanan Nair, K., "Operation Flood: Some Constraints and Implications", *Economic and Political Weekly*, Feb. 23, 1980, Vol. 15, No. 8 (Feb. 23, 1980), pp. 446-448, 1980, p. 446.

the discussion on the development of the Indian dairy industry, as well as the expectations of lower caste breeders.

«Insofar as intra-national interests have come under scrutiny in the context of Operation Flood, the focus has generally been on the relationship between rural and urban India established through the dairy sector»[206]. In terms of national interests, the interests of dairy producers are associated with rural areas, while consumer interests are aligned with urban regions. The governmental investments on the dairy system «in terms of the new technology of breeding, milk marketing, processing and distribution [resulted] in the long run in widening of the disparity in the distribution of rural outcome»[207].

Taking into account that the second phase of Operation Flood spanned over 150 districts in India, involving around 10.5 million households of milk producers, undoubtedly sheds a light on the caste affiliation of these households. This thesis' anthropological quest brings attention to ecological and social inequalities among living beings, stressing the challenging conditions of those who were and still are agents, yet not benefiters, in the industrial framework of the dairy revolution. Thereby, object of analysis is the Indian society, not uniform but consisting of various interest groups that are structurally opposed to one another. It is possible to categorize these groups based on land ownership, distinguishing between those without land and those with marginal, small, medium, and large holdings. Additionally, different castes are identifiable within the society, which are differentiated based on rituals, occupations, and social status. Since the hierarchies of class and caste often coincide, one can use the composite word "claste"[208], as a to refer to these groups, acknowledging that it may not be linguistically ideal but using it for brevity and efficiency in this analysis.

Livestock farming in India historically differentiated between cows and buffaloes, with cows used as draft animals and buffaloes primarily kept for milk production. However, the cattle industry faced challenges such as a large population, scarcity of feed and fodder, low productivity, and frequent epidemics. Prior to the modern era of dairy development, there was no village-level system in place for managing surpluses or collecting, transporting, processing, and distributing milk. Surpluses were typically converted into ghee or milk sweets as the primary means of preservation and utilization. During the colonial rule, policies focused on supplying milk to the armed forces and urban residents through military farms. The colonial regime also established milk colonies in the major cities of

[206] George, S., "Operation Flood and Rural India: Vested and Divested Interests", *Economic and Political Weekly,* Vol. 20, No. 49, 1985, pp. 2163-2170, p. 2163.
[207] Narayanan Nair, K., "Operation Flood: Some Constraints and Implications", *Economic and Political Weekly*, Feb. 23, 1980, Vol. 15, No. 8 (Feb. 23, 1980), pp. 446-448, 1980, p. 448.
[208] George, S., "Operation Flood and Rural India: Vested and Divested Interests", *Economic and Political Weekly,* Vol. 20, No. 49, 1985, pp. 2163-2170, p. 2163.

Mumbai, Kolkata, and Chennai, implemented quality standards for ghee and butter, and exerted control over the movement of milk and milk products through regulations[209].

In relation to this aspect, the same NDDB, under the aegis of the Ministry of Agriculture, was conceived as

> an expert technical body to guide and co-ordinate the accelerated development of the dairy industry in India and to provide the necessary technical, managerial and consultancy services. NDDB was expressly asked by the Prime Minister [Lal Bahadur Shastri], to attempt to replicate the Anand pattern milk co-operatives movement throughout the country[210],

thus underlining the willing to encourage community participation and involvement. In fact, the milk supply chain, constituted by the production, processing, distribution and retail of dairy, had the greatest potential to be the main vessel for improvement of livelihoods for the many stakeholders involved, especially dairy farmers. Policy initiatives from the government proposed in accordance with the Operation Flood strategy were thought to epitomize the much-needed linkages between the producer and the consumer through new, therefore revolutionary, pricing, procurement and marketing system[211].

The Indian Government, though, has been unable to offer adequate protection and support measures to small farmers in line with the regulations set by the World Trade Organization (WTO). This included provisions for poverty alleviation and safeguarding livelihoods[212]. Obviously, the premising condition for raising milk production during OF was that farmers would consider the participation in the OF cooperative milk system as an attractive opportunity for investing resources[213], but this was not the case. On this topic, the Food and Agriculture Organization released a comment on the evolution of Operation Flood, noticing in the early 1980s that unfortunately «for some time to come, milk and milk products will probably continue to be consumed by the more well-to-do people»[214].

[209] Parthasarathy, S., "National policies supporting smallholder dairy production and marketing: India case study", *Smallholder dairy production and marketing opportunities and constraints*, ed. D. Rangnekar and W. Thorpe W., pp. 271-281, 2002, p. 271.
[210] Ibid., p. 273.
[211] Ibid., p. 273.
[212] Ibid., p. 280.
[213] Parthasarathy, S., "National policies supporting smallholder dairy production and marketing: India case study", *Smallholder dairy production and marketing opportunities and constraints*, ed. D. Rangnekar and W. Thorpe W., pp. 271-281, 2002, p. 280.
[214] Food and Agricultural Organization (FAO) (1981), *World Food Program Terminal Evaluation Report on Project India 618 (Operation Flood I)*, Rome: FAO, p. 62.

With the indigenous dairy production not meeting the NDDB prospects, «Operation Flood officials have had to rely on increasing milk procurement from the rural areas and increasing imports from the EEC»[215]. There are indeed many empirical resources on the failures of OF, witnessing how stratified and complex the Indian milk system was built; the goal of self-provision in this agrifood sector led to an increased dependence on foreign dairy imports and technology. What started as a programme of domestic industrialization and foreign food aid became a case of dependence on colonialist resources and environmental disregard, as I will illustrate in the following argumentations.

The impact of different dairy production and consumption models on the environment has become an increasingly important issue globally, because of its concerning various impacts on the ecosystems. Although industrial dairy practices in rich nations with higher yields may require less land, they have a greater environmental impact due to the importation of livestock feed grown in other areas with land and water resources. In wealthy nations, livestock farming is linked to high greenhouse gas emissions due to the clearing of land for pasture and feed production, as well as the methane emitted during livestock lifetimes. On the other hand, smallholder dairy farming in low- and middle-income countries, such as India, may require fewer resource inputs but need more productive animals to produce the same amount of milk[216].

India, with the second-largest human population globally, is also home to a significant population of livestock; in particular, the country holds the top position in terms of the cattle and buffalo population worldwide. After Verghese Kurien's death in fact, in 2012, the statistics of bovine milk economy coincided with what he had forecasted: in 2015, FAO reported that India had the « highest 'livestock' population in the world at 485 million, of which dairy bovines—including cows and buffalo—comprise 185.2 million, making it also the largest global owner of cattlehead (FAO 2015) ». But the rising demand for dairy consumption did not meet the reality of the complex Indian agrifood system, somehow constraining the Indian government to rely on external aid.

The role of international actors within the programme appears twofold and is shrouded in lies: for instance, while representing around 30% of the annual yielding in 1980, it is crucial to note that the almost perpetual stream of aid commodities from abroad has tended to overshadow the effective domestic milk supply, letting India become addicted to cheaper foreign dairy deliveries[217]. Together with lower prices, milk's quality also got conditioned. Operation Flood officials were in fact relying on ECC's leftovers and rural areas milk procurements, while not being transparent with their data. In

[215] "Perspectives – Shades of Grey", *SAGE Journal*, Vol. 9, No. 3, 1984, p. 228.
[216] Brown K. A., et al., *The role of dairy in healthy and sustainable food systems: community voices from India*, BMC Public Health, 2022, p. 2.
[217] Doornbos, M. et al., "Operation Flood: impacts and issues", *Food Policy*, Vol.12, no.4, 1987, p. 377.

light of the many issues raised among the Indian population regarding the costs and inefficiency of OF, newspapers in effect report that public evidence of commercial imports of milk powder during the first half of the 1970s were being ignored and the same imports before 1970 were also being deliberately omitted. Official documents belonging to the IDC and NDDB promoted impressive graphs depicting increasing milk production in the country due to the impact of the project, even though the graphs and figures they were based on were unreliable[218].

For instance, the 1981 official graphs of "gift imports", namely surplus dairy resources coming from the European Economic Community, only show data until 1977; it is depicted that since that year, the EEC has stopped sending stocks to India as gifts, manipulating the truth since this data did not include the foreign imports of butter oil and butter, which were told not to be imported to India before Operation Flood. In response, an unpublished document from the Indian Dairy Corporation (IDC) now acknowledges that international imports between 1982 and 1987 existed and averaged around 45,000 tonnes. In 1982, imports reached a record of 77,467 tonnes: this total included 14,000 tonnes of butter oil and 4,000 tonnes of butter, resulting in a grand total of 95,000 tonnes of imports[219].

Another piece of evidence that suggests milk production was not growing while milk procurement increased comes from the figures of the organized dairy sector, which are considered more reliable. The procurement of fresh milk for metropolitan organized dairies during Operation Flood I was supposed to increase from 6.87 *lakh* (687,000) liters in 1970 to 22.75 lakh (2.275 million) liters in 1975. However, the actual increase was only 13.41 lakh (1.341 million) liters, and this goal was only achieved in 1981[220].

How was this possible? The struggle to be recognized and identified within the global superpowers as a decisive player among Western and wealthier nations shaped the course and the trend of the White Revolution. Albeit «post-Independence economic policies had continued an insular Gandhian emphasis on developing and protecting indigenous industries, economic liberalization in the 1990s led to a rush of foreign imports, as well as rising employment and incomes coming from foreign companies taking advantage of relatively cheap labour in India and seeking to expand their markets»[221].

If the perspective and realization of such reformative projects followed a global momentum, a narrower lens and a local adaptation of these ambitious revolutionary goals was needed to fit the

[218] "Perspectives – Shades of Grey", *SAGE Journal*, Vol. 9, No. 3, 1984, p. 227.
[219] Ibid., p. 227.
[220] Ibid., p. 227.
[221] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 54.

agricultural situation of India. Operation Flood, core of changes and engagement for the milk system's development, applied instead a "package"[222] method of predetermined elements assumed to be replicable throughout regions, inevitably incorporating some weaknesses in its accomplishments due to the lack of attention to the heterogeneous Indian industry and territory. Further major critiques addressing the OF were in fact the application of successful Western technology to the ancient and traditional Indian dairy system; introducing new foreign genetic strains of cattle in the Indian ecosystem is perhaps the most scandalous example of it[223], and, for its complexity, it will be treated in the following chapter.

The catastrophic perspective that sees competition as the predominant driving force in all human relationships with the Natural world and the Other[224] relies in the interiorized concept of the «*Homo economicus*, which maximises its utility and possesses seemingly infinite needs, is encountering its own limits, both individually and collectively»[225]. The network of smallholder mixed farms, of average one to three cows per farm, includes nowadays approximately seventy-five million rural families in India[226]: «dairying has become an important secondary source of income for households engaged in livestock and agriculture, and the government views growth in the dairy industry as one route to fulfilling a pledge to double farmers' incomes, as well as contribute to national GDP»[227]. The Dairy and Animal Husbandry sector is in fact responsible for approximately 4.2% of India's GDP, and represents a crucial means of income for around 70 million rural households[228]. Furthermore, this sector is acknowledged for its significant role in generating employment opportunities across generations and adding value to the agricultural sector of the Indian economy, but still exploits human and nonhuman work through horizontal capitalistic discrimination.

In line with the economic systems of wealthier nations of which it had previously been a colony, India as well gave in to the addictive nature of capitalism, adopting since its independence the same unsustainable dependencies and lifestyles, including eating habits, ultimately leading to the exponential erosion and harm of the collective well-being. Such anticipated collapse, mainly due to the failures of a plan of action modelled upon foreigner standards that did not encompass the wide heterogeneity of Indian environmental and social ecosystems, is apolitical, genderless, unreligious.

[222] Atkins, P. J., "Operation Flood: dairy development in India", *Geography*, Vol. 74, No. 3, 1989, p. 262.
[223] *Ibidem.*
[224] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 105.
[225] Ibid., p. 98.
[226] Brown K. A., et al., *The role of dairy in healthy and sustainable food systems: community voices from India*, BMC Public Health, 2022, p. 2.
[227] Ibid., p. 2.
[228] D. P., Mahida, B. S., Chandel and B., Kumari, "Dairy cooperatives in India: Trends of its coverage and determinants", *Indian Journal of Animal Sciences* ,92 (4), 2022, p. 497.

The several dimensions upon which the ideals of Operation Flood were meant to perform demonstrated to have affected both humans and nonhumans, although cutting out from this totality some privileged categories excluded from the socioeconomic deficiencies that characterized the project. The failures of these huge interventions on the milk industry disregard all those species coexisting within the same ecosystem, albeit with varying intensity and severity, in contrast to the anthropocentric idea that humans are excluded from the perceived natural world for their superiority. Among those who profited on others' environmental injustices of course there are of course the Indian founders of OF, along with their Western collaborators, united in a long-term commitment for the capitalistic exploitation of Indian resources at the expense of the local multispecies communities.

Not only do these nations face socioeconomic and political challenges due to the exploitation of natural resources, but they also endure environmental degradation and harm to their citizens. The exploitation of natural resources causes hardship and adversely affects the standard of living of the underprivileged and most susceptible members of societies and ecosystems[229].

[229] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p.97.

2.4. Food for thought: multispecies oppressions and postcolonial reflections

An in-depth examination of the capitalistic framework of Operation Flood reveals that the long-awaited economic growth of India relied on the commodification of the same living being the country had celebrated as sacred entity and pan-religious nationalistic symbol. In the newly industrial context of India, the body of the cow underwent an expected transformation according to the biological power the animal was born with. What ought to be protected and honoured, the reproductive ability of the feminine body, representation of the cosmos' birth and equilibrium, has been instead rendered a tool: the maternal became material.

Evolving from a European colonialist heritage meant to deal with a renewed culture, hungry for socio-political and economic approval and accreditation on an international scale. Decades of occupation contributed to establish new norms of reality regarding the individual and the community sphere of living, with the promotion of foreign standards to which the local population gradually adopted. Therefore, it is possible to surmise that it is through its colonial experience that the young independent Nation got educated to new ways of engaging with the idea of progress based on the interaction with the environment and the nonhuman[230]; more intensive exploitation was granted by human ownership to animals designated as "livestock". Even in *gaushalas*, the status of profitable global resource labelled the bovine species, overlooking the human-imposed sacred status of "mother"[231], letting this biological condition being the catalyst factor for intensive breeding enhancement. The involvement of the animal body in conversations about settler citizenship strengthens the belief that the settler state holds undisputed authority as the primary source of post-colonial power, overlooking the continuous effects of colonialism[232].

One consequence of the imperialist experience is a contagious and pervasive sense of blind *trust* that anthropologist Tim Ingold defines as «a *trust* in the abundance of nature's resources rather than despair at the inadequacy of human means»[233], which corresponded to the characterizing reality of the Indian transition from an occupied possession to a proper Nation. This trust was further strengthened by a respective belief in the power of industrialization and the human ability to control and harness nature. Ingold refers to it as "confidence"[234], describing it as a rational attribute of the human individual that is set in the perspective of a generally prosperous economy. As a result,

[230] Belcourt, B. R., "Animal bodies, colonial subjects:(Re) locating animality in decolonial thought", *Societies*, 5(1), pp. 1-11, 2014, p. 6.
[231] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", p. 204.
[232] Belcourt, B. R., "Animal bodies, colonial subjects:(Re) locating animality in decolonial thought", *Societies*, 5(1), pp. 1-11, 2014, p. 6.
[233] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 13.
[234] Ibid., p. 13.

previously unfamiliar and intriguing technological devices and economic strategies gained new understanding and value in the eyes of people, making their standardization justifiable to some extent. According to Ingold's claims, the confident rush and determination through which Operation Flood was projected and implemented in a territory that was not ready did not presuppose a total engagement of the ecosystemic community it was working on[235]; this passive involvement of human and nonhuman actors of the dairy system revealed potential sources of damage rather than improvement. Unsurprisingly, those who suffered the repercussions of the government and higher castes' unwarranted trust and confidence in the possible exploitation of infinite natural resources were marginalized and already discriminated groups of individuals, including both humans and nonhumans.

The cultural conception of the grandeur of the environment, advocated by Hinduism as precious, sacred and political entity whose safeguard dictated the rules of ecological coexistence with the nonhuman for the human community, is quite different from the one type of Nature on which post-Independence India trusts. The latter in fact, is subject to a neo-colonialist filter, inherited from the European settler who in turn, had long made natural resources the foundations of their expansionist and capitalist economies; Nature is to be mastered by the man, whose imaginary now merely relies on the notion of *natural capital*.

It is in this way that the intrinsic speciesist hierarchies of settler colonialism were considered innate and somehow, acceptable. Earlier the grassroots campaigns for Independence were unwilling to compromise the slaughter, overworking and disrespect of the bovine body, despite being characterized by ambiguous instrumentalization of the cow; similar manipulation was protracted in the 1970s, where new economic interests and the "believed" forced adherence to capitalism as only successful economic system dictated new rules on the ecological responsibility of the Indian citizen. Devotion and protection of the cow were hence put aside to favour its industrial exploitation. In doing so, settler colonialism positions indigenous identity on the fringes of settler society, serving as a reference point against which settler citizens are defined and constructed. On that account, it is appropriate to rethink and conceive India's imperialist occupation or the British Raj period (1858-1947) as a more-than-human invasion that caused the shift of social and ecological worlds.

Invasion happens to be one of the "Anthropocene Detonators", following the indications of the ethnographic and anthropological instrument of research Feral Atlas. Ecological consequences originated by anthropogenic infrastructures, are detonators of environmental injustices[236]. Like

[235] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 14.

[236] Zhou, F., "Historical and Fantastical Landscapes: The Making of Anthropocene Detonators", *Feral atlas: the more-than-human Anthropocene*, Web, Creative Work, 2020.

Indigenous philosopher and climate justice scholar Kyle Powys Whyte states, Indigenous communities have become wide aware of the intensified interconnections between colonialism, capitalism, and industrialization, forces that inflict various forms of violence upon humans and nonhumans[237].

Architect, artist and researcher Feifei Zhou contributes to the discussion in 2020, by illustrating three stages of India's Invasion, depicting from right to left the before, during and after. A horizontal perspective of analysis, as the illustrative axis that Zhou has chosen for her work, is the optimum way to capture all the multifaceted elements that featured in India's more-than-human history.

«The environmental—and political and social—problems of livestock in the Anthropocene are the result of human actions and cattle actions shaping each other and shaping the places where these interactions occur»[238], claims environmental historian Rosa E. Ficek. «The vastness of an unexplored landscape that seemingly stretches endlessly onwards»[239], corresponds to the rich heterogeneity of Indian ecosystems and natural resources, upon which the settler relied on with trust, hence perceiving it as object of conquest and unlimited profit. Spatial and timing dimensions meet «starting from the assorted colonial ships approaching the shore, […] where various forms of violence and resistance take place, among both humans and nonhumans, and eventually arrives at the anthropogenically modified landscape on the far left, where processes of invasion continue»[240].

The authors of Feral Atlas suggest that the Anthropocene should be analysed in connection with the physical bodies, stories, time, and land involved. They propose "Indigenous Place-Thought" as a methodology to reintroduce critical thinking into the interconnected histories of both humans and nonhumans within the environments where we must coexist. This approach would encourage us to consider the significance of place in our collective existence, encouraging processes of decolonization and indigenization of the Anthropocene by bringing «Indigenous epistemologies, ontologies, and practices to the fore in a meaningful and ethical way»[241].

[237] Whyte, K. P., "Indigeneity in geoengineering discourses: some considerations", *Ethics, Policy & Environment*, 21(3), pp. 289–307. doi:10.1080/21550085.2018.1562529, 2018, p 297.
[238] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 270.
[239] Zhou, F., "Historical and Fantastical Landscapes: The Making of Anthropocene Detonators", *Feral atlas: the more-than-human Anthropocene*, Web, Creative Work, 2020.
[240] Ibid.
[241] Todd, Z., "Indigenizing the Anthropocene*", Art in the Anthropocene: Encounters Among Aesthetics, Politics and Epistemologies* (eds. Davis, H. & Turpin, E.), pp. 241–254, Open Humanities Press, London, 2015, p. 243.

Fig. 4: Zhou, F., "Historical and Fantastical Landscapes: The Making of Anthropocene Detonators", Feral atlas: the more-than-human Anthropocene, Web, Creative Work, 2020.

When examining cattle in relation to the diverse racial and ethnic backgrounds of humans, it transpires that such nonhuman animals might challenge the notion of a homogenous and massified humanity that forms the basis of policy-driven narratives about the Anthropocene because of the differences in cultural representations and interspecies relations. Additionally, the presence of cattle brings forth a perspective that acknowledges the involvement of non-western and non-human forces in the interactions between colonizers and indigenous people, particularly regarding environmental transformations[242]. Follows that the cow's role as a worker in the breeding system and a supplier in the dairy production chain makes it a passive supporter trapped within the expansion of the dairy industry. This makes milk, her final product, a new neo-colonialist tool held by former colonized Hindu castes to reiterate the same violence their ancestors liberated from.

The practical use of cows for milk and bulls for profitable labour, the female for milk and the male for traction, has transcended their agricultural necessity and has been incorporated into political institutions and narratives related to nation-building. Examples include the utilization of Gandhian philosophical musings to establish a newly independent India or the contemporary posturing of Hindu nationalist politics[243], whose argumentation will be deepened in the following chapter.

In doing so, however, the many problems of the late XX century Indian animal husbandry, namely «the growing concerns in dairy farming are shrinkage of resources for fodder production, grazing facility, degradation of common grazing lands, low productivity and profitability»[244] emerged with almost shameful international resonance, which lead the stakeholders of Operation Flood to lie about their data. The pressure to perform of the new state was linked to India's struggle with its own breeding practices, infrastructures, industrial technology and science and disproportioned number of natural resources.

Cow milk and its perceived spiritual purity was «promoted to enhance growth and development in India – to solidify India's position among the world's growing "superpowers"»[245], through an invisible human neocolonization of the animal's body and reproductive capital. « Human colonization of bovine motherhood [became], in effect, the start of the "disassembly line" of animal production where the cow [gets] stripped of her biological bovine motherhood, her infants, their milk, and

[242] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 270.
[243] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), Springer Nature, Melbourne, 2018, p. 137.
[244] Gayathri, S. L., Bhakat, M., Mohanty, T. K., "An outlook on commercial dairy farming in India: A review", *Indian J. Anim. Prod. Manage*, 37(1), pp. 45-56, 2023, p. 45.
[245] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), Springer Nature, Melbourne, 2018, p. 138.

eventually her flesh, skin, and bones»[246]. This corresponds to the cow's *dharma*[247], her ethical duty, according to Hinduism, and job, according to the capitalistic logic of nonhuman *en masse* exploitation, weaving through the silent acceptance and naturalization of human imperialist ideology upon nonhuman individuals.

The policies of the food aid Programme that was Operation Flood signal to reconsider the support of foreign stakeholders, especially the United Kingdom, since the so-called White Revolution was ought to be carried on with the same decolonial drive that brought India to Independence. Instead, the Operation Flood initiative did not witness a robust domestic collaboration between its human and nonhuman actors to achieve the nationalistic objectives of the project. Indigenous scholar Billy-Ray Belcourt affirms on the matter that «decolonization does not exist as a process through which settlers are encouraged to participate in "self-transformation," it is not a politics of allyship, nor is it "a generic term for struggles against oppressive conditions»[248]. The White Revolution, a transitioning challenge for India for a new beginning, was influenced and tainted by external forces, leading to a dependence of the new government on these forces. Such dependence unfortunately resulted in prioritizing commercial relationships and agreements over the well-being of the country's underprivileged individuals, both human and nonhuman, that will find themselves victims of akin oppressions.

In conclusion, the mention of old colonized possessions and territories adds another layer of meaning to nonhuman and human animals' relationship, a metaphorical one. During the period of colonization, powerful nations expanded their empires by acquiring new territories and exerting control over indigenous populations. In this context, animals were frequently employed as metaphors to depict the conquered lands and their inhabitants. The occupation process often involved dehumanizing the native populations and treating them as subordinate to the colonizers. Consequently, animals became a symbol of both the colonized territories and the people who inhabited them. By using animal metaphors, humans have perpetuated and reinforced the colonial mindset and power dynamics.

It is important to recognize and critically analyse these metaphors, as they reflect the historical and ongoing impact of colonization on our collective consciousness. By unpacking the extensive meanings associated with animal metaphors, it is possible to strive for a more nuanced understanding of the complex interplay between culture, power, and the representation of both nonhuman animals and marginalized human communities, linked by similar forms of injustice.

[246] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 204.
[247] Ibid., p. 204.
[248] Belcourt, B., "Animal bodies, colonial subjects:(Re) locating animality in decolonial thought", *Societies*, 5.1, pp. 1-11, 2014, p. 2.

3. Mothering the nation: an Indian paradigm of growth

She felt as if her mind was stopping.

Was she swooning with delight? Yes, all she wanted was that Krishna, Yashoda's boy,

should suck this milk, her life, her hope and her all, if he so chose.

"Yes, I give you all, my beloved child."

The thought flashed across her mind "I am yours"[249].

To pronounce these words is the demoness Putana, tasked by King Kamsa with the assassination of Krishna, divine reincarnation of Vishnu and Preserver of the Hindu trinity, born to rid the earth of the despotic tyranny of the King. «In India, milk is especially associated with Krishna, the Supreme Person or Godhead, who as a child was raised by a group of cowherds»[250].

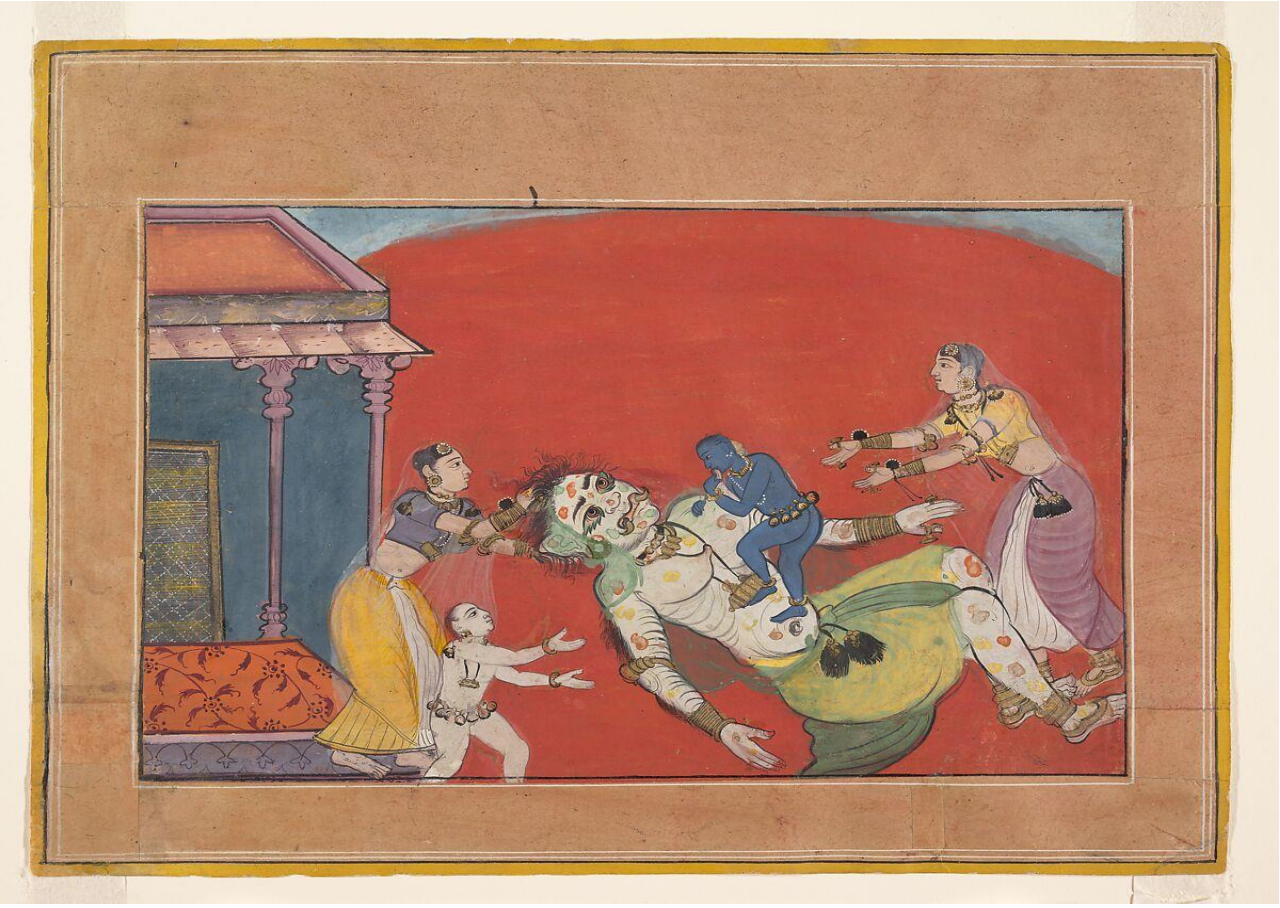

Fig. 4: The Death of the Demoness Putana: Folio from a Bhagavata Purana Series, ca. 1610, MET, NY

[249] Munshi, K. M., *Krishnavatara*, Vol. I, Bharatiya Vidya Bhavan, Bombay, 1967, pp. 65-7.
[250] Velten, H., *Milk*, cit., p. 39.

This artwork, exposed at the Metropolitan Museum of Art of New York, portrays a well-known incident from the adventurous childhood of Krishna, who was under the nurturing care of his adoptive parents in a pastoral setting in the region of Gokula, faced various perils orchestrated by the wicked king Kamsa. In the depicted scene, the demon, in the disguise of a wet nurse is dispatched to eliminate Krishna by feeding him poisonous milk.

«Transformed into a beautiful woman, with a deadly poison smeared on her nipples, […] pretending an upsurge of maternal love and relief that she had at last found him, she took Krishna from his foster mother and gave him her poisoned breast to suckle»[251]. The infant avatar, in blue, became aware of her malicious intent and suckled on her until she met her demise: not only he drank her milk, he also «sucked her life away. The maternal monster swooned, with Krishna's mouth still at her breast, and as she fell dead, she resumed her original hideous form»[252]. This narrative is one among several that illustrate Krishna as a vanquisher of malevolence[253]. While collapsing, the demonic body of Putana undergoes a transformative process, starting right from her breasts, first and last point of bodily contact between the two protagonists, as the demon's nipples become infused with maternal embrace, the sweaty odour of the skin mixes with the enhanced smell of milk: the creature becomes neutralized, transformed, benign[254]. Indeed, according to the legend, despite her malevolent intentions, Putana ultimately achieved *moksha*, the state of spiritual liberation, because she had assumed the role of a mother to the infant deity, as she was animated by a maternal instinct during breastfeeding. Putana is in fact a mother, a tutor, that meets her *dharma,* a Hindu theory that corresponds to a moral sense that governs each existence in this *Saṃsāra*, or world, embodying a metaphor of "bad mother", one who is suffocating in her caring duty, a limiting maternal figure that would pose her devoting and controlling motherhood as obstacle to the development of her progeny. The female demon cannot but offer poisoned milk to Krishna, symbolizing how the negativity can hinder the intellectual, physical and social evolution of a young life if not cared in the right way: it is in this way that the role of the mother is inverted in one of a killer[255]. The suckling avatar removes her toxicity that would otherwise cause harm, and in doing so, he is somehow drying out the same poisonous negativity of the cosmos that thrives on healthy cosmic milk from the *Gaumata,* the Mother Cow.

> By offering him her breast – even in a spirit of hatred – she has performed the supreme act of maternal devotion. Thus even bad mothers are good in Hinduism; the only bad

[251] Devy, G. N., ed. *Indian literary criticism: theory and interpretation*, Orient Blackswan, Hyderabad, 2002, p. 298.
[252] Ibid., p. 300.
[252] Ibid., p. 298.
[253] https://www.metmuseum.org/art/collection/search/64890
[254] Devy, G. N., ed. *Indian literary criticism: theory and interpretation*, Orient Blackswan, Hyderabad, 2002, p. 300.
[255] O'Flaherty, W. D., *Women, Androgynes, and Other Mythical Beasts*, University of Chicago Press, 1982, p. 101.

> women are nonmothers. Similarly, even bad cows (and there are some) are good. […] The cow cannot remain evil; she is immediately purified, for she *is* purity: she is nonerotic fertility[256].

The Putana myth in Indian culture encompasses psychologically significant themes that are distinctively Hindu. These include the symbolism of the poisoned breast, the intense struggle for survival between the malevolent mother and the insatiable infant, and the idea of capital punishment followed by the redemption of the malevolent mother. The notion of "contaminated milk"[257] representing nourishment that brings death, originates during the early stages of life when the separation between a child and their mother occurs. «The poisoned breast symbolizes the child's loss of familiar protection and nurturing of his mother, an experience of "overall loss" and alienation»[258], feelings that are further intensified by the physical reality of weaning, which can occur as late as the child's third or fourth year, coinciding with what can be considered their "second birth." Moreover, Krishna's annihilation of the maternal demon, followed by her redemption as a purified being, provides a resolution to the son's internal conflict. Through the symbolic elimination of the "bad" mother figure, the son eradicates overpowering and sexually voracious maternal images within his psyche, preserving the benevolent and nurturing aspects instead[259].

Providing an ecocritical critique to legend belonging to Hindu mythology cannot but focus on the emotional hunger for milk that pervades the infant deity of Krishna, and metaphorically, every Hindu child. Milk is able to favour growth. The deceptive intentions, the demonic sexuality and violence that the evil spirit embodies are all gathered in the carnal figure of a woman, whose salvation is only guaranteed because of her maternal solicitude and self-sacrifice to Krishna. «Although the imagery of the poisoned breast reflects the dark side of the legacy of the prolonged, intense mother-son relationship in India»[260], it is important to recognize that this very relationship plays a crucial role in nurturing the Hindu personality through trust, devotion, and affectionate care. Despite the challenges, Krishna not only survives but also flourishes in this context, and so did the Indian Nation, mothered and thriving through "the milk of love"[261].

[256] O'Flaherty, W. D., *Women, Androgynes, and Other Mythical Beasts*, University of Chicago Press, 1982, p. 250.
[257] Ibid., p. 299.
[258] Ibid., p. 298.
[259] Ibid., p. 300.
[260] Devy, G. N., ed. *Indian literary criticism: theory and interpretation*, Orient Blackswan, Hyderabad, 2002, p. 299.
[261] Ibid., p. 299.

3.1. Anthropogenically natural: breeding practices on nonhumans

The verb “to milk” signifies to drain, to deplete, to extract, it is tied to the act of exploiting and condenses the result of a mutually beneficial relationship. The term can be incorporated into the language of productivity, which commodifies cows within the discourse, as the man holds responsibility for the female body and her final product[262].

The narratives revolving around the dairy system are intertwined with the idealization of rural life and husbandry practices as sustainable alternatives to intensive farming systems but, what these imaginaries hide though is a gendered violence that multiplies with mass production and consumption of dairy.

The sacred nature of precious food is rooted in the revered status of *Gaumata*, the Mother Cow, who serves as the primary source of sustenance and livelihood for her offspring[263]. As a selfless provider, she exhibits immense generosity that transcends the physical realm and extends into the metaphysical, nourishing her devoted progeny for their development. The symbolic devotion displayed by *Gaumata* and her sacred lineage reflects a shared characteristic between human and nonhuman females, although it is influenced by discrimination associated with the notion of domestication, particularly in relation to specific breeds. The nonhuman breed can be described as the end product of domestication, namely a « group of animals that has been bred by humans to possess uniform characteristics which are heritable and distinguish it from other animals within the same species»[264].

While it is true that the mother-child bond exists across species and holds significant value, it is important to recognize that discrimination based on breed is a societal construct. What happened during Operation Flood is that the distinction and categorization of animals based on their breed led to differential treatments, affecting the perception and treatment of certain individuals or groups. This gendered discrimination is an unfortunate consequence of human intervention and the selective breeding practices that have evolved over time.

For instance, the yak, which exists both in its wild and domesticated forms in Central Asia, possesses larger and more robust wild variants compared to the tamed ones and Marco Polo mentions in Ramusio's account that in the Kingdom of Erguiul yaks were crossed with common cows, resulting in remarkable hybrid animals that were superior for labour compared to other animals and breeds of cattle. It is speculated that this might be the earliest documented instance of a man-made mammalian

[262] Tavella, E., "(Un)Domesticated Embodiments: a multispecies and transfeminist politics of milk", personal notes, 05/04/2023.
[263] Devy, G. N., ed. *Indian literary criticism: theory and interpretation*, Orient Blackswan, Hyderabad, 2002, p. 300.
[264] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 27.

hybrid, although further confirmation is still being researched[265]. Domestication practices in the agrifood system of India have hence evolved and improved alongside technological advancements, passed down through generations of pastoralist communities, that learned with time that the nutritional composition of milk would change according to the different bovine species they were breeding.

Composition of Milk by Animal Species

	WATER (%)	PROTEIN (%)	FAT (%)	MILK SUGAR (%)
Camel	85.6	3.7	4.9	5.1
Cow (Holstein)	87.8	3.1	3.5	4.9
Goat	88	3.1	3.5	4.6
Human	87.4	1.1	4.5	6.8
Mare	89	2.7	1.6	6.1
Reindeer	63.3	10.3	22.5	2.5
Sheep	83.7	5.5	5.3	4.6
Water Buffalo	78.5	5.9	10.4	4.3

(Adapted from Robert Bremel, University of Wisconsin: Milk: Beyond the Dairy, Proceedings of the Oxford Symposium on Food and Cookery, 1999)

Fig. 5: Velten, H., Milk: A global history, Reaktion Books, London 2010, p. 132

[265] Gudger, E. W., "Marco Polo and Some Modern things Old in the Asia of His Day", *The Scientific Monthly*, 37(6), 1933, p. 506.

Table 1 Gross composition of milks of selected species

Species	Average composition (%)				
	Water	Fat	Protein	Lactose	Ash
Buffalo	84.20	6.6	3.9	5.0	0.7
Cow	86.30	4.9	3.4	4.1	0.7
Sheep	83.70	6.0	4.8	4.9	0.8
Goat	86.50	4.5	3.5	4.7	0.8
Camel	87.61	5.38	2.98	3.20	0.70
Human	87.43	3.75	1.63	6.98	0.21

Fig. 6: Cheung, P. C. K., and Mehta B. M., (ed), Handbook of food chemistry, Vol. 11, Springer Berlin, Heidelberg, 2015, p. 514

The publishing of the already mentioned Wright Report (1937) echoed a 1936 article of *The Economist,* exposing what the international audience then started to refer to as "India's food problem"[266]. In the twilight of the British Raj, the large and burgeoning population was in fact struggling with the insufficient domestic production[267], and the primary factors hindering the achievement of economists and nutritionists' desired goal of enhancing the availability and consumption of dairy products as the Wright Report would advise were South Asian bovine breeds. The low efficiency and productivity of ruminant animals in India, together with the prevalence of poverty of the population, were found as key limitations to the productive increase and expanded accessibility for dairy human consumption[268]. Unfortunately, this perspective continues to be upheld even in the present era, extending into the twenty-first century, and has been, since OF, the essential reason to justify contemporary anthropogenic intervention in animal genetics to boost the dairy industry.

As India progressed towards statehood, the connection between cow milk, national strength, and physical growth was emphasized. While milk shortages were lamented, the buffalo, despite being more productive in milk yield, couldn't surpass the cow as a symbol that could unite the Independence movement; however, after gaining independence, the cow lost its significance as a national symbol, and more powerful animals were chosen to symbolize independent India. The zebu cow, which often suffered from malnutrition and produced minimal milk, failed to represent the aspirations and

[266] "India's Food Problem", *The Economist,* 125 (4870), 1936, p. 627–8.
[267] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 46.
[268] Ibid., p. 49.

ambitions of the new nation[269]. Mahātmā Gāndhī, on the other hand, portrayed cow milk as being of greater quality both in nutritional terms and as a religious obligation. It is noteworthy that Gāndhī, despite his support for indigenous Indian village traditions, also argued that the European utilization of cows offered an additional justification for consuming local cow's milk and safeguarding cows, leaving his viewpoint to recent contemporary conversations concerning cow protection[270].

Conversely, an article from 2008 in The Indian Express[271] argued that there was a larger market for buffalo milk compared to cow milk, supported by observations of the State's Dairy Federation, and that to expand the dairy market, the system could also benefit from the addition of buffalo milk to the pure motherly cow milk. In this way, the debate «between faith and fat» was tackled with the assumption that buffalo milk contains a higher amount of fat, resulting in greater financial returns. Coincidentally, the Indian Dairy Federation supported buffalo milk due to its better commercial prospects and the variation in nutritional value. In response to such proposal, the government commission, led by the conservative Hindu nationalist party Bharatiya Janata Party, objected. The report mentioned that the commission's chairman, Babulal Jain, firmly opposed the idea of mixing cow's milk with buffalo's milk for sale. He stated, «Cow's milk is the elixir of life. Those who consume it become energetic and intelligent, unlike buffalo's milk, which makes people lazy»[272]. Water buffalo hold a significant role in Indian mythology as representations of evil, being commonly seen as symbols of malevolence; additionally, they are closely connected to Yama, the Hindu God linked to death, as they are his preferred animal companions for transportation. Interestingly, while cows are believed to encompass the presence of all gods, Yama's dwelling is depicted as being populated with buffalo, highlighting a contrast between the two nonhuman creatures[273].

On this topic, preference to cow milk was also given due to the Indian Ayurveda traditions, that believe that the human body is influenced by three elements - *sattva* (equilibrium), *rajas* (activity), and *tamas* (inertia). These elements impart distinct qualities and tendencies to individuals and are also «ascribed to different foods to explain their effect on the nonphysical aspects of physiology – the mind, heart, senses and spirit. Of all milks, bar human milk, cow's milk is determined as the purest

[269] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 49; «the Nation in fact adopted the Lion Capital, erected by Emperor Ashoka, as its national emblem. The Lion Capital features three lions atop a wheel, which includes a relief of a bull, elephant, horse, and lion», Ibidem.
[270] Ibid., p. 50.
[271] Ghatwai, Milind (2008), "Buffalo Milk vs Cow Milk, MP Has a Fat Problem," *Indian Express*, August 11, 2008. Available online: https://perma.cc/37AH-3JN9, last accessed March 2023.
[272] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 50.
[273] Hoffpauir, R., "The Water Buffalo: India's Other Bovine," *Anthropos*, 77 (1–2), pp. 215–38, 1982, p. 227.

sattvic food, meaning that it is uplifting, yet stabilizing, acting as an aid to serenity and spirituality»[274]. Gāndhī expressed his dissatisfaction with his fellow countrymen's inclination towards consuming buffalo milk:

> I am amazed at our partiality for buffalo milk and ghee. Our economics is short-sighted. We look at the immediate gain, but we do not realize that in the last analysis the cow is the more valuable animal. Cow's butter (and ghee) has a naturally yellowish colour which indicates its superiority to buffalo butter (and ghee) in carotene. It has a flavour all its own. Foreign visitor's cow's milk they get there [sic]. Buffalo milk and butter are almost unknown in Europe. It is only in India that one finds a prejudice in favour of buffalo milk and ghee. This has spelt all but extinction of the cow, and that is why I say that, unless we put an exclusive emphasis on the cow, she cannot be saved[275].

Throughout history, people have extended their reliance on nonhuman animals to the metaphoric level, using them to depict and comprehend different aspects of their surroundings. Animals frequently embody specific qualities or traits that humans attribute to them, like strength, intelligence, or beauty. By assigning these qualities to animals, humans have established symbolic representations that effectively communicate intricate ideas and concepts. In particular, during OF, cattle would carry a deep and multifaceted symbolism that harks back to the era of colonization and the acquisition of territories by colonial powers, they have contributed to shaping perceptions of nonhuman animals and the colonized populations, often perpetuating stereotypes, biases, and hierarchical relationships.

Due to these factors, Operation Flood's Phase III (1987-1996) considered the involvement of a greater number of milch animals in its advancement, placing renewed emphasis on animal health and nutrition with extensive research on vaccines and protein feed. With the bovine increase of milk output being the most researched area of animal breeding, Phase III gathered the scientific efforts of 1950s, according to which reproductive efficiency stood as a crucial factor for the prosperity of cow-calf and dairy operations. In those years, « frozen bovine semen was developed and artificial insemination with progeny-tested bulls became recognized as effective in making more rapid genetic progress for milk yield»[276].

During the third phase the superiority of Holsteins cows, and consequently of their milk, has been idealized to the point of including it into the ground-breaking narrative of the White Revolution. This

[274] Velten, H., *Milk,* cit., p. 42.
[275] Gandhi, M. K., *Harijan*, February 8, 1942.
[276] Stockler, R., "Heifer development: From weaning to calving", *Bovine reproduction*, ed. R. M. Hopper, Wiley Blackwell, Oxford, 2015, p. 655.

species, typical of Northern countries, such as the familiar colonialist power of United Kingdom, has proved to function as more efficient and prolific milk producer compared to the local Indian Zebu cow, providing to Western countries a product of easier accessibility and better nutritional quality.

Technically speaking, «the poor productivity of South Asian ruminants and widespread poverty came to be seen as the key limitations to what economists and nutritionists viewed as the desirable end of increasing dairy product availability and consumption, and this view persists well into the twenty-first century»[277]. Under the conviction of Western milk being a powerful boost to Indian milk if mixed together, the aim of using foreign bull semen was to improve Indian milk into a tastier and more valuable product, with not few ethical complaints from the population, contributing so to the several issues related to the initial issues of Operation Flood. Local autochthonous cows were hence genetically bred with bovines whose living habitats were not corresponding to the peculiar seasonality of India, preferring their productivity over their animal welfare. In fact, «some cross-bred cows have had difficulty adapting to the climate, and male offspring [were] not suitable for draught work»[278].

As interdisciplinary scholar Neel Ahuja underlines, «there are systemic forms that bring different bodies into relation through colonialism and capitalism, and it's necessary to think about the government of species in terms of these systems rather than having an objectified field of identities that can be crossed with one another»[279]. The invasive approach of altering the natural biodiversity of cows in India serves as proof of how the NDDB and the IDC have induced a zoological transition and misused the term *species* to reach political achievements through exploitation, demonstrating how the animal question is still treated as a political and economic matter, not simply as an ethical one[280]. «The realm of interspecies relations, the ways in which the planet, land, species […] have been "engineered" into colonial modernity»[281] ,and the potential for envisioning alternative worlds that have been suppressed or may arise from it, or even challenge it, clearly unveil in this context lack of solidarity, alliances and intersectionality for deconstructing boundaries and foster ecological change, that could pass from an actual way of doing sustainable agricultural ecology.

Reflecting on the topic on a more abstract basis, there are anomalies in the theoretical structure of animal breeding, intended as an exercise of power above nature: these inconsistencies emerge because

[277] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 42.
[278] Atkins, P. J., "Operation Flood: dairy development in India", *Geography*, Vol. 74, No. 3, 1989, p. 260.
[279] Ahuja, N., et al., *Messy eating: Conversations on animals as food*, Fordham University Press New York, 2019, p.164.
[280] Ibid, p. 160.
[281] Ibid, p. 158.

the idea of manufacturing rather than nurturing has been adopted as the dominant model for production. In line with this socioeconomic paradigm, the concept of production is understood as the process of moulding or reshaping raw materials that have already been extracted from nature, namely « nature provides the substance, human reason the form; production lies in the inscription of form upon substance»[282]. For pastoralists and farmers who do not have the ability to physically construct their animals and plants, the process of breeding serves as the closest equivalent to the act of creation. Therefore, it is believed that the essence of domestication lies in the alterations made to the physical characteristics and behaviour of animals through *controlled breeding* or *artificial selection*[283]. In Tim Ingold's words,

> artificial selection can only be distinguished from natural selection on the premiss that the former is guided by a 'preconceived end', an ideal preserved in the collective representations of a human community, suspended above the inter- and intra-generational variability of the material world[284].

Indeed, this sentence suggests that human intervention in the natural world, particularly through processes such as controlled breeding or artificial selection on nonhumans, may lack consideration for the long-term sustainability of ecosystems and future generations. By prioritizing immediate goals and zoological modifications to meet human needs or desires, a potential disregard emerges when trying to preserve the intergenerational criteria of sustainability. This can lead to unintended consequences, ecological imbalances, and a compromised ability to maintain the well-being of the environment and its inhabitants over time. To ensure the safeguarding of intergenerational sustainability, it is crucial to adopt a more holistic and responsible approach that considers the long-term impacts of human interventions on the natural world.

Human scientific ambition invested in the last phase of Operation Flood gave birth to cross-bred cows, «hybrid offspring of local dams and European bulls of the Holstein Friesian/Jersey/Red Dane/Brown Swiss strains, […] through artificial insemination with liquid or frozen semen»[285]. Acquiring cross-bred cows through OF's production unit represented a significant challenge for small producers: it required resources to inseminate the bovine under optimal conditions and to repeat the

[282] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 5.
[283] Bökönyi, S., "Archaeological problems and methods of recognising animal domestication", in P.J.Ucko and G.W.Dimbleby (eds), *The Domestication and Exploitation of Plants and Animals*, Duckworth, London, 2008, p. 219.
[284] Ingold, T., "From trust to domination: an alternative history of human-animal relations", *Animals and human society*, pp. 1-22, Routledge, New York, 2002, p. 6.
[285] George, S., "Operation Flood and Rural India: Vested and Divested Interests", *Economic and Political Weekly*, Vol. 20, No. 49, 1985, pp. 2163-2170, p. 2164.

process until successful, bearing the risk of having male offspring, eventually owning a high-quality local animal to feed the cross-bred calf till its maturity. Such resources and reserves were typically available to medium and large landholders rather than laborers or marginal cultivators. For poorer *clastes*, even the relatively affordable method of acquiring a cross-bred animal might have been beyond their means, as these cows were expensive to purchase. Although funds could be accessed through credit from various institutions, in reality only a fraction of the allocated finances were spent, a significant percentage of purchased animals died or were resold due to financial difficulties, and replacements were insufficient[286]. The success of the crossbreeding program depended on access to adequate feed, fodder supply, and efficient management inputs, which were comparatively easier for farmers with resources: it is estimated that maintaining a high yielder is 80% more expensive than that of local cattle[287], thus confirming the struggle for smaller producers in providing adequate resources, feed, veterinary care, and generating sufficient income for further inputs, loan repayments, and household needs. In this way, an elite corps of cross-bred cow owners formed[288], exploiting the cows' milch potential at its maximum.

The cow, the buffalo, the nonhuman animals in general demonstrated to be prominently embedded in fraught landscapes of human political conflict, making it hard to disentangle them from the religious, economic, farming and industrial context in which they are used[289]. An unfortunate example is "Mission Milk", a six-year National Dairy Plan started in 2012, financed again by a World Bank loan, proceeding to breed foreign male species to local ones.

[286] George, S., "Operation Flood and Rural India: Vested and Divested Interests", *Economic and Political Weekly*, Vol. 20, No. 49, 1985, pp. 2163-2170, p. 2165.
[287] Ibid., p. 2164.
[288] Ibid., p. 2165.
[289] Narayanan, Y., Mother Cow, *Mother India: A Multispecies Politics of Dairy in India*, Stanford University Press, 2023, p. 40.

3.2. The mechanical perpetuation of reproductive and sexualised violence in the dairy industry

The legitimization of "cow politics" in India has allowed milk to be detached from its political implications and the violence it causes to animals. This approach disregards the gendered, racist, and anthropocentric harms associated with dairying. By politicizing milk, as opposed to beef, we are compelled to recognize the vulnerability of the lactating animals exploited for their dairy resources, as well as the marginalized humans, particularly those of racialized backgrounds, who are trapped in specific segments of India's milk production system[290]. Because of that, there is a need to examine the hidden implications of dairy production, including the mistreatment of animals and the gendered and reproductive violence involved in producing what Carol Adams refers to as "feminized protein"[291].

There is no doubt that the extensive livestock in India has been subjected to immense abuse, and it was anticipated that as the cow population increased, so would the human population and milk production. However, the growth brought about by Operation Flood also has a dark side, as it continues to involve the occurrence of death, resulting in a self-destructive, *self-devouring* pattern of growth[292]. On the treatment of cows within intensive farming, American writer, ecofeminist and activist Carol J. Adams commented that the feminized protein of milk

> is taken from living female animals, whose reproductive capacity is manipulated for human needs. I felt that the unique situation of domesticated female animals required its own term: a sexual slavery with […] dairy cows hooked up to milking machines. Even though the animals are alive, dairy products […] are not victimless foods[293].

Humans have long been inclined to believe that traumas are uniquely experienced by our species, asserting ownership over these experiences. However, a growing body of evidence suggests that sexualized and reproductive traumas are not limited to humans, but rather extend to other species as

[290] Narayanan, Y., Mother Cow, *Mother India: A Multispecies Politics of Dairy in India*, Stanford University Press, 2023, p. 10.
[291] Adams, C. J., "Why feminist-vegan now?", *Feminism & Psychology,* 20(3), pp. 302-317, 2010.
[292] Livingston, J., "In the time of Beef", *Self-Devouring growth: a planetary parable as told from southern Africa*, Duke University Press, New York, pp. 35-60, 2019, p. 36.
[293] Adams, C. J., "Why feminist-vegan now?", *Feminism & Psychology,* 20(3), pp. 302-317, 2010, p. 305.

well. This realization challenges the notion that these traumas are exclusive to our species, highlighting the universal nature of such acts of violence: these are *species* violence[294].

The violence hidden behind the breeding experimentations carried on bovine bodies during OF are of reproductive and sexualized nature, as they include « repeated forced pregnancies; separation of mother and child; diseases/infections caused by continuous lactations; and finally, the commodification in the sale and purchase of animal bodies»[295]. Patriarchal oppression took the concrete form of acts that would be otherwise considered as brutal bestiality in non-farming spaces, whereas in such context they were standardized procedures to ensure the growth of the dairy industry, «such as the human masturbation of the bull for sperm extraction, and forcible human-driven penetrations of animal vaginas and anuses to inseminate them for breeding»[296].

An interesting point in Hindu religion relies exactly on the passive role and controlled sexuality of the bull in the ritualistic act of insemination and in the more pragmatic conception of the Hindu devotee family:

An interesting aspect of the deification of the cow (which represents the wholly gratifying mother of one's earliest recollection) is the way in which the role of her consort, the bull, is minimised. He is a benevolent nonentity, as is the child's father during his first year of life; and yet as Nandi, the divine bull, this mild and passive figure is always associated with Lord Shiva, the essence of maleness[297].

Practices involving non-consensual acts performed on animals for the purpose of artificial insemination undoubtedly reference the concept of the heteronormative division, suggesting a connection between gender roles, sexual behaviours, and human reproduction. In discussing this topic, it's essential to consider ethical concerns related to animal welfare, consent, and the broader implications of gender roles and societal norms. The industrial, secretive and aseptic framework of dairy production sets massive artificial farming landscapes in which both female and male bodies are forced to mimic the natural miracle of life without ever entering in direct contact one with another; it is the man who is in charge of such biopower, that controls the reproductive and sexual activities of his domesticated animals while strongly impacting the liberal evolution of nonhumans' lives. Although in different manners and scales that will be explained later, oppression is hence replicated

[294] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), 2018, p. 143.
[295] Ibid., p. 143.
[296] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 200.
[297] Carstairs, G. M., *The twice-born: a study of a community of high-caste Hindus*, Indiana University Press, Bloomington, 1958, pp. 162-163.

in series, disclosing the male and female bovine bodies as intertwined in a perverse mechanism of nonhuman exploitation in favour of capitalistic paradigms that overcome the biological cycles of the social and reproductive spheres of bulls, buffalos, cows. The performative enactment of such "cycle of cruelty" aimed at extracting milk interests the life of livestock animals on a whole. Bovines have their families broken, are subject to social and spatial confinement or physical suffering from excessively crowded locations, scarce hygiene and dangerous exposition to illnesses, contagions and infections, undergo painful mutilations conducted without anaesthesia that include branding, dehorning and tail docking of the cattle and are eventually killed as soon as their respective potential of inseminator and inseminated body starts declining[298]. The heteronormative functioning of the milk industry does not account for the individual identity, physiological needs and biological timing of the nonhuman, also concerning their sexual life and reproductive season, because, once objectified and rendered invisible, the animal gets quickly replaced without gendered exception.

Vegan activist Karen Davis argues that the sexual acts carried out on animals within the confines of "farming" operations are indistinguishable from acts that would be deemed deviant, cruel, or even sadistic in non-farm settings: « sexual manipulation in one form or another is the very foundation of animal farming, and for this reason it is neither illegal nor regarded as deviant or obscene by animal farmers»[299].

Observations of non-human animals have revealed instances of forced copulation, sexual violence, and coerced reproduction, demonstrating that these behaviours exist beyond the human realm. This evidence indicates that the experience of trauma resulting from sexual and reproductive violence is not confined to humans alone but is a broader phenomenon that affects multiple species. Furthermore, the recognition of these traumas as acts of violence against entire species underscores the magnitude and impact of such occurrences. It is not merely a matter of individual suffering but rather an assault on the integrity and well-being of entire populations. The repercussions can be far-reaching, affecting the reproductive capacity, genetic diversity, and overall ecological balance of these species. By acknowledging the broader implications of these traumas, one can develop a deeper understanding of the interconnectedness of life on our planet.

In accordance with this argumentation, scholar Yamini Narayanan argues that forcible human "involvement" in animal breeding of this type can open up discussions about consent and involve the

[298] Animal Equality, "The truth about the Dairy Industry", Issues, Dairy Industry, USA, https://animalequality.org/issues/dairy/ , last accessed 01/06/2023.
[299] Davis, K., "Interspecies sexual assault: A moral perspective", *Animal Liberation Currents*, 2017, https://www.animalliberationcurrents.com/interspecies-sexual-assault/#more-1680.

recognition of *rape:* «akin to the way marital rape in the private spaces of the home may be exceptionalized as *rape* in patriarchal societies, the forcible sexual invasion of animal bodies in the "production spaces" of the "farm" is exceptionalized as such violence in anthropatriarchal societies»[300]. To clarify, in this discourse the term rape is to be intended through an ecofeminist perspective, namely a non-consensual act of violence that includes the penetration of female victim's orifices. What happens in fact in spaces of man-bovine contact is that «a victim's vagina and anus are repeatedly penetrated by hands and objects without the victim's consent, and the victim is routinely nonconsensually inseminated for the purpose of achieving what results from the rape—a living offspring who can be sold, raped, and enslaved»[301]. The law recognizes the human being as only species related to sexual inviolability, obviously not including cows among potential victims of rape[302]. Moreover, due to the use of artificial insemination in breeding practices being perceived as a standard procedure, religiously, culturally and economically justified, and since the farmer does not derive sexual pleasure from it, cow's nonconsensual penetration and insemination are legally justified and can withstand accusations of animal cruelty[303].

While not all feminist activists equate the mistreatment of cows with physical abuse against women, and this will be later discussed in the subsequent chapter, the usage of the term "rape" should be understood at least for its technical interpretation. For instance, «the dairy industry in fact colloquially refers to the structure designed to corral and pin down female animals for artificial insemination as the "rape rack" »[304], giving language fundamental relevance in identifying the literal practice of violence within the milk system and defining rapists inside it[305]. An additional dimension of this abuse is its intergenerational nature. Despite individual bovine victims changing over time, they inherit a subservient status that reduces them to mere objects to fulfil human needs: hence « the general infliction of domination by the "rapist" remains constant between the metaphorical and the literal female and across species of female animals»[306]. The identity and guilt of the rapist is yet not completely defined as it can vary; it could be a man, a mechanical arm, inanimate objects, bull's semen extracted with coercion[307] to inseminate the female bovine to produce new living offspring,

[300] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 200.
[301] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 33.
[302] Beirne, P., *Confronting Animal Abuse: Law, Criminology, and Human-Animal Relationships*, Rowman & Littlefield, New York, 2009.
[303] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 27.
[304] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 200.
[305] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 33.
[306] Ibid., p. 33.
[307] Ibid., p. 33.

who if born female, can be sold, raped and enslaved in turn. It seems that the guilt lies in the female genitalia one has the misfortune of being born with and sexualized accordingly.

But there are no better perspectives if the cow gives birth to a young male. The biological nature of bovine life would prospect for healthy and normal calves to be breastfed from their mothers for a few months after being born. Sadly, almost all male calves born in dairy farms face one of two outcomes: either they are immediately taken away from their mothers and euthanized shortly after, which prevents any bonding between the mother and calf, or they are confined to a small crate shortly after birth, limiting their movement and causing muscle atrophy. Moreover, « because of milk depravation, many male calves starve to death in the first 2-4 hours of their lives»[308]. In the end, they are slaughtered, and their bodies are turned into mere flesh; they are not calves anymore, they get sold as veal. Generally speaking, the phases of nonconsensual insemination, that can result in vaginal and anal rape of both the cow and the bull, «are practices that run contrary to feminist values about the inviolability of the body, female liberation and equality, and treatment of the body»[309].

After pregnancy and having given birth to a calf, the milking process is extensive routine of torture for the nonhuman animal, takes on average approximately five minutes, and «sometimes even the presence of the young at the adult's head can be enough to elicit the response while the milker 'steals' the milk »[310]. In fact, once being separated from their offspring, mother cows experience a decrease in oxytocin production, that significantly reduces the production rate of milk. To tackle this complication, dairy farmers «rely on the tactile teat stimulation, either manually or by the milking machine»[311]. Greta Gaard in her Postcolonial research on Milk Studies explains that the role of oxytocin in milk production in human mammals is not monitored by material production rate, but rather focuses on «relational behaviours, attachment, nurturance, empathy, and happiness – yet material and relational elements are present for *both* bovine and human mother-infant pairs»[312]. She argues that, because of the multispecies synchrony that characterizes this shared bio-behaviour, «animal science research can thus be used to undermine or to advance animal industry and technology, and influence interspecies relations»[313].

[308] Philip, L., "Feeding Pre-Weaned Veal Calves during Winter Months: Understanding Calf Metabolism and Milk Replacers", *Queen's Printer*, 2005, http://omafra.gov.on.ca/english/livestock/veal/facts/05-081.htm, last accessed: 17/05/2023.
[309] Cusack, C.M., "Consensual Insemination, an Analysis of Social Deviance within Gender, Family, or the Home (Etudes 6)", *Journal of Law & Social Deviance*, Vol. 2, pp. 158-90, 2011.
[310] Velten, H., *Milk*, cit., p. 18.
[311] Bruckmaier, R. M., "Normal and Disturbed Milk Ejection in Dairy Cows," *Domestic Animal Endocrinology*, 29, 2005, p. 271.
[312] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 611.
[313] Ibid., p. 611.

If farmers typically milk cows twice daily, every day of the year, a boost of 10% in milk production is achievable by milking cows three or four times a day, affirming this as the most diffused method within the dairy industry. To expedite the extraction process, milking machines are commonly employed, enabling approximately 16 times more milking to be done per hour compared to the manual practice. These machines utilize four rubber-lined cups to extract milk from the cow's udder. The warm liquid is then directed into a container and transported through a vacuum pipeline to a refrigerated storage tank[314].

The intense milking work schedule of cows further jeopardizes their physical health with the threat of possible infections, especially affecting the mammary area. Among them, the worst is surely the mastitis, a severe inflammation of the udder, strictly dependent on the constraint lifestyle of the bovine. Indeed, to comply with the human demand of dairy, calves are given replacement formula during their mothers' repetitive milkings per day; nevertheless, it is recommended that calves should suckle every two to three hours to meet their biological needs, and, if cows are not suckled for extended periods though, they are at a high risk of developing mastitis[315]. The latter can also occur as a result of humans over-milking cows, a phenomenon that is at the basis of intensive animal husbandry, but is mostly common in Holstein Friesian and Jersey cows, the preferred breeds with whom Indian cattle are genetically engineered, which have been selectively bred over generations to produce more milk than what the calves actually require[316]. «Mastitis is an inescapable reality for cows trapped in dairying, and both the infection and the treatment are extremely painful for cows»[317]. The symptoms that infected cows tend to exhibit under this stress are loud bellowing, excessive consumption of carbohydrates, display of noticeable signs of depression. In addition to depression, they may experience a general fever along with mastitis, which can be accompanied by shivering, rapid weight loss, and loss of appetite. It is widely known that dairy farmers frequently administer large doses of antibiotics to cows with the aim of reducing the presence of pus cells in milk[318], since such stressful conditions and repercussions on the cows' health are not allowed to stop the dairy production sector.

Not only the cow undergoes such physical and stressful pain, but she is also forced to bare psychological agony; «because cows suffer anxiety, farmers milk cows in the same order during each

[314] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 28.
[315] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 211.
[316] Ibid., p. 211.
[317] Ibid., p. 211.
[318] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 29.

milking in order to routinize the process», but this routine further mechanizes the cows. As each animal waits for her turn, not just she «witnesses abuse inflicted on her relatives and cohort, she anticipates the discomfort that will be inflicted on her. She waits to be groped, tugged, latched onto, pumped, and voided»[319]. Emotional distress is unfortunately another case of cattle suffering, mainly connected to the separation between the mother and her infant.

Multispecies traumas exemplify the potential of a deep empathic link between humans and nonhumans, with the mother-child bond being a particular form of violence that has the capacity to evoke strong emotional responses and highlight our innate humanity. In her research, animal and criminal justice scholar Carmen Cusack[320] argues that this disruption of the mother-child bond is an integral part of dairy farming, representing a significant example of gendered violence that has long been a focal point within the feminist movement. The destruction of the bond between a mother and child is a distressing experience that human mothers commonly encounter; similarly, cows also undergo this traumatic event, even within what is perceived as sheltered environment, such as a *gaushala* or cow sanctuary. Theoretically, the so-called "humane" treatment of cows in *gaushalas* is limited to just two aspects: prohibiting slaughter and emphasizing the anthropocentric nature of their worship. However, this explicit focus neglects crucial moral obligations that should be upheld: these obligations include refraining from practices such as forced impregnation, the removal of colostrum and breastmilk from the calves, and the separation of mothers and their infants, that instead take place[321]. In other words, while *gaushalas* may claim to provide compassionate treatment to cows, their definition of humane treatment falls short by disregarding important ethical responsibilities. The emphasis on no slaughter and the religious significance of cows overshadows the need to address issues concerning reproductive and gender justice.

One can observe a parallel between the emotional impact on human mothers and cows when their maternal bond is disrupted. In her ethnographic research, Narayanan narrates about her encounters while visiting *gaushalas* in Calcutta and how these defended her thesis of Indian cow sanctuaries being spaces where animal welfarism and anthropatriarcal structures of animal production legitimize gendered, sexualized and reproductive constriction. Right on the topic of maternal violation, she defines the “system” of *gaushalas* as identical to the one of dairy farming: even « in most gaushalas, the calves, including tiny babies who might be only days old, are penned off from their mothers, or

[319] Cusack, C. M., “Feminism and husbandry: Drawing the fine line between mine and bovine”, *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 29.
[320] Cusack, C. M., “Feminism and husbandry: Drawing the fine line between mine and bovine”, *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013.
[321] Narayanan, Y., "“Cow is a mother, mothers can do anything for their children!”", cit., p. 206.

sometimes completely separated. All gaushalas brush off the need for the lactating mother and infant to spend more than a few minutes together during milking time »[322]. In addition, according to her ethnographic study, «In gaushalas, the supposedly *consensual* familial relationship between bovine "mother" and human "progeny" are enacted in the human consumption of infant bovine breastmilk»[323].

The male-dominated agricultural and food industry perpetuates the violation of nonhuman rights, and its propagation of the naturalized concept serves as a rationale for non-consensual and invasive sexual practices of humans on animals. The image of a cow willingly relinquishing milk meant for their calves to humans is a fabricated narrative that diverges from the principles governing natural processes. When discussing milk extraction and cow breeding, «the notion of sacrificing motherhood is an exceptional resource to naturalize, and even sentimentalize, the inherent harms in these acts»[324].

This happens when humans instrumentalize speciesism to safeguard their capitalistic lifestyle, even simple food habits, persuaded that «milk sourced from cows is not merely food, but *prasad* or sanctified food. When milk is elevated to an exceptional, sacred status, its consumption becomes an act of worship itself»[325], for which nonhuman animals need to be conceived as mere environmental commodities. What is lacking it these situations of invisibility and neglection is that humanity fails to recognize that the pain of nonhuman animals is of equal dignity.

On the topic, American author and antispeciesist activist Robert Grillo asserts that when depicting the relationship between farmer and owned animal as consensual, humans, as consumers of nonhuman animals, are misled into believing that these animals are willing participants in their own exploitation, thereby diminishing their identities and significance of their lives. A consequence is the depraved standard of animal treatment that we ignorantly define "humane", namely «not only do we portray them as consensual, we embellish this fiction by portraying ourselves as their benevolent masters and protectors»[326].

While analysing the development of the dairy system during Operation Flood, the human manufactured consent is attributable to the celebration in Hinduism of the « lactating cow as a freely giving, sacrificing mother to her human children»[327]. When questioned about the well-being of a calf

[322] Narayanan, Y., "'Cow is a mother, mothers can do anything for their children!'", cit., p. 212.
[323] Ibid., p. 204.
[324] Ibid., p. 207.
[325] Ibid., p. 207.
[326] Grillo, R., *Farm to fable: The fictions of our animal-consuming culture*, Vegan Press, Danvers, Massachusetts, 2016, p. 25.
[327] Narayanan, Y., "'Cow is a mother, mothers can do anything for their children!'", cit., p. 201.

whose mother's milk is used for human consumption, the common response is that cows produce more milk than their offspring require, as they lactate to feed both species. However, domesticated cows, whether on intensive dairy farms or *gaushalas*, have been selectively bred over numerous generations to produce more milk than their calves actually need[328]. In this way, the domesticated cattle, whose genetic makeup has been anthropogenically manipulated to produce more milk than her calf requires, culturally thrives as a component of a harmonious Hindu cosmos that abounds with milk for human offspring[329], while the actual animal perishes and dies in such man-made system.

[328] Gade, Daniel W., "Llamas and alpacas", *The Cambridge world history of food*, ed. K. F. Kiple and K. C. Ornelas, Cambridge University Press, Cambridge, 2000.
[329] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 211.

3.3. Decoupling a Gandhian heritage on feminine bodies: sociocultural impacts

Interpreting the notion of patriarchy as the hub of unequal and unjust power dynamics that subjugate and profoundly alter the course of life of those who were not privileged enough to be born as human males, it becomes apparent that sexual acts classified as rape solely take place based on the dominant party's discretion and exclusive desire. In this context, it is sadly rational to establish a causal connection between patriarchy and rape [330]. Acknowledging the existence of sexualized and reproductive traumas even in non-human species challenges anthropocentrism, the belief that humans are the central or most important entities in the world.

Yamini Narayanan though sees an added value to this concept, coining the term "Anthropatriarchy", as a concept that allows to read the topography and essence of animal agriculture[331] and can be generally conceptualized as « the human, gendered oppression, exploitation, and control of nonhuman animals *via* their sexual and reproductive systems, which is required to sustain all animal agriculture»[332]. A further definition highlights the oppressive hierarchical character of this narrative, being it « a meta-patriarchal ordering of society constructed around human gendered exploitation of nonhuman animals»[333].

The theoretical critique moved by Narayanan after her anthropological and intersectional *in loco* studies perfectly embodies the descriptive features of the Indian dairy system and helps in dismembering its controversial intersections with the nonhuman realm. Shifting from a universal critique to a local one in fact means to recognize that Anthropatriarchy and Hindu patriarchy work together in colonizing the living spaces, subjugating the bodies and commodifying the reproductive labour of cows, as well as manipulating concepts of motherhood and breastmilk to establish religious, political, Hindu nationalist, and economic power to safeguard the Hindu Body politic. What emerges is that gendered commodification and sexualized violence represent concerning characteristics related to animal husbandry for human consumption, regardless of its scale. The human enactment of such forms of violence did not leave visible traces along the historical junctures of Operation Flood and the development of the Indian milk industry, but rather thrived on its invisible human and nonhuman agents. Indeed, «Hindu patriarchy refers to the instrumentalization of female and feminized bodies

[330] Laura, R.S. and Buchanan, R., "Towards an Epistemology of Ecofeminism", *Education Research and Perspectives*, Vol. 28, 2001, p. 57.
[331] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 198.
[332] Ibid., p. 196.
[333] Ibid., p. 198.

(women, cows, "Mother India") as "mothers" and cultural guardians of a "pure" Hindu civilization. Both patriarchies commodify bovine motherhood and breastmilk»[334].

Regarding this assertion it is crucial to engage in an intersectional discussion on multispecies entanglements in India, that has its roots right in the most intimate spheres, namely what we ingest and wo we pray. «Akin to dairy bull calves, Krishna was born in prison and was separated from his own incarcerated mother *minutes after birth, prior to even receiving his first lactation from Devaki, his biological mother»*[335]*. Instead, Krishna was raised with care by his adoptive human mother, Yashodha, surrounded by motherly cows. When stories of Krishna are shared across generations of Hindu devotees, they often highlight the nurturing and lactation experiences of the Avatar's non-biological mothers, conveniently overlooking any mention of the suffering endured by his biological mother.* Hindu mythologies of this kind, especially those narrating the adventurous childhood of Khrishna for its strict link to motherhood and nonhuman connection, are considered essential in cementing the meta-narrative of the cow as a nurturing mother[336]. This vision becomes problematic when examined and understood in a broader framework, as specific messages are chosen selectively from religious texts and given interpretations that align with political and commercial agendas, often disregarding the historical and cultural context in which these texts originated.

The combined and compatible narrative of Anthropatriarchy and Hindu male dominance have gradually contributed to the reinforcement of the constructed nature/culture binary [337], that «exceptionalizes the human species as not-animals»[338]. The fundamental basis for all forms of animal agriculture, including dairy farming in India, lies right in the complete control exerted over sentient living beings. This control is made possible by humanist ideologies that prioritize human superiority and reinforce speciesism, a social, religious and political condition similar to racism, in which the domination of nonhuman animals by humans is accepted and justified as the norm[339]. In concrete terms, the biopower of female bodies, of women and cows, is exploited for its reproductive capacity and conceptualized as what Indian Professor of Philosophy and Religion Pankaj Jain identifies as *bovine dharma*. The inherent qualities of the cow, which are intended to be beneficial for human exploitation, involve sacrificing herself and her bovine offspring for the sake of humans; this self-

[334] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 195.
[335] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia,* 57(1), 2018, p. 142.
[336] Ibid., p. 140.
[337] Moore, J. W., "Introduction: Anthropocene or capitalocene? Nature, history, and the crisis of capitalism", *Anthropocene or capitalocene: Nature, history, and the crisis of capitalism,* ed. J. W. Moore, PM Press, Oakland, 2016, p. 3.
[338] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 198.
[339] Ibid., p. 198.

sacrifice is considered the cow's *dharma*[340], alias a moral duty[341]. And it is exactly the «forcible and intimate sexual invasion of the cow's vagina is seen as a virtuous service to enable her to be a "mother"»[342], thus achieving her major and ultimate purpose in life. The cow is portrayed as representing the ideal female figure in Hinduism and source of inspiration for Indian women, with the expectation that this fulfilment alone will bring joy and a sense of completeness to her soul.

The powerful propaganda mobilized by Operation Flood effectively conveyed a congruent core message, emphasizing the urgency of embodying the ideals of motherhood as a patriotic responsibility related to female beings and more precisely addressing women, who play a vital role in upholding Hindu culture, to transmit their *dharma* and maternal values to their children as well[343].

As a matter of fact, the trope of the Hindu sacred cow was employed in governmental initiatives in the agricultural and food sectors, identifying in its precious resource, milk, the symbol for a strong independent nation. The holy figure of the cow was associated to «the mother of civilization, nurturing its emergent citizens»[344], proud sons of a self-sustaining nation. Even though, it is noteworthy that the predominant source of milk consumption in present-day India is derived from water buffaloes, which exhibit higher productivity levels and possess a relatively lower religious and cultural status, cow milk remained the primary source of protein that was consumed in massive amounts by younger generations of Indian children. The extensive importance given to cows and their milk in Hindu scriptures, along with the utilization of cow's milk for human consumption, establishes the cow as a mother figure for Hindus. However, this poses a problematic situation: religious scriptures seem to selectively acknowledge the unethical nature of commercializing infant lactation[345], although they celebrate and incite mothers to devote their reproductive power to their

[340] The maternal principle of cows, their Hindu dharma of mothering, breastfeeding, and caring for their offspring, as is the case with women and their human progeny, makes sense only if it is seen as a holistic projection within a system governed by the fulfillment of one's own dharma, one's own duty, which implies a sense of self-sacrifice. In classical Indian Literature, this concept overpasses the dualistic division of human-nonhuman, allowing each individual to reach its dharma in a fluid dialogue among species. This is concept of each life having a particular moral path to follow and sense of living to strive by, is reinforced and perpetuated across Hinduism also with the religious belief of intraspecies reincarnation after death. From Fisher, M., *An Environmental History of India. In An Environmental History of India: From Earliest Times to the Twenty-First Century (New Approaches to Asian History, p. I)*, Cambridge University Press, Cambridge, 2018, p. 43.

[341] Jain, P., "Bovine dharma: nonhuman animals and the Swadhyaya Parivar", N. Dalal & C. Taylor (Eds.), *Asian Perspectives on Animal Ethics: Rethinking the Nonhuman*, Taylor and Francis, New York, pp. 169- 178, 2014.

[342] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 210.

[343] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), 2018, p. 136.

[344] Fisher, M., *An Environmental History of India. In An Environmental History of India: From Earliest Times to the Twenty-First Century (New Approaches to Asian History, p. I)*, Cambridge University Press, Cambridge, 2018, p. 58.

[345] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), 2018, p. 143.

progeny, but it fell short of the chase towards capitalistic profit and global recognition as competitive Nation.

Eager to finally manage its own natural resources and products, the newly independent India elected its cows' pure milk as protagonist of modernist industrialization campaigns, as the proteic substance not only epitomized the development and improvement of a rural economy, beneficial to the community, but also represented an optimal serum of strength able to raise up a young nation, free from its defeated past and determined to revive its authority and grandeur. Personal individual improvement and growth were hence believed to be distilled in an appetizing glass of milk, prepared by a loving mother for a nation that, after having suffered imperialism, food scarcity and famines, was thirsty for prosperity. The alarming poor growth of the population due to the poverty, lack of food safety and in combination with childhood infectious diseases related to malnutrition, « made milk's growth-enhancing qualities especially attractive. Large and powerful citizens were needed to build strong nations»[346] .

Once having abandoned an insular Gandhian emphasis on developing and protecting indigenous cultures and industries, Operation Flood induced a gradual economic liberalization that reached its peak in the 1990s. This led to a surge in foreign imports and an increase in employment and incomes through the exploitation of affordable human and nonhuman labour in India by foreign companies looking to expand their markets. The neo-colonialist wave manifested by cow's milk and that had first hit the stakeholders of the nascent dairy system at the beginning of phase I in the 1970s was now unstoppable and gained significant traction, particularly among Indian upper and rising middle classes[347]. Along with India's economy, its geopolitical power has expanded as well. In such transformative period marked by political, economic, and dietary transformations, a significant surge in milk consumption in India has occurred, in competition with the decline of other Western traditional dairy strongholds like Europe and the United States; the constant comparison with other external powers has impressively shaped a proper growth paradigm, that spreads from the individual, to the familial, to the household and to the national level of India.

«The dairy industry must be careful not to incite communal antipathy by using religious symbols in its marketing. Large Indian dairies such as the pan-India "Mother Dairy" brand play on some familiar—but not divisive—and unifying nationalist themes» [348] . Nonetheless, following the

[346] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 58.
[347] Wiley, A. S., *Re-imagining Milk*, Routledge Press, New York, 2011.
[348] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 55.

implementation of economic policies that facilitated the entry of multinational corporations like Nestlé or Danone, milk, which primarily remains a domestic product, has adopted Western motifs to present a more "modern" or "global" image. This approach serves to detach milk from its traditional associations (which may be perceived as "outdated") and instead align it with India's full-fledged integration into the global political economy[349].

Verghese Kurien's Amul, «which prides itself on being the "taste of India"»[350], is nowadays « the most successful cooperative system and significantly contributes to the countries' milk production and production of value-added products»[351]. Together with Mother Dairy, a wholly owned subsidiary of the NDDB commissioned in 1974 and direct initiative under the Operation Flood, the two milk cooperatives have long been speculating on the potential of milk to contribute to the evolving sense of national identity and have been doing so by targeting their communication and marketing directly to the future citizens of India. Of great patriotic quality, milk commercials and ads following the OF phases are interesting indications of a shared willingness to feed young Indian citizens in order to improve their performances and productivity for their future introduction into competitive markets against other wealthier populations.

The profound symbolism of milk, combined with scientific evidence and economic imperatives, emerged through the communication advertisements employed by Indian dairy companies that overstated the growth-enhancing properties of their products, promoting the idea that consuming milk could contribute to the development of strong and intelligent generations and bolstering dairy sales. Mother Dairy, whose name loudly resonates with Hindu patriarchal heritage, is the first Indian dairy company to focus its marketing efforts on children, starting with an early 2000s notable and straightforward advertising campaign of which a notable example is exhibited here. The ad featured Indian children wearing oversized adult professional attire, accompanied by a bold statement in capital letters: "The Country Needs You! Grow Faster." [352]

[349] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 55.
[350] Rupera, P., "Amul Stirs Up Storm in Teacup, Says Milk Not Tea Should be National Drink," *Times of India*, April 23, 2012, last accessed 26/05/2023, https://perma.cc/J48S-BGZK
[351] Gayathri, S. L., Bhakat, M., Mohanty, T. K., "An outlook on commercial dairy farming in India: A review", *Indian J. Anim. Prod. Manage*, 37(1), pp. 45-56, 2023, p. 47.
[352] Ibid, p. 56: «A Mother Dairy milk ad from India emphasizing milk's contributions to faster growth and development, c. early 2000s». p. 57: «The "Mother Dairy" ads were noted as among the first in India to target children themselves ("The country needs you"). […] Advertisements aside, dietary guidelines in India strongly recommend milk, especially for children, and seek to establish a normative basis for milk consumption (National Institute of Nutrition 2010) ».

Fig. 7: A Mother Dairy milk ad from India emphasizing milk's contributions to faster growth, c. early 2000s. From Cohen, M. and Otomo Y., p. 56.

This approach continues to be employed by the company to this day. It is noteworthy though to expose a heart-breaking truth, namely that India's children are the worst fed in the world according to the studies of Historian Benjamin Siegel. Sadly, in 2012, year of the death of Amul's founder Verghese Kurien, a «survey of 73,000 Indian households found that nearly 42 percent of all children under age five suffer from malnutrition – a statistic which former Prime Minister Manmohan Singh described as a "national shame" »[353]. However, the limited affordability and accessibility of milk serve as reasons to justify the ongoing expansion of the dairy industry and, the interconnectedness among growth, strength and wealth of milk consumers is acclaimed « as a result (despite the lack of government assistance in this effort), it will be further evidence of India's political and economic ascendance»[354] to the eyes of Indian citizens.

Via the conversion of ancient Indian culinary history of milk consumption in cunning marketing plans mastered along the years of Operation Flood, the Indian dairy industry has fully embodied a hypnotising paradigm of growth. Under the guidance of NDDB, government-owned milk cooperatives have successfully shaped in my opinion what Arjun Appadurai explains with the term of cultural "-scapes", identifying dimensions of global flows, whose fluidity enhance the globalization of the localized imaginary[355]. The problematic side of this phenomenon, ordinary in a globalized and colonized reality anyway, coincides with a stereotypical inappropriate cultural reproduction in contexts of rapid change, similar to the one of 1970s Independent India. It is plausible then to speak of colonized milk consumption, understood as a form of confluence of varied historical trajectories, that «refigure imported ideas […] and materials from all over the world as local. In these conjunctures, cultures are made and remade»[356].

What happened culturally in India during the years of Operation Flood and onwards was indeed a resulting combination of the popular success of Western milk old colonizing echoes and desire to emulate foreign wealthiness. If it is true that «anti-colonial struggles are always struggles about nature and food»[357], then milk is a perfect example of how an edible good can be vested with great ideological potential to change a country's global relevance.

[353] Siegel, B. R., *Hungry nation: Food, famine, and the making of modern India*, Cambridge University Press, 2018, p.221.
[354] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 58.
[355] Appadurai, A., "Disjuncture and Difference in the Global Cultural Economy", *Colonial discourse and post-colonial theory*, London: Routledge, 2015, p. 324-339.
[356] Tsing, A., *Friction, An Ethnography of Global Connection*, New Jersey: Princeton University Press, 2005, p. 127.
[357] Ahuja, N., et al., *Messy eating: Conversations on animals as food*, Fordham University Press New York, 2019, p.162.

By examining other commercials aired during the OF years as index of cultural approval and legitimation of intensive farming husbandry, it is notable that

> milk advertisements aimed at India's English-speaking middle class tend to use Western cows. Set amidst a verdant meadow of grass, Holstein cows, the classic black-and- white cow breed that was domesticated in northern Europe, are featured rather than the beloved, distinctive humped Zebu cows that are native to South Asia[358].

This cultural reference, depicting foreign healthy mammals thriving in a distant landscape, demonstrates an attempt at *othering* the local, decoupling the Gandhian ideology of reaffirming the indigenous capital as national pride. Bovine bodies and their reproductive cycles have been made profitable but also vehicles of echoing colonialist tendencies, from which the now independent nation of India still cannot completely detach. Perceiving cows merely as means upon which OF officials had the power to capitalize and use to climb the agrifood markets is a failure for the environment, the health of animals and the society's relationship with its ecosystem. Bovines, their cyclic biology and their role within the Indian environment can be considered one «arena in which anti-colonial nationalism has failed to substantively redress legacies of colonialism»[359] still present in the socio-political hierarchies and infrastructures.

The marketing efforts of public health discourse intersecting with the value of milk even in Western countries have been the focal point of action and cultural "whitewashing" of the Indian government. Differences between the United States, northern European countries, and India are highlighted by the latter by comparing the contrast in the production and size of cows and citizens. It is in fact thought that, according to the Western perspective distinctive of these regions, a larger physical body, both in terms of height and weight, is associated with social and economic prosperity[360]. By extension, the Western cows that are protagonists of communication and advertising strategies and whose genes are mixed with local breeds, such « Western cows may also symbolize larger and more robust Western mothers, feeding their developing youngsters with more copious quantities of healthful milk»[361], imposing delusional standards that Indian mothers must comply with by consuming more dairy. Not

[358] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 55.
[359] Ahuja, N., et al., *Messy eating: Conversations on animals as food*, Fordham University Press New York, 2019, p. 160
[360] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 55.
[361] Ibid., p. 55.

only a woman's duty is to embrace her biological destiny of motherhood and sacrifice herself for her children, she ought also to ingest and feed her progeny great quantities of dairy products.

The vigorous stature and robust appearance of Holstein cows are often associated with the notion that consumption of their milk naturally promotes physical and intellectual growth in children. Additionally, proponents of this belief propagate the idea that milk consumption can also enhance cognitive development, thus augmenting the acquisition of skills crucial for young individuals entering a competitive global job market with diverse qualification requirements[362]. Obviously, this ideology is « also in line with common beliefs in many cultures that the qualities of the animal or woman providing milk can be transmitted to the child»[363].

Milk consumption, due to its association with socioeconomic status both within countries and across nations, becomes a significant metaphor and indicator of power disparities. It serves as a distinguishing factor between affluent and less privileged countries. The observation that politically and economically influential nations typically exhibit higher levels of milk consumption and taller citizens (with the latter often attributed as a consequence of the former) contributes to the multifaceted symbolism of milk as a "modern" food essential for success in the contemporary era[364]. This cultural asset perfectly coincides with the increasing levels of milk consumption rate among Indian middle classes, that aim at feeding «citizens with larger sizes and résumés to match the growth of Indian political and economic power in the global realm»[365].

Cows «have been the subject of poetry, prayer and reverie and the symbolic hub of ritual and meaning. They have long been the mode of wealth in the most expansive sense of the term. […] Cattle have been rendered […] a techno-economic object»[366]. A consequence to invasive zoologic procedures previously examined coincided with the popular assimilation of bovine symbolism and representations within cultural narratives, literature, art, and even everyday language. Behind a romanticized imaginary build on a longstanding cultural heritage of essentialist human-animal relations in fact lies an oppressive and intense exploitation of nonhuman bodies and their resources that cannot be ignored within the extraordinary history of India.

[362] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 56.
[363] Radbill, S. X., "The Use of Animals in Infant Feeding", Wayland D. Hand (ed.), *American Folk Medicine: A Symposium*, pp. 21–30, University of California Press, Berkeley, 1976.
[364] Wiley, A. S., *Re-imagining Milk*, Routledge Press, New York, 2011.
[365] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 59.
[366] Livingston, J., "In the time of Beef", *Self-Devouring growth: a planetary parable as told from southern Africa*, Duke University Press, New York, pp. 35-60, 2019, p. 36.

I personally believe that milk, despite its undeniable historical and religious value for India, should not be regarded as a special food and secret ingredient at the population's rescue against the complex, layered and more-than-human challenges that modern India faces, including issues such as poverty and chronic malnutrition. The privileged role milk has assumed and keeps holding in contemporary Indian culture has its roots in dairy nutritional value and its consequent promotion for health benefits. However, it is essential to understand that its consumption alone cannot adequately address the underlying social and economic contradictions prevalent in the country. And neither can a nonhuman fluid secreted by the mammary glands of females for the nourishment of their offspring be the only mean through which India strives to solidify its position among the world's "growing" superpowers as a "developing" nation[367].

The acknowledgement of anthropatriarchal shadows over India's triumphant dairy system promotes empathy for other species, encouraging a more inclusive and respectful approach to our relationship with the natural world and those living beings from which we extract the "perfect food". Creating awareness regarding the intraspecies universality of oppressive traumas inflicted on the female body, corresponds to reimagine a more inclusive approach to our relationship with other species, recognizing their agency in shaping history, ecosystems and everyday choices. By recognizing the shared qualities of devotion and nurturing between human and nonhuman females, it is possible to foster a more inclusive and compassionate approach towards all living beings. It is important to challenge and overcome speciesist and gendered discrimination to ensure that all beings, regardless of their breed or species, are treated with compassion and respect. In doing so, humanity can endeavour to eliminate violent practices within the agrifood industry and appreciate the sacredness of all life and not only of the food that sustains us.

[367] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p. 59.

4. Future perspectives of decolonization

The many juices of herbs and the manifold resins of the trees flowed into the water of the ocean. And with the milk of these juices that had the power of the Elixir, and with the exudation of the molten gold, the Gods attained immortality. The water of the ocean now turned into milk, and from this milk butter floated up, mingled with the finest essences[368].

These words evoke the mythological depiction of the churning of the Ocean of Milk, one of the most important Hindu legends regarding the creation of the Earth among the many existing. The stirring of the milk ocean is a significant occurrence in Hindu mythology, recounted in the sacred texts of *Bhagwat Purana, Vishnu Purana,* and the *Mahabharata,* from which the extract is taken. It narrates the tale of the *Devas* (the Gods) achieving the coveted gift of eternal life through the consumption of *Amrita,* the potion of immortality in a battle against the *Asuras* (the Demons).

Together with the metaphysical metaphor of a whole Ocean of Milk being churned in a war against the Good and the Evil, Professor of Indian and Southeast Asian studies Joanna Williams reflects on interpreting the myth as a description of the human use of natural resources[369]. Her analysis overcomes theological and the spiritual meaning of the cosmic churning, attempting at providing a new reading to the Hindu legend «as a parable for present worldwide ecological crises»[370], among which India faces the plights of intensive farming, animal cruelty, unequal distribution of food resources, malnutrition and heightened vulnerability to the effects of climate change. All of these factors, as previously explained, are strongly intertwined with the development of the Indian dairy system, an industry of monstrous socio-political power in which various forms of ecological injustice generate.

What firstly emerges from Williams' analysis, in accordance with the thesis of philosophy scholar Rodney J. Parrott[371], is that the holy scriptures depict a scenario where Hindu gods and demons engage in a battle to obtain the elixir of immortality, by vigorously stirring the oceans, that is intimately connected with dairy products « through linguistic connotation, poetic figure, medicinal

[368] *The Mahabharata*, Vol. 1, The Book of the Beginning, Astika Parva, 16.1-27. Tr. J.A.B. van Buitenen, University of Chicago Press, 1973, p. 74.

[369] Williams, J., "The Churning of the Ocean of Milk—Myth, Image and Ecology", *India International Centre Quarterly*, 19.1/2, 1992, pp. 145-155.
[370] Williams, J., "The Churning of the Ocean of Milk—Myth, Image and Ecology", *India International Centre Quarterly*, 19.1/2, 1992, p. 147.
[371] Parrott, R., "A Discussion Of Two Metaphors In The" Churning Of The Oceans" From The" Mahābhārata", *Annals of the Bhandarkar Oriental Research Institute*, 64(1/4), pp. 17-33, 1983.

property, and function in ritual sacrifice»[372]. The Sanksrit term of Amṛta, designated to indicate the elixir of immortality, is used interchangeably in the sacred texts referring to the milky juice of plants; the elixir the Devas and the Asuras fight over for eternal life is in fact believed to correspond to the *soma*, the plant-based exhilarating drink that is usually mixed with milk to sweeten its taste and favour assimilation[373]. In addition to their prominent role in sacrificial rituals, traced in mythological narrations such as the one of reference, there are further associations between milk products and the divine amṛta, which highlight their shared attributes of rejuvenation and healing. Amṛta granted the Gods immortality and protection against death, while as previously discussed, milk products, specifically the five items derived from cows known as *panchagavya*, were believed to possess medicinal properties that purify the body when ingested.

According to the myth, as the waters were stirred, agitated, and whipped, they gradually transformed into a milk-like substance, eventually yielding the nectar of immortality known as amṛta. The sacred substance gave rise to various gods, goddesses, and celestial beings, including *Lakshmi*, the goddess of wealth and abundance, as well as *Surabhi*, the wish-fulfilling cow[374]. Professor Yamini Narayanan suggests that the myth associates Mother Cow and Mother Earth, blurring the lines between them, implying that the sacred milk need not be exclusively sourced from cows.

In support of her thesis, rich in ecofeminist and antispeciesist value, Narayanan refers to the legend of the *Samudra Manthan*[375], the churning of the Ocean Milk, as a metaphorical description of the formulation of milk and butter from non-animal sources, such as plants and water[376]. The texts initiallydescribe the ocean as only containing salt water, but its watery waves, that mythologically bring clarity of heart and spirit, represent the setting for the metaphysic battle for amṛta, for which the churning process is started. The waters are thus infused with the essences found in various herbs and agitated, until a transformative process occurs with the cosmic churning of the substance, resulting in the conversion of the ocean's composition into milk. This counter-narrative challenges the assumption that sacred milk in Hinduism is solely obtained from cows, suggesting that the true essence of sacred milk lies beyond animal milk and encompasses a broader understanding that includes plant-based sources as well, since, the cosmic transformation of the mythic milky ocean is

[372] Parrott, R., "A Discussion Of Two Metaphors In The" Churning Of The Oceans" From The" Mahābhārata", *Annals of the Bhandarkar Oriental Research Institute*, 64(1/4), pp. 17-33, 1983, p. 22.
[373] Kashikar, C. G., "The Vedic Metaphor In The "Churning Of Ocean"", *Annals of the Bhandarkar Oriental Research Institute*, 65(1/4), 241-243, 1984, p. 241.
[374] Daniélou, A., *The myths and gods of India*, Rochester: Inner Traditions International, 1991, p. 167.
[375] Velten, H., *Milk*, cit., p. 39.
[376] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), 2018, p. 147.

achieved «by the mixing of water and *medicinal herbs and plants*, allowing a powerful provocation that the holiest of milks in Hinduism are in fact *plant-based* and *vegan*»[377].

Commenting the Book 6 of the *Mahabharata*, Section IX[378], Yamini Narayanan emphasizes the obsessive and troubling correlation between the excessive human consumption of dairy and the symbolic exploitation that encompasses not only natural resources but also the female body: «Earth, if its resources are properly developed according to its qualities and prowess, is *like an ever-yielding cow*, from which the threefold fruits of virtue, profit and pleasure, may be milked»[379]. Narayanan's examination sheds light on the pervasive and harmful practices associated with dairy production and consumption. It reveals a complex web of interconnections wherein the utilization of natural resources, such as milk, becomes intertwined with the exploitation of female bodies; this overlapping of oppression perpetuates a system that disregards the well-being and autonomy of both nature and women. By drawing attention to this issue, Narayanan challenges the conventional perception of dairy consumption as an indispensable element of human sustenance. Instead, she prompts us to critically examine the ethical dimensions and power dynamics inherent in human relationship with dairy and its broader implications for gender equality and ecological balance.

When examining Hindu theology through a feminist Critical Animal Studies lens, a deeper and consequent criticism arise regarding the legends surrounding milking and motherhood in Hinduism. These critiques propose that the glorification of "motherhood" and the consumption of cow's milk by humans involve gendered, reproductive, and sexualized exploitation. By delving into these analyses, the notion of a harmonious and mutually caring relationship between humans and cows is challenged. Moreover, it is suggested that throughout history and in the present, there has been a complicit silence surrounding the ethical concerns related to commodifying animal milking[380]. Being religion an anthropogenic framework that shapes human cultures all around the globe, it is incredible to observe how the socio-cultural collateral effects of Hindu sacred milk and its massified production, commercialization and distribution mask the latent violence of the objectification of the bovines' reproductive power and the instrumentalization of their identity. The selective interpretation of religious scriptures to invoke a familial bond between humans and cows obscures the inherent harms that exist even within supposed relationships of care. To genuinely prioritize the well-being of cows,

[377] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia,* 57(1), 2018, p. 135.
[378] Ibid., p. 146.
[379] Ibid., p. 146.
[380] Adams, C. J., "Why feminist-vegan now?", *Feminism and Psychology*, 20(3), pp. 302–317, 2010, p. 305.

it is crucial to witness the Hindu patriarchal framing that portrays cows as mothers to humans and its sociocultural influence with critical eyes and an ethical sense of taste[381].

[381] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*"*, *Sophia,* 57(1), 2018, p. 147.

4.1. The resilient transformability of dairy

The mythological legend of the Churning of the Milk Ocean holds great importance in Hindu symbolism for its major reference to the traditional culinary practices of indigenous Indian communities in rural areas, feeding on a great variety of milk-based products. When considering the Aryan and Vedic period, previously discussed in terms of pastoralist cultures and their interactions with the nonhuman world, the primary components of their diets consisted of milk, butter, and ghee. Among these, a particularly cherished delicacy was warm milk obtained directly from the udder, but the *Atharva Veda* actually enumerates seven varieties of milk-based products that were part of the dietary consumption during that time. These include coagulated curds (*āmikṣā*), fermented milk (*dadhi*), freshly churned butter (*navanīta*), a combination of curds with fresh and sour milk (*payasyā*), a mixture of butter and sour milk (*pṛṣadājya*), curds obtained from the first round of churning (*phāṇṭa*), and warm milk blended with sour milk (*vājina*)[382].

The consumption of fat-rich dairy products, such the ones aforementioned, has always been important to the assumption of essential dietary lipids, available in butter, ghee, butter oil. The indigenous manufacturing of butter and oil in particular, originated in India between 2000 BC and 1400 BC, simultaneously developed with the introduction of milk, honey and butter in ceremonial feasts; «in many Indian households, butter for manufacture of ghee is made by the direct churning of milk»[383]. Butterfat is present in milk as an emulsion comprised of small globules that are shielded by a delicate protein membrane. Churning milk involves mechanically agitating it, causing the globules to aggregate into clumps. Throughout the churning process, the lid of the churn is removed a few times to allow carbon dioxide (CO_2) gases to escape. As the milk is agitated, each fat globule adheres to an air bubble and floats to the surface, forming a foam. With continued churning, the air bubbles collapse, leading to the separation of the butter. The butter clumps rise to the surface due to their lower density compared to the buttermilk, which remains as a thin, bluish, watery liquid produced during the churning process[384]. The manufacturing act of milk churning is traditionally a mansion related to the feminine part of the rural community[385].

In many rural societies, milk churning was predominantly carried out by women, who would gather around in a communal setting to churn fresh milk into butter or other dairy products. This process

[382] R. C. Majumdar, R. C., *History and Culture of the Indian People*, Allen & Unwin Lt., London, 1951, p. 394.
[383] Cheung, P. C. K., and Mehta B. M., (ed), *Handbook of food chemistry*, Vol. 11, Springer Berlin, Heidelberg, 2015, p. 388.
[384] Eckles, C. H., Combs, W. B., Macy, H., *Milk and Milk Products*, McGraw Hill, New York, 1929, pp. 211-15.
[385] Parrott, R., "A Discussion Of Two Metaphors In The" Churning Of The Oceans" From The" Mahābhārata", *Annals of the Bhandarkar Oriental Research Institute*, 64(1/4), pp. 17-33, 1983, p. 20.

required skill, patience, and a deep understanding of the milk's quality and consistency. Women would often pass down their knowledge and techniques from one generation to the next, fostering a sense of heritage and continuity. The tradition of milk churning still holds cultural and historical significance in India, it is believed to serve as a reminder of the invaluable contributions of women in rural communities and the important role they have played in shaping their societies, whose dynamics and heteronormative subdivisions though have reached the technological advancements in the modern process of milk production and dairy manufacturing.

Operation Flood has also had negative effects on rural women, specifically in relation to their involvement in dairy activities, since, traditionally, women held exclusive control over these tasks, which provided them with economic benefits. However, with the implementation of Operation Flood, the introduction of new crossbreeds required additional labour from women and children for feeding and milking. The milk was then sold for cash, resulting in women receiving no economic returns and experiencing a decline in their status within the family economy. Operation Flood, the major technological development promoted at the time, did not even facilitate or promote women's learning or knowledge acquisition, as «Operation Flood's "modernisations resulted in a net loss of women's status," as only men were employed in the new high-tech infrastructure»[386].

> Not one of them (women) has acquired mastery over the new technology that has taken over their traditional tasks of making butter and cheese for the urban consumer. They are not even aware that they are contributors to a development miracle that is assuming the size of a national movement[387].

The close association of milk churning to the feminine identity highlights the nurturing and caregiving duties attributed to women within the Indian community, originating right from its marginal contexts. Within this traditional practice, it is possible to observe, once again, a reference to the invaluable resource of female work, functioning in a multispecies collaborative cycle with the purpose of human prosperity: milk, product derived from the work of female nonhuman animals, passes through the wise and capable hands of female human animals, empowering the white liquid with added value. Such connection symbolizes the necessary imperative of human societies that transcends temporal scales to benefit of female interspecies efforts, at any cost, because of their remarkable skill in

[386] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 608.
[386]Ibid., p. 607.
[387] Alvares, C. A., *Another Revolution Fails*, Ajanta Publications, 1985, pp. 37-38.

converting raw ingredients into essential food supplies, ensuring the well-being of human families and fostering the prosperity of the entire human community.

« "Making" butter is simply a collecting together of fat globules into lumps, which rise to the surface: nothing new is created. One could say that the butter is " found " in the milk through churning»[388], offering a metaphysical perspective that can be comforting, yet exclusively anthropocentric. This idea implies that at a fundamental level, nature possesses the ability to provide humans with everything necessary for their prosperity, eliminating the need to create anything further. It conveys the idea that the Gods have already crafted a perfect existence, wherein all essential resources are inherently available for humanity to thrive, legitimizing somehow the constant use of finite natural and biological entities. The narrative according to which environmental richness and nonhuman resources are often hidden in the surrounding reality, waiting to be discovered by humankind, may be one of the ontological justifications for which, in contemporary times, the heterogenic abundance of nature and the biopower of nonhuman beings is commodified rather than being valued for their inherent worth.

An anthropological shift is necessary, transcending the humanist perspective of dairy that accounts as a logic explanation the cultural and symbolic transformation of milk from a religious bliss to a commodity driven by financial gain. This shift, that amplifies milk's historical and theological transformative quality, involves a fundamental change in human perspective and understanding of the cultural, social, and economic significance of dairy consumption. It urges humans to explore the values and motivations that shape our relationship with the dairy industry, whose prevailing profit-oriented mindset must be questioned to foster a more sustainable approach that considers the ethical, environmental, and social dimensions of milk production and consumption.

The importance of rethinking our role in correspondence with the contemporary ecological challenges revolves around the moral burden of acknowledging the mass systems through which we exploit natural resources, of critiquing human spatial and temporal perpetuation of violence and against who we address it. Within the myth, a diverse range of natural elements such as water, mountains, and nonhuman animals are depicted: the role of the human being is emphasized as one of microcosmic participants in the creation of world and not as its primary sculptor of hierarchies. Williams' study highlights a new perspective regarding the human responsibility that becomes horizontal when

[388] Parrott, R., "A Discussion Of Two Metaphors In The" Churning Of The Oceans" From The" Mahābhārata", *Annals of the Bhandarkar Oriental Research Institute*, 64(1/4), pp. 17-33, 1983, p. 21.

preserving the heterogenic majesty of the ecosystems; rather than being excluded, humans are encouraged to gain awareness of their position among what is commonly perceived as *other*.

American writer and journalist Jon Mooallem speaks of "digestive dissonance" a concept through which he identifies the discomfort or aversion individuals may experience when confronted with the consumption of animal products. This dissonance though only arises from the exposure to vivid narratives that depict the brutality and miserable conditions found in factory farms[389]. By vividly portraying the violence, unsanitary and sexualized practices associated with animal agriculture, these stories of nonhuman creatures, invisible up to that point, generate a cognitive dissonance within human individuals, prompting them to question their dietary choices and consider alternative approaches to food consumption. This visceral response serves as a catalyst for reevaluating the ethical implications of consuming animal products and potentially leads to dietary shifts and the adoption of more compassionate and sustainable food practices.

According to scholars Samantha King, R. Scott Carey, Isabel Macquarrie, Victoria Niva Millious and Elaine M. Power, authors of *Messy Eating*, a collection of interviews concerning the scholarship on the ethics and politics of food and that on human–animal relationships, the shift towards sustainable and mindful eating habits can only be accomplished through two avenues. Firstly, change can be driven by a conscientious consumerism that challenges the existing normative, speciesist and gendered, systems of food provision. Secondly, the pragmatic shift ought to involve the making of incremental modifications to societal policies, which are currently based on a problematic ethical framework that prioritizes animals perceived to have the closest resemblance to humans and aligning them more closely with their natural lifestyles.[390] Their academic effort in carrying on the anthropological research on the intimate act of consuming food, but of animal origin, among emergent scholars in the field of postcolonial, Indigenous, queer, feminist, posthumanist, and multispecies studies, underscores the significance of food and eating as critical arenas where racial and colonial subjectivities, hierarchies, and anxieties are generated, lived, and understood.

These disturbances, which affect both human and non-human beings, have emphasized within the academic dimension the importance of giving priority to "collective resilience"[391], a concept that

[389] Mooallem, J., "Carnivores, Capitalists, and the Meat We Read," *Believer*, 3, October 2005, http://www.believermag.com/issues/200510/?read=article_mooallem.
[390] King, S., Carey, R. S., Macquarie, I., Millious, V., & Power, E., *Messy Eating*, Fordham University Press, New York, 2019, p. 3.
[391] The concept of resilience is «defined literally as 'an ability to bounce back' or to 'return to its original state', the notion of resilience was first used in engineering, ecology, and developmental psychology in the 1960s and 1970s», from Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 97.

ought to be examined carefully. Nowadays, the word resilience is extensively employed in international development and policy discussions, becoming a popular buzzword used for various purposes and, in the context of contemporary dairy India, I believe that the concept of resilience should progressively be «replaced by a new notion: that of *transformability* along with a variant of the same notion, *transformative capacity*»[392].

An integrating explanation in regard can be found in the area of academic inquiry that is ecopsychology, emerged following the earlier studies of Swiss psychiatrist and anthropologist Carl Gustav Jung[393], who explored the connection between humans and nature, as well as the significant myths and symbols that shape our collective understanding of human existence. As noted by sociologist Michel-Maxime Egger, ecopsychologists do not stress the outdated anthropocentric idea of human superiority, but rather emphasize the concept of human maturity, which entails the capacity to simultaneously embrace both unity and diversity. This notion encompasses three interrelated components. Firstly, it involves a heightened awareness of our individual identity and the qualities that set us apart from others. Secondly, it encompasses a sense of interconnectedness with the tapestry of life, entwined with the lives of all living beings. Identity is no longer solely defined by one's distinct personal attributes, but by the intricate web of relationships between oneself and others, encompassing both humans and non-human entities. Lastly, maturity entails recognizing and accepting our own limitations, particularly in our relationship with nature. Nature is viewed both as a partner and an essential complement to our social interactions, rather than a mere external reality and a reservoir of profitable resources[394].

Following a comprehensive examination of the intricate controversies surrounding the topic of Indian dairy consumption, Rosa E. Ficek suggests that the latter also presents a noncapitalist potential, comparable to the valuable resources concealed within the Ocean of Milk, waiting to be unearthed. She claims that

> the terrible worlds humans have made along with cattle can also be unmade, with and without human intervention. Human efforts to unmake these worlds could look to these instances of more-than-human environmental change—these situations of transformative possibility—to better account for the landscape-shaping power of cattle and other

[392] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 97.
[393] Sabini, M., *The Earth Has a Soul: The Nature Writings of C. G. Jung*, North Atlantic Books, Berkeley, 2022.
[394] Egger, M. M., *Soigner l'esprit, guérir la terre: Introduction à l'écopsychologie,* Labor et Fides, Geneva, 2016.

creatures of the Anthropocene in order to build less terrible ways of multispecies and multiracial living together[395].

Although the modern dairy industry in the south-Asian nation is based on the popular cultural axiom of the cow being sacred and her milk being an elixir of growth, Hindus, like all humans, possess a multifaceted nature, and their religious reverence for natural entities does not automatically indicate a heightened ecological consciousness nor citizenship[396]. «Concentrating on ethical questioning invites us to explore how societies might mobilise the symbolic, critical, and practical resources of their traditions to bring about necessary changes to economic models and unsustainable ways of life»[397].

Given the significant ecological degradation occurring in India, largely attributed to intensive animal agriculture, there is a growing need to prioritize the revival of plant-based Hindu practices and decrease the reliance on animals as sacred resources. Such shift would align with both animal ethics and environmental values, promoting a more sustainable and compassionate approach.

If the challenges posed by the Anthropocene are not solely caused by deliberate human actions but rather arise from intricate networks of interdependencies involving multiple species, then the solutions carried out in the name of sustainability must consider the impact of sustainability interventions on the entire ecosystems to be regarded as useful and effective[398]. This includes recognizing how, if guided by selfish capitalistic and patriarchal paradigms, human agency disrupts the relationships of interdependency among different species, including humans and other animals. By acknowledging and understanding these complex ecological dynamics, effective solutions can be developed that account for the interconnectedness and well-being of all species involved. «The recognition of our interdependence demands a collective ethical and political reflection in order to inform the economic, social, and cultural transformation of our societies»[399]; this viewpoint is primarily educational, as it directs all individuals away from a state of instability and imbalance and towards more secure and feasible paths, ensuring that no one is left behind. Within societal settings marked by injustice, inequality, and power dynamics, hence corresponding to the conditions experienced by poorer Indian farmers during and after Operation Flood, the adoption of a liberal

[395] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 270.
[396] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), 2018, p. 146.
[397] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 103.
[398] Ficek, R. E., "Cattle, capital, colonization: tracking creatures of the Anthropocene in and out of human projects", *Current Anthropology*, Vol. 60(S20), 2019, pp. 260-271, p. 10.
[399] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 96.

standpoint would endeavour to facilitate inclusive engagement, allowing all individuals to partake in discussions and steer decision-making processes towards promoting a more equitable allocation of resources or a greater commitment to the improvement of collective good[400]. I personally advocate for this form of societal involvement as an initial stride towards unveiling the gendered and species-based systems of hierarchy to which humans themselves are bound, with the aim of fostering heightened sensitivity and awareness regarding the collective traumas experienced within the dairy industry.

When considering these analyses as a whole, a common thread emerges, revealing the detrimental consequences of industrial agricultural practices on various aspects such as food quality, animal well-being, human health, local economies, environmental pollution, and climate change. However, these analyses often overlook the interconnectedness and emotional nature of human-animal relationships. They also tend to disregard the potential for political transformation that arises from acknowledging and engaging with the nonhuman world, emphasizing the importance of thinking and acting alongside nonhuman entities.

[400] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 106.

4.2. Dairy consumption and its sour political after-taste

The act of consuming food involves complex interconnections among the senses, memory, social context, and historical influences. The embodied sensory and emotional experiences of individuals when eating animal products are therefore manifested in the physical and emotional aspects of their dietary choices[401].

Within a post-humanist, decolonizing, and critical animal studies framework, a comprehensive examination of the dairy industry in India necessitates an exploration of the country's colonial legacy. An inevitable parameter of analysis to achieve a broader comprehension of the complex milk heritage of the Indian nation is represented by the political dynamics through which the consumption of animal-based food products was strategically employed by the Imperialist power of England as a means of asserting dominance and devaluing the dietary practices of local populations. As can be recalled from what has previously been stated, the Wright Report provides evidence that the colonized population had lower dairy consumption compared to the colonizers, influenced by the multifaceted significance of cows in religious, agricultural, and social traditions in India.

Once having recognized the problematic commodification of bovine bodies and their dairy resources, it is fundamental to address how milk, the primary resource derived from cattle, became a symbol for racial purity during the colonization and how its coerced foreign consumption started unsettling revolutionary feelings before India's Independence. Anyhow, more than everything, it is alarming to observe how this concept has been echoed, albeit with adaptations and manipulations, by the very people who have attained liberation in their pursuit of domestic food self-sufficiency.

Colonialism «participated in the conversion of almost all non- human life into objects for capitalist accumulation, transforming pre-existing human animal relations, and altering food production and consumption»[402]. The connection between European expansion, invasion, settlement, and dominance, along with the growth of industrial animal agriculture, can be characterized as a form of intertwined violence, as described by American sociologist David Nibert[403]. In his studies regarding nonhuman animals and societies within a globalized context, Nibert contends that the domestication of animals for food production, which he refers to as "domesecration," has led to ethical corruption, large-scale

[401] King, S., Carey, R. S., Macquarie, I., Millious, V., & Power, E., *Messy Eating*, Fordham University Press, New York, 2019, p. 5.
[402] Montford, K. S., Taylor, C. eds. *Colonialism and animality: Anti-colonial perspectives in critical animal studies*, Routledge, New York, 2020, p. XVII.
[403] Nibert, D. A., *Animal Oppression and Human Violence: Domesecration, Capitalism and Global Conflict*, Columbia University Press, New York, 2013, p. 91.

violence, and destructive patterns over time. Nibert's analysis challenges the conventional narrative – that highlights the violent shared experiences of domesticated and colonized bodies and lives of both animals and Indigenous peoples – and the commodification of animals within the food industry surrounding the role of animal exploitation in human development. «Colonial food regime was the first hegemonic regime […] and had consolidated a powerful set of institutions and rules that influenced food production, processing and distribution on a world scale»[404]. The occurring of such profound changes has provoked significant impacts on the eating patterns of individuals worldwide, resulting in a diverse range of culinary influences, a rejection of imported dietary habits, and, in some cases, the erosion of long-standing traditions in favour of new foreign taste preferences.

The connection between the milk question and its colonialist aspect is in some manner linked to the historical context of dietary racism overall, specifically concerning the consumption of animal-based products as a means of expressing anti-immigrant sentiment[405]. The argument that non-Western nutrition was inadequate or deficient was rooted in a Eurocentric perspective, which disregarded the diverse dietary practices and nutritional knowledge of indigenous cultures. The British colonizers viewed their own dietary choices as superior and sought to impose them upon the colonized population: this not only served as a means of cultural domination but also had economic implications, as it created a market for British goods such dairy products and, in this case, also imposed the biological supremacy of the English breed over the local Zebu-cow.

The underlying motivation behind Operation Flood propaganda campaigns in fact was to fuel the capitalist agenda of economic growth and profit based on such imperialist influences on Indian culture and subjugated population, rather than considering the diverse nutritional needs and cultural practices of the population. This approach neglected the potential negative consequences for those who did not fit into the prescribed paradigm and reinforced a biased and unequal system of development.

Illustrations of such "dietary racism" can be found in 19th century pseudo-scientific claims regarding milk, lactose tolerance, race and masculinity, which attacked the so-called "effeminate corn and rice eaters"[406], namely local population whose diets were lacking consumption of animal-based products, such as dairy. In the context of the occupied British Raj, the definition of a colonized Hindu citizen was one of a weakened individual, where their perceived masculinity was threatened and suppressed due to a visible vulnerability associated with inadequate consumption of animal-based foods, which

[404] Holt-Giménez, E., *A Foodie's Guide to Capitalism: Understanding the Political Economy of What We Eat,* Monthly Review Press, New York, 2017, p. 33.
[405] Stănescu, V., "White power milk': Milk, dietary racism, and the 'alt-right", *Animal Studies Journal*, 7(2), 103-128, 2018, p. 104.
[406] Ibid., p. 105.

are considered sources of protein and strength. Those who followed traditional dietary practices with a greater emphasis on vegetables were deemed less capable, weak, and even feminine, as a result of the colonialist patriarchal mindset:

> the 'effeminate rice eater' represented a widespread and well-known colonial stereotype based on the argument that it was the eating of meat and consumption of dairy products that helped colonizers to become the more masculine, and therefore, the more dominant, power in the colonial age versus the supposedly "effeminate rice and corn eaters" of the recently colonized countries[407].

This statement explains how differences in dietary habits between colonizers and the colonized established a social hierarchy based on the consumption or non-consumption of animal-based products, leading to the following acknowledgement that «conversations about the consumption of animal products, race, gender, and colonialism [also] represent a long-standing and repeated belief about diet, race, and issues of masculinity»[408].

Furthermore, by associating the consumption of animal-based products with notions of race and civilization, the British perpetuated a narrative of cultural superiority and justified their colonial project. This belief system reinforced the idea that adopting British dietary practices and consuming animal-based products was a sign of progress and modernity, while rejecting or not conforming to these practices was seen as a marker of backwardness or primitiveness. In 1884, J. Leonard Corning, a renowned British medical researcher and doctor, authored a monograph called *Brain Exhaustion*, work in which he put forth the argument that the colonial population, «lacked the "intellectual vigor" of the English»[409] and surrendered to the foreign occupation not only because of racial inferiority, but rather because of insufficient consumption of specific Western meat and dairy products.

> Thus flesh-eating nations have ever been more aggressive than those peoples whose diet is largely or exclusively vegetable. The effeminate rice eaters of India […] have again and again yielded to the superior moral courage of an infinitely smaller number of meat-eating Englishmen. […] by far the most wonderful instance of the intellectual vigor of flesh eating men is the unbroken triumph of the Anglo-Saxon race. Reared on an island

[407] Stănescu, V., "White power milk': Milk, dietary racism, and the 'alt-right", *Animal Studies Journal*, 7(2), 103-128, 2018, p. 105
[408] Ibid., p. 120.
[409] Ibid., p. 105.

> of comparatively slight extent, these carnivorous men have gone forth and extended their empire throughout the world[410].

In Corning's judgement, the reason why Warning Hasting (1732-1818), the initial British-imposed Governor-General of India, was able to effectively govern the country was not solely due to superior weapons technology. Instead, the doctor suggests that Hasting's consumption of a diet primarily centered around meat played a significant role in his success[411].

The notion that eating habits formed the foundation of perceived racial distinctions was primarily driven by the belief in the potential ease of transformation. To make it clear, such racist Eurocentric ideology reckoning peoples' value based on their food consumption justified the alteration of non-white ethnicities and individuals' diets as a chance for their civil and intellectual improvement. By increasing Indigenous people consumption of meat, eggs, and dairy, it was believed that their alleged "brain exhaustion" - conceived both a mental and moral deficiency - could be cured. In essence, the colonizer's belief was that a dietary change alone could rectify perceived intellectual and ethical inferiority among non-white populations[412]. «Milk came to represent a unique product which seemed to embody new "technologies" of pasteurization, commercialization, and nutrition coupled with a seemingly intrinsic connection to white citizenship: a commodity fetish seemingly unifying both "intelligence" and "race"»[413].

This explains why the complex cultural value of the white liquid took on a new dimension during the years in which the Operation Flood plan was put into force; an amplified neo-colonialist significance was attributed to milk, that had been long celebrated as sacred food, symbolizing harmonious growth, cosmic balance, abundant nourishment, and nurturing care up to the post-Independence strive for international approvement of India as a competitive economic superpower. Milk became a metric of progress, measuring a population's *vigor*, often associated with male strength and female fertility, on a global level based on per-capita consumption of dairy.

With reference to this point, interesting yet debatable research has been conducted by Professor Justin Cook[414], academically active in the macro area of Health Economics, who brings into the conversation human lactose tolerance and explores its intersections with European colonialism and

[410] Corning, J. L., *Brain Exhaustion, With Some Preliminary Considerations on Cerebral Dynamics*, D. Appleton and Company, 1884, p. 196-197.
[411] Stănescu, V., "White power milk': Milk, dietary racism, and the 'alt-right", *Animal Studies Journal*, 7(2), 103-128, 2018, p. 106.
[412] Ibid., p. 106.
[413] Ibid., p. 107.
[414] Cook, J. "Got Milk? How Lactose Tolerance Influenced Economic Development", *PBS NewsHour*, 3 Dec 2015, last accessed 05/06/2023, https://www.pbs.org/newshour/economy/got-milk-lactosetolerance-influenced-economic-development.

economic growth. Cook suggests that contemporary wealth inequalities among countries can be attributed to genetic differences in the ability to consume and digest milk, alongside other factors such as economic and technological development. The author, in the given context, demonstrates to hold an extremely deterministic viewpoint, reminiscent of eugenics. The comparison to eugenics implies that the author seems to attribute excessive value to the selection and manipulation of human traits through biological means, without considering ethical principles, the environmental and cultural context, the rights of the individuals involved and their free will.

In the same critical ways, cultural differences among ethnicities are instead the object of study of Russian political scientist Andrey Shcherbak[415], that brings Cook's theories further by discussing that the genetic adaptation of lactose tolerance is both tied to and proof of collapsing societies, uncivil government, barbaric lifestyles. He claims in fact that the implementation of a European diet, namely one of high intake of protein-rich animal products, might be a significant precursor of democratization. In his view, enhancing dietary patterns and encouraging the consumption of dairy is among the essential conditions for a political change towards democracy for those unruly Southern nations, alongside factors such as increased income, education, and urbanization. Further articulation of this theory worth of being debated is that, according to Shcherbak, contemporary developed nations were once societies with high lactase tolerance, that had greater prospects for development thorough history. The scholar then posits that milk and dairy products not only provided nutritional advantages to Northern citizens but also social and economic benefits, focusing on demographic changes. A potential causal mechanism that limited Southern nations to achieve the same pace of development as the Western ones has been identified of course into the rates of human lactose tolerance, linked for Shcherbak, to lower fertility rates and child mortality rates, thereby influencing societal development. This vision completely disregards the personal agency and framing context of the colonized individuals that he subjugates with racist argumentations to exclusive biogenetic factors.

Vasile Stănescu, American Professor of Critical Animal Studies, vegan advocate and member of the International Association of Vegan Sociologists, positions himself in contrast with these studies, and I concur with his stance. He addresses Southern India as a perfect example to demonstrate how certain regions, belonging to the "developing" or "Third world countries", as WEIRD[416] societies like to define them, exhibit high rates of lactose tolerance despite experiencing European colonialism[417].

[415] Shcherbak, A., "A Recipe for Democracy? The Spread of the European Diet and Political Change", 20 June 2016, *Higher School of Economics Research Paper,* No. WP BRP 70/SOC/2016, 20 June 2016, last accessed 05/06/2023, https://ssrn.com/abstract=2798110.
[416] Western, Educated, Industrialized, Rich, and Democratic countries.
[417] Stănescu, V., "White power milk': Milk, dietary racism, and the 'alt-right", *Animal Studies Journal*, 7(2), 103-128, 2018, p. 110.

Stănescu argues that Cook fails to consider the technological advancements in milk production, such as pasteurization and refrigeration, which have contributed to the global increase in milk consumption. Additionally, he raises concerns about the potential danger of this research, as it may perpetuate the idea that European colonialism and ongoing wealth disparities are natural and inherent, tied to immutable genetics. I agree that the issue lies in the fact that these studies attempt to establish racial differences as biological norms, thereby making their findings potentially hazardous. Even if not all researchers investigating the evolutionary advantages of lactose tolerance make sweeping generalizations similar to those presented by Cook and Shcherbak in their research[418], I endorse Stănescu's position. The latter effectively entails a more inclusive, socio-historical vision of the human relationship with food and nonhuman consumption, one that develops an *intolerance* for entanglements in carnivorous, racist, patriarchal and sexist socioeconomic and cultural patterns.

«The dominant Western food ontology underpins the political logic of settler colonialism, while the food ontologies of alternative food movements», such as a protein-devouring eurocentric diet based on animal products for strength enhancement, «are invested in a politics of purity and human supremacy, as well as political investments in ability, gender, race, and class privilege»[419].

To comment on the white male and supremacist idea of diffusing with expansive ambitions an exclusive European type of diet, that includes intense consumption of dairy, I find useful to rely on the observations of the World Health Organization (WHO)[420], that expressed concerns on the topic, sure that a universal standard of alimentation would not adequately take into account the specific circumstances of individual countries and the potential impact on farmers or livelihoods that rely on resource-intensive foods, exactly like animal-based products. The WHO believes that eating recommendations should consider the local context and the potential consequences for those involved in the production and consumption of such foods, surpassing alleged genetic differences in the ability to consume and digest milk. «Only one-third of people produce the lactose enzyme during adulthood, which enables them to drink milk»[421] indeed, indicating that milk consumption is not biologically intended and ecologically sustainable to persist throughout one's lifelong existence.

Considering the significant prevalence of milk consumption in present-day India and the supporting archaeological and genetic evidence suggesting the independent domestication of cattle in the Indus

[418] Ibid., p. 111.
[419] Montford, K. S., & Taylor, C., "Beyond edibility: Towards a nonspeciesist, decolonial food ontology", in *Colonialism and Animality*, pp. 129-156, Routledge, New York, 2020, p. 148.
[420] Brown K. A., et al., *The role of dairy in healthy and sustainable food systems: community voices from India*, BMC Public Health, 2022, p. 2.
[421] Stănescu, V., "White power milk': Milk, dietary racism, and the 'alt-right", *Animal Studies Journal*, 7(2), 103-128, 2018, p. 114.

valley around 7,000 years ago, Gallego Romero et al.[422] conducted a study aimed at ascertaining whether lactase persistence has independently evolved in the subcontinent. The collective transdisciplinary research project integrated scientific disciplines such as evolutionary biology, genetics, cellular and evolutionary biology, and biological anthropology. Thanks to the screening of DNA samples «from all major language groups and geographic regions of India (n = 2284) »[423], the study has provided new insights into the distribution of specific genetic variations related to lactase persistence in India. Biologists have identified previously unknown genetic variations in addition to the known ones: their findings indicate that a particular genetic variation, known as the -13910*T allele, is responsible for a significant proportion of lactase persistence in the South-Asian country. The research was conducted on the *LCT* gene: the -13910T allele refers to a specific genetic variant that occurs at position -13910 on the lactase gene (LCT) located on chromosome 2. This variant is associated with lactase persistence, which is the ability to digest lactose, the sugar found in milk, into adulthood. The -13910T allele is one of the key genetic variations that has been extensively studied in relation to lactase persistence in various populations. Individuals who carry the -13910*T allele are more likely to have the lactase enzyme continue to be produced in their bodies, allowing them to digest lactose throughout their lives. In contrast, individuals who do not carry this allele tend to have reduced lactase enzyme activity after weaning, leading to lactose intolerance[424]. Here a map is presented illustrating the widespread distribution of the -13910T allele frequency in South Asia. Although there is a general pattern of increasing frequency from north to south and west to east,

[422] Gallego Romero, I., et al., "Herders of Indian and European cattle share their predominant allele for lactase persistence", *Molecular biology and evolution*, 29.1, pp. 249-260, 2012.

[423] Ibid., p. 250.

[424] Kuokkanen, M., et al., "Mutations in the Translated Region of the Lactase Gene (LCT) Underlie Congenital Lactase Deficiency", *The American Journal of Human Genetics*, Vol. 78-2, pp. 339-344, 2006.

significant variations in the occurrence of the -13910T allele can be observed among neighbouring groups.

Interestingly, the scientific analysis suggests that this allele in India has a shared ancestry with the one found in Europe and Western Asia, suggesting that it was introduced to India from western regions. However, within India, the occurrence of lactase persistence shows a more organized pattern, with higher frequencies observed in groups that traditionally rely on dairy-based economies[425]. In fact, the research underlined how «instances of phenotypic convergence imply the existence of a strong selective advantage to being lactase persistent in cultures where milk is commonly available»[426].

This can be explained because certain populations, including those in central and Northern Europe and countries that were colonized by Europeans, have a longstanding tradition of milking domestic

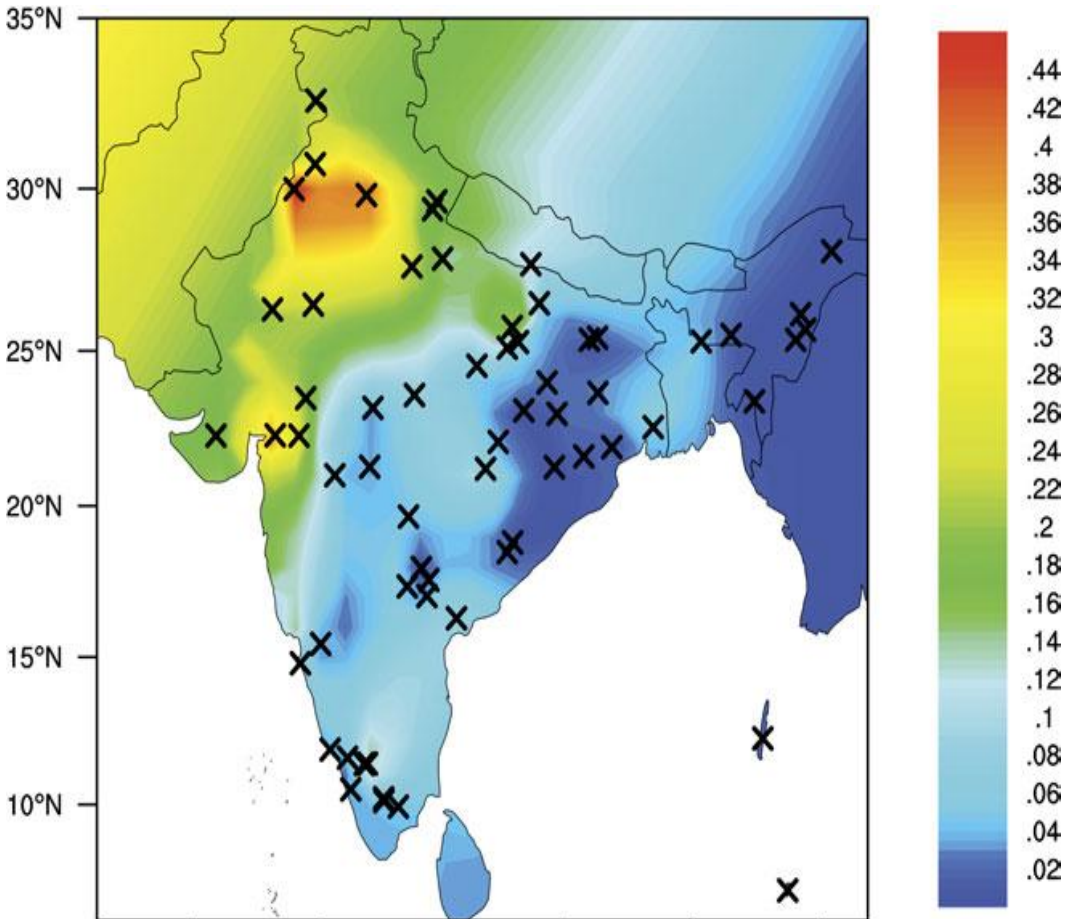

*Fig. 8: Geographical distribution of -13910*T in India. From Gallego Romero, I., et al., 2012, p. 253*

animals: humans involved have maintained the lactase enzyme, which is responsible for digesting

[425] Gallego Romero, I., et al., "Herders of Indian and European cattle share their predominant allele for lactase persistence", *Molecular biology and evolution*, 29.1, pp. 249-260, 2012, p. 258.
[426] Ibid., p. 250.

lactose sugar in milk, well into adulthood. The paper suggests that the probable selective advantage of digesting milk even in adult age is dependent on the availability of ample milk sources after humans' weaning stage, implying that such food resources would not have been easily accessible to humans before the domestication of cattle, sheep, or goats, and the establishment of dairy-related methods[427], given the fact that, on average, the vast majority of the world's population loses the lactase enzyme by the age of four[428].

Nonetheless, Eurocentric and racist aspects of the Western dairy industry are evident in their assertions of the universal health benefits of milk, to the point of demonizing those who cannot digest it; the 1920s US dairy industry for instance, «rather than acknowledge this diversity in digestive capacities, […] has coined the terms *lactase impersistence* and *lactose maldigesters*, terms that effectively pathologize nonwhite populations»[429]. In the same way, historical accounts from the 1930s to highlight how overt racism was prevalent during the Great Depression when discussing the supposed ability of milk to promote racial superiority. Specifically, the Aryans were identified as heavy milk drinkers, utilizing butter and cheese extensively, which was believed to contribute to their rapid and advanced development as a distinct human group, dangerous for its expansive and violent intentions of subjugating all living beings[430]. The question arises as to why the dairy industry has not faced consequences for promoting such overt ethnocentrism.

These behavioural and judgemental trends confirm the intertwined relationship between cultural and biological factors in shaping lactase persistence and that the historical and socioeconomic complexity of India offers a valuable opportunity to study the processes that contribute to human diversity[431]. Surprisingly, despite India's large population and well-documented history of dairy product consumption, information regarding the distribution of lactase persistence was scarce until the 1970s[432]. The lack of comprehensive understanding regarding lactase persistence in India is a significant gap in current knowledge, that might still be affected by the influence of Western cultural perceptions of dairy consumptions related to human and male power. It is in fact right in the 1970s that the Operation Flood project takes shape, and its implementation, together with further understanding and research efforts related to lactase persistence, may have been impacted by Western

[427] Ibid., p. 250.
[428] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 608.
[429] Ibid., p. 608.
[430] Wiley, A. S., *Re-imagining milk: Cultural and biological perspectives*, Routledge, 2015, p. 32.
[431] Gallego Romero, I., et al., "Herders of Indian and European cattle share their predominant allele for lactase persistence", *Molecular biology and evolution*, 29.1, pp. 249-260, 2012, p. 258.
[432] Ibid., p. 252.

dietary racism based on lactose intolerance, race and the surrounding imagery of milk, invoking ideas of whiteness and purity of the liquid[433].

Professor of Sociology at the University of California Melanie E. DePuis claims that the nationalistic Hindu portrayal of milk as *perfect food*, wholesome and indispensable, is far from accurate. Poisoned by neo-colonialist socioeconomic models, milk quenches instead a narrative of progress, human supremacy and perfection. Once unveiled of its superficial layer of benign multispecies motherhood, the perfect whiteness of milk and human oppressors, white bodies that are genetically capable of digesting it, are linked[434].

[433] Stănescu, V., "White power milk': Milk, dietary racism, and the 'alt-right", *Animal Studies Journal*, 7(2), 103-128, 2018, p. 119.
[434] DuPuis, E. M., *Nature's perfect food: How milk became America's drink*, NYU Press, 2002, pp. 8-11.

4.3. Decolonizing and decapitalizing milk through ecofeminism and veganism

The Western behaviours analysed before can be categorized under the umbrella term of *food imperialism*, encompassing various actions undertaken by dominant white groups of people, heirs of their ancestors' colonialist principles, that replicate in contemporary times the neo-colonization of Indigenous dietary practices, resulting in the erosion of cultures, intraspecies connections, and environmental stewardship. This type of oppression disregards diverse and vibrant non-Western traditions of plant-based cuisine and philosophies promoting nonviolence towards all living beings, an ideology that transpires by interpreting Indian religious and culinary traditions.

Exempt from any geographical demarcation, modern societies should grasp the opportunity of truly exploring novel ways of living that identify as more modest and harmonious in respect with nonhuman life[435], in an era of excessive food waste, unequal distribution of food, animal enslavement, reproductive injustice, biodiversity degradation, genetic manipulation, commodification of nonhuman life. This extends to even the most automated aspects of humans' daily lives, including dietary choices. Such interpretations align with the goals of the ecological transition, aiming for lifestyles that are more equitable and sustainable that demand for a new replacement of the human being in an ecosystemic perspective. Rather than conceiving the nonhuman realm as a satellite reality rotating around human hierarchies, more inclusive and empathic interpretations of the human reliance on the exploitative work and death of nonhuman animals is theorized, to become active and educated participants in the protection of the biological living cycle of nonhuman beings.

Efforts to fight the dominant influence of colonization and capitalism on milk production and the animals involved can be challenging without the appropriate approach. In earlier sections, I discussed the importance of postcolonial perspectives in understanding and addressing the negative impacts of colonialism on both human and nonhuman communities in India. However, relying solely on a postcolonial perspective is insufficient.

While valuable resource in understanding and addressing the negative impacts of colonialism on human and nonhuman communities in India, the postcolonial field has primarily focused on questions of difference and agency, often neglecting the inclusion of other sentient beings in its analysis. «It has also not been open to "our" similarities, to the vulnerability that humans share with nonhuman

[435] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 104.

animals»[436]. This limitation highlights the need for an additional perspective to supplement the understanding of intersectionality within the Indian dairy system: it is in these terms that the ecofeminist point of view comes as supplementary tool to better address the topic of intersectionality within the Indian dairy system.

The multiple layers that have been analysed up to this moment encourage us to reflect on the multifaceted consequences of our actions and urges us to consider alternative practices that prioritize sustainability, respect for nature and the empowerment of women. It invites us to question and reshape the existing narratives and systems surrounding dairy production and consumption, fostering a more conscious and equitable approach to our interactions with both natural resources and the female body. The same dairy machines that are constantly impregnated without consent and from which milk is stolen for the mere pleasure of human consumption are first of all mothers, daughters, mammalian females[437]. Even if nonhuman creatures, I am firmly of the opinion that they are worthy of «the attention of the feminist movement because they are exploited in a fashion that compares to some of the gravest atrocities committed against humans»[438]. It is for this reason that Carol J. Adams, extraordinary American writer, feminist, and animal rights activist, passionately advocates for an empathetic intervention that recognizes the importance of multispecies entanglements and trauma sharing. She asserts that the consumption of dairy must provoke feminist anxieties about the human violation of nonhuman female reproduction[439]. Building upon this viewpoint, Carmen Cusack strongly aligns with Adams' perspective and expresses her belief that feminists «should argue for the inviolability of all female bodies, rather than condone the government's authority to dispense with a consent requirement in commercial contexts»[440].

The defining characteristic of a feminist methodology lies in its commitment to inclusivity, wherein it seeks to integrate a wide range of knowledge sources, recognize the importance of situated

[436] Chagani, F. "Can the Postcolonial Animal Speak?" *Society & Animals* 24, o. 6, 2016, p. 620.
[437] While first-generation ecofeminism emphasizes the position that the same dairy machines, which are subjected to unwanted impregnation and milk extraction for human consumption, deserve attention from the feminist movement due to their inherent femininity as mothers, daughters, and mammalian females, Greta Gaard's approach extends the perspective of feminized bodies beyond the confines of gender binaries: she critiques the binary thinking that separates humans from nature and expands the scope of ecofeminism by highlighting the interconnections between feminism, animal rights, and environmentalism, and advocating for a more inclusive and intersectional approach to addressing these interconnected oppressions. This intersectional approach that acknowledges diversity in oppressed experiences avoids the risk of essentialism that can arise when discussing human-nonhuman relationships. Current ecofeminist critique extends beyond the exploitation of female individuals within the species, although it was originally rooted in that particular context. From Gaard, G., *Ecofeminism, Women, Animals, Nature*, Temple University Press, Philadelphia, 1993.
[438] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 38.
[439] Adams, C. J., "Why feminist-vegan now?", *Feminism & Psychology*, 20(3), pp. 302-317, 2010, p. 305.
[440] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 31.

perspectives and actively listening and engaging with the insights provided by each source[441]. This approach, distinctive signature of the feminist vision, entails establishing dynamic and open frameworks that foster collaboration and cooperation among different stakeholders. By embodying a commitment to justice from its inception, feminist becomes a powerful movement for social transformation, that brings together the intellectual, political and activist work[442].

Most importantly, «feminist methodology […] requires that feminist research puts the lives of the oppressed at the centre of the research question, and undertakes studies, gathers data, and interrogates material contexts with the primary aim of improving the lives and the material conditions of the oppressed»[443]. The academic critique of feminist advocate Greta Gaard claims that milk, a feminized protein[444] produced by female mammals, must be analysed first and foremost through a feminist outlook, as it offers a logical framework of inquiry[445], but stresses the need of applying specific adaptation of feminist reading to the peculiar contexts analysed. It is possible indeed to benefit from the multiple branches in which feminism declines, broadening its revolutionary trajectory of actively confronting various forms of oppression and injustice. Feminism has manifested through various analysis insights, such as feminist animal studies, material feminisms, indigenous feminisms, queer ecologies, feminist science studies, feminist analyses of environmental and climate justice, as well as antiracist and anticolonial activisms[446]. Such articulations of the topic highlight the expansive reach of feminist perspectives and their critical engagement with multiple dimensions of social, political and ecological struggles.

Understanding the entirety of our world as a *contact zone*[447], as suggested by Deborah Bird Rose and her colleagues, means to accept the existence of interactions and intersections across various levels and dimensions. This notion, that encompasses all types of interactions across living beings, recognizes that the current environmental and socio-ecological crisis faced by humanity today are unfolding precisely within this zone, where the traditional dichotomy between «nature/culture

[441] Gaard, G., "Where Is Feminism in the Environmental Humanities?", in Oppermann, S., and Iovino, S. (eds.), *Environmental humanities: Voices from the Anthropocene*, Rowman and Littlefield International, London, pp. 81-98, 2017, p. 94.
[442] Ibid., p. 94.
[443] Ibid., p. 83.
[444] Gaard, G., *Ecofeminism, Women, Animals, Nature*, Temple University Press, Philadelphia, 1993, p. 74.
[445] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p.595.
[446] Gaard, G., "Where Is Feminism in the Environmental Humanities?", in Oppermann, S., and Iovino, S. (eds.), *Environmental humanities: Voices from the Anthropocene*, Rowman and Littlefield International, London, pp. 81-98, 2017, p. 82.
[447] Rose, D. B., et al., "Thinking through the Environment, Unsettling the Humanities", *Environmental Humanities,* 1, pp. 1–5, 2012.

collapses and possibilities of life and death for everyone are at stake»[448]. It is for the existence of these ecological interrelations that Carol J. Adams provides a functional explanation of Ecofeminism is, defining it as an instrument that compares «the domination of women and nature, and calls for an end to oppressions based on politicized binaries (nature/culture; women/men; rationality/emotion), but has been slower to question the constructed human/animal binary»[449].

It is fundamental though to address the intersectional approach of contemporary Ecofeminism, that is founded on the critique towards dualistic thinking, but has developed to be a perspective that reads the reality for its heterogeneity and multiculturality; as political scientist Claire Jean Kim describes in her "Dangerous Crossings: Race, Species, and Nature in a Multicultural Age" these categories – race, species, and nature – are not fixed or inherent, but rather products of cultural and social processes. They are used as tools of classification and hierarchy, shaping our understanding of identities, relationships, and power structures. Her theories delve into the ways in which these constructs shape perceptions, policies, and practices related to racial and ethnic identities, animal rights, environmental issues, and notions of belonging and exclusion. Across her research, she proceeds to define the idea of "taxonomies of power", namely that these categories play a role in defining and maintaining systems of power and domination: race, species and nature are not neutral or objective classification, but instead reflect and reinforce social and political hierarchies. By examining this interplay, Kim aims to shed light on how these categories operate together and mutually shape, eventually damaging, each other[450].

Ecofeminism performs both through critical analysis and active agency, akin to the feminist movement, and is rooted in the emergence of women who identified and acknowledged their own lived encounters with marginalization, oppression, and inequality. These bodily, psychological and emotive experiences touch a variety of dimensions, including race, gender, class, sexuality, age, ability, and often interconnections among these factors. Still, these women do not perceive their experiences as personal deficiencies or biologically predetermined circumstances to be passively accepted or endured. Instead, they *stay with the problem*, addressing their own forms of abuse as socio-political predicaments constructed by society, which warrant challenge and resistance[451].

[448] Rose, D. B., et al., "Thinking through the Environment, Unsettling the Humanities", *Environmental Humanities,* 1, pp. 1–5, 2012.
[449] Adams, C. J., "Ecofeminism and the eating of animals", Hypatia, 6 (1), pp. 125–45, 1991.
[450] Kim, C. J., *Dangerous crossings: Race, Species, and Nature in a Multicultural Age*, Cambridge University Press, Cambridge, 2015.
[451] Gaard, G., "Where Is Feminism in the Environmental Humanities?", in Oppermann, S., and Iovino, S. (eds.), *Environmental humanities: Voices from the Anthropocene*, Rowman and Littlefield International, London, pp. 81-98, 2017, p. 83.

«Ecofeminists have argued for stronger alliances between women's and animal liberation; the need for these intersections is exceptionally strong in India where similar, if not identical, Hindu nationalist discourses operate on the role of women and cows in building and sustaining the Hindu nation»[452]. Cows are recognized as beings that experience extreme suffering once encaged, or worse, born, in the intense milking system of the largest producer of dairy among the world's countries. This acknowledgement prompts the urgent need to oppose to their suffering when contemplating the significance of human cultural practices involving animals. The question of whether cultural and traditional justifications can validate animal use and practices remains pivotal in these discussions, as the interests of animals are juxtaposed, in this case, with the eating habits of colonized communities[453].

Among social justice movements, of which ecofeminism is part, the intertwining concepts of culture and *voice* play a significant role in articulating claims about respective specific challenges faced by human communities. However, considering a problematic multispecies coexistence such as the one that interests the neo-colonialist milk industry in India, one can notice that a deeper interplay emerges, unveiling a connection between social justice movements and the additional erasure of *nonhuman animal cultures* due to oppression.

On this topic, many improvements are being made within the field of Critical Animal Studies, where scholars interested in postcolonial, anti-colonial, anti-capitalist, and intersectional theories have investigated the human presumption of animal agency and resistance from a sociopolitical perspective. Considering that many «social justice movements rely on voice tropes to articulate their claims, and the animal movements especially and pervasively claim to be the "voice of the voiceless"»[454], CAS Professor and contemporary social theorist Lauren Corman argued about the common usage and presumptions of such concept in activism in her essay "He(a)rd: Animal cultures and anti-colonial politics", of evocative title. She analysed whether «reliance on voice tropes within the animal movements might inadvertently reinforce the erasure of nonhuman animal subjectivities, as animals are regularly rendered as "voiceless"»[455], in a literal and metaphorical sense. Her main objective consisted in challenging the human conception of nonhuman animals as passive and voiceless victims, who lack any sort of power in their liberation process as oppressed entities and are instead in vital need of human advocates. Referring to ethological and historical research, Corman

[452] Narayanan, Y., ""Cow is a mother, mothers can do anything for their children!"", cit., p. 198.
[453] Corman, L., "He (a) rd: Animal cultures and anti-colonial politics", in *Colonialism and Animality*, pp. 159-180, Routledge, New York, 2020, p. 166.
[454] Corman, L., "He (a) rd: Animal cultures and anti-colonial politics", in *Colonialism and Animality*, pp. 159-180, Routledge, New York, 2020, p. 163.
[455] Ibid., p. 163.

obviously recognizes that nonhuman animals often lack a political voice, but affirms instead «that animals' own resistance and voices should be recognized alongside the humans' who fight on their behalf»[456]. Corman's study comes in response to the fact that while the reclamation and assertion of human struggles through voice metaphors is given relevance and finds comprehension, the idea that animals as well might possess their own intricate subjectivities, akin to humans, and endure similar injustice is often unimaginable or overlooked within the discourse of social engagement[457], where debates concerning cultural appropriation are at times rendered as "voice appropriation" debates[458].

The auspicated adoption of a non-anthropocentric plan of intervention understands culture not as an exclusive human capacity, but rather a product of interspecies social learning. Embracing a new perspective of this kind involves redefining the idea of *culture*, that is rather viewed as a form of social enrichment in which new behaviours and good practices can be transmitted horizontally (among species) or vertically (across generations), overpassing the dualistic division of human and nonhuman agency. By recognizing culture as a broader phenomenon that extends beyond humans, a post-humanist ecofeminist perspective would encourage a more inclusive understanding of the complexities of social learning and behaviour in various species[459]. Creative, intellectual and moral engagement must then be oriented towards the quest for a contextual food ontology that would be able to resist property relations and proceed to the *desubjectification* of animality within the agri-food system[460]. My proposal in response to these concerns introduces the vegan diet into the discussion.

In 1944, Donald Watson originated the term "vegan" by shortening the word "vegetarian" to encompass a more stringent form of abstention from animal products. This linguistic innovation was accompanied by the establishment of the Vegan Society in Leicester, United Kingdom, which solidified the concept of veganism as a lexically defined construct and a discernible set of cultural practices[461]. «In our time the consumption of animals is normalized to the point of invisibility may seem to be accepted as absolute or unchangeable—but is in fact neither»[462]. Food studies indicate that the origins of religious vegetarianism can be traced back to India, specifically influenced by Jainism and Hinduism. These belief systems embrace the principles of non-violence towards both

[456] Montford, K. S., Taylor, C. eds. *Colonialism and animality: Anti-colonial perspectives in critical animal studies*, Routledge, New York, 2020, p. 41.
[457] Corman, L., "He (a) rd: Animal cultures and anti-colonial politics", in *Colonialism and Animality*, pp. 159-180, Routledge, New York, 2020, p. 164.
[458] Ibid., p. 162.
[459] Ibid., p. 165.
[460] Montford, K. S., Taylor, C. eds. *Colonialism and animality: Anti-colonial perspectives in critical animal studies*, Routledge, New York, 2020, p. 8.
[461] Hertweck, T., *Vegetarian and vegan histories*, The Routledge Handbook of Vegan Studies, Routledge, 31 Mar 2021, last accessed: 08/06/2023, p. 29.
[462] Ibid., p. 28.

humans and other species, which is a shared theme that resonates with many individuals practicing veganism[463].

Consuming plant-based food gained relevance for its transformative significance, that would affect not only the physical body but also the spirit and the broader community: throughout the 20th century it became a practice that heavily relied on rationality to substantiate its assertions and reinforce its impact[464]. While India may have served as an initial model for vegetarian lifestyles from a dietary perspective, it was through the adoption and adaptation of these practices in the West, supported by moral and rationalist reasoning, that they gained political significance. Gandhi, along with others, viewed vegetarian diets, particularly raw diets, namely vegan ones, as a means of achieving greater liberation, an argument for modern efficiency as much as ethics, making the two strands of thought richly entwined[465]. «Vegetarianism and veganism had a radical effect on many social reformers — […] with Gandhi being perhaps the most effective example—and such themes become only more common as the century progressed, being reproduced by [other] movements»[466].

The social label of being vegan carries significant weight for individuals in a contemporary society like India, which aims to establish itself as a capitalist superpower. Embracing veganism enables individuals to actively combat feelings of guilt resulting from inaction and frustration associated with the inherent suffering endured within the oppressive system of animal husbandry, including the consumption of dairy products. The ethical lens of vegan advocacy allows the previously overlooked or disregarded nonhuman individuals to emerge as visible and tangible entities, with their own narratives and distinct identities, and in doing so, their suffering is also exposed as a real problem of supposedly common interest. Unfortunately, aligning with what Professor of Feminist studies Neel Ahuja[467] points out, the capacity to embrace a vegan lifestyle is frequently associated with an individual's financial means. This link is particularly evident in societies where animal-based foods are artificially affordable or have diminished economic value due to mass production and profit-oriented practices that compromise their quality. This correlation seems to underscore the influence of economic means on dietary choices, indicating that individuals with greater financial resources have a higher likelihood of being able to opt for vegan alternatives.

[463] Hertweck, T., *Vegetarian and vegan histories*, The Routledge Handbook of Vegan Studies, Routledge, 31 Mar 2021, last accessed: 08/06/2023, p. 30.
[464] Ibid., p. 32.
[465] Ibid., p. 33.
[466] Ibid., p. 32.
[467] King, S., Carey, R. S., Macquarie, I., Millious, V., & Power, E., *Messy Eating*, Fordham University Press, New York, 2019, p. 10.

A systemic viewpoint within the food framework is to be used to address institutionalized disparities and other manifestations of social injustice, such as classism, passive consumerism and disinformation; thanks to the research of critical food geographer A. Breeze Harper succeeds in dismantling the ideological prejudices linked to vegan dieting. Her 2009 publication, "Sistah Vegan: Black Female Vegans Speak on Food, Identity, Health and Society", is intended to be an instrument that helps deconstruct notions of veganism through a collection of narratives, critical essays, poems, and reflections from a North American black-identified vegan community[468].

As suspected, to propose veganism as an alternative and sustainable diet of feasible applicability even in more difficult contexts, where poverty, hunger and multispecies injustices are standardized issues, arises peculiar critical thoughts. Many are the trivial discussions of financial limits, protein intake, lack of tastefulness and health concerns related to vegan eaters, all ideological prejudices that critique vegan fundamentalism, but what Harper promotes with her intersectional, queer and vegan thought-provoking activism rather introduces veganism as an attempt at decolonizing our minds and bodies from capitalistic, racist and classist systems[469].

In fact, scholars exploring the intersection of colonization and animal advocacy usually strive to find a balance between acknowledging the suffering of animals and understanding the customs and experiences of communities that have been subject to colonization, both historically and presently[470].

Veganism might be perceived as another instance of colonized cultural intrusion, aimed at disseminating Western dietary habits through the search for fertile ground to expand such practices once again. In response to this critique, Kelly Struthers Montford and Chloë Taylor propose a perspective emphasizing that the proliferation of veganism in non-Western countries or among Indigenous communities has nothing to do with Western eating habits, because veganism, in their opinion, «remains [unfortunately] a marginalized diet in Western countries»[471]. Instead, it is argued that Western food imperialism has imposed animal agriculture, animal-based foods, and factory farming on cultures that traditionally followed plant-based diets, thereby displacing their relational interspecies practices and sacred approaches to food consumption with the commodification of animal agriculture[472].

[468] www.abreezeharper.com
[469] Harper, A. B., ed. *Sistah vegan: Black female vegans speak on food, identity, health, and society*, Lantern Books, New York, 2009.
[470] Corman, L., "He (a) rd: Animal cultures and anti-colonial politics", in *Colonialism and Animality*, pp. 159-180, Routledge, New York, 2020, p. 168.
[471] Montford, K. S., & Taylor, C., "Beyond edibility: Towards a nonspeciesist, decolonial food ontology", in *Colonialism and Animality*, pp. 129-156, Routledge, New York, 2020, p. 148.
[472] Montford, K. S., & Taylor, C., "Beyond edibility: Towards a nonspeciesist, decolonial food ontology", in *Colonialism and Animality*, pp. 129-156, Routledge, New York, 2020, p. 148.

The discourse surrounding veganism being characterized as trace of food imperialism fails to acknowledge the substantial quantities of plant and land resources necessary to sustain the prevailing Western consumption patterns of dairy products. Additionally, it overlooks the cultural significance and diversity of non-Western culinary practices that embrace plant-based diets, as well as the ethical principles encouraging respect towards nonhuman animals. Indeed, «these accusations align with the centuries-old majoritarian habit in Western cultures of deriding vegetarianism and, as it has come more into popular consciousness, veganism»[473].

Rediscovering the authentic taste of food within local communities surely means to make a powerful statement against food imperialist patterns, but to rethink traditional animal cultural practices revolving around the consumption of nonhuman animals' products is an additional engagement unto oneself and surrounding living beings: «reclamation of these engagements is, in part, a challenge to racist and colonial legacies that have degraded, disrupted, and sometimes decimated [occupied populations'] cultures»[474]. Engaging in a mindful and sustainable vegan diet can be seen as a resilient form of protest against the lasting impacts of colonization. I believe that veganism represents an act of solidarity with oppressed communities and serves as a collective form of resistance on behalf of those whose voices have been silenced.

What can be established as Indigenous veganism essentially attempts at granting former-colonized individuals, local minorities and women especially[475], the power to acknowledge and revitalize pre-colonial narratives and practices that not only contributes to the empowerment and self-determination of indigenous communities but also facilitates the recovery of human-nonhuman relationships, moving away from the exploitative and commodifying mindset that often characterizes the colonial legacy. Indeed, numerous individuals who oppose colonialism also engage in active resistance against industries of foreign imprint that have transformed the domestic productive sector of animal agriculture, the whole food chain and animal-product consumption[476].

To explicitly condemn such forms of nonhuman oppression and human coercion means to show support for animal welfare in opposition to the aftermath of colonial power dynamics; moreover, active engagement that starts from actual changes at the microlevel of individual everyday life,

[473] Deckha, M., "Toward a Postcolonial, Posthumanist Feminist Theory: Centralizing Race and Culture in Feminist Work on Nonhuman Animals", *Hypatia*, 27, no. 3, 2012, p. 535.
[474] Corman, L., "He (a) rd: Animal cultures and anti-colonial politics", in *Colonialism and Animality*, pp. 159-180, Routledge, New York, 2020, p. 167.
[475] Montford, K. S., Taylor, C. eds. *Colonialism and animality: Anti-colonial perspectives in critical animal studies*, Routledge, New York, 2020, p. XXII.
[476] Ibid., p. XXIII.

namely questioning unsustainable foodways, has the potential of disrupting dominant narratives rooted in settler ideologies. These strategies I think can serve as a significant means to foster collective power and build communities that challenge existing systems of oppression[477]. Even when the colonizer is geographically and historically distant, the effects of its violent invasion continue to resonate through fundamental dietary decisions, industrial infrastructure, controlled breeding of native livestock, communication methods and linguistic strategies, instrumentalization of religious traditions, as well as research and development investments oriented towards capitalistic ambitions.

Therefore, veganism can be described a paramount resource to take action in such complex inquiry, mostly because it «does not embrace imperatives to plant-based diets driven by white vegan cultures, but instead unsettles the master narrative by asking how veganism might reaffirm self-determination, and with this offer a vision for non-human flourishing»[478]. However, it is worth saying that even such righteous alternative to animal-products consumption should be approached in a culturally sensitive and informed manner, respecting and understanding the diverse standpoints and traditions that exist within one specific regional context. If a vegan ethical framework is imposed without taking into account the rich tapestry of Indian experiences, narratives, concepts, and knowledge, it runs the risk of replicating the patterns of past colonial projects; simply put, failure to address such delicate themes would perpetuate forms of cultural imposition that could be reminiscent of colonialism.

[477] Montford, K. S., Taylor, C. eds. *Colonialism and animality: Anti-colonial perspectives in critical animal studies*, Routledge, New York, 2020, p. XXIII.
[478] Ibid., p. XXII.

Conclusions

Operation Flood, which aimed to increase milk production in India, capitalized on the interconnected issues of race, citizenship, class, gender, and culture in harmful ways, where the immediate yet silenced violence repeated on nonhuman bodies emerged with its latent effects on the Indian society.

India's White Revolution, alongside the Green Revolution, mirrored the colonial practice of transforming food production into profitable commodities for export, consequently unsettling an already fragile agrifood economy. This transformation disproportionately affected rural communities, women in particular, who played a marginal yet significant role in Indian's post-independence economy[479]. Operation Flood led to the impoverishment of numerous individuals and exacerbated their economic vulnerability, overflooding the Nation with a self-consuming narrative of milk. Ecofeminists Val Plumwood and Vandana Shiva[480] have collaborated in exposing the biocolonization practices that are put into force within the dairy system of India, «patenting indigenous knowledges and genetics, all under the cover of "progress" through Western science and agribusiness»[481].

Among interspecies and colonialist disparities and divisions, «specific historical conjunctures come about, in which both human and nonhuman energies are increasingly turned into labour for the production of certain forms of capital, and for reproducing types of circulation and types of national state formations that increasingly appropriate human and animal bodies»[482]. Capitalism can be analysed as a simultaneous process to colonialism, both overwhelming to the Indian nation and appropriating of its "cheap natures"[483], namely ecological forces that through exploitation got turned into commodities, not accessible to everyone. This is the case of the White Revolution, where economic competition subverted ecosystemic complementarity and social heterogeneity, leaving place to global mono-productions instead of domestic multiplicity.

Our relationship with environmental resources and other living beings instead must be respected in its integrity of natural processes, cycles and genetics, and not sold to foreign superpowers. As food sovereignty advocate Vandana Shiva points out, both environmental and social sustainability have been jeopardised in the Indian context, destroying the ecological basis of agriculture. This was made possible by the fact that the dominant economic paradigm that pervaded post-Independent India has

[479] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 607.
[480] Plumwood, V., *Environmental Culture* (New York: Routledge, 2001); Shiva, V., *Biopiracy: The Plunder of Nature and Knowledge* (Boston: South End, 1997).
[481] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 598.
[482] Ahuja, N., et al., *Messy eating: Conversations on animals as food*, Fordham University Press New York, 2019, p. 164
[483] Moore, J., "The Rise of Cheap Nature", in *Anthropocene or Capitalocene?*, PM Press, pp. 78-114, 2016.

neglected the economy and equilibrium of both Nature and people[484]. The sole parameter to measure growth and wellness has relied on economic graphs and markets, even if promises of growth have instead failed their claims by impoverishing Nature and people, leaving a lot of work to environment, food and animal activism.

The authority and reliability of this initiative in fact mostly relied on the inherent belief among Indian citizens that the consumption of animal-based products, particularly dairy, played an indispensable role in fostering progress and development. It is noteworthy that these convictions were firmly grounded in the ideological construct of socio-economic nationalistic development and the perceived superiority of technologically advanced societies. Locked in a colonial crate, indigenous populations were subjected to considerable pressures to align with the perspectives of the colonizers, to perceive themselves as inferior, and to assimilate the practices and customs of the colonizing powers as a means to "improve" their circumstances[485].

According to the explanations provided by Frances Moore Lappé and Joseph Collins, «food aid has always been a colonialist extension of foreign policy, farm interests, and corporate interests»[486]. The theory put forth by Lappé and Collins accurately captures the consequences of India's Operation Flood, exemplified by the accumulation of wealth and the ascent to influential positions by Kurien and the Amul Dairy Cooperative: OF «offered to open future markets for commercial sales, extending the reach of agribusiness corporations and enabling First-World governing and economic institutions to control their Third World counterparts»[487]. The belief in the linkages between race, citizenship, class, gender, culture, and the consumption of animal-based food products during the British occupation of India was used as a tool of power, domination, and cultural assimilation. It reflected the Eurocentric worldview of the colonizers and served to reinforce existing hierarchies while marginalizing indigenous dietary practices and knowledge. The campaigns portrayed the consumption of milk and dairy as a symbol of modernity and success, implying that those who did not conform to this norm were somehow inferior or backward[488]. Strengthening the dualistic distinction between nature and culture, human and nonhuman, domesticator and domesticated, « the cultural position of animals has also been used as a marker of civility. Reverence, respect, and

[484] Shiva, Vandana, *Campi di Battaglia, biodiversità e agricoltura industriale*, Edizioni Ambiente, Milano, 2001, p. 116.

[485] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 604.
[486] Lappé, F. M., Collins, J., *Food First: Beyond the Myth of Scarcity*, Random House, New York, 1977.
[487] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 605.
[488] Gaard, G., "Where Is Feminism in the Environmental Humanities?", in Oppermann, S., and Iovino, S. (eds.), *Environmental humanities: Voices from the Anthropocene*, Rowman and Littlefield International, London, pp. 81-98, 2017, p. 95.

spiritual communion with animals and nature were used by colonists as evidence of the savagery of Indigenous peoples—a position used to justify the settler project»[489].

By equating the consumption of dairy with progress, deceptive OF campaigns reinforced existing hierarchies and promoted a one-sided narrative that ignored diverse dietary practices and cultural perspectives, perpetuated to this day within the industrial farming of cattle in India, thriving on resulting neo-colonialist cultural assets. These started to spread among the Indian population through the commodification of religious beliefs of cosmic nutrition of devotion to the motherly sacred cow, at the expenses of actual nonhuman mothers, whose bodies and lives underwent a process of objectification and commercialization that had never previously occurred in the Nation, mainly due to the predominant Hindu faith. Echoing the former colonizers' perspective, rooted in a biased and capitalistic paradigm, motherhood was commodified and reduced to a means of promoting and sustaining the dairy sector. Inside India's patriarchal industry, multispecies women were often portrayed as nurturers and providers of milk by *dharma*, reinforcing the traditional dualistic heteronormative distinction of gender roles within the society and perpetuating the notion that human and nonhuman female worth was tied to their ability to contribute to the growth of the population and dairy supremacy.

Strictly tied to economic growth are the horrors linked to reproductive work, that fosters the objectification, fragmentation and consumption of the female bovine body; *reprocentrism*, namely the practice of inflicting repeated violent physical abuses in name of economic gains on the schematized reproductive labour of nonhuman beings that become in this context "livestock" is the basic component in the management of natural resources. «The mother's body is the first environment, an insight that links the concerns of feminism, environmental justice, and interspecies justice»[490].The consequent scars that are left on the body and psychology of nonhuman animals also extend to their environmental footprint, their ecological role within ecosystems from which they are torn away, the index of biodiversity to which they contributed and the annihilation of their biopower for human consumption of milk. Many are the interconnections between capitalistic speciesism, that escalate in toxic anthropocentrism, masculinity, carnivorous consumerism and animal exploitation. Boycotting the cruelty hidden behind delusional dairy advertisement and industry can therefore be instituted as one of the pillars of multispecies feminism and ecofeminism. Neglecting this aspect would otherwise disregard the evolution of feminism in all of its branches that embrace the heterogeneity and singularity of each story and experience of oppressed victims. Expressing one's

[489] Montford, K. S., Taylor, C. eds. *Colonialism and animality: Anti-colonial perspectives in critical animal studies*, Routledge, New York, 2020, p. 8.
[490] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 598.

moral and activist commitment against such forms of patriarchal violence would instead demonstrate that sexualized and gender-based oppression are «not unidirectional or solely existent in male-on-female crime»[491].

In the previous chapters the realm of animal husbandry and its euphemistic attempt at romanticizing and softening the brutal nature of its functioning has been exposed for it telling a narrative articulated by oppressors to describe nonconsensual penetration and insemination of cattle. On this topic, I agree with Carmen Cusack on the more appropriate, yet scandalous for those who consume dairy products, of rape, that better evokes the acts of violation, deprivation and objectification involved in husbandry practices[492]. To be taken in account though there are also other invasive procedures, such as the milking, the starving, the killing and the disruption of the mother-child bond.

> Inside each glass of milk is the story of a nursing mother separated from her offspring. To justify and feel comfortable in "breaking" the bio-psycho-social bonds that join mother and calf, dairy scientists, dairy farmers, and dairy consumers alike must deny the web of relationships that defines healthy ecosystems[493].

Similarly, failing to recognize the intersectionality and shared traumas between nonhuman animals' domination and reprocentric exploitation of the female body by continuing to refer to the harmful and cruel dairy industry as "husbandry" means to distance oneself from the situation, to put in act Jon Mooallem's "digestive dissonance". It also signifies to deny one's direct or indirect contribution to the perpetuation of rapist practices and other atrocities against cows, dissociating in this way also from other female victims, to alleviate one's guilt[494].
In agreement with Greta Gaard's opinion, I think that, hopefully, «it is the presence and influence of postcolonial, antiracist and posthumanist feminist perspectives and methodologies that will make the most meaningful interventions in the environmental crises of our time»[495]. Taking action, responding to eco-social crisis with behavioural changes to address these issues is a goal that ecofeminism shares with the discipline of Environmental Humanities. Ensuring the flourishing of the feminist thought

[491] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 40.
[492] Cusack, C. M., "Feminism and husbandry: Drawing the fine line between mine and bovine", *Journal for Critical Animal Studies*, 11 (1), pp. 24–44, 2013, p. 32.
[493] Gaard, G., "Toward a feminist postcolonial milk studies", *American Quarterly*, 65.3, pp. 595-618, 2013, p. 612.
[494] Laura, R.S. and Buchanan, R., "Towards an Epistemology of Ecofeminism", *Education Research and Perspectives*, Vol. 28, 2001, p. 57.
[495] Gaard, G., "Where Is Feminism in the Environmental Humanities?", in Oppermann, S., and Iovino, S. (eds.), *Environmental humanities: Voices from the Anthropocene*, Rowman and Littlefield International, London, pp. 81-98, 2017, p. 95.

within the transdisciplinary academic field of EH corresponds to the necessity of giving equal dignity and space to the discussion of diverse perspectives and representations of race, class, gender, sexuality, ability, humanity or nonhumanity. Of the same importance though is the prioritization of arguments and topics for which EH should broaden its research parameters, by dedicating specific attention to the epistemological assumptions and the methodologies used in shaping new questioning and reinterpretation of the ecosystemic reality[496].

However, it is also true that this optimistic and wholistic approach does not always give rise to additional challenges: the reality of decision-making processes often falls short of the ideals. Decisions are frequently made by a specific segment of the population (such as national debates predominantly involving wealthy cis educated men of a particular age). Moreover, not everyone unfortunately possesses equal capacity for engaging in debates, and various biases come into play[497]. In response to the difficulties, the activist component, that encompasses both theoretical and practical research approaches analysed to this point, might succeed in encouraging societal and political engagement at the grassroot level, which I believe is the most immersive and efficient one, against the problematic prospering of the dairy industry in India.

Such commitment promotes structural change not only through dialogue practices among people, echoing the nonviolent protests that conducted India to its liberation, but also by impacting multiple issues of shared and intersectional living and individual and collective interests. To prioritize collective approaches that align with institutional transformation, that could provide actual modification to the intensive dairy system, it is important to adhere to certain guiding principles that embody the goals of social and ecological transition[498], such as:

a. the ambition to recognise collective responsibility as human agents by recovering empathy for the nonhuman and addressing the concerning cultural mindsets that contributed to the endurance of commodification of nonhuman bodies;
b. the constant search for individual emancipation of the oppressed and collective empowerment, condemning the gendered violence and sexualization of motherhood that is hidden in the animal husbandry system and evoked in speciesist and social Indian hierarchies;

[496] Gaard, G., "Where Is Feminism in the Environmental Humanities?", in Oppermann, S., and Iovino, S. (eds.), *Environmental humanities: Voices from the Anthropocene*, Rowman and Littlefield International, London, pp. 81-98, 2017, p. 94.
[497] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 107.
[498] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 107.

c. the desire to empower the most vulnerable members of the industry, human and nonhuman, at all stages of the productive and distributive process through a just education of the new generations to orient their cultural attachment towards nonhuman life and not over their edible products;
d. The aspiration to facilitate broader participation by promoting fair and transparent communication that does not sugar-coat the harsh reality of what cows endure for humans to consume their milk and does not promote artificial breeding as a delusional resolution to children's malnutrition and capitalistic hunger of the highest Indian castes.

The lesson for animal studies, including those striving to establish a "critical" perspective, is to be attentive and aware. It is crucial to recognize the limitations of our influence, comprehend the unique aspects of our own history and its interconnection with others, refrain from assuming that we alone represent the movement or possess control over its composition, and remain open to the insights of those whose experiences differ from our own, as they can teach us about the absence of universality in the dominant narrative of the privileged individual perspective of the straight, white, Judeo-Christian, heterosexual man of property[499].

Did Operation Flood succeed in guiding India towards a more environmental and ecologically sustainable management of the domestic dairy industry? Not really. Among its pragmatic results one can clearly admit that it brought the nation in the spotlight, as today, the level of milk consumption has grown, together with Indian economy and political power on the global stage. Thanks to OF, recent empirical data witness important improvements regarding the current per capita production levels, roughly respecting modest dietary recommendations (300ml/day), although actual milk consumption «is still well below this, especially for rural and impoverished citizens, and consumer demand is expected to continue to grow (National Institute of Nutrition 2010, Kumar et al. 2014) »[500]. As a result of its debated investments in the dairy industry, India is nowadays the largest producer of milk in the entire planet, but at what cost? The impact of the White Revolution on Indian culture and society surely «ushered in India's dominance as a milk producer, but a lack of political will failed to make access to this food a priority and consumption continued to lag well behind levels deemed desirable by nutritionists and public health reformers, as well as the poor»[501]. My thoughts on the topic cannot but result in a wish for the spread of ecological awareness and historical transparency

[499] Montford, K. S., Taylor, C. eds. *Colonialism and animality: Anti-colonial perspectives in critical animal studies*, Routledge, New York, 2020, p. XXIII.
[500] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p.52.
[501] Cohen, M. and Otomo, Y., *Making Milk: The Past, Present and Future of Our Primary Food*, Bloomsbury Publishing, 2019, p.59.

on such important agrifood transformations, hopefully conducing to a reimagination of humans' relationships with nonhumans, food and territory, especially given the fact that India is now feeding a huge and always growing population.

Professors Kelly Struthers, historian and sociologist, and Chloë Taylor, Women's and Gender Studies, contend that a true alternative food ontology would relinquish human-centered dietary practices in favour of a *nonspeciesist food ontology*, which considers the interests of humans, animals, and the broader natural world on equal grounds. This alternative approach to human eating would create opportunities for us to re-establish relationships with others—both humans and animals—in a way that promotes ethical connections and nurtures desirable ethical values[502].

The precursor of veganism, alias vegetarianism, is still much intertwined with India's history, to the point of being even a paramount element of Gandhi's political engagement, as concrete model for *ahimsa* or non-violence. Although « veganism as a political concept for liberation and non-violence had not gained traction at the time, it is clear that Gandhi nonetheless has some notion that an *ahimsic* lifestyle must reject the consumption of all animal products, including lactation»[503]. Dairy products in fact are not victimless foods, and a post-human analysis implicates the additional effort of preferring vegan diets rather than vegetarian ones, always respecting each one's health requirements and values.

A significant contribution to the cause would be found for each one of us at the end of our comfort zone, where it is possible to learn from diverse experiences and recognize the strong intersectionality that characterize the ecological context we live in and are not just masters of. To ask oneself how one's own particular social, racial and geographic situation upholds specific structures and powers is already a good starting point, that leads to interrogating its interference with our access to food, our personal eating choices and our concerns about others' health[504]. For Dr. Harper, veganism is not an everyday compromise on taste and proteic intake, but rather the right platform to explore all those issues, and, as a vegan woman myself, I share the same opinion[505].

[502] Montford, K. S., & Taylor, C., "Beyond edibility: Towards a nonspeciesist, decolonial food ontology", in *Colonialism and Animality*, pp. 129-156, Routledge, New York, 2020, p. 148.
[503] Narayanan Y., "Animal ethics and Hinduism's milking, mothering legends: analysing Krishna the butter thief and the Ocean of Milk*", Sophia*, 57(1), 2018, p. 144.
[504] Chang, V. L., "Redefined Palate: Sistah Vegan Project's Breeze Harper Dishes on Mindful Eating", *Civil Eats*, 19 December 2013, last accessed: 12/06/2023, https://civileats.com/2013/12/19/redefined-palate-sistah-vegan-projects-breeze-harper-dishes-on-mindful-eating/
[505] Ibidem.

It is for this reason that I am convinced that veganism could really function as a form of alliance towards human and nonhuman victims of the commodification of dairy, with it being an inclusive ideology that meets the main themes of ecofeminism.

An educated combination of the two principles can function as acts of resistance standing in opposition to the individualistic and capitalistic points of view and offering effective strategies for shaping collective behaviour across various societal levels. The two are both complementary methods whose potential best suits the urgent exercising of discernment that is requested by today's ecological challenges to the smaller scale, prompting the citizens in this way to make larger-scale critical thinking and stimulate the search for new solutions and new paths towards ecological democracies[506].

I believe that «ethical questioning can encourage us to better identify ways of overcoming the predatory attitudes»[507] bond to an understanding of the surrounding reality in dualistic terms, and veganism represents an individual dietary decision that aligns with this vision. Actions and projects of ecological transition, in all societies, open up new fruitful occasions for civic engagement[508]. There is no singular ethical framework exclusively tailored to ecology, but an efficient ethical framework and eating practice should respond simultaneously to different traditions, religions, and cultures, highlighting the necessity of employing a « less anthropo-centric ethics»[509].

[506] Renouard, C., Beau, R., Goupil, C., Koenig, C., *The Great Transition, Guide Principles for a Transformative Education*, Laudato Sì Research Institute, Campion Hall, Oxford, 2021, p. 106.
[507] Ibid., p. 103.
[508] Ibid., p. 103.
[509] Ibid., p. 100.

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