

## ARTICLE

# People, animals, and island encounters: A pig's history of the Pacific

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## Abstract

This essay traces the diffusion of pigs and the introduction of new practices of pig husbandry in East Asia and the Pacific, with particular attention to the cases of Hawaii, Okinawa, and Japan. Countering the trend in animal history to emphasize environmental and genetic factors, it demonstrates that discourses of property, sovereignty, freedom, and slavery, brought to the region with modern imperialism, played a decisive role in shaping relationships between people and domesticated animals. The essay concludes that global diffusion of capitalist forms of animal husbandry depended on a process of disembedding animals from earlier social roles. This process took different forms in different places. It was in part ecological and in part economic, but must be understood first in the context of the movement of political ideas.

**Keywords:** Human-animal relations; ethnohistory; history of capitalism; Asia-Pacific; East Asia

## Introduction: The Hawaiian-Okinawan pig gift

The devastating battle of Okinawa in 1945, the only battle of the Pacific War to be fought on Japanese home territory, killed as much as one quarter of the islands' civilian population. The loss of livestock was even greater. The pig population dropped from over 120,000 before the war to just a few thousand afterward. Pigs had occupied a particularly large place in Okinawan domestic life. Prior to Second World War, over 90% of farming households in Okinawa kept pigs; the average in the rest of Japan was under 10%. Decimation of the islands' pig population thus deprived Okinawans of their main source of animal protein and fat.<sup>1</sup>

Since Japan's annexation of the former Ryūkyū Kingdom as Okinawa Prefecture in 1879, Okinawa had been one of the poorest regions of the country and a major exporter of international migrants, the greatest number of whom went to Hawaii. In 1947, responding to the desperate conditions in Okinawa, a group of Hawaiian Okinawans formed the United Okinawan Assistance Association of Hawaii and began a campaign to send pigs to their homeland. Using advertisements in Hawaiian Japanese-language newspapers and on radio, they managed to raise nearly \$50,000 to purchase and ship 550 pigs. They acquired pigs of Omaha, Nebraska stock from a dealer in Portland, Oregon. The US military assisted with transport. After a campaign of over one year, the pigs arrived on 27 September 1948, on White Beach, Okinawa, then under US occupation, and were distributed island-wide the following month. Plans for the distribution, carefully explained in leaflets accompanying the pigs, called for local officials in each municipality to keep boars for breeding and for the households receiving sows to

<sup>1</sup>Yoshida Shigeru, 'Sengo shoki no Okinawa chikusan no kaifuku katei to Hawaii rengō Okinawa kyūsaikai', *Ryūkyū daigaku nōgakubu gakujiutsu hōkoku* no. 51 (2004): 96.

commit to giving neighbours ten piglets, while recipients of the second generation committed to giving away five, thus ensuring rapid propagation.<sup>2</sup>

The project was a success and has since been celebrated in Japanese media as well as locally in Okinawa and Hawaii. In 1999, Japanese national television ran a documentary special about it called ‘Operation Pig Transport: 5,000 Kilometers Across the Pacific.’ In Okinawa, the episode has come to be called the story of ‘pigs from the sea.’ A ‘Pigs from the Sea Monument’ was dedicated in Uruma City, near White Beach, in 2016. Two years later, the Hawaii State Senate declared 27 September ‘Pigs from the Sea Day.’<sup>3</sup> The campaign made a good human-interest story, to be sure, and a good ‘pig-interest story,’ because pigs are often seen as cute or humorous. But it is treated with seriousness in Hawaii and Okinawa. It raised Okinawan ethnic pride in Hawaii, where Okinawans had once suffered discrimination from other Japanese immigrants. It also represented the reopening of ties between the islands of Okinawa and the Okinawan diaspora, which had been cut by the war. The Hawaiian Senate declaration honours ‘the Okinawan community in the Hawaiian islands . . . recognizing those who did their part in bridging two cultures and two islands.’<sup>4</sup> In Okinawa, where the story is taught in schools and commemorated in school festivals as well as in a musical, the cause to commemorate is postwar recovery. ‘These pigs,’ the Uruma monument declares, ‘which our Uchinanchu [Okinawan] brethren in Hawaii risked their lives to deliver, helped revive the Okinawan pig farming industry and solve the food shortage . . . They also played a large role in ensuring that the Okinawan tradition of consuming pork could be carried on to future generations.’<sup>5</sup> The story of the Hawaiian-Okinawan pig gift has thus come to signify more than the charity or heroics of the donors themselves, becoming a part of cultural identity on both the giving and receiving sides.

Beyond the human-interest story, this Hawaiian-sponsored transfer of pigs from the American Midwest to Okinawa emerges as part of a broader history of domesticated animals travelling the Pacific Ocean, including a sequence of Pacific pig colonizations that began centuries earlier with the first introduction of pigs to Polynesia by voyagers from New Guinea and Near Oceania. Since pigs became central to the local diet on practically every Pacific island they colonized and often became important in rituals of power, the roles they played in each case need to be understood in both alimentary and political terms. Just as the Hawaiian-Okinawan pig gift is inseparable from the geopolitical setting that enabled it—US domination of both islands following a war in which both had been key strategic sites—political factors are critical to the context of earlier colonizations and exchanges as well.

As environmental historian Sam White has shown, domesticated pigs in most parts of the world today are a Chinese-European crossbreed developed in Europe in the eighteenth century. White traces the introduction of pig breeds from China into Europe and onward to North America and shows the environmental and social changes that preceded and accompanied the breeding of new strains. The modern animals that emerged in this process bore traits developed for the needs of industrial capitalist society.<sup>6</sup> Since White’s study carries the story westward as far

<sup>2</sup>Shimajima Tetsurō, *Buta to Okinawa dokuritsu* (Tokyo: Miraisha, 1997), 196.

<sup>3</sup>NHK, ‘Taiheiyo 5000-kiro buta yūsō sakusen’, 1999; Okinawa Prefecture ‘Pigs from the Sea Commemorative Monument,’ ‘Umi kara buta ga yatte kita “kinenhi”’ <https://www.pref.okinawa.jp/site/bunka-sports/koryu/umibuta.html>; Hawai‘i State Senate, ‘Pigs from the Sea Day’, September 18, 2018. <https://www.hawaiisenatemajority.com/post/2018/09/18/pigs-from-the-sea-day>.

<sup>4</sup>Hawai‘i State Senate, ‘Pigs from the Sea Day’.

<sup>5</sup>Okinawa Prefecture, ‘Pigs from the Sea Commemorative Monument’.

<sup>6</sup>Sam White, ‘From Globalized Pig Breeds to Capitalist Pigs: A Study in Animal Cultures and Evolutionary History’, *Environmental History*, 16, no. 1 (January 2011): 94–120. There has been a modest boom in pig histories since publication of White’s article, including Tiago Saraiva, *Fascist Pigs: Technoscientific Organisms and the History of Fascism* (Cambridge, MA: MIT Press, 2016); J. L. Anderson, *Capitalist Pigs: Pigs, Pork, and Power in America* (Morgantown, West Virginia: University Press, 2019); Alex Blanchette, *Porkopolis: American Animality, Standardized Life, and the Factory Farm* (Durham, NC: Duke University Press, 2020); and Thomas Fleischman, *Communist Pigs: An Animal History of East Germany’s Rise and Fall* (Seattle: University of Washington Press, 2020).

as North America, the social history of the diffusion of modern pig breeds in the Pacific remains to be told. That history cannot be told simply as an extension of the migration described by White, however, because it encompasses the crossing of several trajectories, from both the east and the west. In addition to the prehistoric colonization of Polynesia, pigs also travelled from China throughout East Asia, including to Okinawa and Japan. Later, pigs on European and North American vessels travelling westward arrived in the island Pacific. Finally, after the Second World War, they travelled on an American vessel accompanied by seven Hawaiian-Okinawan sponsors to arrive at White Beach, Okinawa. The diffusion of pigs in the Pacific thus reveals a process in the global history of human-animal relations that exceeds the bounds of any linear narrative of trade and capitalism.

Announcing the departure of the USS John Owen carrying the 550 gift animals from Portland in August 1948, the local newspaper called it 'the first attempted trans-Pacific crossing by pigs.'<sup>7</sup> In genetic terms, Okinawa's pigs from the sea had in fact come across many seas, since the American strains descended directly from the Chinese-European crossbreeds. Meanwhile, centuries before Chinese pigs were first introduced to Europe, they had travelled in the opposite direction, to the Ryūkyū Islands, where they formed the stock that survived there until Second World War. With the Hawaiian-Okinawan pig gift, the Chinese pig, transformed through generations of breeding, thus circumnavigated the globe to encounter its distant relatives. US-born pigs and their offspring quickly replaced the pigs of the smaller, earlier Chinese breed in Okinawa.<sup>8</sup>

This essay surveys the sequence of pig colonizations in the Pacific, with particular focus on Hawaii and Okinawa, showing how political forces brought the two island societies across time and space toward the pig gift and the moment of genetic circumnavigation. Contrary to White's focus on genetic and environmental factors, however, my aim will be to show that changes in the position of pigs in Pacific societies occurred as the result of new discourses and attitudes introduced through encounters among people. Although new breeds played a role in this history, their impact was never decisive by itself. In the pig's history of the Pacific, the things people said about pigs were ultimately more significant than the genes that the pigs carried.<sup>9</sup> The same claim might be made for domesticated animals elsewhere too, but it has particular clarity in the Pacific due to several recent introductions of new breeds together with ideologically or politically driven changes in husbandry around the region.

The historiography on human-animal relations has seen two waves since the 1980s. The first, exemplified by studies like Harriet Ritvo's *The Animal Estate*, was concerned primarily with how people perceived and behaved toward animals. Because this work focused on human perceptions of animals more than on what the animals did or might have thought, it grounded itself in analysis of the record of human discourse. Studies also tended to be single-country or regionally narrow (with Europe predominating). The second wave emerged with the growth of environmental history and treats humans and animals together as part of the natural environment. Humans in most environmental histories remain the primary drivers of historical change, but the animals have agency too. By wandering, eating, defecating, and reproducing, they transform landscapes, directly and indirectly affecting humans. Animals have also been vectors of disease. Compared to the first wave of animal histories, environmental histories of animals treat larger regions, uncontained by national boundaries. Although elements of both approaches are evident in some recent studies, the

<sup>7</sup>Quoted in Shimojima, 175.

<sup>8</sup>American pig breeds were introduced elsewhere in Asia and the Pacific in the twentieth century, so the genetic reunion in Okinawa was not unique. It was surely one of the best documented and most celebrated, however.

<sup>9</sup>Louise Robbins observes of eighteenth-century Europe that 'concerns about human affairs suffused writing that was ostensibly about animals'. Louise E. Robbins, *Elephant Slaves and Pampered Parrots: Exotic Animals in Eighteenth-Century Paris* (Johns Hopkins University Press, 2002), 187.

gains made through environmental and biological explanations and broad, transregional approaches have tended to come at the sacrifice of close analysis of discourse.<sup>10</sup>

The case of pigs in the Pacific calls for conjoining the two approaches, in order to construct a cultural history based on discourse while retaining the large geographical scale and relativization of human agency that have informed environmental studies. There are two reasons to bring cultural history to the foreground in this instance. First, having been introduced on each Pacific island intentionally by people, pigs were already culturally imbricated from the outset, shaped by their relationships with humans, whatever independent agency they might have shown. Second, in each of the cases examined here, the introduction of new pigs or new ways of breeding pigs was enmeshed in the politics of encounters between radically different human societies—imperial encounters—in which normative discourses about humanity and civilization played a critical role. As with other farm animals, the modern history of pigs charts the growth of capitalist husbandry. But before capitalism reshaped human-animal relations in the Pacific, epistemologies that undergirded capitalism shaped the way animals' social roles were understood. These epistemologies, which travelled together with human colonizers and new breeds of animals, were rooted in a conception of the sovereign individual whose personhood was defined by property rights and, by extension, dominion over other living beings. That conception required extracting animals and humans from the webs of social relations that tied them.

### Pig colonizations and pig-human societies

It is difficult to say whether humans domesticated pigs or pigs domesticated humans. The two became socially entangled millennia ago. Wild pigs probably came to live in human settlements in multiple regions independently, including separate domestications in eastern and western Eurasia.<sup>11</sup> Pigs are gregarious herd animals and will attach emotionally to humans. In contrast with ruminants, they are omnivorous, making them potential competitors with humans for a range of foods that ruminants will not eat. The pig's rooting habit and its voracious omnivory place wild pigs among the worst nuisance animals for crop-growing farmers. Although pigs will consume human waste, people seeking to keep domestic pigs from consuming their crops as well are compelled to offer them additional food. Pigs obviously benefit from this arrangement. The process of domestication thus involved a mutual accommodation: in exchange for being fed, pigs became more manageable and offered themselves up as food.

Unlike many other domesticated mammals, people keep pigs around for only one purpose: to eat them. A pig won't guard a house, pull a plough, or allow people to ride its back. Nor do we drink the pig's milk. Viewed in utilitarian terms, pigs are pure meat animals.<sup>12</sup> At the same time, they are forest foragers by nature and will quickly become feral if given the opportunity. All domestic breeds of pigs in the world belong to the same species, which is close enough to the wild boar that they will mate and produce fertile offspring. Pigs thus live with and around humans across a full spectrum of habits, from domesticated to wild, and of relationships, from intimate to antagonistic.

In the anthropological literature, pigs have figured prominently in a debate posing a semiological approach against an ecological one to explain why consumption of certain animals is taboo in some societies and not others. Mary Douglas argued that the Hebrew bible prohibited eating the

<sup>10</sup>Other studies that bridge environmental and social-cultural history include Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford University Press, 2004); John Ryan Fischer, *Cattle Colonialism An Environmental History of the Conquest of California and Hawai'i, Flows, Migrations, and Exchanges* (Chapel Hill: The University of North Carolina Press, 2015).

<sup>11</sup>Greger Larson et al., 'Current Views on Sus Phylogeography and Pig Domestication as Seen through Modern mtDNA Studies', in *Pigs and Humans: Ten Thousand Years of Interaction*, edited by Umberto Albarella and Keith Dobney (Oxford University Press, 2007), 32–5.

<sup>12</sup>Marvin Harris, *Good to Eat: Riddles of Food and Culture* (Prospect Heights, Illinois: Waveland Press, 1985), 74.

flesh of pigs because they failed to fit into classifications devised to show order in God's creation.<sup>13</sup> In contrast, Marvin Harris argued that the interdiction of pig flesh resulted from the fact that deforestation and the growing human population in the ancient Middle East made pig husbandry unsustainable.<sup>14</sup> Both these studies focused on ancient societies. Related studies have examined smaller societies in the present. Few, however, have sought to explain the dynamics of how an animal's fit within a human community, as companion, labour source, or food, changed in a particular historical context. Yet major changes in both the ecological and cultural place of domestic animals have occurred in recent history, when we can identify human actors and political causes. Just as we know the names of the individual Hawaiian-Okinawans responsible for the pig gift of 1948, we can follow the transfer of pigs and of ideas about pigs around the Pacific with reference to particular people.

White shows that pigs in China and Europe evolved differently due to the differing social and historical conditions in which they were bred. Hemmed in by humans in denser settlements, Chinese pigs accommodated themselves to living principally on household refuse rather than foraging in the woods. As sedentary animals, they became 'round, pale, short-legged, and pot-bellied.' The label 'house pig' is clearly apposite for these animals. In contrast, European pigs continued to demand pannage (release into the forest to feed on acorns and nuts) and exhibited more of the characteristics of a forest animal. These habits came into conflict with human needs as human population growth reduced available forest land. The cross-breeding of Chinese house pigs and European forest pigs in eighteenth-century Europe produced what White refers to as 'capitalist pigs,' the pork-making 'machines' we know today, kept housed or penned and fed grain, in farms and factories with hundreds or thousands of animals.<sup>15</sup>

Since the presence of pigs influenced humans too, instead of focusing only on the resulting pig types, we might instead think in terms of the different social configurations, or pig-human societies, that formed wherever pigs and humans cohabited: a paddy-farming, house-centred Chinese pig-human society versus a broadcast-farming and forest-dependent European pig-human society, for example. If we follow pigs from the Eurasian continent into the island Pacific, we find a third type of pig-human society. And if describing the Chinese and European cases as 'pig-human societies' feels slightly hyperbolic, it should not for the island Pacific, in many parts of which pigs once had a social and ritual centrality that is now hard to imagine.

People travelling in outrigger canoes from New Guinea and Southeast Asia began populating remote Oceania, including Polynesia, around 3,500 years ago. Although scholars differ on when they reached Hawaii, recent archaeological evidence suggests that it may not have been until as late as the thirteenth-century CE.<sup>16</sup> Their boats carried with them what Alfred Crosby called 'port-manteau biota': an ensemble of co-travellers including pigs, dogs, and chickens, as well as rats. According to no less a maritime authority than Captain James Cook, pigs are prone to seasickness, so it cannot have been an easy trip.<sup>17</sup> But pigs soon established themselves together with humans

<sup>13</sup>Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (1966; Ark Paperbacks, 1984), 41–57.

<sup>14</sup>Harris, 67–87. Harris contrasts the ancient Hebrew abomination of pigs with what he calls 'pig love', seen in many Pacific island societies. See Marvin Harris, 'Pig Lovers and Pig Haters', in *Cows, Pigs, Wars and Witches: The Riddles of Culture* (NY: Random House, 1974), 35–60. For another ecological study, with a focus on Melanesia, see Roy A. Rappaport, *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People* (Waveland Press, 2000); For a theoretical review, Margaret Jolly, 'The Anatomy of Pig Love: Substance, Spirit and Gender in South Pentecost, Vanuatu', *Canberra Anthropology* 7, nos. 1–2 (1984): 74–108.

<sup>15</sup>White, 82. Fleischman's *Communist Pigs* emphasizes that modern communist regimes promoted the same factory farming methods.

<sup>16</sup>Janet M. Wilmshurst et al., 'High-Precision Radiocarbon Dating Shows Recent and Rapid Initial Human Colonization of East Polynesia', *PNAS*, 108, no. 5 (2011).

<sup>17</sup>James Cook, R. A. Skelton, and J. C. Beaglehole, *The Journals of Captain James Cook on His Voyages of Discovery*, Extra Series, No. 34–37 (Cambridge: Published for the Hakluyt Society at the University Press, 1955), vol. 1, 139–40, 151.

in many Polynesian islands. When Europeans arrived in the eighteenth century, they found large pig populations.

European visitors to Polynesia in the eighteenth century observed that the pigs they encountered there differed from the pigs they had at home. Polynesian pigs were generally smaller, slimmer, and hairier, with long hind legs. All of this indicated that they remained closer genetically to their wild ancestors than the pigs then common in Western Europe, even though there were no wild pigs indigenous to Polynesia with which they could interbreed. In many places they roamed free.<sup>18</sup> Voyagers' accounts and later ethnographies suggest varying degrees of domestication. In general, however, Polynesian pigs were in social terms what we might call *village pigs*.<sup>19</sup> Individuals were often fed, named, and claimed by particular households, but they spent most of their lives foraging around the settlement rather than penned. Where there were fences, gardens were fenced to keep pigs out, since it was assumed they would roam and forage. The laws of Huahine (part of French Polynesia) recorded by William Ellis in 1829 made clear the pig's right to roam: 'If a pig enters a garden and destroys the produce there, let no recompense be required, because of the badness of the fence he entered.'<sup>20</sup>

### European ideas of human and animal slavery in Polynesia

Eighteenth- and early nineteenth-century European voyagers frequently mentioned pigs in their accounts because their ships were in constant search of animal flesh to eat and pigs were the largest land animals in the island Pacific. Europeans therefore showed a strong interest in the question of who owned the pigs in Polynesia. They also interpreted the management of pigs and traits of the animals themselves in terms of their own conceptions of civilization and savagery.

Georg Forster, who accompanied Cook on his second voyage, noted that the pigs in Tahiti appeared more wild than European pigs, writing that they 'have not those pendulous ears, which according to the ingenious count de Buffon, are the characteristics of slavery in animals.' He went on to observe that they were 'cleanlier than our European hogs,' and 'part of the real riches of the Tahitians,' yet appeared only to be eaten 'on certain solemn occasions,' when the chiefs consumed massive amounts of pork.<sup>21</sup> Buffon's widely read *Natural History*, to which Forster alluded here, theorized that traits such as droopy ears were products of the domesticated animal's 'degeneration' under human bondage. This also implied the complementary idea that creatures less influenced by captivity were inherently superior. Buffon was one of a number of eighteenth-century European writers who viewed animal domestication through the lens of slavery.<sup>22</sup> This mode of thinking rendered the Polynesian pigs into noble savages.

However, Polynesian pigs were not necessarily less domesticated than their distant relatives in China and Europe. After all, their ancestors had arrived by boat with humans, who continued to

<sup>18</sup>Biogeographer Cheong H. Diong claims that all Polynesian pigs were 'pariah' animals, taking food from people but not bred or sheltered by them. Diong, 'Population Biology and Management of the Feral Pig (*Sus Scrofa* L.) in Kipahulu Valley, Maui' (PhD dissertation, University of Hawaii, 1982), 69. Diong summarizes early European descriptions of Polynesian pigs on pp. 53–4.

<sup>19</sup>For the comparable case of 'village dogs', see Raymond and Lorna Coppinger, *Dogs: A New Understanding of Canine Origin, Behavior and Evolution* (University of Chicago Press, 2002), 69–70. For historical study of a range of dog-human relationships, see Lance Van Sittert and Sandra Scott Swart, *Canis Africanis: A Dog History of Southern Africa* (Leiden: Brill, 2008).

<sup>20</sup>William Ellis, *Polynesian Researches* (London: Fisher, Son, and Jackson, 1829), vol. 4, 428.

<sup>21</sup>Georg Forster, *A Voyage Round the World, in His Britannic Majesty's Sloop, Resolution* (London: B. White, 1777), 273. Forster also records that the islanders hid their animals from the European visitors and told them they could not trade them because they belonged to the king. It bears remembering that all early European observations of pigs in the Pacific were made by voyagers seeking to acquire them. The same phrase about droopy ears as the 'badge of slavery' was used by Bennett, 1840; see Diong, 58.

<sup>22</sup>Ingrid H. Tague, *Animal Companions: Pets and Social Change in Eighteenth-Century Britain* (Penn State University Press, 2015), 63; Robbins, *Elephant Slaves*, 186–91.

feed them and treated them as both community members and ritual animals of the highest importance. They simply lived in a different domestic relationship. Throughout the island Pacific, communities keeping pigs found ways to tie them to their caregivers emotionally without physically tying or enclosing them. Women often cared for piglets from infancy, grooming, hand-feeding, and sometimes suckling them.<sup>23</sup> The animals 'were the constant companions of their masters,' observed Russian ship commander Urey Lisiansky, who visited Kealahou Bay on Hawaii Island in 1804.<sup>24</sup> The affective bonds between pigs and humans in village-pig societies could thus be extremely intimate (Marvin Harris has called it 'pig love' in the case of Melanesia), but mature pigs fed and mated at will. With mating uncontrolled, little selection occurred to produce a fatter or more meat-efficient pig.<sup>25</sup>

The Pacific island village pigs might also be called *feudal pigs*. This was anyway the perception of Europeans. And it seems true that in Tonga, in Hawaii, in Tahiti, and elsewhere, although individual households looked after pigs, the king or chief had a claim over them, as he did over all the land and the labour of his subjects. As Forster noted, pigs were not daily food for Polynesians. Like other agricultural products, the people tending them gave them as periodic tribute to their overlords. In other cases, the kings' demands came irregularly. One local ruler told a missionary, however, that he had to distribute everything he got, 'or else he would not be king.'<sup>26</sup> Tribute pigs were sacrificed and consumed at festivals, a rare occasion when commoners were able to eat them. Together, in this way, commoners, rulers, and pigs constituted a society that was 'feudal' in the sense that those who worked the land gave a portion of the product, including pigs, to a local lord or the king, who distributed what he had exacted to his immediate entourage and to the farmers themselves in occasional ritual displays of largess.

A system like this developed its most evolved form in Hawaii during the three centuries prior to the arrival of European explorers and the beginning of trans-oceanic trade. The archaeological record indicates a marked increase in pig sacrifices sometime after 1500, unaccompanied by evidence of increased pork consumption in domestic sites. Michael J. Kolb reads this as the sign of a growing 'chiefly hierarchy.'<sup>27</sup> This process would ultimately lead to the consolidation of a multi-island state under Kamehameha at the end of the eighteenth century. In contrast with his predecessor Kaheliki, who treated each encounter with a foreign ship as a separate episode, seeking advantage through either trade or theft, Kamehameha used his control of island resources to negotiate acquisition of European arms and ultimately to gain assistance in constructing a navy. Pigs were a critical commodity in this exchange. In the words of one American captain, the Hawaiian king was 'a magnanimous monarch, but a shrewd pork dealer.'<sup>28</sup> Weaker subsequent members of his dynasty used their monopolies of pigs, native women, and eventually sandalwood, to acquire imported luxuries.

<sup>23</sup>Patrick V. Kirch and Marshall Sahlins, *Anahulu: The Anthropology of History in the Kingdom of Hawaii* (University of Chicago Press, 1992), vol. 1, 28. For summaries of several dozen studies revealing the variations in pig-human relations in the Pacific, see Secretariat of the Pacific Community, eds., 'The Importance of the Pig in Pacific Island Culture: An Annotated Bibliography', Secretariat of the Pacific Community, 2006.

<sup>24</sup>Urey Lisiansky (Yuri Lysiansky), *A Voyage Round the World: In the Years 1803, 4, 5, & 6* (London: J. Booth, 1814), 107.

<sup>25</sup>There is some dispute today over whether pigs in Hawaii before the European arrival roamed free or were kept penned. The historical record offers evidence of both. Hawaiian scholars tend to emphasize a high level of management of land and livestock before European contact, implicitly deploying European concepts of property to support the case for indigenous sovereignty. See, for example, Kepā Maly, Benton Kealiʻi Pang, Charles Peʻapeʻa Makawalu Burrows, 'Pigs in Hawai'i, from Traditional to Modern', East Maui Watershed Partnership, 2013. <http://www.eastmauiwatershed.org/wp-content/uploads/2013/01/Puaa-cultural-fact-sheet-04.03.pdf>.

<sup>26</sup>Robert Wood Williamson, *The Social and Political Systems of Central Polynesia* (Cambridge University Press, 1924), vol. 3, 356.

<sup>27</sup>Michael J. Kolb, 'Staple Finance, Ritual Pig Sacrifice, and Ideological Power in Ancient Hawai'i', *Archeological Papers of the American Anthropological Association*, 9, no. 1 (January 1999): 89–107.

<sup>28</sup>Quoted in Kirch and Sahlins, *Anahulu* vol. 1, 42.

Judging from Marshall Sahlins' analysis of sexuality and alliance-making in Hawaii at the time of Captain Cook, there seems to have been some congruence between the treatment of pigs and attitudes about human offspring. Hawaiian kinship was not based on patriline. Most young people's sexual behaviour was not controlled by their parents. However, sex was used to create or maintain alliances among households. Similarly, pigs were important to families not as their private property but as the means to maintain relationships with chiefs and relatives. In killing and giving or sharing a pig, a household affirmed bonds and obligations with other households. Human offspring tied households and extended kin groups by having sexual relationships, much as animals tied households by being killed, exchanged, and eaten.<sup>29</sup>

As whites came to acquire greater stake in Pacific island societies, the pig's freedom from bondage before its final sacrifice to the chief or king came to be seen as the flip side of a condition of unfreedom for the Polynesian common man. Pigs served as props in a story that circulated among missionaries in the early nineteenth century. In this story, an island man acquires a pig and raises it for a year in secrecy to feed his own family, only to have it taken from him by the king's procurer at the moment the family is to eat it. 'Such is the civil condition of the mass of the nation,' wrote the American missionary C.S. Stewart after recording this tale. 'Their only birthright is slavery; and its highest immunities cannot secure them, a right of life, much less any inferior possession.' Without the right to private property in livestock, in the missionaries' view, the common people were slaves to their king.<sup>30</sup>

There is evidence in voyagers' and missionaries' accounts that in places where taxation was not regularized, chiefs did in fact exact tribute when they wished. Marshall Sahlins and Patrick Kirch, citing David Malo's early nineteenth-century description of Hawaii, assert that Hawaiian kings had become selfish and acquisitive, although they suggest this may have begun after the introduction of European goods.<sup>31</sup> The concern here, however, is not whether in fact this royal pig expropriation occurred, but what its telling signifies. The story offered a parable for the protestant missionaries' ideals of the autonomous individual, domesticity attached to the hearth and the family meal, and the ethic of labour to bring hard-earned bacon to the table. It also derived ultimately from eighteenth-century ideas about animals and slavery: Buffon had claimed that Native Americans demonstrated their lack of civilization by the fact that they had no command over animals.<sup>32</sup> According to the missionaries' circular logic, the Polynesians gave up their property to their lords and were indolent as a consequence of having no property rights. Their inability to raise their own pigs and eat them in the privacy of their homes when they pleased signified their slavery. And therefore, implicitly, to be free was to be able to hold sovereign dominion over a domestic animal.

The solution to this condition of slavery in Hawaii was the privatization enacted in the Constitution of 1840 and the Great Māhele (1848–52), in which the land formerly held, together with its agricultural products and animals, in a complex system of usufruct and tribute within the hierarchy of king, chiefs, subordinates, and commoners, was divided between king and subjects, registered to individual owners, and commodified. Within a few years, the great majority of Hawaiian land passed into the hands of white settlers and the mass of commoners found themselves indebted tenants.<sup>33</sup> Thereafter, commoners could kill and eat pigs when they chose, if they could find the money to acquire and keep them.

<sup>29</sup>Sahlins, *Islands of History* (Chicago University Press, 1985), 19, 23.

<sup>30</sup>C.S. Stewart, *Private Journal of a Voyage to the Pacific Ocean, and Residence at the Sandwich Islands* (3<sup>rd</sup> ed.; London: H. Fisher, Son, and P. Jackson, 1830), 152. See the discussion of this story in Stewart Banner, *Possessing the Pacific: Land, Settlers, and Indigenous People from Australia to Alaska* (Cambridge, MA: Harvard University Press, 2007), 146–8. A variation, recorded as the speech of a native Christian convert in Rurutu (French Polynesia) may be found in John Williams, *A Narrative of Missionary Enterprises in the South Sea Islands* (London: J. Snow, 1838), 230.

<sup>31</sup>Kirch and Sahlins, *Anahulu* vol. 1, 27.

<sup>32</sup>Robbins, *Elephant Slaves*, 201.

<sup>33</sup>Banner, *Possessing the Pacific*, 138–46. For a detailed account, see Robert H. Stauffer, *Kahana: How the Land Was Lost* (University of Hawaii Press, 2004).



In addition to land titling, the Māhele meant enclosures. White settlers brought cattle and quickly moved in to claim common agricultural land (*kula*) for pasture. Indigenous commoners found their animals shot at for trespassing on foreigners' property. Although range cattle had first destroyed the native commons, Hawaiian courts upheld the sovereign property rights of the shooters against the keepers of the errant animals.<sup>34</sup> It is easy to imagine that in the years after this, many native Hawaiians, now compelled to pen and feed their pigs if they wanted to keep them, simply gave up on the previous semi-domestic arrangement.<sup>35</sup> Open land went first to pasture for cattle and subsequently to sugar cane and pineapple plantations. The second generation of missionaries abandoned the ideal of the independent native householder with his solitary pig and reimagined salvation for their flock in the discipline of wage labour on plantations, the largest of which would fall into the hands of missionary families.<sup>36</sup> The remaining village pigs went feral. Even in the mountain forests where the pigs now proliferated, native Hawaiians were forbidden by law from hunting them, since the land was government property.<sup>37</sup> In 1910, just as capitalist pig husbandry in Hawaii was beginning—with imported labour and imported mainland American pigs—the Hawaiian territorial government initiated a massive feral pig cull.<sup>38</sup>

### Pig colonizations of Okinawa and Japan: Conflicting utilitarianisms

Genetic evidence suggests that domesticated pigs had come to the Ryūkyū Islands by the third-century CE. These would have been Chinese house pigs. There is no evidence of a separate domestication of wild boars in either the Ryūkyū Islands or Japan.<sup>39</sup> Pigs appear in the written records of the Ryūkyū kingdom from the fifteenth century. They seem not to have been bred widely for several centuries afterward, however. The people of Ryūkyū were poor. Although pigs ate human waste, that waste was also precious fertilizer, and pigs are prodigious eaters, so it was difficult to maintain them. Chinese and Korean accounts from the fifteenth through seventeenth centuries suggest that at the time, the islands had few pigs.<sup>40</sup> At the court of the Ryūkyū kings, at least in the seventeenth century, beef was preferred, but the Chinese embassies that came to the Ryūkyūs on the occasion of a king's investiture changed this. These embassies, consisting of hundreds of officials and staying for months, demanded pork. In 1713, the Ryūkyū king ordered his subjects to breed pigs in preparation for the Chinese visit, and from around this time, pig breeding became common. The introduction of sweet potatoes in the seventeenth century had made keeping pigs more feasible, since they were easy to grow and their leaves and shoots augmented the animals' diet.<sup>41</sup> By the late nineteenth century, pork and lard had acquired a central place in Okinawan cuisine.<sup>42</sup> Ryūkyū diplomacy thus transformed the Okinawan diet. Pigs also transformed

<sup>34</sup>Jocelyn Linnekin, *Sacred Queens and Women of Consequence: Rank, Gender, and Colonialism in the Hawaiian Islands* (University of Michigan Press, 1990), 201; See also Fischer, *Cattle Colonialism*, 56, 176–88. Fischer shows that the issue of fencing property was closely tied to the introduction of cattle ranching.

<sup>35</sup>Diong records a case elsewhere in Polynesia in which people abandoned pig-keeping when compelled to pen them. Diong, 104.

<sup>36</sup>Lawrence H. Kessler, 'A Plantation upon a Hill; Or, Sugar without Rum: Hawai'i's Missionaries and the Founding of the Sugarcane Plantation System', *Pacific Historical Review* 84, no. 2 (2015): 129–62; Carol A. MacLennan, *Sovereign Sugar: Industry and Environment in Hawai'i* (University of Hawai'i Press, 2014), 52–80.

<sup>37</sup>Fischer, 183.

<sup>38</sup>Diong, 63–5. The cull did not eradicate Hawai'i's feral pigs, which continued to be regarded as a problem.

<sup>39</sup>Takuma Watanobe et al., 'Prehistoric Introduction of Domestic Pigs onto the Okinawa Islands: Ancient Mitochondrial DNA Evidence', *Journal of Molecular Evolution* 55, no. 2 (August 2002): 222, 230–31; Larson et al., 'Current Views on *Sus* Phylogeography', 36.

<sup>40</sup>Kinjō Sumiko, 'Shiryō ni miru sanbutsu to shoku seikatsu', *Shin Okinawa bungaku* 54 (1982): 63.

<sup>41</sup>Higa Rima, *Okinawa no hito to buta: sangyō shakai ni okeru hito to dōbutsu no minzokushi* (Kyoto: Kyōtō daigaku gaku-jutsu shuppankai, 2015), 25.

<sup>42</sup>Ijichi Sadaka, *Okinawa shi* (Tokyo: Ishikawa Jihei, 1877) vol. 2, 45.

Okinawan homes: since Chinese pigs were house pigs rather than village pigs, Okinawans accommodated them by building enclosures next to their kitchens and toilets.

A discourse on domestic animals quite distinct from Euro-American ones accompanied the eastward trajectory of pigs from the Asian continent. It travelled through texts and diplomatic exchange. When the Chinese ambassadors who visited the Ryūkyū court in the seventeenth century were given beef, they refused it, instructing the Ryūkyū king that oxen laboured and therefore should not be eaten. In his 1683 account of the embassy, ambassador Wang Ji described his own deed:

‘The king sent an official every five days with beef and wine to please the ambassadors. Refusing this offering as unacceptable, the ambassadors gave the king the following reason: ‘Because cattle work hard to till the fields, we mustn’t slaughter them at our own convenience. I say this thinking of the Country of Ryūkyū, not out of regret for the expenditure. Rather, I command you to establish what is forbidden as forbidden.’ Since the ambassadors continued to decline beef, the king reportedly forbade the slaughter of cattle throughout the land.’<sup>43</sup>

The Chinese ambassadors’ injunction had deep roots in continental tradition. Records from at least the Tang dynasty (618–907) repeat the same idea that draft animals should not be eaten because of their social utility.<sup>44</sup> The proscription was also introduced to Japan. The sixteenth-century military hegemon Toyotomi Hideyoshi instituted a ban on the consumption of beef and horse meat on the grounds that these animals laboured. Hideyoshi’s ban was repeated by the Tokugawa shogunate in 1612.<sup>45</sup> Although it was founded on social utility, the injunction in all cases was moral, not simply practical. In didactic tones, the Chinese ambassador explained to the Ryūkyū king that it was a matter of principle. Influenced by its powerful neighbour, the Ryūkyū court issued prohibitions against killing cows in 1696 and again in 1759.<sup>46</sup>

Chinese social utilitarianism would subsequently come into conflict with another, more individualist, utilitarian argument concerning the killing of animals. This argument considered animals in the abstract, without regard to their social roles, in order to justify their killing under certain conditions. Its theoretical foundations can be found in the writing of Jeremy Bentham on cruelty to animals.

When British ships began to ply Japanese waters in the early nineteenth century, in the occasional contact they had with local officials, the British asked for beef. The Japanese refused the request, justifying the refusal with the same social utility argument the Chinese ambassadors had given to the Ryūkyū king. In an account of the H.M.S. *Samarang*, which called at Nagasaki in 1845, Captain Edward Belcher described the Nagasaki officials’ explanation, which he clearly found absurd, as a humorous anecdote:

On enquiring, why they could not supply these cattle, instead of hogs, they observed ‘The Japanese do not eat *Cows*, they do their duty, they bear calves, they give milk, it is sinful to take it, they require it to rear their calves, and because they do this they are not allowed to work. The Bulls do their work; they labour at the plough, they get thin, you cannot eat them, it is not just to kill a beast which does its duty, but the hogs are indolent, lazy, do not work, they are proper for food.’

<sup>43</sup>Harada Nobuo trans., *Sakuho Ryūkyū shiroku sanpen* (Okinawa-ken Ginowan-shi: Yōju shorin, 1997), 39.

<sup>44</sup>Examples from classical texts in Guoxue.net Chinese Economic History Forum. <https://web.archive.org/web/20070813121422/http://economy.guoxue.com/article.php/9477>.

<sup>45</sup>Akira Shimizu, ‘Meat-eating in the Kōjimachi District of Edo’, in *Japanese Food and Foodways*, edited by Stephanie Assmann and Eric Rath (University of Illinois Press, 2010), 95.

<sup>46</sup>Hirakawa Munetaka, *Suteeki ni koi shite: Okinawa no ushi to gyūniku no bunkashi* (Okinawa-ken Naha-shi: Bōdaa inku, 2015), 20–21, 24.

Belcher went on to remark ‘Our specimens were probably of this breed, they did not appear like working animals, but, on the contrary, overwhelmed with their own fat, and weighing about 150 lb.’<sup>47</sup>

Belcher’s footnote to this passage provides the real punchline, however, revealing why the British voyagers considered the Nagasaki officials’ response absurd. The footnote reads: ‘Probably it was on the ground they could not work, that one of the Djogouns [shoguns] ordered all the old men, women, and cripples, to be destroyed.’<sup>48</sup> What might be construed as a humane sympathy toward cows thus became, in Belcher’s version, a sign of oriental despotism. A society in which the social utility of the animal determined its right to live was despotic in his eyes because it implied that all living beings, including humans, lacked innate rights. Asian societies generally were assumed by most Europeans at the time to be ruled by absolute and arbitrary despots. Edward Belcher had commanded the Samarang in the First Opium War, a war justified to the British public as a fight against Chinese despotism.<sup>49</sup>

The irony in Belcher’s story of Japanese despotism in Nagasaki, of course, is that it was the British who wanted to kill the animals. Indeed, the Japanese seem to have kept their ship in the bay in part to protect Japanese cows. Belcher was told that the crew of H.M.S. Phaeton, which had made an unwelcome visit some thirty-seven years earlier, had demanded bullocks and, when refused, had gone ashore and stolen them.<sup>50</sup> Although he did not resort to cattle rustling, Belcher was seeking to liberate Japanese cows from despotism so as to eat them.

Belcher’s account, published in 1848, followed a period in which many British people had reimagined their relationship to domestic animals. The Royal Society for Prevention of Cruelty to Animals was founded in 1824. The Society’s campaign against mistreatment of animals crystallized enlightenment ideas of natural rights and the idea of ‘sensibility’—that all sentient beings experience pleasure and pain and that, because of this, humans have the capacity to empathize with them.<sup>51</sup> Jeremy Bentham had applied these ideas in a section of his *Introduction to the Principles of Morals and Legislation* on the treatment of animals that has come to be seen as a foundational text in the history of animal rights. Referring to animals and human races in the same breath, Bentham asserted that ‘[t]he day *may* come, when the rest of the animal creation may acquire those rights which never could have been withholden from them but by the hand of tyranny.’<sup>52</sup> This reasoning did not lead Bentham to advocate vegetarianism, however. In the same passage, he went on to ask whether humans had the right to eat animals and, contrary to the reading that animal rights advocates would prefer, he concluded decisively that they did. ‘We are the better for it, and they are never the worse,’ he claimed, for ‘[t]hey have none of those long-protracted anticipations of future misery which we have.’<sup>53</sup>

If the Chinese argument concerning eating animals grounded itself on a situated assessment of social utility, in which both animals and people have defined roles in a shared social order, the

<sup>47</sup>Edward Belcher, *Narrative of the Voyage of H.M.S. Samarang, During the Years 1843–46* (London: Reeve, Benham, and Reeve, 1848), vol. 2, 13.

<sup>48</sup>Belcher, 13.

<sup>49</sup>Li Chen, *Chinese Law in Imperial Eyes: Sovereignty, Justice, and Transcultural Politics* (New York: Columbia University Press, 2016), 206–7.

<sup>50</sup>Belcher v.2, 8. On the Phaeton Incident, see Noell Wilson, ‘Tokugawa Defense Redux: Organizational Failure in the Phaeton Incident of 1808’, *Journal of Japanese Studies* 36, no.1 (Winter 2010): 1–32. A similar incident in 1824 had resulted in armed conflict. See David Howell, ‘Foreign Encounters and Informal Diplomacy in Early Modern Japan’, *Journal of Japanese Studies* 40, no. 2 (Summer 2014), 309.

<sup>51</sup>Tobias Menely, *The Animal Claim: Sensibility and the Creaturely Voice* (University of Chicago Press, 2015). 168–82.

<sup>52</sup>Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation* (1789), edited by J.H. Burns and H.L.A. Hart (London: Athlone Press, University of London, 1970), 282–3. Bentham’s ideas came in the wake of a centuries-old tradition of moral arguments against gratuitous cruelty to animals, but differed in its reliance not on biblical interpretation but on a non-religious utilitarian logic. On the religious tradition, see Keith Thomas, *Man and the Natural World: Changing Attitudes in England 1500–1800* (Penguin UK, 1991), Chapter 4.

<sup>53</sup>Bentham, 283.

Benthamite argument conceived an abstract utility justified by the relative sentience of animals and humans. Bentham's approach acknowledged animals as feeling beings deserving of rights like humans, but disregarded their collective relation to humans, thus, in effect, detaching them from social bonds (as draft animals, or as members of households and communities).

Mass breeding of the eighteenth-century Chinese-European capitalist pigs coincided with Britain's industrial revolution.<sup>54</sup> Yet there appears to be little direct causal relation between the industrialization of animal husbandry and the concurrent movement for the protection of animals. Members of the RSPCA did not initially concern themselves with factory-farming, which was still in its infancy. They focused instead on the capricious abuse of animals in amusements such as bull-baiting, or on the brutal treatment of work animals.<sup>55</sup> An individualist utilitarian logic like Bentham's helped square animal sensibility with the development of capitalist farming by offering bourgeois Europeans a rationale for worrying about the feelings of animals they did not intend to eat while justifying the fates of animals bred to become their food. Edward Belcher's joke about Japanese cows, pigs, and despots thus reflected both the new British attitude toward the rights of animals and the complementary assumption that individual humans had a natural right to eat whichever animals they pleased.

The Nagasaki officials' response to Belcher about the ethics of slaughtering cows was not merely an expression of their personal beliefs. Eighteenth-century Japanese edicts that prohibited slaughter of draft animals had mandated execution for offenders.<sup>56</sup> At the same time, Japanese cows were not the sovereign property of their keepers. An outcaste group of leather workers called *kawata* received exclusive rights from the Tokugawa shogunate to claim the carcasses of all draft animals, meaning that upon death the animals had to be given to them.<sup>57</sup> This device for maintaining distinct occupational groups in human society made draft animals what Michael Abele calls 'status-based property,' socially situated within the status system in life and in death. The law did not apply to pigs, however. In contrast to cows and horses, pigs were status-less. It was not simply that they did no work: in a society where relative status roles were carefully calibrated, they had no defined social place. The Nagasaki officials were thus free to offer them to the British ship as 'proper for food,' while withholding cows, since the management of status distinctions was the officials' core duty in the Tokugawa system.<sup>58</sup>

Domestic pigs were as socially marginal in Japan as they were central in Polynesia. The animals had no ritual significance, but nor were they taboo. They simply were not bred through most of the archipelago. Only with the opening of Japanese ports in 1859 and the political and cultural revolution that followed did pork-eating become common. In the twentieth century, supported in part by the introduction of new pig breeds, husbandry diffused widely. Once established, it proved as viable as it had been in Ryūkyū. In this sense, the Japanese case provides the exception proving the rule, that neither religio-cultural nor environmental factors were decisive in determining the shape of pig-human society. When change came, international (human) politics and new discourses were the salient influences, with the pig breeds themselves playing a significant but secondary role.

<sup>54</sup>White, 105.

<sup>55</sup>Rob Boddice, *A History of Attitudes and Behaviours toward Animals in Eighteenth- and Nineteenth-Century Britain: Anthropocentrism and the Emergence of Animals* (Lewiston, NY: Edwin Mellen Press, 2008). See also Ritvo, *The Animal Estate*, 125–66.

<sup>56</sup>Daniel Botsman, 'From Sacred Cow to Kobe Beef: Japan's Bovine Revolution', forthcoming.

<sup>57</sup>Michael Abele, 'Peasants, Skimmers, and Dead Cattle: The Transformation of Rural Society in Western Japan, 1600–1890' (PhD dissertation, University of Illinois, 2018), 3–6; Pieter S. De Ganon, 'The Animal Economy' (PhD dissertation, Princeton University, 2011), 126–33.

<sup>58</sup>Calling Tokugawa pigs 'status-less' calls to mind Mary Douglas' explanation of the interdiction of pigs in Hebraic law as resulting from their anomalous position in the Israelites' animal taxonomy. The Tokugawa case, however, had nothing to do with cosmology; it had a concrete social and political foundation. Moreover, in contrast to Douglas' reading of the anomalous pig in ancient Israel, outsider status in Japan had the opposite effect of making pigs more acceptable for consumption.

The marginality of pigs in Japan is not easily explained. Wild boars had been present throughout the archipelago from prehistoric times, yet they were not domesticated. Domesticated pigs were brought from the continent and for a time consumed at court: early Japanese chronicles refer to an imperial keeper of pigs. After the ninth century, this office disappeared. During the Tokugawa period (1600–1868), pigs were seldom bred for human consumption outside the port of Nagasaki (where Chinese and Dutch traders resided from the mid-seventeenth century) and southern Kyūshū, despite the country's frequent contact with the continent and proximity to pig-breeding Ryūkyū.<sup>59</sup> Some *daimyo* warlords bred pigs to feed hunting dogs. In the castle town of Hiroshima in the eighteenth century, pigs were found in the streets, living on household refuse—but the residents apparently did not eat them. Uncommon as household animals and human food, they seem to have been widely reviled.<sup>60</sup> Buddhist prohibitions against meat-eating are typically adduced as the explanation.<sup>61</sup> Yet Buddhism prohibited killing generally, and Japanese ate game animals, including boar. Injunctions against killing specific animals addressed only cattle and horses. The history of limited consumption of pigs in Japan can only be understood through a complex of factors, including the cumulative impact of centuries of injunctions from rulers (albeit not specifically directed at pigs), the economic priority on rice cultivation above all else—which was also a product of pressure from the country's rulers—and the effect of farming small holdings, which tended to make all non-draft animals appear primarily as pests that damaged crops.<sup>62</sup> Cultural factors for eating boar but rejecting domestication might include the long association of meat with the hunt and the military caste, and perhaps also conscious differentiation of Japan from its pig-keeping neighbours—yet it is difficult to prove that either of these was decisive. The full spectrum of possible animal-human relationships was always at play, and no single factor can explain all the choices made along it. The result, however, was that in a country where persons and useful animals were all regarded as having defined social positions, pigs found no place.

In contrast with Ryūkyū and Polynesia, pig-breeding in Japan when it became popular in the nineteenth century followed a capitalist husbandry model from the outset—although not driven simply by individual entrepreneurship. One year after the Meiji Restoration of 1868, an official of the former regime created a mutual aid society to sell pigs to households interested in breeding them as part of a scheme to raise money for schools and provide work to the poor. Studs were brought from Nagasaki. Supported by the new government, the aid society distributed pigs to local chapters throughout the country. Optimistic promoters promised a thirty percent return on investment, sparking a speculative boom, with some breeds reportedly selling for hundreds of times the initial price. The boom was concentrated near cities, and the bubble burst in 1873, when the government imposed restrictions on pig breeding in urban areas.<sup>63</sup> Thereafter, husbandry developed unsteadily for a generation. Influenced by military demand and the growing cosmopolitan tastes of Tokyo consumers, the pork industry established itself from the turn of the twentieth century. New foreign breeds were introduced again at this time, accelerating production. By 1928, the domestic pig population was on par with Australia and New Zealand. Yet everywhere in Japan except Okinawa Prefecture, farmers raised pigs primarily for the urban market. The new breeding centres were around the capital and the former treaty port of Yokohama.<sup>64</sup> The

<sup>59</sup>Buta', *Kokushi daijiten* (Tokyo: Yoshikawa kōbunkan, 1979–97). This historical encyclopedia article also refers to the custom in islands of southwestern Japan of releasing pigs in the forest to feed, suggesting that ancient Japanese domesticated pigs may have been mast-feeders like the pigs of Europe.

<sup>60</sup>Tsukamoto Manabu, *Edo jidai hito to dōbutsu* (Tokyo: Nihon edita sukūru shuppanbu, 1995), 131–53.

<sup>61</sup>For discussion of pig breeding in Japan with specific reference to these prohibitions, see Tanaka Saneo, 'Wagakuni yōton no tenkai', *Kagoshima daigaku nōgakubu gakujutsu hōkoku*, no. 23 (nd.). <http://hdl.handle.net/10232/2342>.

<sup>62</sup>Indeed, intensive rice farming became so central under Tokugawa rule that from the late seventeenth century, the draft animal population fell too, as farmers found human labour better suited to maximizing yields from small paddies.

<sup>63</sup>Fuchi ruisan', *Tōkyōto kōbunsho dayori dai 3 gō* (September, 2003), 1–2; Murakami Yōshin, *Yōton shinsho* (Tokyo: Hirano Shiō, 1888), 8–9.

<sup>64</sup>Nōrinshō chikusan kyoku, *Honpō no yōton* (1931), 1–31, 33.

re-emergence of pig domestication in Japan after a millennium of dormancy thus derived from the political context of the time.

New discourses about animals and civilization facilitated the accommodation of Meiji Japanese to breeding for consumption. Even after the government abolished status-based rights in animal carcasses, many main islanders still needed to be persuaded that domesticated mammals made suitable and desirable food. In 1870, with the backing of the new Ministry of Finance, educator and entrepreneur Fukuzawa Yukichi started a meat and dairy business, which he advertised with a manifesto titled 'On Meat-Eating.' One can read in this manifesto the blend of European utilitarianism and a Confucian world view based on a harmonious social and natural order that characterized much early Meiji-period political theory. Fukuzawa started by declaring that all creatures were 'naturally endowed' to eat certain things, and that humans, as 'the lords of creation,' naturally ate all things. Japanese, he claimed, suffered nutritionally because their diet lacked sufficient meat, which hampered national development. He then offered rebuttals against each possible objection to his merchandise, beginning with the notion that killing animals was cruel, to which he countered that it was no crueller to kill domestic animals than to kill wild ones such as whales and fish. The essay concluded by promoting the medicinal value of milk products.<sup>65</sup>

Fukuzawa's argument that people should eat meat for the benefit of the nation was entirely new. The manifesto made no mention of the social-utility argument against eating cows that Nagasaki officials had given to Captain Belcher a generation earlier, despite its long tradition in East Asia. National strength represented a new utility of a higher order; whether the animal laboured was no longer significant. Indeed, it is not clear from the advertisement whether it was the flesh of cows, or horses, or only milk that was being sold. The business was called the 'Cattle and Horse Company,' the manifesto title alluded to meat-eating in general without indicating the type of meat, and the merchandise list at the end contained only milk products. Fukuzawa's manifesto abstracted the consuming of these animals and animal products from the specific question of their origins or social status. The company reportedly acquired its livestock from pastures owned by the recently defeated Tokugawa family, meaning that in status terms the animals had quite lofty origins.<sup>66</sup> Perhaps their new owners considered the ancien-regime cattle and horses as abandoned, and thus useless, animals that 'do no work,' like the Nagasaki officials' pigs. More importantly, of course, Fukuzawa wished his audience to think of them simply as potential food, without reflecting on what their fate or utility might otherwise have been. In a society where cattle and horses held defined roles that excluded their consumption, they needed to be socially disembedded to be eaten.<sup>67</sup>

### Capitalist pigs with 'agency': from Hawaii to Okinawa

While Chinese pigs became part of Ryūkyū society in the eighteenth century, their relatives made their way to the Pacific via Europe. European voyagers brought pigs (along with goats, cattle, and other livestock) and left them on islands in the Pacific to multiply. Wherever people and pigs already dwelled, the larger, faster-growing European pigs quickly interbred with the local animals and became dominant. Already in 1792, Captain Bligh described this happening in Tahiti: 'The Otaheite breed of hogs seems to be supplanted by the European. Originally they were of the China

<sup>65</sup>Fukuzawa Yukichi, 'On Meat-Eating' (1870), translated by Michael Bourdaghs. <https://www.bourdaghs.com/fukuzawa.htm>. Fukuzawa makes no mention of pigs, whose omnivory fit them poorly in his schema.

<sup>66</sup>Ishige Naomichi, *The History and Culture of Japanese Food* (Routledge, 2001), 148.

<sup>67</sup>The precise source of Fukuzawa's ideas about meat-eating in 1870 is uncertain, but he read widely in European utilitarian writing. In 1882, Bentham's *Introduction to the Principles of Morals and Legislation* was listed among the textbooks at the college Fukuzawa had founded. Albert Craig, ed., *Autobiography of Yukichi Fukuzawa* (Columbia University Press, 2007), p. 361 fn. 199.

sort, short and very thick-necked, but the superior size of the European have made them encourage our breed.<sup>68</sup>

The spread of European-Chinese pigs in the island Pacific did not lead to capitalist husbandry as it had in Europe, however. The animals may have been suited to mass production, but the societies to which they were introduced were not. In Hawaii, capitalist agriculture began only after the combination of imported diseases and political pressure from white colonists had undermined the power of native rulers. Commercial pig breeding followed in the twentieth century, when white-managed sugar and pineapple plantations were already well established and there were new populations of meat consumers in the islands unfettered by traditional Hawaiian customs of tribute and gift exchange.

After 1900, Ryūkyū islanders, now Okinawan Japanese subjects, left poverty at home for work on Hawaiian plantations, joining the tens of thousands of migrants imported for the burgeoning sugar economy. The Okinawans brought their pig-keeping habits, acquiring pigs in Hawaii and feeding them household scraps. Some migrants from the Japanese main islands also tried their hand at keeping pigs, but it bore a stigma among them. What had been normal for Okinawans at home thus became a cause of discrimination against them in Hawaii. Nevertheless, it created economic opportunities. By 1940, Okinawans made up 44% of the hog farmers on Oahu, where most of the industry was located.<sup>69</sup> They had started out keeping small numbers of pigs on the side while working in the cane fields, but in Oahu in the 1930s and 1940s, a few enterprising Okinawans took advantage of the US military and tourist presence to become full-time breeders of pigs, establishing farms with thousands of animals, feeding them waste from Pearl Harbor and the hotels, then selling the pork to islanders and visitors. Thanks to the increased military population and the difficulty of transporting goods from the mainland during the war, pork prices on the islands multiplied and these full-time breeders became successful capitalists.<sup>70</sup>

Before this time, Hawaii had had no commercial pig-breeding industry. After the mid nineteenth-century privatization, first settler cattle-ranching, then sugar plantations, dominated Hawaiian agriculture. Chinese immigrants had tried importing pigs from the US and fattening them for local sale, but the industry had been abandoned due to expense and disease.<sup>71</sup> Despite the long history of Hawaiian pigs, imported pork fed the growing market of white residents and tourists in the early twentieth century. When the local industry began in the 1910s, it relied on animals brought from the American mainland (including the revealingly named Poland China breed) rather than local varieties, together with the initiative and husbandry knowledge of Okinawans.

The members of the United Okinawan Assistance Association of Hawaii who spearheaded the pig gift in 1947 were among these first Hawaiian pig capitalists. Through the gift, therefore, they exported to their homeland not only new pigs but capitalist attitudes about the pigs' social role. The Hawaiian-Okinawan donors announced five reasons for their initiative:

1. Pork is indispensable food for the people of Okinawa Prefecture.
2. Lots of fat from pork gives flavour to vegetable foods.
3. Pigs can provide the fertilizer farms need.
4. Okinawan farmers have raised pigs for ages and made enormous economic profits.
5. As for feed, Okinawans regularly eat sweet potatoes and have lots of small sweet potatoes and vines; this and kitchen waste from US forces should not be a problem.<sup>72</sup>

<sup>68</sup>William Bligh, *A Voyage to the South Sea* (London: G. Nicol, 1792), 70. Bligh and others called the Tahitian pigs 'Chinese' although they were likely a distinct strain from New Guinea or Southeast Asia.

<sup>69</sup>Yukiko Kimura, 'Okinawans and Hog Industry in Hawaii', in *Uchinanchu: A History of Okinawans in Hawaii*, edited by Ethnic Studies Oral History Project, University of Hawaii (Honolulu: University of Hawaii at Manoa, 1981), 118.

<sup>70</sup>Shimojima, 64–5.

<sup>71</sup>Kimura, 217; F.G. Krauss, *Swine Raising in Hawaii* (Washington, DC: Department of Agriculture, 1923), 1–2.

<sup>72</sup>Shimojima, 132.

The rhetoric of this announcement fused the traditional house-pig role with the projected new role of the pigs as engines of economic growth. The fourth point, in particular, about Okinawans' long experience raising pigs for profit, re-reads the Okinawan past in capitalist terms. In reality, Okinawa's house pigs had been bred as a tribute product to deliver to the Ryūkyū court for the Chinese ambassadors and subsequently became a part of the typical farm household's subsistence strategy. In aggregate it might be claimed that 'economic profits' had accrued for Okinawans over the ages, but mass breeding for profit was a new experience that in 1948 belonged almost exclusively to the Okinawan-Hawaiian donors themselves.

The pig gift helped Okinawa recover from the collapse of its domestic animal population, but 'enormous economic profits' did not result for Okinawans. The leaflet prepared by the Okinawan Assistance Association of Hawaii urged special care and feeding for the animals, noting that 'American pigs eat a mixture of grains, meat, fish, and salt.' Since this matched the human diet, in a context of scarcity, only those ready to forgo their own sustenance with an eye to future profit could be expected to follow this advice.<sup>73</sup> As a result, in Okinawa as in Polynesia earlier, the introduction of Euro-American 'capitalist pigs' did not immediately lead to capitalist pork production. Instead, first there was confusion and a speculative boom. Amid postwar food shortages, excess food provided by US bases to feed pigs was consumed by humans instead, while land that might have been used to grow sweet potatoes as pig feed was taken by the military. Pigs were killed and eaten before reaching reproductive age. When they did bear litters, disputes arose over distribution of piglets, which local elites monopolized. Meanwhile, promotion of the American pigs excited demand while supply remained short, with the result that by 1949, piglets were selling in some cases for more than the annual salary of a white-collar worker. Since pigs can be mated a few months after birth, their rapid growth and fecundity suited them to speculation. The donors themselves had forecast 100,000 pigs in four years. As economic conditions stabilized, this figure was almost achieved, but through neither even distribution among households nor steady capital accumulation.<sup>74</sup>

By the mid-twentieth century, meat animals constituted a significant part of Japanese agriculture, and extension programs were seeking to expand production. Okinawa after the war was on the receiving end of agricultural advice from both Japan and the United States, and since Okinawans had long bred pigs, much of this advice focused on raising pork production. The Hawaiian-Okinawan campaign was thus in tune with the ambitions of both US and Japanese development experts. A decade later, however, few Okinawans seem to have adopted the practices of pig capitalism. At least, that is what is suggested by the complaints of agricultural extension agent Ishigaki Chōzō in a 1959 article titled 'We Must Reform Pig Husbandry,' published in the Ryukyu University Agriculture Newsletter:

Despite the fact that I often see pigs made unhealthy by a lime deficiency, concern on this front in farm villages seems surprisingly limited. One example of this is that there are still many pig farmers who don't even know what Koroikaru [a brand of commercial calcium supplement] is.

Ishigaki noted that Okinawa needed to compete with Southeast Asian countries in the Hong Kong market, calling for better rearing practices in order to deliver the leaner meat that foreigners preferred. This required special feed and nutrients such as calcium supplements.

One might expect that since pigs in Okinawa were now becoming mere pork-making machines, their feelings or 'agency' would be ignored. Yet Ishigaki closed his article by expressing sympathy for the pig deprived of optimal feed. What's more, Ishigaki's pig spoke:

<sup>73</sup>Shimajima, 162.

<sup>74</sup>Shimajima, 109–10, 194–5.



It's the pigs people like this keep that are generally overweight. The farmer himself mistakes it for normal development and doesn't deal with it properly. But if you ask the pig, it's the worst possible nuisance.<sup>75</sup>

Not only did it speak, as a good citizen in a capitalist society, this pig wanted to contribute to a profit-making enterprise: don't over-fatten me, the pig says. Like a professional athlete, by seeking to stay fit, Ishigaki's pig participates in the commodification of its own body. Of course, this was only Ishigaki's fantasy. We have no way of knowing whether the fat Okinawan pig was troubled by its fat. All we do know is that, whereas it had long made itself a part of Okinawan households, the international market wanted leaner animals. The husbandry expert was far from oblivious to the pig's habits or needs but had a radically different conception of the pig's social role from the subsistence farmer. Under the influence of experts like Ishigaki, the Okinawans who continued raising pigs in the 1960s and 1970s adopted new rationalizations for the market.

Planned investment in large-scale pig farming awaited pressure from the US administration in the islands to build a pork industry. Funded by the American PL-480 'Food for Peace' program, the Ryukyu Development Loan Corporation (*Ryūkyū kaihatsu kin'yū kōsha*) made loans to farmers prepared to build large-scale feeding facilities, reorienting a minority of pig keepers toward specialized full-time management.<sup>76</sup> By 1970, the Okinawan pig population was double its prewar peak. The number of households keeping pigs, however, had reduced to a fraction. Thus, in the final years before Okinawa's reversion to Japanese sovereignty in 1972, house pigs were replaced by American capitalist pigs, to be kept in large numbers, fed on a special diet, and bred for distant markets. In Okinawa as in Hawaii, US military bases provided a large source of kitchen waste that helped the industry.

The effects of capitalist animal husbandry on postwar Okinawa were perhaps not as calamitous for local society as they had been in Hawaii a century earlier, but nor did the effort improve the lives of Okinawans. The new husbandry regime pushed Okinawan pig farming into an underdevelopment trap, in which the islands depended on the presence of US military bases, while at the same time importing value-added products, like feed and nutrition supplements, in order to groom animals for national and international markets, where they competed against other poor regions to produce the cheapest meat. Okinawa never did develop significant pork exports beyond the Japanese main islands, but continued to rely on US bases and to grope for profitable export commodities.<sup>77</sup>

None of this was directly caused by the Omaha pigs that arrived 'from the sea' in 1948. The new breed of animals demanded special feeding, which was part of the problem, but might still have remained house pigs, part of a subsistence economy, were it not for pressure from development experts and successive US and Japanese governments. As in Hawaii, therefore, Chinese-EuroAmerican pigs bred for industrial production—White's 'capitalist pigs'—did not carry capitalism in their genes, although in this instance they helped facilitate a political process, initiated through the un-capitalist gesture of a gift, toward capitalist husbandry, and toward greater dependency.

## Conclusion

The transitions between different pig-human societies—from village pigs to capitalist pigs in Hawaii, from no pigs to house pigs and then capitalist pigs in Okinawa, and from pestilential pigs

<sup>75</sup>Ishigaki Chōzō, 'Buta no kaikata o aratamemashō', *Ryūdai nōka dayori* no. 45 (August, 1959), 4–8.

<sup>76</sup>Rima Higa, 'A Problematization of Pigs and Pork: A History of Modernity to Invent and Deodorize Odor', *Inter Faculty* (University of Tsukuba, Japan; <https://journal.hass.tsukuba.ac.jp>), 57–75; Higa, *Okinawa no hito to buta*, 28.

<sup>77</sup>The recent revival of the traditional Okinawan pig reflects both nostalgia for a more harmonious time in pig-human relations and the ongoing effort to exploit island traditions for tourism. See 'The Strange Case of the Agū Pig', *Slow Food*, November 16, 2015 (<https://www.slowfood.com/strange-case-agu-pig/>).

to capitalist pigs in Japan—were all sparked in one way or another by outside interventions. The gustatory and moral demands of Chinese ambassadors led Okinawans to become pig keepers. The demands of white plantation owners for cheap labour later brought to Hawaii the Okinawans who would breed house pigs and then capitalist pigs there, and subsequently export them to Okinawa. The fall of the Tokugawa regime in Japan, precipitated by American gunboat diplomacy, opened the way for experimentation with capitalist pigs. And it was under both US and Japanese tutelage, through a development aid program under US military occupation, that Okinawa eventually began the transition to capitalist pig husbandry. In every case, new pig-human relationships followed externally precipitated political changes. Pigs excel as both pests and food, readily make themselves an intimate part of human communities and households, and yet also reproduce with an ease that makes them unusually attractive for factory farming. It may be this very malleability that allowed pig-human relations to be transformed repeatedly as the result of human-human encounters.

The ultimate shift to capitalist husbandry in each case was at the same time a process in which slaughter of animals ceased to be hemmed in by ritual and moral rules, and a process in which pigs ceased to be companions. Karl Polanyi stressed that before market relations came to be assumed as the natural form through which all land, labour, and goods were distributed, the economy itself was always socially embedded.<sup>78</sup> The case of food animals provides a living instance of the disembedding that had to take place for the formation of market economies: relations between people and pigs had to be transformed for pig-human societies to become market societies in which pigs, as commodities, existed outside inter-personal relations. Yet the disembedding occurred differently in each case: in Polynesia, slaughter of animals was disembedded from kingly ritual; in Japan, from feudal status distinctions that encompassed labouring animals as well as people; and in Okinawa, from household subsistence strategies.<sup>79</sup>

Further, it was not capitalism itself that disembedded animals from these social contexts, but discourses about society and human values. In both the Polynesian missionaries' parable of the pig and Captain Belcher's story of the Nagasaki cows, cases of incomplete individual human sovereignty over domesticated animals were taken as signs of a system of complete subjection of individual humans to a cruel sovereign. This double thrust, locating human freedom in the sovereign right over a domesticated animal, on the one hand, and valuing the animal's life on the basis of its presumed degree of sentience rather than its social role, on the other, in a kind of pincer movement, helped create the conditions for capitalist exploitation of pigs as pork-making machines.

By the same token that an adequate explanation for each case cannot be found in capitalism *tout court*, the transformations of pigs, pig breeding, and discourse about both did not occur in lockstep. The cross-bred Chinese-European animals that White calls capitalist pigs arrived in the Pacific before capitalism. Ideologies that prefigured capitalism arrived next, shaping discourse about pigs, property, and society in a way that had real prescriptive power. The way that voyagers and missionaries in the island Pacific spoke about pigs thus affected the way that Pacific societies would eventually come to breed, slaughter, and consume them. Capitalism, capitalist animals, and capitalist ideas must all be seen moving around the Pacific separately, interconnected but at different paces. The elements of the capitalist economy—private property, commodity exchange, rationalization of production, and capital accumulation—often arrived piecemeal too. There were failures and false starts: in late nineteenth-century Hawaii, pigs were more a casualty than a product of capitalism, for example. Meanwhile, in both Meiji Japan and post-WWII Okinawa, introduction (or reintroduction) of pigs as a fast-breeding food animal, accompanied by the sudden public attention to their potential profitability, led to a period of speculation and then a bust, not a process of stable capital accumulation. These events offer reminders that all of the shifts in animal

<sup>78</sup>George Dalton, 'Introduction', in *Primitive, Archaic, and Modern Economies: Essays by Karl Polanyi*, edited by George Dalton (Garden City, NY: Doubleday and Co., 1968), xii–xvii.

<sup>79</sup>For a comparable case of social disembedding in Southern Africa, see Jean Comaroff and John Comaroff, *Of Revelation and Revolution* (University of Chicago Press, 1991), vol. 2, 166–217.

husbandry discussed here happened in artificial situations, engendered by the imbalanced politics of imperialism rather than simply by economic changes.

The breed of pigs introduced did have a significant impact: everywhere they went in the Pacific, the newly introduced Chinese-European breeds grew larger and reproduced faster, tending to overwhelm previous pig populations. The post eighteenth-century Pacific pig colonizations, often also accompanying as they did the aggressive intervention of Europeans and Americans into indigenous societies, can thus properly be thought of as an aspect of modern colonial imperialism. Biology was, of course, a part of imperialism in other ways too. Long before Alfred Crosby's landmark work *The Columbian Exchange* made clear the impact of imported diseases in the European conquest of the Americas, visitors to Hawaii and the Hawaiians themselves recognized that disease had played a large role in the islands' nineteenth-century crisis, for example.<sup>80</sup> Yet in each case, we can discern key political moments and ideas that make the transformation of relations between humans and animals intelligible. The introduction of sovereign property rights in the Great Māhele rapidly and irreversibly transformed Hawaiian society, including the relations of people to the land, to other people, and to animals. Had the king not listened to his white advisors at the time, things would have been quite different.<sup>81</sup> Similarly, pigs played a significant role in helping Okinawa emerge from the ruins of Second World War, but it was under the subsequent influence of advice from development experts and political leaders who believed opening the door to international capitalism would lead the islands to prosperity that the animal-human relationship was decisively changed.

Although other factors can be adduced in each case, my emphasis in this essay on the things people said about pigs has been aimed at bucking the trend in environmental history to emphasize the agency of non-human actors. The non-human world certainly matters as much as the human in understanding the history of life on earth, and arguably even in understanding our own human history. Yet the record of discourse has a unique capacity to explain motive forces in human society in subtle and precise ways. Without it, causality is readily blurred or misapprehended. We need to understand the development of capitalism through multiple causes, recognizing the entwined effects of environmental and genetic factors together with social, political and economic ones. I have borrowed White's clever phrase 'capitalist pigs,' but the animals themselves were not the bearers of capitalism. New breeds of pigs required certain forms of treatment, but they could neither determine the mode of production (and their own reproduction), nor resist it.

In the orthodox Marxist scheme, the mode of production itself determined history. Words and ideas were presumed to be no more than superficial products of this economic structure. Historians abandoned this base-and-superstructure approach when it became clear that the relationship between the economic and cultural realms was too complex to be compassed by it. Today, historians drawn toward the powerful explanatory tools of the natural sciences risk creating a new base and superstructure: a paradigm in which ultimate causes lie in nature, beyond the reach of human ideas. If we place too much emphasis on the non-human in tracing the forces that made capitalist society, we risk losing sight of particular ideologies and the exercises of power that they licensed, making the emergence of capitalist relations itself appear natural.

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<sup>80</sup> Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, Conn: Greenwood Press, 1972). For assessment of both contemporaneous accounts and later epidemiological studies of Hawaii's demographic decline, see O. A. Bushnell, *The Gifts of Civilization: Germs and Genocide in Hawaii* (University of Hawaii Press, 1993).

<sup>81</sup> Politically, the Great Māhele was a complex event. For a study from the indigenous perspective, see Lilikalā Kame'eleihewa, *Native Land and Foreign Desires: How Shall We Live in Harmony?* (Honolulu: Bishop Museum Press, 1994).