



Harvey Neo and Jody Emel, *Geographies of Meat: Politics, Economy, and Culture*, London: Routledge, 2017. ISBN: 9781409440338 (cloth); ISBN: 9781315584386 (ebook)

Meat is both highly revered and highly tabooed. Thus, it is a highly complex and sensitive issue. Meat is intertwined with culture, societies, politics, religion, and identity. Harvey Neo and Jody Emel argue that meat is also entangled in geography, with attitudes and trends regarding meat being as unique as individual places. In *Geographies of Meat*, Neo and Emel present a sweeping yet concise portrayal and analysis of the global state of meat. They focus on the trajectory of increased industrialization, commoditization, and governmentality within the meat-making process.

The book traces meat's current spatial (Chapter 2) and scientific (Chapter 3) developments, examining consequences to slaughterhouse workers and the environment (Chapter 4) and the commoditized animals themselves (Chapter 5), before finally turning to resistance against the meat industry (Chapter 6). This landscape is analyzed through a critical perspective in order to conclude "what we have known for some time: vegetable protein is much less problematic than animal protein" (p.78). Fish and marine ecosystem impacts are omitted due to space limitations, yet the oceans are some of the most threatened places on Earth due to animal flesh consumption (Cullis-Suzuki and Pauly 2010). The drawbacks of meat production are numerous and are gaining attention in the mainstream, especially since the publication of the UN Food and Agriculture Organization's *Livestock's Long Shadow*, which linked the meat industry with many unsustainable and unjust practices (Steinfeld et al. 2006).

In describing current trends, *Geographies of Meat* pays special attention to place. While the overall global trend is expansion of industrial facilities, Chapter 2 contrasts the differing situations in Poland and Malaysia. Poland has seen more complicity between the public and private sectors helping to facilitate animal industrial development, whereas Malaysia has been resistant to industrial animal agriculture. This is due largely to Malaysia's primary religion being

Islam, a religion which eschews pork consumption by relating pigs with uncleanness. In Malaysia, pork is racialized, with pork production associated with the less welcome Chinese minority (see also Neo 2012).

Particularly poignant are discussions of animal science. The field is exposed as unwaveringly driven by profit motivations. Animal science represents extreme biopolitical control and commodification of animal bodies in which animals are reduced to their parts, which are further reduced to genetics, and are distributed to the highest bidders. The breeding stocks of the poultry, pig, and cow industries are highly concentrated and thus a few large businesses control research. The health and ecological impacts created by this short-sightedness have been devastating across the planet, albeit not evenly distributed (see also Wallace 2009; Wilson et al. 2002). While animal scientists exclusively promote their research with arguments about feeding a large and growing human population—concomitantly asserting animal welfare as a top priority—Neo and Emel show that the “output” from animals is largely concentrated geographically. Wealthier places and peoples are receiving more animal products at cheaper cost; those truly in need of improved and increased nutrition are not.

Animal welfare is also routinely compromised by animal science. Extreme confinement has led to many welfare issues such as broken bones, exposure to disease-causing pathogens, and even cannibalism. Animal science then sets out to engineer animals and management practices in order to minimize these effects. But “solutions” inevitably cause further problems. For instance, the focus on maximal growth of an animal has led to “side effects such as heart failure and leg problems” (p.53). Particularly contradictory are “euthanasia” experiments carried out by the industry in the name of welfare. Such studies test ways of killing farmed animals by different means and observing the outcome in order to determine which method is the most humane. The authors cite an article from the journal *Poultry Science* in which researchers experimented with different gas mixtures as ways to dispose of unwanted animals. Violent and painful reactions to all three gas mixtures were observed. Thus, the welfare of some animals is purposefully

overlooked in order to improve the killing process of others. This aspect of welfare is not reported by industries, nor is it a criterion for humane certification. Yet these types of experiments are carried out continuously.

The reader is also given an overview of environmental impact assessments. The end result is that efforts are going into efficiency improvements to current methods rather than finding less harmful alternatives or reducing total emissions. Since growth is the overall trend in the meat industry, any gain in efficiency is quickly overtaken by overall volume. Yet publicized commitments to efficiency improvements have been adequate to quell the public's overall demand for responsibility on behalf of the livestock industry. Public resilience is also revealed through the history of zoonotic disease outbreaks. While food scares temporarily reduce demand for meat, this reduction is transient and highly localized. Once the public is assured the meat industry has mitigated the problem, increased meat consumption resumes. While Neo and Emel discuss various forms of resistance such as vegetarianism, they conclude that these acts have been largely ineffective. Partly this is due to people changing personal habits rather than challenging institutional practices. But counter-hegemonic narratives have also been severely stifled and marginalized through corporate rhetoric and media discourse (see also Cole and Morgan 2011).

All of this makes for a grim outlook in turning the tide on meat consumption and its side effects as enabled by capitalism. Importantly, Neo and Emel attribute this to speciesism as the ultimate factor that so strongly binds people to eating animals. This is particularly exemplified by in vitro meat (IVM), animal flesh grown from stem cells in laboratories instead of on farms with animals. IVM is being developed as a way to address the problems with traditional animal farming. Neo and Emel elucidate the continuum between traditional and lab grown meat. Drawing on philosopher Roberto Esposito, they illustrate how IVM is a logical extension of the meat industry. IVM takes the animals out of the meat making process, reducing meat to flesh and artificially induced life processes. However, this is not so different from how most animals live

their lives on industrial farms. A farmed animal's life is, through commoditization, reduced to the bare elements of metabolizing food, reproducing, standing, lying down, and dying. Removing the animal simply removes death. Capitalism dictates that farmed animals be bereft of social relations, maternal bonds, space to move, and proper food. Hence farmed animals essentially already "exist without life" (p.87), similar to how IVM has been called the "dead-living" (Stephens 2010). The same ideology, biopolitics, and rendering of animals as commodities continues in IVM, albeit with perhaps even less scrutiny from the public.

Overall, Neo and Emel clearly demonstrate the extremes of the animal agricultural-industrial complex and its consequences. Those in the humanities, social and natural sciences can all find something to appreciate in *Geographies of Meat*. The book expands on critical animal geographies by focusing on farmed animals, a category which has been largely overlooked. Further, by addressing hierarchy in human-animal relationships, *Geographies of Meat* also extends and applies concepts from anarchist geography to farmed animals. In Western societies meat is coming to a crossroads, but is finding new markets elsewhere, mostly in Asia (see Bajzelj and Bothra 2016; Tian et al. 2016). This makes the timing of *Geographies of Meat* all the more important.

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