Origin of the current conversation: An exploration of the animal/plant divide

Frédéric Leroy*
Vrije Universiteit Brussel, Brussels, Belgium

Contemporary agricultural and dietary narratives often – and increasingly so – represent plant-derived foods as mostly beneficial whereas animal source foods are depicted as mostly harmful. Yet, both sides of this poorly informative plant/animal binary represent a very large and heterogeneous food group, of which the elements can be either benign or harmful from an ethical, environmental, and/or health perspective. It is unhelpful, therefore, to base opinion (or worse, public policy) on such simplistic categorisation. Doing so may distract from addressing some of the urgent challenges related to the production of plants (for example, with respect to water scarcity or biodiversity losses due to monoculture cropping), while unjustifiably vilifying the animal husbandry systems at the more sustainable side of the spectrum. The latter is counterproductive, as such systems not only have net benign impacts on the environment and provide ecosystem services, but they also contribute to the production of foods that (1) are rich in important nutrients (many of which are more difficult to obtain from plants and are already creating worldwide deficiencies), (2) allow for the upcycling of inedible materials and valorisation of food waste, (3) have important cultural significance, and (4) create livelihoods. That being said, the livestock sector will obviously also need to intelligently confront a wide range of problematic practices that are currently undermining the sustainability of future food systems.

Livestock as pharmakon/pharmakos

It suffices to examine the public domain to reveal that agricultural and dietary discourse is typically ridden by exaggerations and contradictions. To illustrate this, Schoenfeld and Ioannidis (2013) demonstrated through a cookbook analysis that 40 out of 50 common ingredients have been associated with either cancer protection or risk. Animal source foods, in particular, are described as both beneficial *and* detrimental to our health, as was shown in a mass media analysis by Leroy *et al*. (2018). In philosophy, something that has the potential to simultaneously heal and poison constitutes a *pharmakon*, an ambiguous status that under certain conditions also entails the 'purifying' concept of the *pharmakos* (scapegoat). It is of note that animals have a historical and ritualised role as scapegoats, carrying the sins of humanity. Leroy (2019) speculated that this legacy feeds into the narratives that connect livestock to a range of calamities (chronic disease, pandemics, climate change, water depletion, biodiversity collapse, etc.), despite the fact that they are *also* seen as valuable (in the past, but also in current food systems where they take up a crucial and irreplaceable role).

According to the latter perspective, further elaborated on by Leroy et al. (2020), livestock and animal source foods are now conceptually collapsing from the ambiguous pharmakon status into a defined pharmakos status. In other words, a transition is seen from playful ambiguity into an intimidating animal (bad) v. plants (good) binary, from which the 'bad' needs to be expelled (*i.e*., scapegoated). According to Girard (2017), scapegoats are characteristically stereotyped as monstrous and indicative of the common Other, who is proclaimed 'guilty' by a frenzied mob, yet is unable to retaliate. As societal insiders/outsiders, animals fulfil this role to perfection. References to the monstrosities of blood and manure, planet-heating 'cow farts' and 'belches', 'chicken periods' (eggs), and 'milk pus' further underline the point. All this is indicative of conceptual tension caused by a worldview constructed on a problematic series of binaries (Life/Death, Nature/Culture, Pure/Toxic, Good/Evil, etc.), rather than on a more nuanced approach to the complexities and uncertainties of reality.

The above-mentioned observations and reflections lead to the following question: does the scapegoating of livestock serve

***Correspondence:** Frederic.Leroy@vub.be

Frédéric Leroy graduated as a Bioengineer (Ghent University, 1998) and obtained a PhD in Applied Biological Sciences at the Vrije Universiteit Brussel (2002), where he holds a professorship in food science and (bio)technology.

Prof Leroy's research deals with (fermented) foods, human and animal health, food studies, and 'food traditions'. He is a member of academic non-profit societies, such as the Belgian Association of Meat Science and Technology (president), Belgian Society for Food Microbiology (secretary), and Belgian Nutrition Society. On a non-remunerated basis, he serves on the Scientific Boards of the World Farmers Organization and the Danone Institute Belgium.

as a convenient option to ignore the more challenging elements of Western consumerism, which are related to is hyperextractive production systems, while at the same time opening up an option for virtue signalling (especially in the urban centres of the West)? The challenge we are confronted with is to understand *why* and *how* scapegoating, and all hyperbole, polarisation, and hostility that come with it, is triggered.

Retracing the origins and understanding the dynamic

To understand the current animal/plant divide and pharmakon-into-pharmakos transition, a socio-historical exploration is needed. For details, we refer to Leroy (2019), Leroy *et al.* (2020), and Leroy and Hite (2020); the below can only serve as a sketchy and highly simplified outline for the sake of argument.

Historically, the second half of the 19th century has been pivotal. With the first 'Vegetarian Societies', founded by temperance movements in England and the USA, the idea that animal source foods corrupt human health took shape as institutionalised ideology (some historical examples of dietary asceticism and mysticism aside). By rejecting earthly life, these movements (Cowherdites, Bible Christians, and Seventh-Day Adventists, in particular) began promoting a Garden-of-Eden diet, which was connected to a romanticised interpretation of Hindu vegetarianism by Theosophists. Symbolising richness and sensuality, red meat was at odds with a world-renouncing vision of restraint, and thus portrayed as sinful compared to the blandness of 'virtuous' whole grains. As argued by Plumwood (2000), crusading vegetarians have been referring to meat eating as a morally deficient and unnecessary perversion in terms of 'corpse consumption' ever since. Even now that such religious teachings have become less relevant and are little more than a historical footnote, their lasting influence on dietary beliefs is nonetheless not to be underestimated, especially in the Anglosphere.

Due to zealous insistence within a receptive Zeitgeist, the above-mentioned Food Reformist beliefs of the late-19th and early-20th century entered the emerging field of household economics, shaping public dietary views and influencing medical discourse for decades to come (propagated by such Reformists as Sylvester Graham, John H. Kellogg, and Lenna F. Cooper). Leroy and Hite (2020) hypothesised that this may have been at the origin of what is today's *healthy user bias*, installing a cultural artifact in the data obtained from nutritional epidemiology in the USA, but not (or less so) in other cultural contexts. Upper-middle class Americans, who are healthier to begin with, typically eat less red meat and favour whole grains. As such, they are more susceptible to 'moral eating' and obedient adherence to dietary guidelines. This pattern is captured by observational studies which, in a positive feedback loop, further confirm and strengthen the original dietary advice underpinned by nutritional epidemiology of chronic disease. Given the low relative risks that typify such information, it is impossible to rule out (socially constructed) residual confounding and bias.

Why has a marginal dietary view, rooted in ideology, so successfully been picked up by the middle classes? Although vegetarianism can be an informed and conscious personal choice based on ethical concerns or personal taste preferences, some authors such as Veit (2015) and Finn (2017) have convincingly argued that at least part of its current prevalence as a wider societal trend is due to societal unease. Loss of individual purpose in a status-oriented society mirrors resentment, amplified by what René Girard has called 'mimetic desire' (Girard, 2017).

Such a state of affairs generally parallels scapegoating and a Nietzschean 'transvaluation of values' (what was good and strong is turned into vile and sick). Whereas conventional representations of power and sensuality are demonised, victimhood and asceticism are glorified as morally superior. In the process of transvaluation, historically benign connotations of animal source foods, such as strength, abundance, sensuality, and generosity, which are particularly valid for red meat (Leroy and Praet 2015), are inverted into ones of death, infertility, debauchery, and selfishness. A sanctified state develops as one is able to refuse what was historically seen as the most nutritious foods.

Proponents of vegetarianism are frequently part of the Western middle classes, prone to status anxiety driven by an increasing wealth gap with the elites. This typically finds its expression in 'moral' eating and discourses on dietary purity, which, is also intertwined with advocacy for social causes and political activism. Usually, this is done from a 'progressive' angle, blending vegetarianism with feminism, socialism, anti-racism, etc. Yet, Buscemi (2018) has outlined in detail how it can also appeal to the ultra-right side of the political spectrum, giving expression to ecofascism. Both fractions thereby rely on an ecological rationale, in an attempt to convert those who are not convinced by the animal rights or health arguments. In any of its radical political versions, this may contribute to a developing trend of increasing ecoauthoritarianism (cf. Beeson 2010). References to a common threat, such as 'planetary catastrophe' or 'moral decline', act as a unifying narrative to shape mob homogeneity (and thus to dissolve inter-individual differences and inequalities). In both cases, dietary choice is identitarian and serves as an antidote to threatening inequality and loss of purpose.

Reinforcement of the binary by mass media in a post-truth setting

Animal husbandry and diets that are skewed to the inappropriate use of animal source foods are not without problems, but their effects on health and the planet are contextual. Unfortunately, there is little room for nuanced debate within the public space. Mass media are driven by click-bait dynamics and the so-called 'attention economy', leading to sensationalism and sweeping misrepresentations of the scientific evidence. Moreover, certain newspapers are financed by ideological and politico-economic agendas to promote one-dimensional views on the food system. Although these views are sometimes supportive of livestock farming, defending the sector's interests, they can also be hostile. Global media reporting on adverse impacts of animal source foods now overshadows the coverage of positive contributions to health, ecosystems, and livelihoods (Leroy *et al.* 2018; Marchmont Communications 2019).

To make matters worse, the post-truth era, and its reliance on social and mass media, has paved the way for quackery, advocacy, and manipulation of dietary discourse. Because intricacy hampers the process of societal conversion into a dietary belief system, the use of slogans is widespread. Such simplifications aim at increasing the persuasive power of the messages to be transferred. Due to the 'illusory truth effect', repetition of the same messages eventually equates with truth.

The frequent references to 'scientific authorities' further amplifies the problem, either because studies are misread or because

it is erroneously assumed that scientists are at all times rational and unbiased. Higher-educated population groups are strongly committed to an ideological viewpoint and particularly prone to 'myside bias', unable to realise that they have derived their beliefs from the social groups they belong to. Often, this is also amplified by 'white hat bias', *i.e.*, the distortion of information in the service of what may be perceived to be righteous ends.

Science and scientism

Animal source foods are now portrayed by various vocal scientists as intrinsically harmful. In contrast, healthy and sustainable eating is equated to 'plant-based' diets, almost by definition, while the latter of course depends on the nature of the diet rather than its plant or animal origin. Red meat is sometimes specifically labelled as an 'unhealthy food' together with sugar and refined grains, even by some of the leading nutritionists. This has been the case in the EAT-Lancet report (Willett *et al.* 2019), opposing meat's longstanding contribution to humanity's needs (including health) and despite the lack of solid evidence (Johnston *et al.* 2019). The fact that investigation of the quality of the evidence for such statements led to a vitriolic smear campaign by some of the crusading scientists involved indicates, regrettably, that the food system debate is not only about rational arguments (Rubin 2020).

The EAT-Lancet report is symptomatic: it argues for an interventionist Great Food Transformation towards a Planetary Health Diet that is essentially of a quasi-vegetarian nature, allowing only small amounts of animal source foods. Various authors have criticised the reckless use of such top-down approaches for systems in general (Gall 2012; Scott 2020), and for food systems in particular (Leroy *et al.* 2020). They may lead to scientism at the level of public policy making and nutritionism in the case of diets, while translating into potentially harmful policies. This is not to be considered as anodyne. In a biopolitical context, such public interventions can have serious ethical repercussions on individual responsibility and freedom, cause iatrogenic harm, and affect societal well-being. The eventual impact of a radical change in food production and eating may be devastating indeed, for nutritional security specifically, but also at a broader societal level.

Conclusion

There is an urgent need to acknowledge the various forms of bias that underpin the current animal/plant divide in the food system debate. Scientists are not immune, as they too operate in a society where the conditions of possibility for such mindset have been created over decades. Rather, both sides of the divide need to be scrutinised without ideological distortion so that the best of science can be applied to improve the diets of the future.

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