



WHITE PAPER

# DAIRY 3.0

## A NEW PARADIGM FOR THE UK DAIRY INDUSTRY?

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**The rise of veganism, climate conscience and wider social changes are impacting the dairy sector - how must it respond to survive?**

AUGUST 2019



Kite Consulting commissioned this research paper in light of the increased profile of vegan activism in recent years and to ascertain how the livestock industry should respond.

The paper was prepared by William Allen from Warwick University in conjunction with Philip Gibson and John Allen.



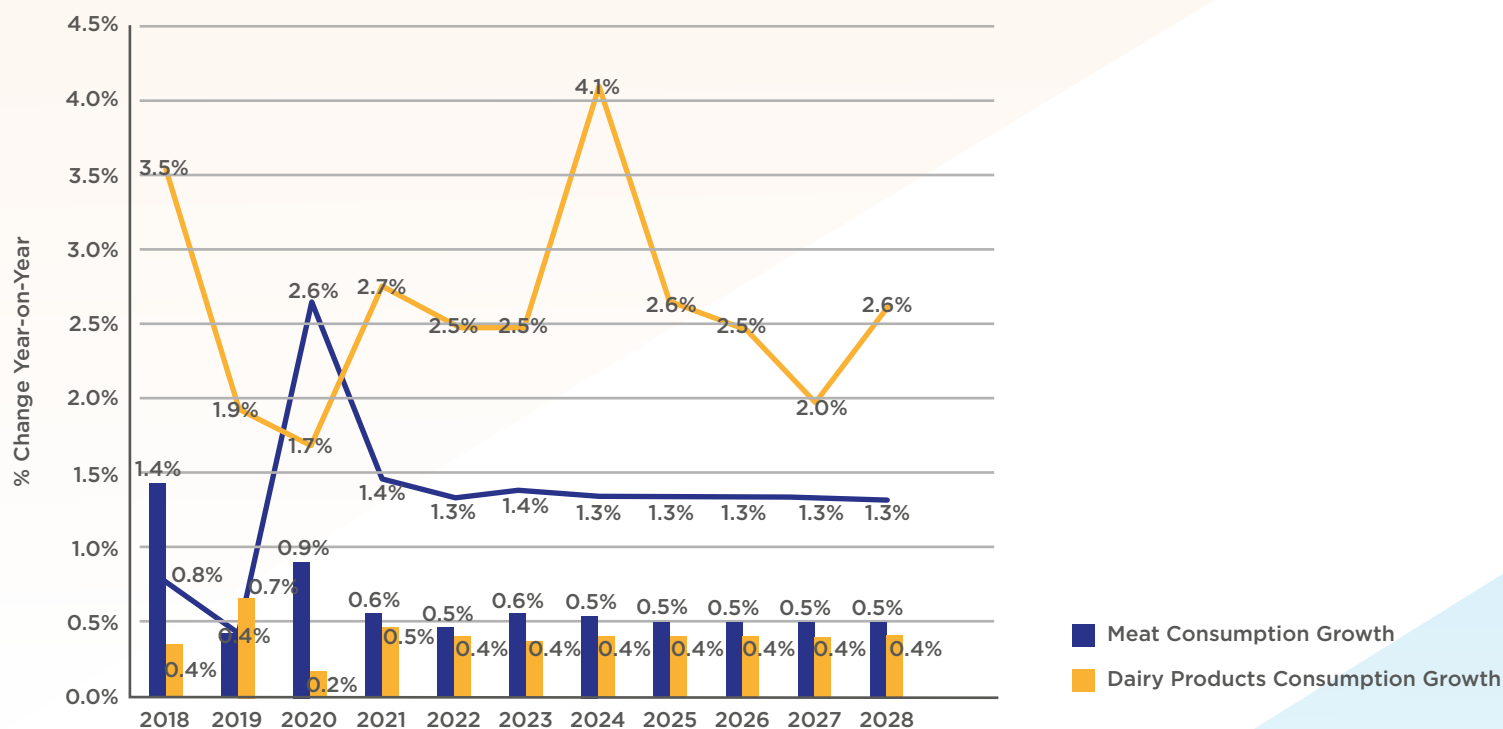
## INTRODUCTION

July 2019

The explosive rise in the popularity of veganism in western culture over recent years has left many industries scrambling to respond. Here we look at the key reasons for its growth, how it functions as a social movement, its potential for the future and the implications for the dairy and livestock industries. Vegans quote three main motivations for their lifestyle - ethical, environmental and health benefits and the three often share a substantial overlap. The internet has provided an entirely new platform for the sharing of information, ideas and debate, and veganism has become a point of contention in a wider conflict where traditional practices are pitted against 'watershed' notions of progressivism. The issue raises broader questions (beyond the scope of this paper) of how we make choices, form identities, create ethical canon and view consumption within society. This study focuses on the 'West', as veganism (outside of religious reasons) is predominantly a phenomenon in highly developed countries. It is important to

note that globally, meat and dairy consumption is increasing in accordance with Bennett's Law: as incomes rise, populations consume less starchy staple foods and more nutrient-dense meat and animal products. In the developed world, meat and dairy consumption will continue to increase but at a much more modest rate of growth than the preceding decade (with a change in composition of demand for dairy leaning towards more dairy fats like full-fat milk and cream), while in the developing world there will be more significant increases in consumption: demand for meat is projected to grow at four times that of developed countries (driven by countries in Asia and Latin America with large middle classes) while dairy consumption is projected to increase by an average of 2.6% per annum until 2028 aided by high growth in India and Pakistan<sup>1</sup>. A comparison of Developing World and Developed World consumption projections is illustrated in fig 1.1 below.

Fig 1.1<sup>2</sup>: OECD-FAO Global Consumption Projections 2018-2028



1) OECD/FAO (2019), OECD-FAO Agricultural Outlook 2019-2028, OECD Publishing, Paris/Food and Agriculture Organization of the United Nations, Rome. [https://doi.org/10.1787/agr\\_outlook-2019-en](https://doi.org/10.1787/agr_outlook-2019-en) (accessed 09/07/2019) pp. 175 and pp. 181

2) Graph created using data from OECD-FAO Agricultural Outlook 2019-2028 commodities database: [https://stats.oecd.org/Index.aspx?datasetcode=HIGH\\_AGLINK\\_2019](https://stats.oecd.org/Index.aspx?datasetcode=HIGH_AGLINK_2019) (accessed 08/07/19). Calculations made using aggregates of consumption- Meat (Beef & Veal, Sheepmeat, Pigmeat and Poultry meat) and Dairy (Fresh Dairy Products, Butter, Cheese, Skim Milk Powder, Whole Milk Powder, Whey Powder and Casein)



## AGRICULTURE AND THE ENVIRONMENT

The environmental effects of agriculture have been well documented and as such there is little to be gained in recycling statistics. In broad terms, the agriculture industry is estimated to be responsible for c. 14.5% of all anthropogenic Greenhouse Gas emissions (2013) - of this, cattle (for meat and dairy) account for 65% of emissions and 20% is produced by consumption of fossil fuels in the supply chain<sup>3</sup>. The composition of livestock GHG emissions is: 44% methane, 29% nitrous oxide and 27% carbon dioxide<sup>4</sup>. Compared with other industries, livestock emissions are disproportionately higher in methane and nitrous oxide and lower in carbon dioxide. Methane is 34 times more effective at trapping heat than carbon dioxide, while nitrous oxide is 298 times more effective<sup>5</sup>. However, neither of these gases remain in the atmosphere for as long as carbon dioxide: methane dissipates after 9-14 years and nitrous oxide after 114 years. Carbon dioxide is more complicated to calculate because it dissipates at a slower rate - roughly 80% is removed from the atmosphere after 200 years but the remaining 20% can linger for millennia<sup>6</sup>. Thus, there is an argument that although methane and nitrous oxide are more damaging in the short-term, their effects are easier to reverse than the continual aggregate build-up of carbon dioxide.

Producing a standardised way of measuring GHG emissions was an important step in understanding in broad strokes how humans contribute to climate change and was achieved by the creation of the CO<sub>2</sub>e (carbon dioxide equivalent). Professor Myles Allen of the Oxford University Climate Dynamics Group however warns against the danger of the 'single metric' when trying to accurately assess individual industry emissions. The livestock industry is unique in that it produces a high proportion of its GHG in methane rather than carbon dioxide (see fig 1.2 below for illustration) - and that methane emissions have been overestimated by 400%<sup>7</sup> - this is because of the quick dissipation rate of methane: if there is no rate of change (i.e. no change in the amount of emissions) then 1 tonne of methane is equivalent to 7 tonnes of carbon dioxide, rather than 28 tonnes which is the figure often quoted. Allen argues that for a power station to stop contributing to Global Warming, it would need to be completely shut down to reduce its carbon dioxide emissions to zero; 'by contrast, for UK livestock farming to achieve the same, it needs to reduce methane emissions by around 20%; and by making modest and achievable reductions in its methane emissions, farming can have an active role in maintaining the climate within safe limits, and continue to produce nutritious food, maintain landscapes and ecosystems, support tourism, cultural traditions, vibrant rural communities and employment.'<sup>8</sup>

3) FAO, 'Tackling Climate Change through Livestock': Key Facts and Findings, 2013 <http://www.fao.org/news/story/en/item/197623/icode/> (accessed 25/04/19)

4) Ibid

5) IPCC, 2013: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp. 714

6) Lisa Moore, 'Greenhouse Gases: How Long Will They Last?', Environmental Defence Fund, February 26th 2008, [http://blogs.edf.org/climate411/2008/02/26/ghg\\_lifetimes/](http://blogs.edf.org/climate411/2008/02/26/ghg_lifetimes/) (accessed 14/04/19)

7) Barry Brill, 'Methane Warming Exaggerated by 400%', March 30th 2019, <https://wattsupwiththat.com/2019/03/30/methane-warming-exaggerated-by-400/> (accessed 14/07/19)

8) Catherine Broomfield, 'Unravelling the Science of Agricultural Emissions', July 11th 2019, <https://sustainablefoodtrust.org/articles/unravelling-the-science-of-agricultural-emissions/> (accessed 15/07/19)





By adopting Allen's new 'GWP\*' (Global Warming Potential) measurement, we can see that the change in methane emissions is far more important than the impact of steady methane emissions. Steady-state herds of cattle actually add very little to Global Warming as every methane molecule added to the atmosphere is balanced out by the expiry of methane molecules produced by the same herd several years prior, suggesting that even marginal improvements in digestive efficiency can help reduce global warming: 'if an individual herd's methane emissions are falling by one third of one percent per year...then that herd is no longer adding to global warming.'<sup>9</sup> In order to understand how the industry can reduce its carbon footprint, the composition of its emissions has to be understood fully in scientific terms, **some of which are only just coming to light** - the importance of this cannot be overstated.

On the other side of the spectrum is 'Cowspiracy'. 'Cowspiracy' is a documentary produced in 2014 to highlight the link between greenhouse gas emissions and the agriculture industry - it has been widely touted as a major standalone conversion factor for many vegans. However, the true intention of the documentary is to promote the creators' agenda of a world without livestock, not to present a scientifically accurate and unbiased position. This is highlighted by the statistics with which the viewer is bombarded, often without objective and qualifying context ('methane has a global warming potential 86 times that of CO<sub>2</sub> on a 20 year time frame'<sup>10</sup> - see notes about long vs short-lived pollutants above) and sometimes downright irresponsibly (such as blaming the farming industry for the deaths of 1,100 land activists in Brazil or suggesting livestock and their by-products account for '51% of all worldwide greenhouse gas emissions'<sup>11</sup>). In order to make the 'conspiracy' even more heady, the film misrepresents several

environmental organisations whose goals are actually aligned with its own (such as Greenpeace, Friends of the Earth and the WWF) to suggest they are part of a global scale cover-up of the 'true' impact of agriculture on the environment out of fear of the industry. This should destroy any credibility the documentary has as a source (and it does raise important questions about our carbon footprint). 'Cowspiracy' is a perfect storm of the dangers of misinformation in the modern age and highlights concepts that we will look at in more detail in further sections:

- a) Statistics that are manipulated to fit a 'progressive' agenda that provides a simplistic, easily consumable solution to a complex problem - simply become a vegan, and the environment will be saved. This is twinned with the idea of conspiracy which in an era of ubiquitous information, provides access to a certain 'exclusivity' of truth. A recent psychological study into conspiracy theories suggests 'people with a high level of conspiracy belief are more likely to believe they possess information that other people don't have and, as expected, also showed a higher need to feel unique or special.'<sup>12</sup>
- b) The perfect emotional message, buttressed by misleading statistics, to an impressionable, young demographic who feel disenfranchised but want to personally make a difference in the world (and have been inculcated from a young age to believe that they can - '94 percent of millennials want to use their skills to benefit a cause'<sup>13</sup>)
- c) Released on a platform (Netflix/online) that allows the documentary to be shared widely and quickly and disproportionately attracts a younger audience (such as that outlined in 'b' above).

9) Allen et al, 'A solution to the misrepresentations of CO<sub>2</sub>-equivalent emissions of short-lived climate pollutants under ambitious mitigation', June 4th 2018, NPJ Climate and Atmospheric Science 1:16

10) 'Cowspiracy: the facts', <http://www.cowspiracy.com/facts> (accessed 04/07/19)

11) Ibid

12) Romeo Vitelli, 'What Makes Conspiracy Theories So Appealing?' August 14th 2017, <https://www.psychologytoday.com/gb/blog/media-spotlight/201708/what-makes-conspiracy-theories-so-appealing> (09/07/19)

13) Eddie Lou, Why Millennials Want More Than Just Work: The Importance Of Your 'Double Bottom Line', June 9th 2017, <https://www.forbes.com/sites/theyec/2017/06/09/why-millennials-want-more-than-just-work-the-importance-of-your-double-bottom-line/#36d662cb5784> (accessed 06/07/19)



“Some perspective is needed - there is a lot of potential for mitigation and regenerative farming within the industry and it is a far cry from Cowspiracy’s assertion that ‘worldwide conversion to veganism is the only possible way to save the planet.’”

There is no doubt that agriculture contributes a non-trivial proportion of greenhouse gas emissions (14.5% not 51% at most recent estimates, and important to note Professor Allen’s qualifier regarding methane above) and, globally at least, has an impact on deforestation and intensive water-use. Improvements need to be made, but some perspective is needed – there is a lot of potential for mitigation and regenerative farming within the industry and it is a far cry from Cowspiracy’s assertion that ‘worldwide conversion to veganism is the only possible way to save the planet’<sup>14</sup>. Climate change requires a global co-ordinated consensus on the political level (and a complete sea-change from the US and China) and as Greenpeace themselves argue: ‘advocating a one-size-fits-

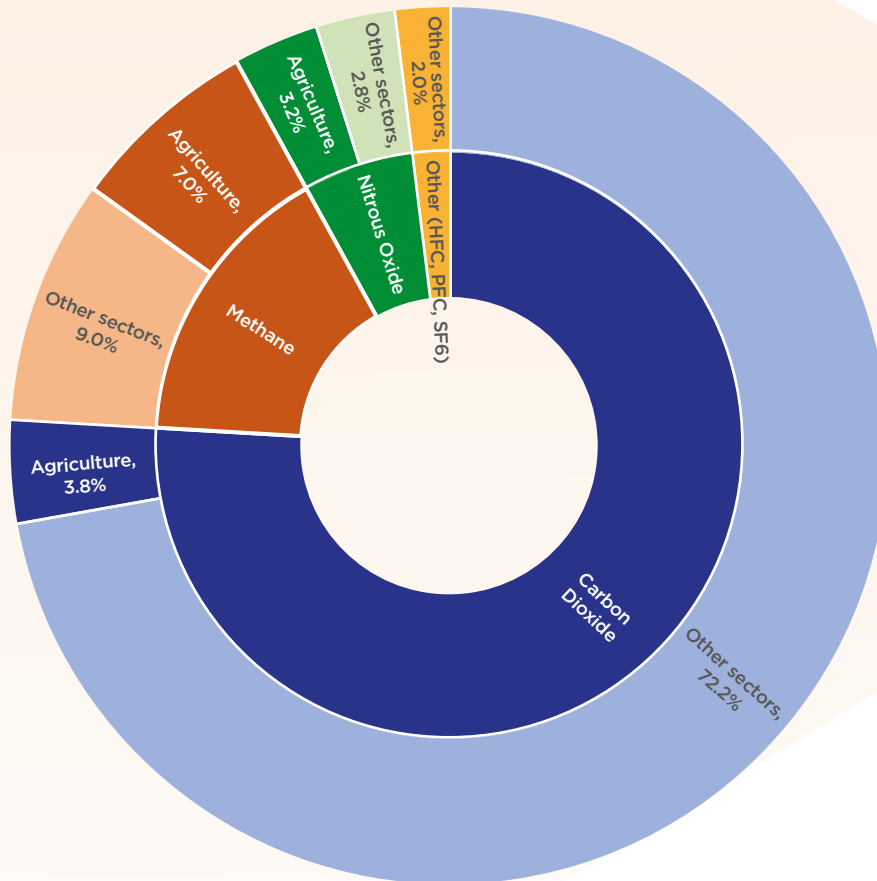
all solution of ‘go vegan to save the planet’ simply isn’t an appropriate, meaningful or impactful solution to someone who relies on subsistence farming or fishing for survival.’<sup>15</sup> Unless this is simply more layers of the conspiracy!

For detailed information on the relationship between agriculture and the environment, and the potential for mitigation, see the FAO’s study: *‘Tackling Climate Change Through Livestock: A Global Assessment of Emissions and Mitigation Opportunities’* (2013) and Allen et al: *‘A solution to the misrepresentations of CO2-equivalent emissions of short-lived climate pollutants under ambitious mitigation’* (2018)

14) Dan Hancox, ‘The Unstoppable Rise of Veganism: How a Fringe Movement went Mainstream’, April 1st 2018, <https://www.theguardian.com/lifeandstyle/2018/apr/01/vegans-are-coming-millennials-health-climate-change-animal-welfare> (accessed 12/04/19)

15) Robin Oakley, ‘Cows, Conspiracies and Greenpeace’, October 19th 2015, <https://www.greenpeace.org/international/story/7187/cows-conspiracies-and-greenpeace/> (accessed 04/07/19)

Fig 1.2<sup>16</sup> : Global GHG Emissions 2015 (Gas Type)



## THE RISE OF VEGANISM

### Vegetarianism and Veganism - Current Demographics

There are many statistics that have been floated around when trying to determine the exact numbers of vegans and vegetarians - this is complicated by the short time-frame in which veganism has gained mass exposure, the way survey questions have been phrased, the issue of virtue-signalling and the number of 'flexible' vegetarians, in addition to the high number of national 'estimates'. A 2018 study by Ipsos Mori breaks down the global demographic as 73% omnivorous, 14%

flexitarian, 5% vegetarian, 3% vegan and 3% pescatarian<sup>17</sup>. If applied to current world population (7.7 bn) this would give figures of c. 847 million non-meat eaters, composed of 385m vegetarians, 231m vegans and 231m pescatarians. Almost half of this number derives from India, with a 2014 census<sup>18</sup> suggesting 31% of the population (currently equating to 415m) do not consume meat, predominantly for religious (Hindu/Jain) and class (Brahmin) reasons.

16) Centre for Climate and Energy Solutions, 'Global Emissions', 2015, <https://www.c2es.org/content/international-emissions/> (accessed 15/04/19) and FAO, 'Tackling Climate Change', 2013 <http://www.fao.org/news/story/en/item/197623/icode/> (accessed 15/04/19), Percentages are of total emissions of all gases. Calculations made using the 'Emissions by gas type (CO2 equivalent)' from C2ES and livestock emissions as a percentage of total anthropogenic emissions by gas type from FAO. The yellow 'Other' sector includes HFC, PFC, SF6 for which there is no breakdown available.

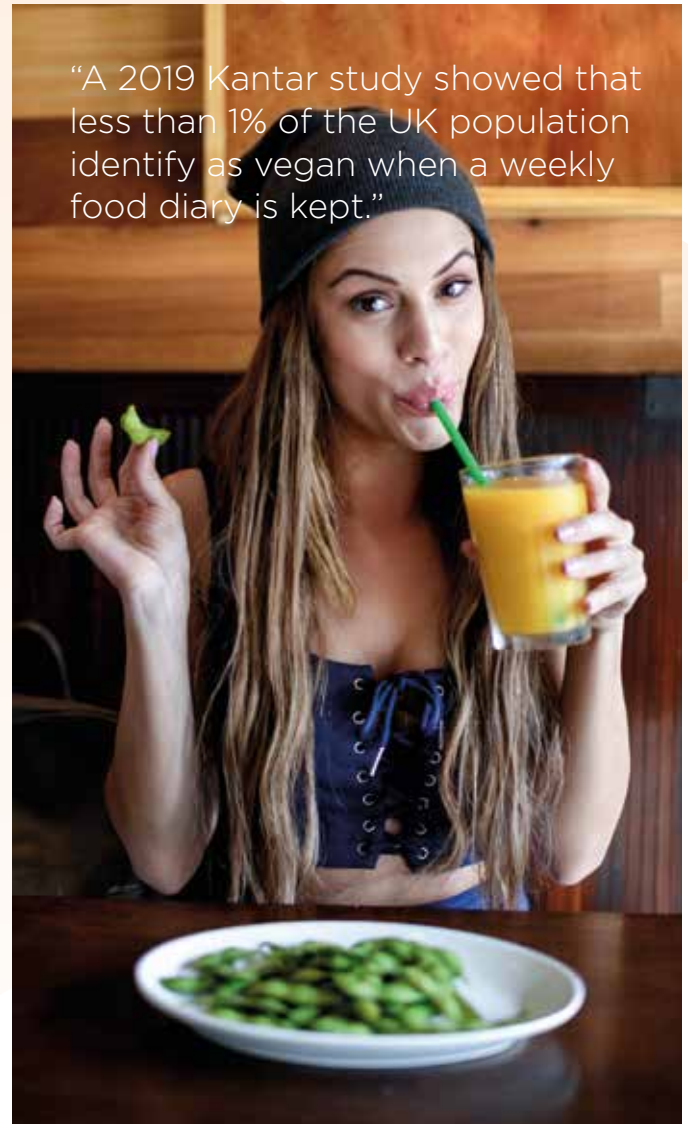
17) Ipsos Mori, 'An Exploration of Diets around the World', August 2018, [https://www.ipsos.com/sites/default/files/ct/news/documents/2018-09/an\\_exploration\\_into\\_diets\\_around\\_the\\_world.pdf](https://www.ipsos.com/sites/default/files/ct/news/documents/2018-09/an_exploration_into_diets_around_the_world.pdf) (accessed 09/07/19)

18) Indian Government, 'Sample Registration System Baseline Survey 2014', 2014, [http://censusindia.gov.in/vital\\_statistics/BASELINE%20TABLES07062016.pdf](http://censusindia.gov.in/vital_statistics/BASELINE%20TABLES07062016.pdf) (accessed 09/07/19)



In the UK, a 2018 study suggested vegans numbered 3.5m (or 7% of the population) compared to 540,000 (1.05% of the population) in 2016<sup>19</sup> - it also estimated vegetarians to number 14% of the population. However, this is likely to be a gross overestimation, as the survey was phrased in a way that included anybody who had ever tried a vegan or vegetarian diet (such as those who partake in Veganuary but return to an omnivorous diet thereafter). It also asked whether the respondents identified as vegetarian/vegan rather than asking them specifically about their diet: this is a notoriously unreliable way of gathering accurate figures as self-reporting often lends itself to self-idealisation or self-aggrandization. This is highlighted by a 2019 Kantar study which shows 2.6% of the UK population identify as vegan (see fig 1.3 below), which falls to less than 1% when a weekly food diary was used<sup>20</sup>. Perhaps what these studies show more profoundly than actual statistics are that veganism encapsulates an ideal which is growing in popularity and which is realised more often by a flexitarian approach to consumption rather than a strict vegan one. Perhaps the term 'vegan' itself is a misnomer and is not useful as an umbrella term for a movement which encompasses varying degrees of meat consumption but is characterised by a desire to reduce or remove entirely meat and dairy from diet. However, for the purposes of simplicity we will continue to use it when referring to the wider plant-based diet movement.

Within the vegan demographic itself, there are some other interesting points to note: millennials make up more than 1/3 of all vegans, and female millennials outnumber their male counterparts by 5:1: '(female millennial) engagement sees huge over-indexes, standing at 274 in comparison to the total population and 134 in comparison to total vegetarians'<sup>21</sup>. Other areas where vegans 'over-index' (and thus differ in broad-strokes characteristics) compared to vegetarians are living alone (44% over-index), living in London/South UK (37%) and living in a household without children (93%)<sup>22</sup>. This provides a reasonably good profile of the type of consumer that might pursue a vegan lifestyle.



"A 2019 Kantar study showed that less than 1% of the UK population identify as vegan when a weekly food diary is kept."

19) Olivia Petter, 'Number of Vegans in UK Soars to 3.5 Million, Survey finds', April 3rd 2018, <https://www.independent.co.uk/life-style/food-and-drink/vegans-uk-rise-popularity-plant-based-diets-veganism-figures-survey-compare-the-market-a8286471.html> (accessed 09/07/19)

20) Emma George, 'Only 3% of UK Self-Define as Vegan', February 5th 2019, <https://uk.kantar.com/consumer/shoppers/2019/only-3-of-uk-self-define-as-vegan/> (accessed 10/07/19)

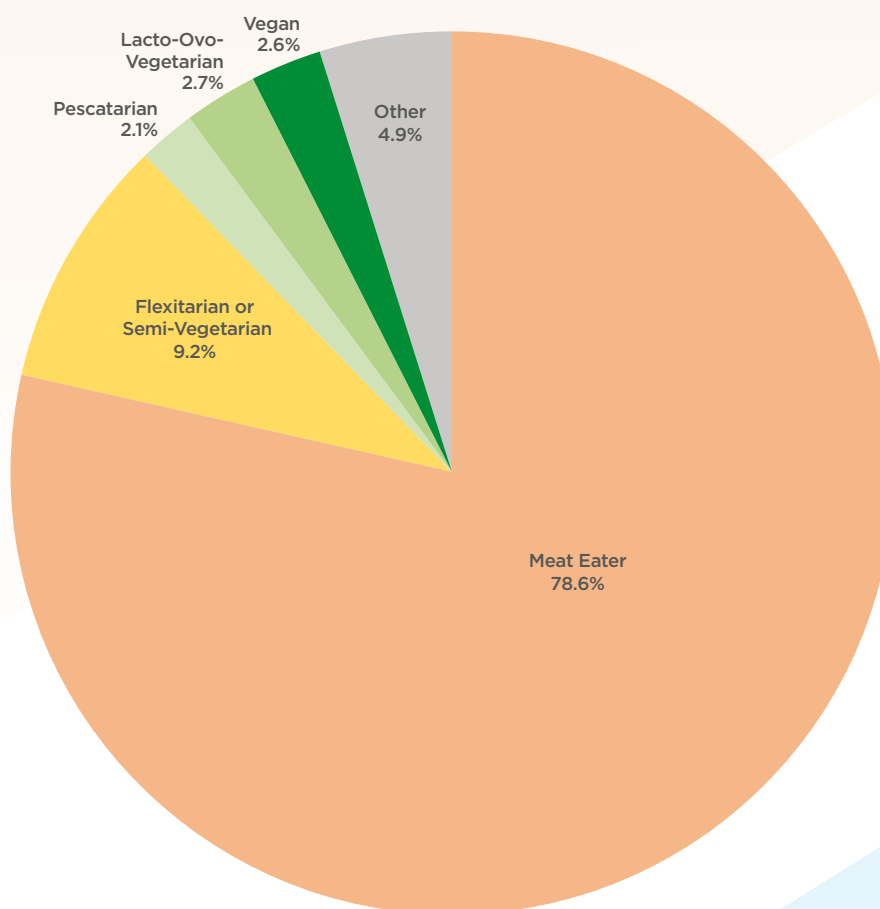
21) Ibid

22) Ibid





Fig 1.3<sup>23</sup>: UK Adult Diet - Self-Reported (January 2019)



23) Ibid (0.1% Raw Food demographic not included)

## SOCIAL MEDIA AND VEGANISM

The rise of social media and how it impacts on behaviour is a new and relatively unknown quantity. It's clear that it provides a platform for social movements to gain exposure at a rate that was impossible when reliance on newspapers and word-of-mouth was the norm - this is evidenced by the pervasively viral '#metoo' and '#blacklivesmatter' movements against sexual harassment and institutional racism respectively. The use of Twitter as a mouthpiece for Donald Trump played a crucial role in his ascent to the presidency by allowing him to extend his reach into people's living rooms (akin to President Roosevelt's wartime radio 'Fireside Chats') and creating a personal connection with his followers that fuelled his 'authentic' appeal. Instagram allows pictures and videos to be shared, which provides powerful visual stimuli in a way that articles and debates simply cannot. Younger people/Millennials (who form the bulk of the candid vegan sector) identify with certain ideals that they consider important and progressive - 'Linkfluence' has identified the seven most significant values on Social Media for the 18-34 year old demographic:

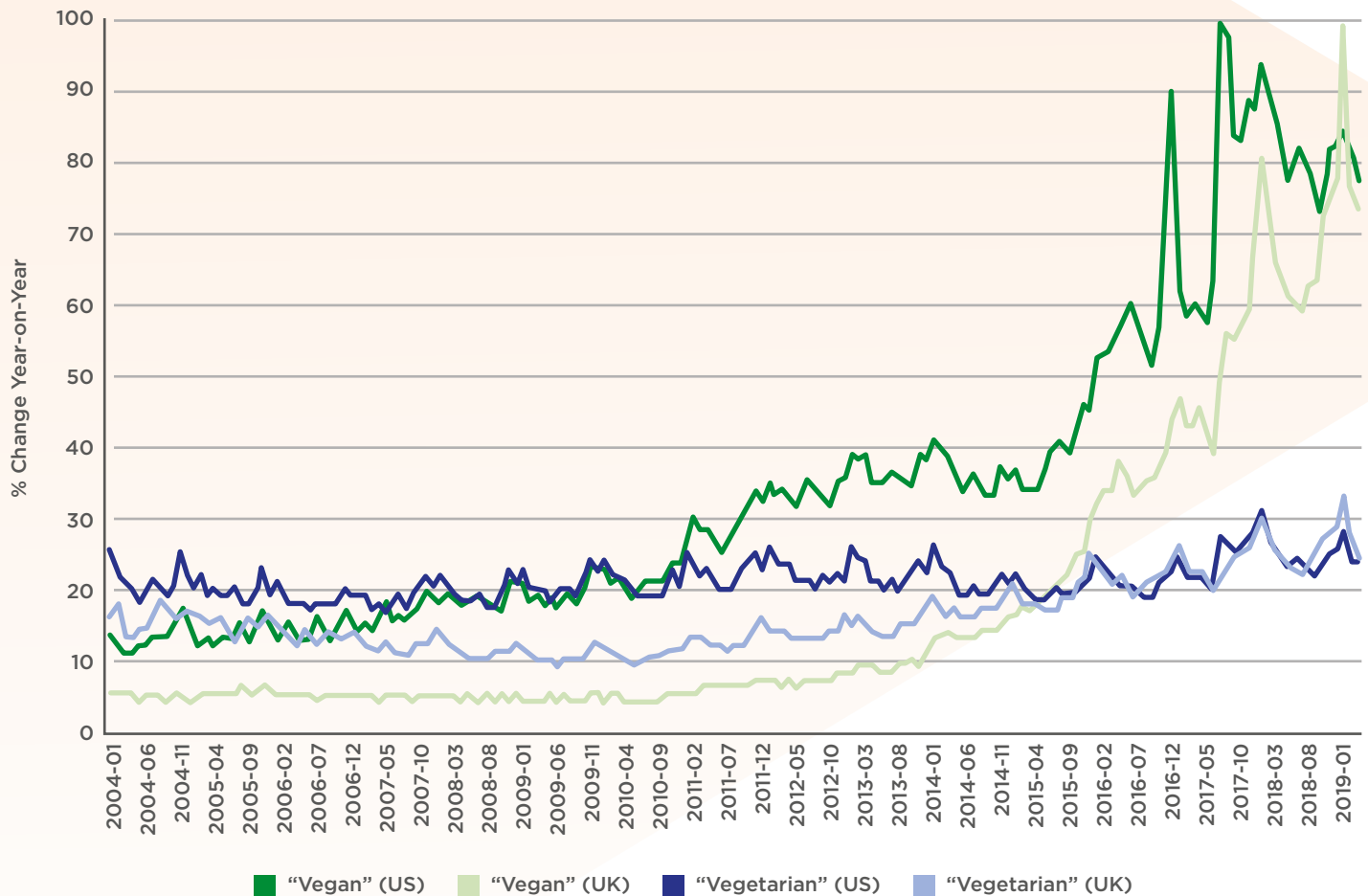
The Vegan movement ties in with three of these seven values (Animal Rights, Sustainability and Environmental Protection) demonstrating the fertile ground for veganism to win young support online. There is a correlation/causation issue here - it is not clear whether veganism is exploding in popularity among the younger demographic because of social media or whether the movement is simply more popular among younger people and their tendency to use social media more reflects this. Regardless of this 'chicken-egg' debate, the surge in social media vegan advocates gives a huge amount of exposure to those considering the lifestyle.

Fig 1.4<sup>24</sup>: Values Identified by The Exploratory Research



Nowadays, Google is the entry point for the majority of people seeking information about a topic. Analysis of the popularity of the search terms 'Vegan' and 'Vegetarian' in the US and UK since 2004 is shown in Fig 1.5 below:

Fig 1.5 : US/UK Google Trends Search Terms (Vegan, Vegetarian) 2004-2019



Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means that there was not enough data for this term.

What is interesting about the graph is that while 'vegetarian' searches have remained relatively constant, 'vegan' searches exploded in popularity around the turn of 2015/2016 - there is no clear trigger from this period that can be identified but it is likely a culmination of factors (including celebrity advocates, the sharing of ethical and environmental documentaries and generally increased news exposure) that creates a self-sustaining growth in popularity. It could also be extrapolated that the phenomenon took root first in the US, and the UK followed suit.

The above demonstrates that veganism ticks many boxes for a strong social media presence. However, how does social media promote a vegan lifestyle centred on the main 3 issues (environment, ethics, health) outside of mere exposure? This is a complex question and touches on many deeper issues such as the philosophy of choice, the changing nature of 'information' and how we create our own identities. To start simply, let's look at 'influencers': celebrities such as Ellie Goulding, Natalie Portman, Ariana Grande, Woody Harrelson, JME, Ellen DeGeneres and Liam Hemsworth have popularised

25) Hancox, 'The Unstoppable Rise of Veganism'

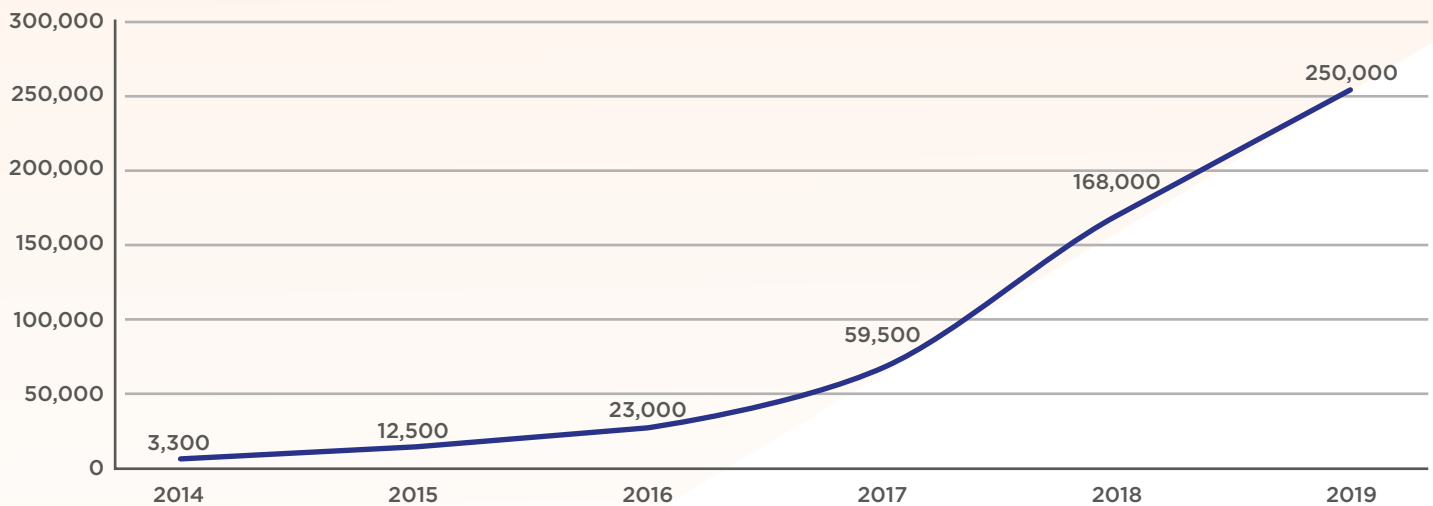
26) Katie North, 'The Link between Social Media and the Rise of Veganism', October 12th 2017 <https://medium.com/the-view-from-pompey/the-link-between-social-media-and-the-rise-of-veganism-9f57bf74669e> (accessed 20/03/19)

27) Julie Doyle, 'Celebrity vegans and the lifestyling of ethical consumption', Environmental Communication, 10:6, pp. 777-790, pp.779

and promoted a fully vegan diet<sup>25</sup>. These celebrities combined have 149m followers on Twitter and 253m followers on Instagram (as of April 2019 - followers of multiple celebrities may have been counted more than once). It is important not to understate the effect celebrities have as role models on impressionable fans and imitation alone (excluding all other reasons for becoming vegan) has doubtless influenced many of their followers to adopt, or at least trial, a vegan lifestyle. Not only do 'vegan influencers often have a young, impressionable audience to push their own ethics upon'<sup>26</sup>, but celebrities help spread veganism in several ways: by acting as 'visible and spectacular celebrity signs of veganism; as cultural intermediaries conferring particular knowledge about being vegan and (by) contributing to debates about types of ethical consumption'<sup>27</sup>.

Aside from promoters, social media allows the sharing of ideas, petitions, protests, documentaries, memes, information (and misinformation for that matter) that have allowed a fringe movement to become more organised and mainstream. 'Veganuary', a movement to promote trying veganism for a month in January, began with 3,300 online signatures in 2014. By 2019 it had reached 250,000 signatures. The most recent follow-up study, however, suggested 38% of 2018 Veganuary participants returned to an omnivorous diet as soon as February rolled around<sup>28</sup>, perhaps highlighting (like many similar New Year resolutions) that drastic lifestyle changes can be difficult to maintain once the energy afforded by the novelty effect has worn off.

Fig 1.6<sup>29</sup>: 'Veganuary' Online Participants



28) Learner Vegan, 'Why People Don't Stay Vegan after Veganuary', January 2019, <https://www.learnervegan.com/why-people-dont-stay-vegan-after-veganuary/> (accessed 11/07/19)

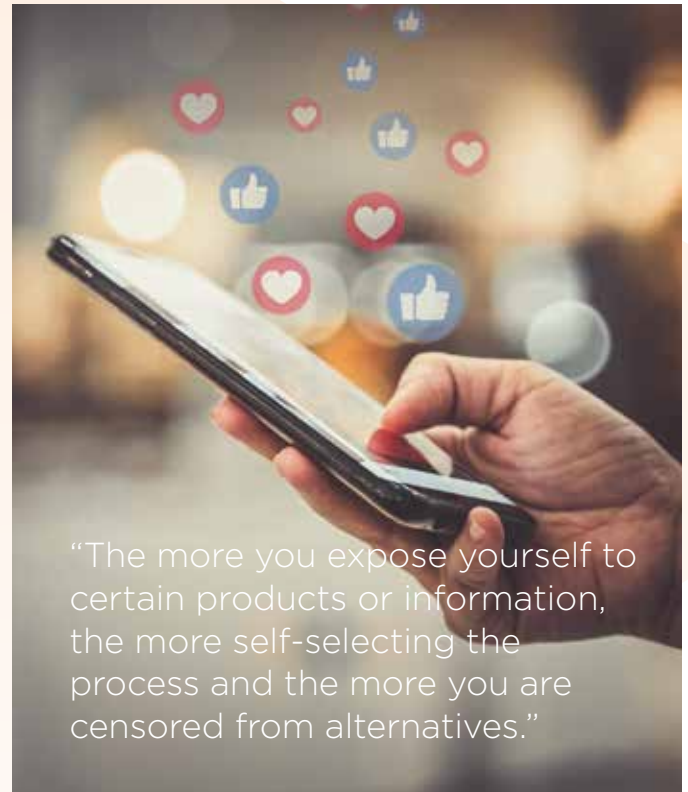
29) Alexandra Topping, 'Year of the Vegan? Record Numbers Sign up for Veganuary', 31st December 2018 <https://www.theguardian.com/lifeandstyle/2018/dec/31/year-of-the-vegan-record-numbers-sign-up-for-veganuary> (accessed 18/03/19)

30) Charles J. Godfray et al, 'Meat Consumption, Health and the Environment', 20th July 2018 <https://science.sciencemag.org/content/361/6399/eaam5324> (accessed 18/03/19)

31) Oliver Milman, 'Anthropomorphism: How much humans and animals share is still contested', January 15th 2016, <https://www.theguardian.com/science/2016/jan/15/anthropomorphism-danger-humans-animals-science> (accessed 21/03/19)



A more implicit way social media influences the movement is the shift from exclusivity to inclusivity and the impact on our automatic decision-making processes. The availability of online forums for the sharing of vegan recipes, ideas and positive reinforcement makes a vegan lifestyle more easily accessible than ever before and creates a hive-mind that propagates itself and is resistant to external information that defies their collective beliefs. The Dual-Process theory (which will be considered in more depth later in this paper) argues that we form our beliefs in two ways: through reflective and automatic decision-making<sup>30</sup>. The internet, and social media particularly, plays on our automatic decisional system - Instagram images, hashtags and the rise in 'anecdotalism' (personal opinions carrying more weight than they ought to) appeal to our emotional responses more than to our critical thinking. One crucial way this is done is anthropomorphism, which leads to a conflation of human rights with animal rights and ties in with the 'ethical' foundation of vegan supporters. Countless videos are shared of chimps, kangaroos, pandas etc. exhibiting behaviour that viewers can ascribe as 'human'. Patricia Ganea, a psychologist who has run a series of experiments on the impact of anthropomorphism on child perceptions of animals argues 'it's almost like the internet was built for anthropomorphizing animals...(it) can lead to an inaccurate understanding of biological processes in the natural world...It can also lead to inappropriate behaviours towards wild animals, such as trying to adopt a wild animal as a 'pet' or misinterpreting the actions of a wild animal.'<sup>31</sup> This will be examined in more detail during the ethical considerations section.



Something more insidious that is often not mentioned when discussing the influence of the internet/social media are the 'cookies' and algorithms that affect what we are shown when we are browsing. The premise is that many websites use your browsing history data to learn what material or advertisements to show you ('because you are interested in X, you might be interested in Y'). This targeted approach may seem benign or helpful but, in effect, the more you expose yourself to certain products or information, the more self-selecting the process and the more you are censored from alternatives. When the whole motivation of websites is traffic and engagement, there is a low chance you will be shown something which challenges your beliefs, creating a feedback loop where you become more and more surrounded by information which supports your pre-existing opinions. This will result in people developing narrower and more firmly entrenched viewpoints, reducing the chance of dialogue, compromise and empathy - we can see today the dangers that arise when a society becomes polarised.





## HEALTH AND VEGANISM

Health is a big motivator for people looking to try a vegan diet and is closely linked to social media: Instagram encapsulates the motto ‘a picture is worth a thousand words’ and spreads the vegan message ‘primarily through food and not other aspects of veganism like apparel and skincare products’<sup>32</sup>. This directly plays into our automatic decisional system as the vegan lifestyle is predominantly promoted on Instagram by twinning it with healthy connotations - as well as providing visual examples that vegan food can be more than just salads, hashtags like ‘wellness’ and ‘clean eating’ are hugely important in winning over new converts (predominantly younger women: of the 2018 Veganuary online signatories, 84% were women and 60% aged under 35)<sup>33</sup>. With the use of hashtags such as these, the idea is presented that a ‘clean’ diet (fresh, whole foods as close to their natural state as possible) and consumption of animal products are mutually exclusive, which is fundamentally untrue. It also implies by opposition that meat and dairy products are inherently ‘dirty’, framing the debate as a black-and-white choice between the two. Of course, it is entirely possible to have a healthy diet that includes meat and an unhealthy vegan diet, and animal products are among the most natural sources of food available to us.

The main study that is often cited regarding the health debate around meat consumption was a 2015 World Health Organisation report which found a correlation between higher levels of processed/red meat consumption and colorectal cancer incidence. The study found that an increase of 100g of red meat (beef, veal, pork and lamb) or 50g of processed

meat (salted, cured, fermented, smoked meats) raised the risk by 17%<sup>34</sup>. To put this into contextual numbers, the risk of colorectal cancer for the highest processed meat-eaters is 66 per 1000 people vs 56 per 1000 people for the lowest consumers of processed meat<sup>35</sup>. (based on data suggesting an average of 61 per 1000 people will experience bowel cancer in UK). The WHO has labelled processed meats as a number 1 carcinogen (definitely causes a type of cancer) and red meat as a number 2A carcinogen (probably causes a type of cancer). This led to such sensationalist headlines as ‘Drop the bacon roll - processed meats including sausages ‘as bad for you as SMOKING’<sup>36</sup>. However, while the study and subsequent categorisation does indeed indicate a slightly increased risk of one type of cancer, it doesn’t tell us the potency, and with context the actual risk is still very low. If we take the 17% figure, and the average colorectal cancer incidence of 61 people per 1000, your chance of bowel cancer will rise from 6.1% to 6.6% with a diet high in red/processed meat. In addition, the study did not take into account mitigating factors such as a diet both high in processed meat and high in fibre (which reduces risk of bowel cancer). In fact, official NHS advice on the issue is to reduce consumption rather than stop outright: ‘It is unnecessary to cut red meat out all together as it is a good source of nutrients, including protein, iron, zinc and vitamin B12’<sup>37</sup>. This study focuses on one specific type of cancer and the negative effects of red/processed meats and does not suggest any cancer risk associated with white meat, fish, dairy or eggs.

32) Samantha Lubatkin, ‘How the Social Media Obsession is Fuelling Veganism’, September 12th 2016, <https://www.theodysseyonline.com/how-the-social-media-obsession-is-fueling-veganism> (accessed 02/04/19)

33) Hancox, ‘The Unstoppable Rise of Veganism’

34) NHS, ‘Processed meat ‘causes cancer’ warns WHO report’, October 27th 2015, <https://www.nhs.uk/news/cancer/processed-meat-causes-cancer-warns-who-report/> (accessed 08/04/19)

35) Cancer Research UK, ‘Processed meat and cancer- what you need to know’, October 26th 2015 <https://scienceblog.cancerresearchuk.org/2015/10/26/processed-meat-and-cancer-what-you-need-to-know/> (accessed 04/04/19)

36) Felicity Thistlethwaite, ‘Drop the bacon roll - processed meats including sausages ‘as bad for you as SMOKING’’, The Daily Express, October 23rd 2015 <https://www.express.co.uk/life-style/health/614101/Processed-meats-bacon-sausages-smoking-WHO> (accessed 05/04/19)

37) NHS, <https://www.nhs.uk/news/cancer/processed-meat-causes-cancer-warns-who-report/>

Weight loss and lowering cholesterol is another oft-cited reason for going vegan. It is perhaps easier to reduce calorie intake by eating only foods that have a higher proportion of fibre and a lower proportion of fats, but weight loss ultimately always boils down to calories consumed vs calories burned. There are fewer fast food/processed food options for vegans, which helps reduce fat intake, but this may change as vegan options increase to meet the increasing demand. One example of this is the new plant-based 'Impossible' and 'Beyond' burgers, which actually contain slightly more calories, fat and sodium than a regular beef burger (depending on how the burger is cooked)<sup>38</sup>. Cholesterol levels among vegans have been proven to be 10-35% lower than average - but this includes a reduction in both LDL ('bad cholesterol') and HDL ('good cholesterol')<sup>39</sup>. Heart disease risk is complicated because while vegans generally have lower LDL, BMI and higher fibre diets (good markers for heart disease), they also generally have lower HDL, higher levels of homocysteine and triglycerides (all associated with a higher heart disease risk). In fact, two extensive studies published in the NCBI and based on UK and Australian data found there to be 'no evidence that following a vegetarian diet, semi-vegetarian diet or a pesco-vegetarian diet has an independent protective effect on all-cause mortality.'<sup>40</sup>

What's more, there are some health difficulties that the vegan diet can present. Vegans can generally get enough protein through soy products, lentils, chickpeas and nuts, but there are common vitamin deficiencies among vegans for B12, B6 and D, which can cause a range of symptoms including anaemia, fatigue, difficulty concentrating, depression, mouth ulcers, Rickets and muscle weakness. Such symptoms would only manifest in severely deficient cases, of course, and most vegans who take these things into account and vary their diet accordingly will not suffer from these, but it does go against the 'clean' living archetype if supplementation with synthetic vitamins is required to ameliorate a lack of animal products!

Vitamin B12 can only be found in animal products so supplements must be taken. The Vegan Society recommends vitamin B12, vitamin D, omega-3 fat and iodine supplements<sup>41</sup> and the NHS advice is that a vegan diet is not suitable for



"The Belgian Royal Academy of Medicine has also recently argued that parents who raise their children as vegans should be prosecuted for child endangerment."

children under the age of two<sup>42</sup>. The Belgian Royal Academy of Medicine has also recently argued that parents who raise their children as vegans should be prosecuted for child endangerment due to the potential of 'stunted growth and psychomotor delays, undernutrition (and) significant anaemia. Some developments must be done at a specific time in life and if they are not done, it is irreversible.'<sup>43</sup>

Veganism is also open to abuse by those with eating disorders - a dietician from the British Dietetic Association suggests 'it's very easy for people who have problems with disordered eating to take on veganism as a mask for something deeper that's going on, because it's cutting out huge food groups and for them it's a way to control their diet that's socially acceptable.'<sup>44</sup>. B12 deficiency can also affect mental health - a 2017 study found that 7% of vegetarians and 50% of vegans were deficient in vitamin B12. This may help explain why vegetarians/vegans were almost twice as likely to suffer from depression (based on a study in the UK of 10,000 people)<sup>45</sup>.

38) Beth Skwarecki, 'Is the Impossible Burger better for you than meat?', July 10th 2019, <https://vitals.lifehacker.com/is-the-impossible-burger-better-for-you-than-meat-1836248117> (accessed 10/07/19)

39) Georgia Ede, 'Vegan Diets', Diagnosis: Diets, <https://www.diagnosisdiet.com/diet/vegan-diets/> (accessed 17/04/19)

40) Mithrshahi et. Al, 'Vegetarian diet and all-cause mortality: Evidence from a large population-based Australian cohort - the 45 and Up Study', Preventive Medicine 97, April 2017, pp.1-7

41) The Vegan Society, 'Nutrition Overview', <https://www.vegansociety.com/resources/nutrition-and-health/nutrition-overview> (accessed 10/09/19)

42) NHS, 'The Vegan Diet', August 18th 2018, <https://www.nhs.uk/live-well/eat-well/the-vegan-diet/> (accessed 10/07/19)

43) James Crisp, 'Parents who raise children as vegans should be prosecuted, say Belgian doctors', the Telegraph, May 16th 2019, <https://www.telegraph.co.uk/news/2019/05/16/parents-raise-children-vegans-should-prosecuted-say-belgian/> (accessed 11/07/19)

44) Hancox, <https://www.theguardian.com/lifeandstyle/2018/apr/01/vegans-are-coming-millennials-health-climate-change-animal-welfare>

45) Gord Kerr, 'The Statistics of Vegetarians vs. Meat-Eaters', February 12th 2019, <https://www.livestrong.com/article/481795-the-statistics-of-vegetarians-vs-meat-eaters/> (accessed 12/04/19)





# of Healthy Lifestyle Factors	Hazard Ratio (all-cause mortality)
0	1.00
1	0.79
2	0.61
3	0.47
4	0.35
5	0.26

If a vegan is avoiding meat solely on health grounds, there are far bigger lifestyle choices which would minimise risks to their health - avoiding alcohol, caffeine, cigarettes, exercising regularly, etc. In an extensive 2018 study, five key risk factors were identified and analysed for their mortality coincidence. These were: abstinence from smoking, moderate BMI (18.5-24.9), moderate alcohol intake, healthy diet (quality in upper 40%) and regular exercise (> 30 minutes per day of brisk or vigorous exercise). By adopting all five of the 'low-risk' behaviours, life expectancy at age 50 was increased by 14 years for women and 12.2 years for men. In addition, adherence to just one or some of the factors made tangible improvements to life expectancy with the results summarised in the table to the right (the Hazard Ratio indicates the chance of mortality relative to the baseline '1.0' which was determined by people who didn't adhere to any of the 5 low-risk behaviours. There is a 95% confidence interval in the results).<sup>46</sup>

With the sheer volume of information available online, it is easy to cherry-pick or get hung up on labelling certain foods as inherently 'healthy' or 'unhealthy'. Many foods or food groups go through periods where they are demonised or become vogue: the long-running butter vs. margarine health debate, for example. One should listen to registered or qualified nutritionists (who are unlikely to have a hidden agenda) rather than the purveyed pseudo-science and anecdotalism of social media/YouTube bloggers. Denise Robertson, reader in nutritional physiology and a vegan of four years (for ethical reasons) argues "You can get really good vegan diets and really diabolical ones. Some unhealthy foods, like chips and crisps, are vegan." She states that regardless of what you are consuming, a good diet will consist of 'about 15 per cent protein; 50-55 per cent carbohydrates, and the rest fat.'<sup>47</sup> Humans are omnivores by definition: we need look no further than our canine teeth and our digestive system (our high number of proteases and shortage of cellulases compared with herbivorous animals). Although in the developed world we are lucky to have so many options to choose from, obliterating an entire food group from our diets solely on health grounds would be counter-intuitive. It is a human instinct to seek out silver bullets but, when it comes to diet, 'everything in moderation' (although hackneyed) perhaps remains the best advice. Of course, if someone is going vegan for ethical or environmental reasons it is possible to maintain a healthy diet, provided they are supplementing them self for the vitamin deficiencies that may arise.

46) Y Li et. al, 'Impact of Healthy Lifestyle Factors on Life Expectancies in the US Population', April 2018, Circulation 24;138(4), pp. 345-355 <https://www.ncbi.nlm.nih.gov/pubmed/29712712> (accessed 11/07/19)

47) Anjana Ahuja, 'Myths and Facts about Veganism', The Financial Times, September 13th 2017, <https://www.ft.com/content/602d3bf8-97b8-11e7-8c5c-c8d8fa6961bb> (accessed 10/04/19)

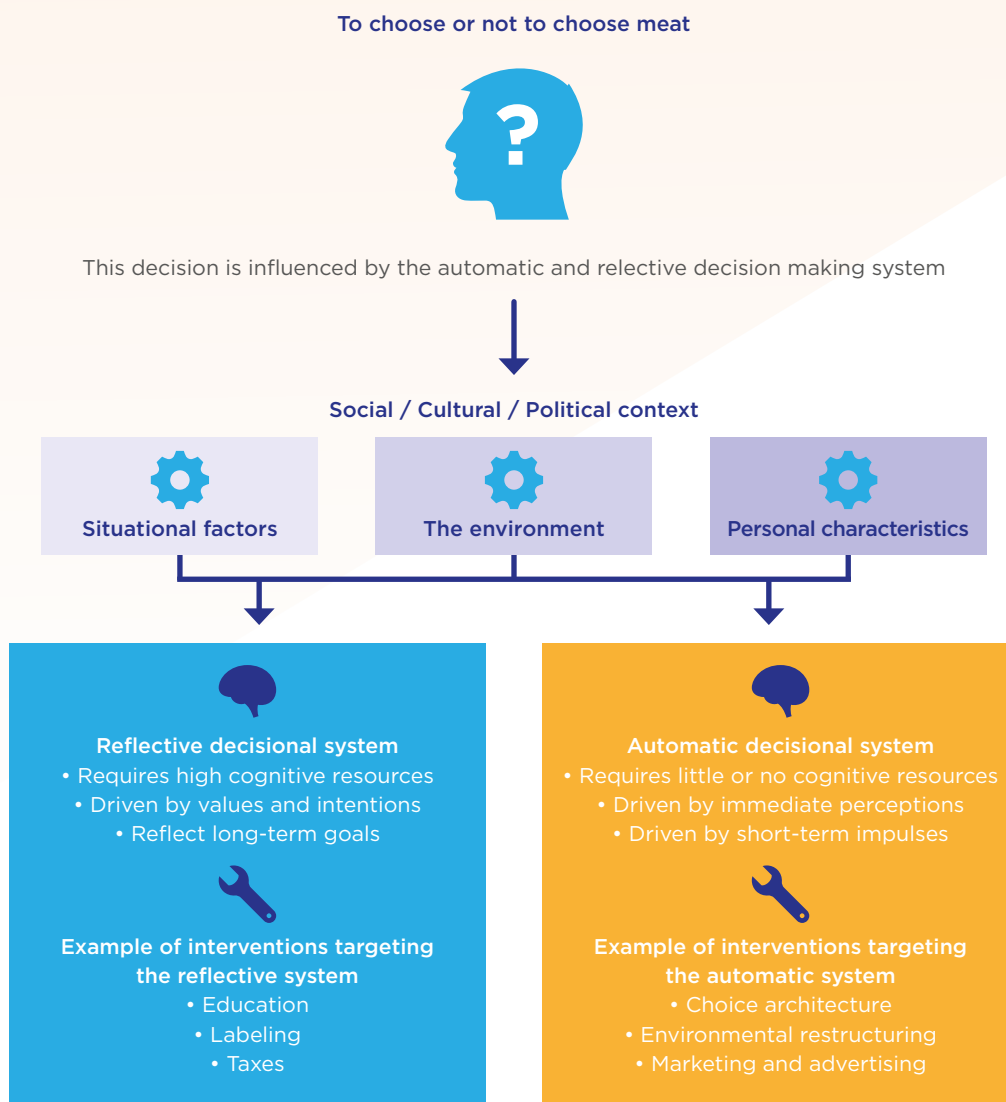


## SOCIAL MEDIA, CHOICE AND IDENTITY

How we make decisions as consumers can be explained using the Dual-process theory of behaviour, as shown in Fig 1.7 below. Our automatic decisional system is responsive to nudge behaviours such as vibrant new wrappers or changing the layout of products in a supermarket, while our reflective decisional system is much more ingrained. The historic societal consensus on meat consumption as 'normal' plays a big part in our reflective decision-making, but this does not make it immutable going forward. The attack on smoking is a perfect example of how to influence ingrained behaviour using policy - education, warning labels and high sin taxes all targeted the reflective decisional system, while removing cigarettes from

view in shops and introducing visceral images and blanket ugly packaging for all brands plays to the automatic decisional system. Combined with the ban on indoor smoking, the entire behaviour has taken up almost a taboo status. Cigarettes are essentially irredeemable whereas meat and dairy are not, however. While the goal of the vegan movement is to shift meat consumption away from 'normal', with a little tact meat and dairy can be 'nudged' towards the more positive associations which are often not mentioned as much as they should be. The issue will be who is directing or influencing the overall narrative?

Fig 1.7: The Dual-Process Theory<sup>48</sup>





“It seems that a fair amount of aspirational self-deception, terminological inexactitude or simple hypocrisy is at play.”

An important question to ask is does the rise in the popularity of veganism necessarily *accurately* reflect the number of people converting to a vegan lifestyle? Veganism is often decried as a ‘fad’- when a movement becomes popularised there are always people who piggyback on the movement in a superficial way to create or buttress their identity, without necessarily adhering to its principles. There is certainly an element of virtue-signalling and vegans are often ‘accused of focusing more on their own virtue than on the fate of the non-human victims of domination.’<sup>49</sup> Expressing moral outrage ‘benefits individuals by signalling their moral quality to others...doing so online instantly advertises your character to your entire social network and beyond’<sup>50</sup>. The three tenets of veganism (animal ethics, health and environment) are all very relatable concerns and because veganism is promoted as a progressive movement, there is a desire to be seen to be ‘on the right side of history’. This is likely to be a very powerful influence on potential vegan converts. There is even an assertion from some

vegans that they are somehow more ‘socially developed’ and that history will show that meat-eating is a primitive behaviour. The opportunity to feel part of an online community and guaranteed ‘likes’ for vegan posts can be powerful motivators for some people, leading people to misrepresent themselves as shown in some of the vegan demographic statistics above. ‘In general, polls seem to find many more people claiming to be vegan than they do people abstaining from all meat, fish and animal products...It seems that a fair amount of aspirational self-deception, terminological inexactitude or simple hypocrisy is at play’<sup>51</sup>. This has led to a conflict between ‘die-hard’ vegans and ‘flexitarians’ with a concern that the core vegan message of complete animal product abstinence has become diluted by the incorporation of those simply looking to reduce their meat/dairy consumption (more about this in the ‘future of veganism’ section). Finally, although the movement is noisy, meat consumption in the developing world is continuing to grow, and even in developed nations, meat consumption has increased 0.7% a year since 1991<sup>52</sup>.

49) Valery Giroux, ‘Veganism as a Social Justice Movement: the Efficacy of our Individual Commitment to the Ideology of Animal Liberation’, June 10th 2017, pp. 8 [https://www.academia.edu/33465745/Veganism\\_as\\_a\\_Social\\_Justice\\_Movement\\_The\\_Efficacy\\_of\\_Our\\_Individual\\_Commitment\\_to\\_the\\_Ideology\\_of\\_Animal\\_Liberation](https://www.academia.edu/33465745/Veganism_as_a_Social_Justice_Movement_The_Efficacy_of_Our_Individual_Commitment_to_the_Ideology_of_Animal_Liberation) (accessed 03/04/19)

50) M. J. Crockett, ‘Moral Outrage in the Digital Age’, 2017 [https://static1.squarespace.com/static/538ca3ade4b090f9ef331978/t/5a53c0d49140b7212c35b20e/1515438295247/Crockett\\_2017\\_NHB\\_Outrage.pdf](https://static1.squarespace.com/static/538ca3ade4b090f9ef331978/t/5a53c0d49140b7212c35b20e/1515438295247/Crockett_2017_NHB_Outrage.pdf) (accessed 04/04/19) Commitment to the Ideology of Animal Liberation’, June 10th 2017, pp. 8 [https://www.academia.edu/33465745/Veganism\\_as\\_a\\_Social\\_Justice\\_Movement\\_The\\_Efficacy\\_of\\_Our\\_Individual\\_Commitment\\_to\\_the\\_Ideology\\_of\\_Animal\\_Liberation](https://www.academia.edu/33465745/Veganism_as_a_Social_Justice_Movement_The_Efficacy_of_Our_Individual_Commitment_to_the_Ideology_of_Animal_Liberation) (accessed 03/04/19)

51) ‘Why People in Rich Countries are Eating more Vegan Food’, The Economist, October 13th 2018 <https://www.economist.com/briefing/2018/10/13/why-people-in-rich-countries-are-eating-more-vegan-food> (Accessed 02/04/19)

52) Ibid

53) Justin Worland, ‘Trump Said ‘We Need’ Global Warming to Deal With Record Cold Temperatures. Here’s Why That Doesn’t Make Sense’, January 29th 2019, <http://time.com/5515340/trump-climate-change-weather/> (accessed 16/03/19)

It is also important to note how opinions and identity are shaped by social media. This is a difficult concept and impossible to quantify but needs consideration. The framing of meat/dairy consumption as a black-and-white issue with compassionate vegans on one side and backwards omnivores on the other is reflective of a period in which opinions online seem more important than facts, and nuance is increasingly ignored. Information, more readily available than at any point in human history, has become devalued by its own sheer weight and is used selectively to buttress existing opinions, then ignored when convenient. It could also be argued that in the era of instant gratification, anecdotal evidence is readier to consume as truth in a 'post-truth' world than the ponderous process of experimentation and peer review. By selecting the online company you keep, you are self-selecting the information and opinions you will be exposed to. Online echo-chambers become entrenched bastions of selective facts and subjectivity. One only has to look at Donald Trump: how he surrounds himself with 'yes-men' and decries anything that challenges his view (even something as concretely verifiable as climate change) as fake news. He cites personal experience such as the extreme cold spell of weather in the US in January as 'proof' that global warming is not a real phenomenon. *'In the beautiful Midwest, windchill temperatures are reaching minus 60 degrees, the coldest ever recorded. In coming days, expected to get even colder. People can't last outside even for minutes. What the hell is going on with Global Warming? Please come back fast, we need you!'* (Tweet January 29th 2019)<sup>53</sup>.

The fact is that all too often people no longer want to be right, they just want to be able to assert their emotions by voicing their own opinions. With facts so readily available, people have lost faith in the ability to form their own opinions because they can be so readily disproved - this leads to fact-resistant, almost ridiculous opinions that defy conventional logic such as that of Trump (above) or the rise in flat-earthers and conspiracy theorists. People want ambiguity because it allows for different opinions. Certainty is too uniform. The election of Trump and the vote for Brexit are both examples of the power of appealing to people's emotions rather than their reason.

It no longer feels like making a personal choice is enough - there is a zealous emphasis on recruiting new converts to the cause. This misdirected paternalism is symptomatic of the modern crisis with liberalism. People construct what they consider to be progressive views and bemoan those who don't agree with them, presenting the debate as the enlightened versus the ignorant and reducing the likelihood of empathy, compromise and conciliation. In reality, this boils down to the 'visibility' factor of social media and the need to virtue-signal and to be 'seen' to care about social issues. Whether people actually follow the virtues of their online persona in their real life is another question!



"The fact is that all too often people no longer want to be right, they just want to be able to assert their emotions by voicing their own opinions."

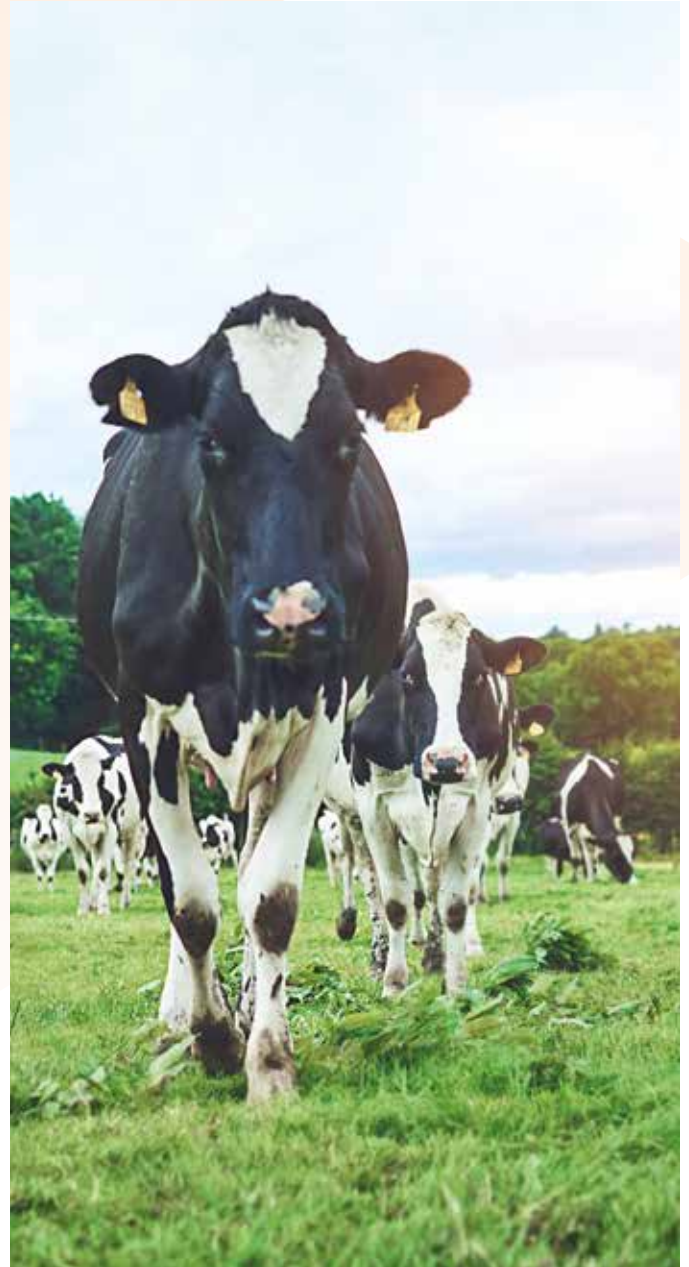


## THE ETHICAL DEBATE AROUND VEGANISM

One of the core reasons given for following a vegan lifestyle is the ethics of meat-eating: VeganBits found that 90% of UK vegans choose this lifestyle because of “ethical reasons”<sup>54</sup>. Fuelled by social media, memes and documentaries, it is very difficult in today’s world to hide behind ‘wilful ignorance’ of farming practices - the question people face is ‘can you continue to eat meat and be accepting of these practices?’

Since the term was coined in 1944 by Donald Watson based on first and last letters of the word ‘vegetarian’ (because he hoped veganism would mark the ‘beginning and end of vegetarian’<sup>55</sup>), ethics has been the most fundamental principle, as the health and environmental effects of meat/dairy consumption are relatively recent revelations. The movement drew from various sources such as the concept of ‘non-violence’ popularised by Gandhi and philosopher Albert Schweizer’s ‘Reverence for Life’, which is still used for ethical discussions around meat consumption and which argues that any destruction of life is ethically wrong. In arguing that vegetarianism doesn’t go far enough, the Vegan Society website (which is the top result on Google when ‘veganism’ is used as a search term) highlights the cruelty of the dairy/egg industry, for example. ‘The production of dairy products necessitates the death of countless male calves that are of no use to the dairy farmer, as well as the premature death of cows slaughtered when their milk production decreases. Similarly, in the egg industry, even ‘ethical’ or ‘free range’ eggs involve the killing of the ‘unnecessary’ male chicks when just a day old.’<sup>56</sup>

So, what are the various positions on vegan ethics? There are two main premises: 1) the Utilitarian Theory, which argues we should cause the least suffering possible and 2) the Rights Theory, which argues we should not violate the rights other sentient beings have to their own lives<sup>57</sup>. Utilitarianism seems to be the less idealistic of the two and lends itself better to measurable actions and personal choice (such as Flexitarianism), while the Rights Theory seems to be the reserve of strict vegans who are directly opposed to any human interference in animals’ lives. The Rights Theory also opens a wide philosophical argument on how we define sentience or measure pain and cruelty.



54) North, ‘The Link between Social Media and the Rise of Veganism’

55) Caroline Lowbridge, ‘Veganism: How a Maligned Movement went Mainstream’, December 30th 2017, <https://www.bbc.co.uk/news/uk-england-leicestershire-40722965> (accessed 18/03/19)

56) ‘Why Go Vegan?’, <https://www.vegansociety.com/go-vegan/why-go-vegan> (accessed 15/03/19)

57) Piper Hoffman, ‘The Ethical Arguments against Ethical Veganism’, February 25th 2013, <https://www.ourhenhouse.org/2013/02/the-ethical-arguments-against-ethical-veganism/> (accessed 18/03/19)





## Sentience

To meet global protein needs, particularly in the developing world, there has long been the idea that our consumption of insects (which have a protein density equivalent to beef and milk) will increase in the near future - it is already culturally commonplace in many areas of Asia and Sub-Saharan Africa. How would a vegan assess the sentience and suffering of a cricket? It is clear they experience cognition markedly different to humans and mammals but is there a certain cognitive threshold where slaughter and consumption is ethically permissible? Vegan and philosopher Michael Marder posits ‘we should not reject the possibility of respecting communities of bacteria without analysing the issue seriously’<sup>58</sup>. Do the Jains have it right when they brush the ground ahead of them lest they tread on any insects? How about we go further than slaughter - if the Rights Theory is centred on animals’ rights to self-determination, is it cruel to keep a dog as a pet? Or keep a horse so you can ride it? After all, we do not and cannot know for certain whether dogs would prefer to have no masters or whether horses find it demeaning and painful to be treated in a subservient way. This may seem pedantic, and there is no suggestion that pet ownership is the equivalent of an abattoir, but it is an important point: rights for humans have established themselves and evolved over millennia resulting in a common agreement on certain rights and principles, as codified by the UN and national governments. Veganism, by contrast, is a recent phenomenon with so many unknown quantities, so there

needs to be a coherent standpoint to formalise the movement beyond personal opinion on which animals are permissible to slaughter and which are not.

Fundamentally, it comes down to a personal viewpoint of whether you view humans as necessarily more important than animals - some vegans equate this ‘discrimination on the grounds of species as distastefully as discrimination on the grounds of race or sex.’<sup>59</sup>. Whether or not you agree with this conflation of animal and human rights is entirely personal and up to you. What is clear, however, is that the existing ‘five freedoms’ provide an ethical framework within which the livestock industry abides - if the mainstream ethical position shifts to equate animal rights more closely with human rights (such as racism, sexism) the entire premise of the farming industry becomes incompatible with the new ethical sentiment.

If the position is: ‘we should do more to ensure animal rights are protected while they are alive and slaughter is ethical, if done humanely’, then this is something that can continue to be developed and the increasing use of welfare outcome measures as well as behavioural elements in welfare measurement, as well as the rise in ‘big data’ allowing more transparency and accountability stands the industry in good stead. But if the position becomes: ‘animals have just as many rights as humans and killing an animal in any way is wrong’ then this becomes a much bigger existential problem that will affect not just the farming industry but any industry where animals are used.

58) Tyler Doggett, ‘Moral Vegetarianism’, September 14th 2018, <https://plato.stanford.edu/entries/vegetarianism/> (accessed 19/03/19)

59) Sali Owen, ‘So What is an Ethical Vegan?’, February 1st 2012 <https://www.theguardian.com/commentisfree/2012/feb/01/what-is-an-ethical-vegan> (accessed 17/03/19)

## Practical considerations

It is easy to see a cute picture of a calf and imbue it with notions of fear, pain and emotional depth, particularly with the prevalence of anthropomorphism on social media: see above. In fact, there are many unsubstantiated claims made on behalf of animals to appeal to our emotional empathies. For example, the Vegan Society claims that 'all living creatures (even those labelled 'free range' or 'organic') fear death, just as we do. No matter how they are treated when alive, they all experience the same fear when it comes to slaughter.'<sup>60</sup> The Farm Animal Welfare Council outlines the 'Five Freedoms' that farm animals should be entitled to - these include freedom from hunger/thirst, from discomfort, from pain (including disease and injury), from distress and the freedom to express normal behaviour<sup>61</sup>. Hunger and thirst aside, these are very difficult concepts to quantify and are relative to what? If the comparison is living in the wild, then it is arguable that current farming practices offer better protection from hunger/thirst and pain than a natural life in the wild could provide. Data harvesting can help answer the more nebulous ideas such as fear and stress (e.g. we can now measure cortisol levels, grooming behaviours, appetite, lying times, etc.) and could help create a biological baseline for ethical comfort. To play Devil's advocate again, of the following two scenarios, which is more ethical? To treat a chicken like a valued pet, allow it free-range, ensure it is always well-fed and protected then euthanise it painlessly and consume the meat? Or to allow it to live life on its own terms in the wild - possibly at times without shelter or adequate food or water - and eventually be mauled to death by any number of natural predators?



The vegan would argue that a natural existence would always trump an existence based on human intervention but the domestication of livestock over millennia has fundamentally altered the genetics and behaviour of farm animals. One only has to compare the contemporary cow with its progenitor, the Auroch, to see how marked the shift is. It is idealistic and naïve to think that if everybody stopped eating meat then cows, chickens and pigs would have free roam of the countryside. The fact is that the reason these animals exist in such large numbers is because of farming. You then run into a philosophical argument about whether it is better for the majority of such animals to never exist at all or to exist as they do within the current system? As Temple Grandin suggests 'we've got to give those animals a decent life and we've got to give them a painless death. We owe the animal respect.'<sup>62</sup> Rightly or wrongly, we exist within a society of commodification and purpose - if there is zero demand for beef and milk, there will be zero demand for cows, particularly when considering the environmental impact of such large numbers of these animals. We do not tend to allow things to exist for the sake of it - everything must have a purpose.



60) <https://www.vegansociety.com/go-vegan/why-go-vegan>

61) Farm Animal Welfare Council, 'Five Freedoms', [http://www.aspcapro.org/sites/pro/files/aspcasv\\_five\\_freedoms\\_final\\_0\\_0.pdf](http://www.aspcapro.org/sites/pro/files/aspcasv_five_freedoms_final_0_0.pdf) (accessed 12/03/19)

62) Temple Grandin, <https://www.goodreads.com/quotes/419241-i-think-using-animals-for-food-is-an-ethical-thing> (accessed 11/07/19)





## AN ETHICAL CONFLICT WITHIN THE VEGAN MOVEMENT

When it comes to what to do with livestock, there exists a conflict between the ethical and environmental motivations of the vegan movement. If the end goal of veganism is the global abolition of meat/dairy consumption in the name of reducing GHG emissions (outside of streamlining processes/innovation) we must cull huge numbers of livestock. If it is in the name of protecting the rights of animals, we now have huge numbers of livestock that will need to be fed and watered but with no discernible value to humans. Does this infringe on the rights of famine and drought-stricken people in the poorer areas of the world? Many people find it far too easy to forget that 'for most of the 2.6 billion people depending on smallholder farming systems (globally), livestock production is essential for diversifying income sources, maintaining soil fertility and providing draught power and transportation. This is particularly important to women for whom the value adding activities in processing and marketing products such as eggs, butter, cheese, leather goods and wool and woven products make

vital contributions to their household budgets.'<sup>63</sup> Livestock ownership has shown marked benefits in improving healthcare, education, social status, income, asset diversification, reduced domestic violence and female emancipation. There is much good work being done to highlight these benefits (such as that of the 'Send A Cow' charity) but it is beyond the scope of this paper to go into - perhaps it is wise to remember that although larger farms can sometimes be portrayed like corporate, soulless objects of derision, in much of the world's developing regions **livestock equates to livelihood**. The IFCN (International Farm Comparison Network) estimate that there are approximately 1 billion people globally<sup>64</sup> who owe their livelihood to the dairy industry and as the global demand for dairy grows, this number will continue to increase too. For more information on the positive role the livestock and dairy industry plays in the developing world, refer to 'The Role of Livestock in Developing Communities: Enhancing Multifunctionality' by Swanepoel, Strobel and Moyo.

63) Frans Swanepoel, Aldo Stroebel, Siboniso Moyo: 'The Role of Livestock in Developing Communities: Enhancing Multifunctionality', Bloemfontein 2010, pp. XV

64) IFCN, 'IFCN Long-term Dairy Outlook: The IFCN Vision of the Dairy World in 2030', June 2018, <https://ifcndairy.org/wp-content/uploads/2018/06/IFCN-Dairy-Outlook-2030-Article-1.pdf> (accessed 15/07/19) pp.2

## WOULD REMOVING LIVESTOCK SOLVE THE ENVIRONMENTAL ISSUES ASSOCIATED WITH LIVESTOCK AGRICULTURE?

So, what if we were to remove livestock from a developed nation? A 2017 study has investigated the possible effects of removing all livestock from the US. Whilst this is not focused on the UK, it is possible to draw similar conclusions for the UK market and, indeed, other western countries. The report shows that, currently, livestock constitute 49% of total agricultural GHG emissions but removing them would reduce emissions by significantly less than that - around 28%. This is because of 'the need to synthesize fertilizers to replace animal manures...dispose of human-inedible by-product feeds that are used as feed for animals...and produce additional crops on land previously used by animals (32% increase over plant contributions in the system with animals).'<sup>65</sup> Overall, the complete removal of livestock from the US would result in a 2.6% decrease in overall US GHG emissions - not an insignificant number by any stretch, but when you consider that emissions by transportation account for 29% of total US emissions, finding a widespread alternative to fossil fuel automobiles would clearly be a higher priority when looking to reduce emissions.<sup>66</sup>

From a dietary perspective, currently 'animal-derived foods provide energy (24% of total), protein (48%), essential fatty acids (23-100%), and essential amino acids (34-67%) available for human consumption in the United States'<sup>67</sup>. While a model of an entirely plant-based agriculture system would produce 23% more food, it would meet far fewer of the nutritional values



that meat/dairy provides - the conversion of energy-dense, micronutrient-poor crops like grains into micronutrient-dense products like meat, eggs and milk is a crucial biological process in ensuring a population's dietary needs can be met. While it would be possible to meet US dietary needs using plant-based rations, the study highlighted that 'this can be a challenge to achieve in practice for an entire population'<sup>68</sup>, suggesting a flexitarian approach, where veganism remains a minority, would be easiest to maintain. In more developing countries, this would be unfeasible as animal products remain the most efficient way to meet dietary needs. Outside of diet, animals provide a multitude of products which are used in 'adhesives, ceramics, cosmetics, fertilizer, germicides, glues, candies, refining sugar, textiles, upholstery, photographic films, ointments, paper, heart valves'<sup>69</sup> among others. While synthetic replacements can be found, the myriad influences of animal products would necessitate a long transitional period if a plant-based society was the goal. The study highlights the risk of oversimplification when calling for a complete removal of animals from the agricultural industry and the challenges that would arise. For example, there is often a naïve idea that all of the land devoted to livestock pasture can suddenly be turned into fields producing crops for human consumption. In reality, there are huge tracts of land all over the world where crops are incredibly difficult or impossible to sow and harvest - without livestock grazing these areas would become redundant overnight. Again, the issue is more nuanced than a simple zero-sum game.



"There is often a naïve idea that all of the land devoted to livestock pasture can suddenly be turned into fields producing crops for human consumption."

65) Robin White and Mary Hall, 'Nutritional and Greenhouse Gas Impacts of Removing Animals from US Agriculture', PNAS, November 13th 2017, <https://www.pnas.org/content/114/48/E10301> (accessed 15/04/19)

66) Centre for Climate and Energy Emissions, 'U.S Emissions', 2017 <https://www.c2es.org/content/u-s-emissions/> (accessed 20/04/19)

67) White and Hall, <https://www.pnas.org/content/114/48/E10301>

68) Ibid

69) Ibid





## SOCIAL MOVEMENTS - CONSIDERATIONS AND THE FUTURE OF VEGANISM

### Theories of social movements

There are several theories as to how social movements develop and the conditions necessary for them to do so. There is not sufficient space in this document to review them all, but there follows a brief overview of several important and relevant theories, using the Civil Rights Movement in the US as an example.

**1) Deprivation Theory** - this argues that the primary motivation for a social movement to arise is the deprivation of rights, services or resources. This can manifest as 'absolute deprivation' (group in isolation is deprived) or 'relative deprivation' (deprivation compared to other social groups, e.g. African-American grievances relative to white Americans). However, deprivation alone is simply a precondition for a social movement and correlated factors need to be present such as the ones outlined below<sup>70</sup>.

**2) Resource Mobilisation Theory** - groups that feel deprived need certain resources to begin a social movement in the form of 'money, labour, social status, knowledge, support of the media and political elites, etc.'<sup>71</sup>. In the modern era, a key resource for developing movements in their early stages can be social media. Resource mobilisation buttresses the deprivation theory, as cultural groups deprived of rights may not be able to form a coherent social movement that is recognised as valid in the absence of resources. The Civil Rights Movement was able to mobilise support by using a religious angle to present the struggle as a moral duty. Initial resources are manpower, focused in local areas 'then bring (people) together in mid-level regional gatherings, and finally organize protests (and even boycotts) at the national and international levels.'<sup>72</sup>

**3) Political Process Theory** - this looks at political situation as a necessary condition for a movement to take root. Deeply entrenched regimes that utilise repressive measures provide a difficult basis for movements to take root. (e.g. Pinochet repeatedly repressing pro-democracy movements in Chile). This can be reductive as it does not take the balance (political situation vs cultural factors) into account. i.e. if the cause is strong enough to accept loss of life/civil war, a repressive political process can become a weapon in mobilizing support and sympathy around the world.

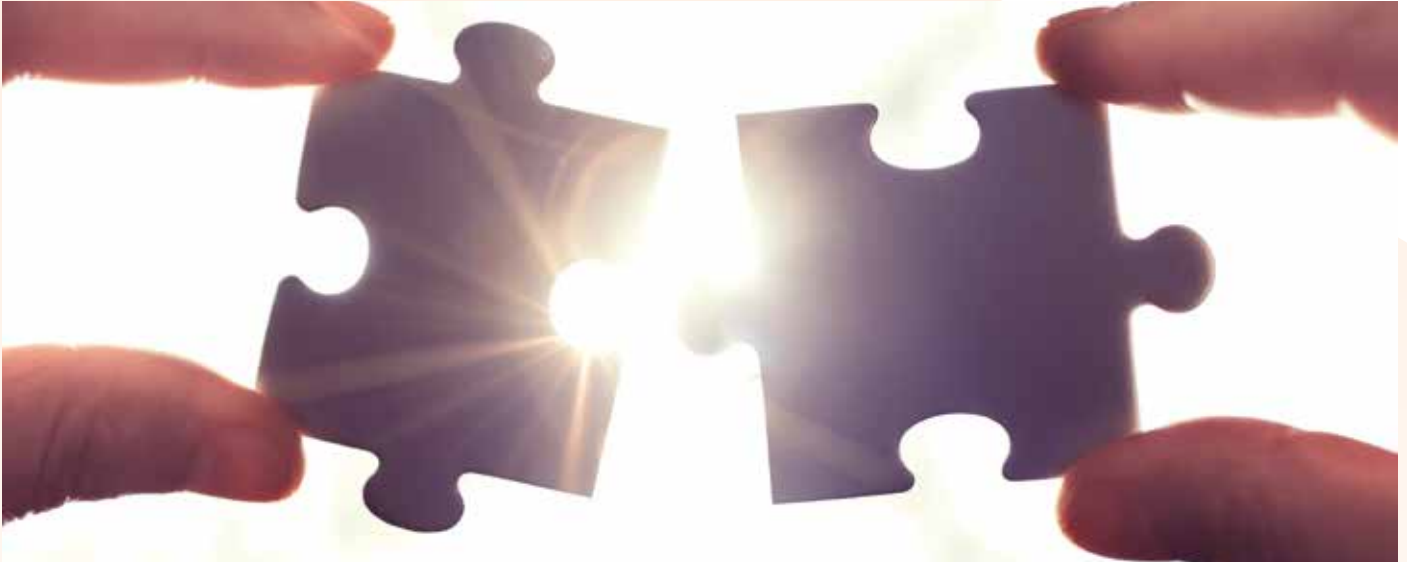
**4) Structural Strain theory** - this is a more complete picture and argues that 6 factors are necessary for a movement to grow - deprivation, recognition of a problem as a legitimate issue by wider society, ideology to 'fix' issue spreads, trigger event that transforms nascent movement into bona fide social movement (e.g. Rosa Parks incident), a society/government that is receptive to social change, and mobilisation of resources occurs as movement develops<sup>73</sup>. Using the Civil Rights Movement as an example - 1) deprivation of African-American rights; 2) recognition of problem by society as unsustainable in light of America championing themselves as land of Land of the Free; 3) ideology based on religion/equality to grant equal rights to minorities with clearly identifiable goals; 4) Trigger event such as the Rosa Parks incident; 5) Society generally supportive to change, and importantly, the Kennedy and Johnson administrations being receptive to demands rather than repressive in dealing with the movement.

70) Anindya Sen, 'Why Social Movements Occur: Theories of Social Movements', Bilgi Ekonomisi ve Yönetimi Dergisi / 2016 Cilt: XI Sayı: I, <http://www.beykon.org/dergi/2016/SPRING/2016XI.I.10.A.Sen.pdf> (accessed 20/03/19) pp. 125

71) Ibid pp. 126

72) Ibid pp. 126

73) Sen, <http://www.beykon.org/dergi/2016/SPRING/2016XI.I.10.A.Sen.pdf> pp.128



## Stages of a social movement

Once the necessary societal preconditions have been met, there are 4 recognised stages of a social movement (Emergence, Coalescence, Bureaucratization, Decline)<sup>74</sup>

**1) Emergence** - 'social ferment'- people are aggrieved by something but there is no collective action or formal organisation.

**2) Coalescence** - general discontent transforms into more specific and directed discontent. 'Unrest is no longer covert, endemic, and esoteric; it becomes overt, epidemic, and exoteric. Discontent is no longer uncoordinated and individual; it tends to become focalized and collective'<sup>75</sup>. Public actions like demonstrations, sit-ins, etc. tend to arise.

**3) Bureaucratisation**- 'formalised' movement. No longer reliant on inspirational leaders or individuals - the movement must begin to have a trained staff and an organised system of promoting the movement. 'Many social movements fail to bureaucratise in this way and end up fizzling out because it is difficult for members to sustain the emotional excitement necessary and because continued mobilisation becomes too demanding for participants.'<sup>76</sup>

**4) Decline** - 'institutionalised' movement. Not necessarily indicative of failure but can include repression, co-optation, success, failure or establishment with mainstream. Factionalism, or dilution of ideals.

One could argue that veganism is currently occupying the second stage of the social movement - it has transitioned from a personal standpoint to a collective community of like-minded individuals, marshalled by high-exposure celebrities and fuelled by a social media community who are keen to spread their message and win converts to the cause. However, the likelihood of it bureaucratising is dependent on vegans defining exactly what it is they are standing for - at the moment it is a general discontent with the ethics, environmental footprint and health impacts of the meat/dairy industry, but there is no coherent co-ordinated goal (e.g. the abolition of slaughterhouses, clear legislation to prevent 'unnecessary suffering', an aim to reduce livestock emissions by X per cent, etc) beyond a simple personal boycott of animal products. Because veganism contains a wide spectrum of principles, conciliation is difficult along ethical lines; some vegans would be appeased by a measurable improvement in the treatment of livestock, some find any notion of livestock farming abhorrent in any form.

74) Jonathan Christiansen, 'Four Stages of Social Movements', EBESCO Publishing 2009 <https://www.ebscohost.com/uploads/imported/thisTopic-dbTopic-1248.pdf> (accessed 09/05/19) pp.2

75) Rex Hopper (1950), 'The revolutionary process: A frame of reference for the study of revolutionary movements', Social Forces 28 (3), 270-280, (page 273)

76) Christiansen, 'Four Stages' pp.3

77) Ibid pp.8



The vegan movement has long been denigrated as a 'fad'-largely because historically it has been the preserve of counter-culture movements and due to the strident demands often espoused by ardent supporters ('if you cannot commit to perfection, you might as well make no effort at all as you will be excluded from the select group of the true vegans, no matter what.'<sup>77</sup>) ensuring it remained a very exclusive fringe movement. However, the opening up of the lifestyle largely inspired by social media 'influencers' and communities, and a consequential shift from exclusivity to inclusivity, has led to a big increase in media coverage and supermarkets, restaurants etc. catering to the increasingly vocal audience. One could also argue it dovetails with the rise of 'eco-warriors' and anti-capitalist sentiment focused on altering our cultural attitudes towards our consumption habits. This co-optation may blur the boundaries between veganism and flexitarianism and weaken the need to 'convert' new members to the cause, but it will still result in a reduction in carnist consumption.

Because the movement is at the meeting point of three competing motivations, the 'extreme vegan' lifestyle will only be pursued by those genuinely motivated by the desire to reduce animal suffering, with the flexitarian subset by definition more elastic to change in either environmental impact or health study findings. Those who are vegan solely for virtue-signalling or identity-construction will likely find a vegan lifestyle too inconvenient and make up the 'fad' element that will dissipate as quickly as it has arrived.

Barring a complete lack of environmental innovation, for a fully vegan (rather than a flexitarian) lifestyle to become the norm, there would need to be a complete cultural and ethical shift towards equal rights for humans and animals, or a political move to taxing meat consumption on environmental or ethical grounds to price people out of meat consumption. The core of the vegan movement, therefore, will remain as quoted below - whether or not they find the 'justice' they seek will depend on being able to unpick and remake our entire attitude towards animals:

'The vegan lifestyle is, for these reasons, essentially political. Thus, by insisting on changing the mentalities, the culture, the ethos, vegans are changing the social conditions that need to be changed before we can hope to obtain some of the profound institutional and legislative modifications that justice requires.'<sup>78</sup>

"Barring a complete lack of environmental innovation, for a fully vegan (rather than a flexitarian) lifestyle to become the norm, there would need to be a complete cultural and ethical shift towards equal rights for humans and animals, or a political move to taxing meat consumption on environmental or ethical grounds to price people out of meat consumption. The core of the vegan movement, therefore, will remain essentially political. By insisting on changing the mentalities, the culture, the ethos, vegans are changing the social conditions that need to be changed before we can hope to obtain some of the profound institutional and legislative modifications that justice requires."

78) Valery Giroux, 'Veganism as a Social Justice Movement : The Efficacy of Our Individual Commitment to the Ideology of Animal Liberation', June 10th 2017, [https://www.academia.edu/33465745/Veganism\\_as\\_a\\_Social\\_Justice\\_Movement\\_The\\_Efficacy\\_of\\_Our\\_Individual\\_Commitment\\_to\\_the\\_Ideology\\_of\\_Animal\\_Liberation](https://www.academia.edu/33465745/Veganism_as_a_Social_Justice_Movement_The_Efficacy_of_Our_Individual_Commitment_to_the_Ideology_of_Animal_Liberation) (accessed 29/03/19) pp.7

## HOW TO PROMOTE DAIRY? THE DAIRY/LIVESTOCK INDUSTRY RESPONSE

Until recently, the agriculture industry could ignore the vegan movement- most people denounced it as an extreme viewpoint which was the reserve of a vocal but disorganised minority. However, the recent mainstreaming of vegan views means the response must take on a more conciliatory and proactive line.

The popularity of Veganuary (mentioned above) prompted the dairy industry to launch 'Februdairy'. The intention - to post the dairy industry in a more positive light - is the right one, and organisers should be applauded for engaging the industry in developing proactive positive engagement at all levels, probably for the first time ever. Indeed, there has been considerable content published during the campaigns that positions dairy in a positive light, promoting the health benefits of dairy, the good work of dairy farmers in promoting animal welfare, care for the environment and the production of high-quality food.

The challenge, however, is that in many cases participants have ended up largely imitating the vegan idea, taking a 'fightback' stance. This fails on two levels: firstly, it gives the impression that the dairy industry is being reactive rather than proactive - that the rules of the debate are being created by the vegan movement. Secondly, it simply entrenches the conflict into two very disparate positions which are irreconcilable. Indeed, 'analysis from last year's (2018) Februdairy tweets revealed 'Go vegan' and 'vegan' were the top two related hashtags'<sup>79</sup>, although, perhaps confusingly, these tags were used by pro-Februdairy posts as well.



Februdairy organisers argued that 'for every negative comment made, we need five positive messages to counteract it'<sup>80</sup>. However, with the vegan stance far more vociferous on social media than the pro-dairy stance - largely because they feel like they represent progressive change rather than a status quo, which is a more emotionally-charged message, this was always going to be a challenge. This results in many Februdairy posts simply becoming a jumping-off point for those opposed to the industry to respond with their own critiques. In these circumstances, all too often it descends into a social media tit-for-tat battle, of which there can only be one victor.



Unfortunately, it seems that one of the benefits of the Februdairy campaign - the mobilisation of many people across the industry to proactively engage - may also be its downfall. Having many different people, with many different viewpoints and, inevitably, an antagonism to the vegan movement and the messages it portrays, leads to an incoherence in messaging, which plays into the vegans hands. All too often, the antagonism towards vegans is only just below the surface in pro-dairy Februdairy posts, either very obvious or present through the use of humour and sarcasm. Furthermore, the juxtaposition of 'cute calves' next to messages promoting 'juicy beef burgers' almost feels satirical and is more likely to reinforce the vegan message than discredit it.

79) Liam Gilliver, 'Februdairy: the Failed Retaliation to Veganuary's Success', February 3rd 2019, <https://www.plantbasednews.org/post/februdairy-failed-retaliation-to-veganuaries-success> (accessed 15/05/19)

80) Farmers Guardian, '#Februdairy already trending as British farmers and dairy products celebrated', February 1st 2019, <https://www.fginsight.com/news/news/februdairy-already-trending-as-british-farmers-and-dairy-products-celebrated-78772> (accessed 11/07/19)





“Unfortunately, the many voices across the sector do not speak with one voice and there isn’t a consumer-facing mentality running as a thread throughout the sector. As a result, all too often, what sets out to be well-intentioned and positive activity actually ends up alienating the very people that the industry needs to engage.”

Without doubt, social media is a useful tool for influencing and spreading ideas. But what this perhaps shows is that it is certainly not the forum if the intention is reasoned debate. Indeed, perhaps it demonstrates that it is, in fact, a far more viable tool for propagating counterculture than it is for defending the mainstream.

This needn’t be the end of the world for the dairy sector, however. As shown in earlier sections, there is not necessarily a correlation between social media behaviour/self-identification and actual consumer behaviour, so the dairy industry should not lose sight of the wood for the trees: consumer habits are far more important than what people are posting on social media and finding ways to inform consumers does not necessarily have to be via a strong social media presence.

What this situation does crystallise, however, is that the biggest issue in respect of how the dairy industry responds is a cultural one – unfortunately the many voices across the sector do not speak with one voice and there isn’t a consumer-facing mentality running as a thread throughout the sector. As a result, all too often, what sets out to be well-intentioned and positive activity actually ends up alienating the very people that the industry needs to engage.

Much of this can be blamed on the fact that the dairy industry, and indeed the wider agricultural industry, has perpetuated an approach based on an expectation of continuing post-war gratitude that our farmers feed a hungry nation. This ‘thank a farmer’ mentality is not unique to the UK, but this cultural position means that much industry communication is about imploring consumers to appreciate how hard farmers work producing food in difficult weather, in difficult markets, and with huge challenges – almost a ‘don’t take us for granted’ position.

As consumers have become more distant from agriculture yet at the same time more able to access information, due to the porosity of our digital age, this approach no longer resonates. Lots of people work hard, lots of people face uncertainty in the jobs, and consumers don’t feel sorry for farmers nor, if we are honest, do they particularly value food, as average spend on food as a proportion of household income is at an all-time low, despite a growing number facing food poverty in the UK. In short, consumers don’t feel gratitude towards farmers and actually many get further dis-enfranchised when the industry expects that they should.

When a vocal minority, such as the vegan movement, then start questioning the ethics, environmental performance and health benefits of an established agricultural sector such as dairy, and the industry responds defensively and, on occasions antagonistically, the danger is that average consumers – those who actively consume the products in question – can end up viewing the industry in a negative light.

Here’s the rub – most consumers retain an emotional connection with a storybook image of rural idyll – a farmer with a few chickens, a dog, a cab-less tractor, some vegetables growing in the garden, a few sheep and a cow with a name. Yet modern agriculture doesn’t conform to this rural idyll, so the emotional connection is further shattered. The reality of modern farming and consumer perceptions of farmer ‘wealth’ versus their own circumstances means that to build goodwill the industry cannot rely on consumer gratitude any longer, and continuing with antagonistic, confrontational and ‘entitlement’ communications that seek such gratitude will only further alienate the ultimate customers, increasing the chances of the vegan movement being successful, rather than reducing them.



## HOW TO PROMOTE DAIRY?

If we want to promote and protect dairy, which continues to have massive household penetration but is largely taken for granted, then we must engage consumers in a positive way about things that matter to them. We must see the current situation - the rise of veganism and milk alternatives, the pressure from climate conscience and the growing awareness of animal welfare issues - as an opportunity, a chance for self-reflection and a driver of innovation. One thing is certain - if we carry on as we are then we will see our market continue to be eroded by milk alternatives and the growth of vegan lifestyles.

Rather than continuing to justify current practice in a defensive way, we must show that we care about the things that consumers care about, and then explain why our practices deliver that. We must also root out any people in the industry that don't demonstrate those values and make it clear that such practice will not be tolerated.

We know that consumers are interested in their own health and fitness, and in the healthiness of the food they eat. We also know that there are perceptions that dairy is unhealthy. Yet there is considerable nutritional advice that dairy is an important part of a balanced diet and a source of many of the trace minerals that consumers are otherwise deficient in.

The industry's approach to promoting the health benefits of dairy hasn't really changed since the campaigns made by the Milk Marketing Board in the 1980s - an emphasis on 'natural goodness' with the promotions acting more as a reminder of continued relevance than a persuasive marketing campaign. What's more, these campaigns are sporadic and short-lived due to issues of funding.

Whilst this type of approach can be successful, if funded properly, in a market without ready alternatives (see Coca-Cola, where advertising at a certain marque level (is) not to acquire new customers, but to retain them or even stop "buyer's regret"<sup>81</sup>), the rise of oat, almond and soy 'milks' (UK sales worth c. £300m per year<sup>82</sup>) has highlighted how rigid and reliant on historical consumption habits the industry has become. While there are obvious market differences, one should only look at Blockbuster vs. Netflix for an example of the dangers of complacency/ underestimating shifting consumer habits.

In reality, consumers do need reminding that mainstream unbranded dairy products are healthy but they will, inevitably, engage more readily with innovative new products and new brands. In this respect, the non-dairy 'milks' have an advantage



and so the dairy industry needs to continue to develop innovative new products and market them convincingly.

Of course, this generic marketing and the development of new products and brands is not cheap and there is an ongoing debate over how the industry should fund it, particularly when margins are under huge pressure throughout the supply chain. The details of that are not for this paper, but an observation would be that if we don't promote the generic health benefits of dairy in an engaging and mainstream way, we cannot complain when innovative competitor products take our market. Ultimately, therefore, the industry must decide if it will simply adapt to reducing demand, and watch the sector reduce in size and significance, or drive fundamental change that will provide sufficient margin to promote and protect the resilience of dairy for the future. A real challenge!

The range of choice available to consumers today is without precedent: to return to the dual-process theory of choice, there must be a two-pronged marketing campaign. Studies must be published which promote health benefits and combat misinformation (targeting the reflective decisional process) and combined with innovation and rebranding to influence the automatic decisional process. 'That means creating desirable milk drink products that provide a specific taste, health or nutritional benefit and capture consumers' changing eating habits, interests and lifestyles.'<sup>83</sup> It is dangerous to presume dairy products should simply continue to sell themselves: proactivity rather than reactivity is a necessity.

81) Visakan Veerasamy, 'Reddit: Why does Coke still Advertise?', September 1st 2013, <https://www.referralcandy.com/blog/why-does-coke-still-advertise/> (accessed 15/05/19)

82) Tom Levitt, 'Move over Veganuary: it's time for Februdairy and promoting British farmers', January 29th 2019, <https://www.fginsight.com/news/news/move-over-veganuary---its-time-for-februdairy-and-promoting-british-farmers-78559> (accessed 12/05/19)

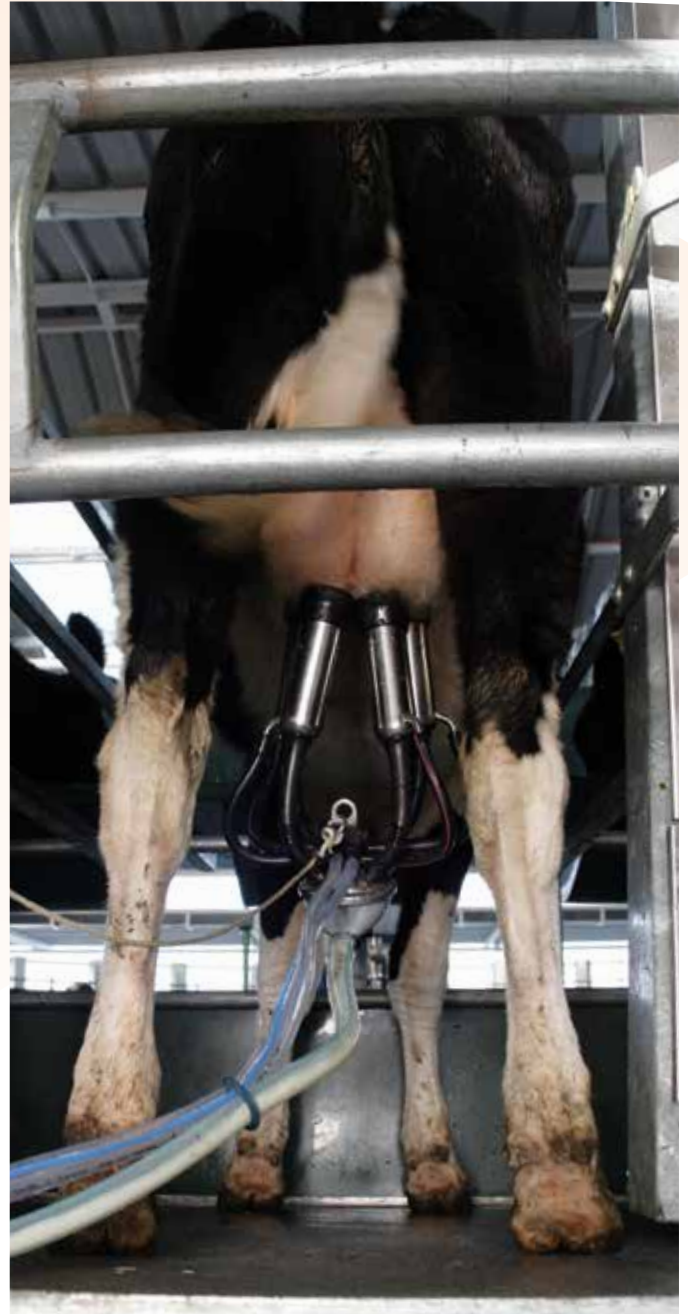
83) Ibid

Much of the shift to dairy alternatives comes from the Flexitarian group who are looking to reduce their animal product consumption, but not remove it completely. This is an important point as it means for many consumers, plant-based proteins and dairy are not mutually exclusive<sup>84</sup>. The dairy industry should focus on appealing to these flexitarians by promoting the health benefits of dairy vs plant proteins (superior for bone and muscle-building due to complete amino acid profile) and promoting dairy as part of a balanced diet which includes proteins and vitamins from vegetarian sources to make the debate less binary.

The other significant consumer issue around dairy is the way that milk is produced. As already stated above, consumers are further removed from the realities of modern farming than ever before yet, almost perversely, the rise of social media and digital technology allows them to get closer than ever before. Consumers don't understand farming practice and have concerns about the values by which farmers operate, due in large part to the myths and misinformation promulgated by the vegan and animal welfare lobby.

Rather than fighting and appearing to defend these accusations, the industry must adopt a much more open and transparent approach, explaining what we do, how we strive for improvement and, at times, accepting criticism where it is due. Rather than resting on our laurels we must drive continuous improvement and we must ensure that assurance standards are rigorous and properly audited and enforced.

The industry needs to demonstrate that we have nothing to hide - controlling the narrative in a confident way by highlighting areas where improvements are being made (welfare, carbon footprint, traceability, etc.) whilst retaining confidence in the product itself (health and taste-wise). We need to provide context, be open about the challenges and what we are doing to address them and demonstrate that, as an industry, we share the same concerns that consumers have, and we take seriously our responsibility to address them. Importantly, whilst messages around improved welfare, sustainability, etc. within the industry are often linked to improved financial performance as an incentive to get farmers to change, this is not a message that reflects well to consumers - we must demonstrate that we are improving animal welfare because we care about our animals, not simply because we can then make more money.



<sup>84</sup>) Lynda Searby, 'Dairy Innovation: How product makers can steal back the share', July 16th 2018, <https://www.foodmanufacture.co.uk/Article/2018/07/13/Dairy-product-makers-rise-to-the-veganism-challenge#The%20need%20to%20promote%20the%20health%20benefits%20of%20dairy> (accessed 15/05/19)



There is often a debate in the industry about how we use science as a justification for what we do. In the main, most are agreed that you cannot counter emotion with science and that to try is to further alienate consumers. What is clear, however, is that science and fact can be really useful to provide evidence of progress having first established that values are shared. In short, what this means is that our industry engagement must answer emotion with emotion first to demonstrate that we share values with our customers. Then – and only then – we can include science and data to demonstrate progress.

We must also avoid sarcasm and cynicism, no matter how tempting it may be – belittling those that buy our products is a sure-fire way to alienate them and damage relationships. Just because a consumer doesn't understand the farming way of life or how their food is produced doesn't make them stupid. Examples of this approach are regularly seen on social media – farmers taking pictures of the beautiful landscapes around their farm, or their healthy livestock whilst making sarcastic comments about the 'terrors of industrial farming' – in effect belittling those that attempt to comment against us. Whilst this is, perhaps, understandable when it feels like the industry is unfairly under attack, in the main we need to rise above such pettiness and seek to build positive relationships.

In short, as an industry, we must accept that in order to have a licence to operate for the future, we must demonstrate that we

care about the same issues that our consumers care about and can, therefore, be trusted to be custodians of the countryside and the way that food is produced, and that they should continue to buy our products. We must all – right through the supply chain – work together positively to promote all aspects of dairy. We must adopt a customer-centric sales approach to our consumers, listening to their concerns, demonstrating empathy, and countering these concerns politely.

We need to stop behaving as we've always done as an industry – feeling taken for granted – because to continue down that path is to see our markets disappear. Instead, we need to welcome and be grateful for the fact that we have a huge customer base of people regularly buying what we produce. And we need to engage that consumer base in a positive way to ensure we secure their future custom.

This requires a new paradigm – a new way of thinking about the industry – that is outward-looking, positive, focused on consumers and transparent about how we operate. We need to address concerns around animal welfare and environmental performance faster and more proactively and positively engage in the debate. And we need to shout about the positive health benefits of a balanced diet that includes dairy consumption at every opportunity. Only when this cultural change occurs will reputation be consistently enhanced by collective communication from all levels of the industry.





## SUMMARY

It is clear that the pressures on the dairy industry from the vegan movement are increasing. It is also clear that a change in culture and communication – becoming more consumer focused than ever before – is required to protect and promote the industry.

But, as well as a shift in culture and approach, the largest sustainability problem the livestock industry faces is one of its own emission.

*Veganism might be noisy, but the biggest threat could be linked to the environmental impact of agriculture...*

The threat of interventionist policies on ethical grounds would seem to be minimal – the UK has stringent and world-leading welfare standards already. Where change may come, however, is if tangible policy is directed towards changing agricultural processes: with the rise of environmental protest movements like ‘Extinction Rebellion’ and the UK government just announcing plans to reach zero net GHG emissions by 2050 (from an initial 80% planned reduction), there is both a public call and a governmental necessity to reduce the agricultural carbon footprint and we are facing a new approach to agricultural legislation in a post-Brexit world. The fact is that if the industry cannot find ways to markedly reduce carbon equivalent emissions, then a decline in meat and dairy consumption is the only alternative (at least a 20% decrease

in lamb, beef and dairy products was recommended by the Committee on Climate Change in May 2019<sup>85</sup>). It remains to be seen if the UK government translates this into legislation, sin taxes or public information campaigns centred on reducing meat consumption such as the new dietary recommendations recently published by Health Canada on behalf of the Canadian government<sup>86</sup> which has removed dairy products as a distinct group and advocates reducing meat consumption in favour of plant-based proteins. As outlined earlier, this sort of ‘nudge’ behaviour can be very useful for products which have little or no redeemable value to society (e.g. smoking ‘sin taxes’), but unintended consequences can arise where the issue is not so black and white and there is a human cost involved – the government should be wary of writing off farmers as disposable relics of a halcyon age; ‘nudging demand is likely to have a host of unintended consequences, e.g. paying people to graze animals we then don’t want other people to buy’<sup>87</sup>.

That veganism is on the rise, in the short term, at least, is without dispute – it is flourishing from the perfect storm of motivations – ethical, health and environmental concerns (the latter two having been only recently connected with meat consumption). For a long time, ethics was the sole preserve of the vegan movement and, as such, it attracted only those who were willing to make considerable lifestyle choices in the name of animal ethics.

85) ‘In Depth: The UK Should Reach ‘Net-Zero’ Climate Goal by 2050, says CCC’, May 2nd 2019, <https://www.carbonbrief.org/in-depth-the-uk-should-reach-net-zero-climate-goal-by-2050-says-ccc> (accessed 11/05/19)

86) Health Canada, ‘Canada’s Dietary Guidelines’, January 2019, <https://food-guide.canada.ca/static/assets/pdf/CDG-EN-2018.pdf> (accessed 11/05/19)

87) Julian Jessop and Andy Mayer, ‘Debate: Nudge Economics- can paternalism ever be libertarian?’, January 15th 2019, <https://iea.org.uk/debate-nudge-economics-can-paternalism-ever-be-libertarian/> (accessed 17/04/19)



What we have witnessed more recently is the opening of the vegan movement as a result of health and environmental studies. Aided by the reach and resources of the internet, this has diluted the extreme 'boycott all animal products' message to one that allows part-time vegans and flexitarians - it is perhaps useful to view them as distinct movements entirely. In turn, the response by retailers and the media in providing coverage, new products and dietary options helps to create a self-sustaining momentum of growth that attracts consumers who would otherwise not have considered alternatives to animal products. (potentially aided by the 'trendy' or 'novelty' value which may diminish after a short period of time).

It is easy to get side-tracked by the threat posed by the vegan movement, but it is still unlikely to be the biggest challenge to the dairy and livestock sectors. Without doubt, the environmental argument is currently the biggest external risk to the dairy and livestock industry as, unlike ethical and health arguments it combines two modes of intervention - societal pressure based on facts with the spectre of government legislation - so this is where we need most to self-reflect and be seen to be improving our processes.

*Proactive, collaborative and innovative relationships with government are essential, rather than defensive and entitled lobbying, or environmental legislation is likely to force change on the sector*

One of the key actions for the dairy industry, therefore, must be to positively and proactively engage government to demonstrate that legislation is not required to force the industry to adapt, but that the industry is proactively driving change. Again, this requires a change in culture from the defensiveness and entitlement that is prevalent in current agricultural lobbying activity, towards a more collaborative and problem-solving mentality where the industry demonstrates that it is open to change and actively driving innovation. If this can be achieved, then government legislation should be focused on supporting faster progress by the industry rather than focused on forcing 'laggards' to change.



## *Dairy must be promoted...*

When it comes to the matter of health, this debate needs more scientific reason to counter anecdotalism and pure misinformation about the 'dangers' of meat and dairy: studies need to be commissioned (and indeed existing study results more widely promoted) which highlight the undeniable benefits of moderate amounts of meat/dairy consumption. It is far too easy for people and organisations to make unsubstantiated and sensationalist claims about how meat and dairy are 'dirty'; nutritionally, as well as ethically and environmentally. The reality is that most consumers will not read peer-reviewed scientific articles of their own volition, so it is of paramount importance that the industry can find ways to reach consumers and present itself in an honest way. This needs to be combined with a new culture – a new operating approach to ensure that dairy is seen as in-touch, relevant and progressive – without visibly imitating the vegan movement in what could be construed as a reactive rather than a proactive way.

Veganism harnesses a 'progressive' energy and it is essential that the dairy sector changes its approach so that it is seen as sharing progressive values and being open and transparent, rather than defensive or entitled. Technology will also play an important part, not only in helping the industry engage directly with consumers, but in the use of accurate 'big data' to demonstrate progress and enable transparency.

It would be fair to say that the industry is on the back foot and is defending its position following the significant increase in interest in veganism in recent years. Yet engaging directly with



those who feel that livestock agriculture amounts to animal exploitation is a waste of resources and energy and probably simply fuels their argument even further.

When the combination of ethical, health and environmental considerations is put together, it is easy to see how young, impressionable, health and environment-conscious consumers are at least taking more notice of a vegan lifestyle, which is seen as positive and socially-aware. So, the industry must respond with higher profile co-ordinated generic promotional activity, faster innovation and convincing brand marketing. The range of choice available to consumers today is without precedent: to return to the dual-process theory of choice, there must be a two-pronged marketing campaign. Studies must be published which promote health benefits and combat misinformation (targeting the reflective decisional process) and combined with innovation and rebranding to influence the automatic decisional process. 'That means creating desirable milk drinks [and dairy products] that provide a specific taste, health or nutritional benefit and capture consumers' changing eating habits, interests and lifestyles.'<sup>88</sup> It is dangerous to presume dairy products should simply continue to sell themselves: proactivity rather than reactivity is a necessity.

This isn't cheap and a sector that struggles with slim margins will struggle with funding this type of activity. But unless dairy is promoted more visibly, in an engaging and mainstream way, we cannot complain as the sector reduces in size and significance.





*A new approach - a new culture - is required, one that is outward-looking, consumer focused and transparent...*

So, the industry must respond, but respond in a new way. As outlined above, this is not about subtle change but wholesale change in culture and approach – a new paradigm, a new way of thinking about the industry – that is outward-looking, positive, focused on consumers and transparent about how we operate. Rather than responding to consumer concerns the industry must lead, driving the environmental and welfare agenda further and faster than ever before and shouting about the positive health benefits of a balanced diet that includes dairy consumption at every opportunity.

There is much good work already being done in the dairy sector, but it needs to progress further and faster at all levels of the supply chain.

Just like the operating system on the latest smartphone needs to be regularly updated to remain relevant and secure, the operating system for the UK dairy industry also needs updating. Dairy 3.0 – a new model - needs fresh thinking and a more open and engaging approach. It needs to lead not follow, positively challenge perceptions and misinformation, not defend and justify. Only when this cultural change occurs will reputation be consistently enhanced by collective communication from all levels of the industry.

Change may be for the brave. But, like any other customer relationship, it is not a right but a privilege to provide dairy products for consumers. The harsh reality we face is that other markets and the external environment we operate within are changing and changing fast. Put simply, those who are not brave, and fail to embrace a new dairy paradigm, may well find themselves without a market in the future.



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