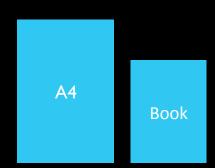
An insightful look at the arguments for and against universal adoption of a vegan diet and lifestyle

Should We All Be Vegan?

A Primer for the 21st Century Molly Watson

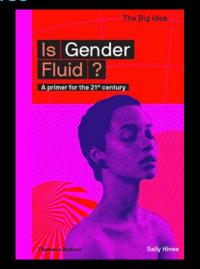
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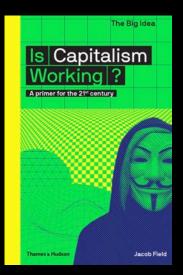




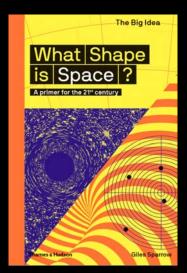
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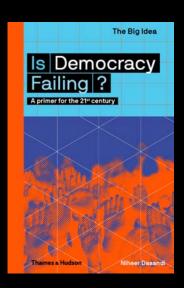
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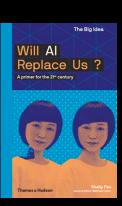




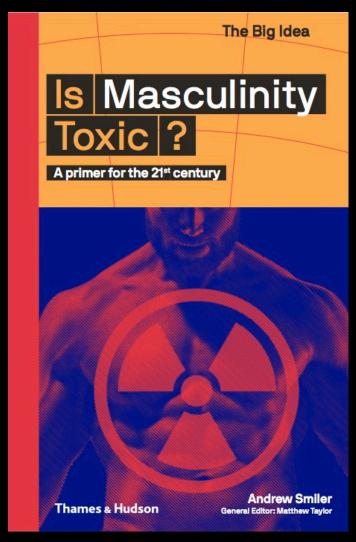








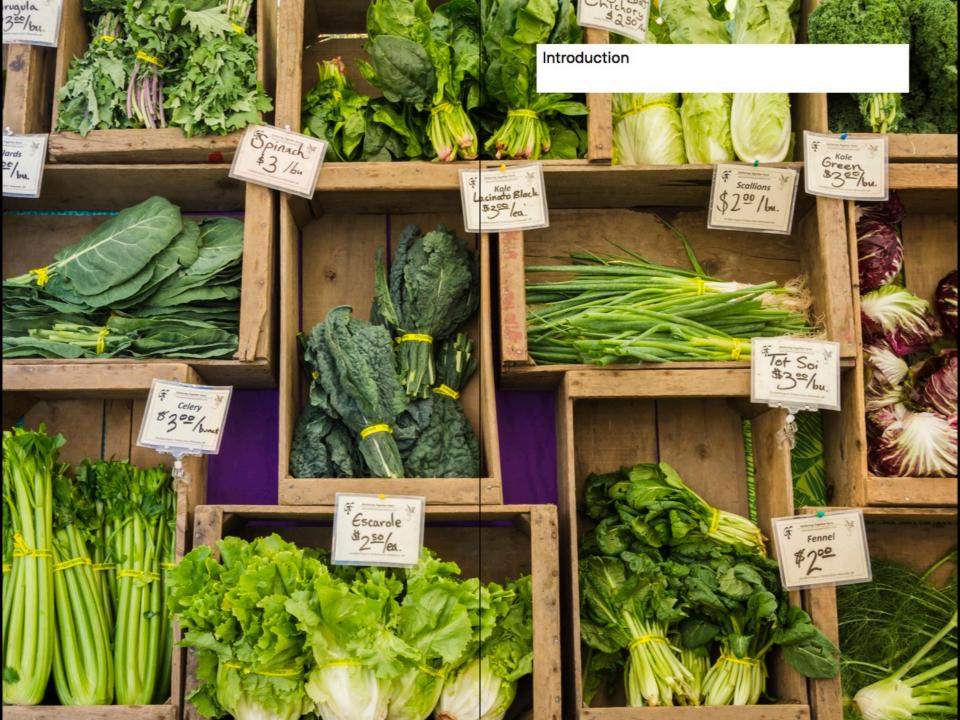
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Key Sales Points

- Evaluates every angle of the debate on veganism, reviewing the evidence for its effects on health and assessing the ethics, environmental impact and feasibility of adopting a vegan lifestyle worldwide
- Expertly crafted discussion balances unpleasant truths about industrial livestock production with the economic, medical and social case for retaining meat and dairy as part of our diets
- One of two new books in the Big Idea series this autumn, the other being Is
 Masculinity Toxic (ISBN 978 0 500 295021)





This aerial view of a

key indicators of being

ready for slaughter and final meat quality.



Many vegans ask moral and ethical questions about raising animals for human use because industrial methods of animal husbandry keep animals in confined spaces, without the ability to exhibit natural behaviours. Whereas some vegans object to any use of animals by humans, a more common moral stance is that modern factory farming and industrial animal husbandry are so exploitative to both animals and the environment as to be unethical - not to mention unsustainable environmentally, socially and economically.

Second, some vegans are primarily motivated by ecological and sustainability concerns.

Nebraska feedlot illustrates the sheer mass of animals being moved through and the complete lack of grass or other natural environment for the cattle. Cattle at a feedlot in Illinois are herded inside for testing. The ultrasounds will reveal the animals' fat content and marbling - the fat running through the muscle tissue - which are

Factory farming is resource intensive. Any animal raised to feed humans requires food, water and labour. Beef from feedlots, for example, takes up to 12 pounds (5.4 kg) of grain to produce every pound (0.45 kg) of beef. In short, foodstuffs from animals require greater resources per calorie than growing plants for food: a single pound of beef, for example, contains 1,137 calories, but it takes more than 18,000 calories in grain and almost 1,800 gallons (8,180 l) of water - plus energy and human labour - to produce each pound of beef. Factory farming also creates huge amounts of waste products that are harmful to the environment, including animal waste and pesticides used to grow the crops for feed.



On a planet with an expanding population, it is worth noting that more people can be fed with fewer resources on a vegan diet.

Third, many people adopt a vegan diet for personal health reasons, and plenty of studies support this position.

> Following a vegan diet is a clear and effective way to reduce cholesterol and saturated fats, as well as to increase antioxidants in a diet. People also report improved energy, clearer skin and better digestion as a consequence of eating vegan.

> > Natural behaviours are

Industrial methods of animal husbandry

include what are known as intensive farming operations in Britain and concentrated feeding operations in the USA. Both methods hold large numbers of animals in highly crowded conditions

those that animals are driven to do and that are key to their overall health, such as chickens roosting to sleep or hogs rooting for food. An inability to express natural behaviours causes stress and even

self-harm.

Feedlots are where cattle are taken to be fattened up for slaughter. In general, calves are weaned from their mothers, grazed on grassland and then transported to feedlots, where they are 'finished' by being fed grain-based feed to force them to gain weight.





A most entertaining example of rejecting meat comes from Irish playwright George Bernard Shaw (1856–1950). Removing meat from his diet started as a way to save money, but being vegetarian became part of his sense of moral and physical superiority. He wrote: 'It seems to me, looking at myself, that I am a remarkably superior person, when you compare me with other writers, journalists and dramatists; and I am perfectly content to put this down to my abstinence from meat. That is the simple and modest ground on which we should base our non-meat diet.' For Shaw, vegetarianism was about the perfection of the self.

Throughout history, not eating meat or declaring oneself vegetarian had, as it does today, a range of meanings.

The label 'strict vegetarian' often referred to someone who did not eat any animal products. Then, in 1944, Donald Watson coined the term 'vegan' as a way to differentiate between strict vegetarians and less strict ones. The goal was to come up with something more concise than 'non-dairy vegetarian'. Watson noted that a shorter name would also save time when he typed the newsletter for his group of fellow strict vegetarians, which would henceforth be known as the Vegan Society. Some other possibilities he considered included 'dairyman', 'vital' and 'benevore'.

Even with the new name, veganism did not gain much traction in broader society. While the number of self-declared vegetarians went up in Britain during World War II, this may have been because such a declaration led to greater cheese rations, which were larger and more reliable than meat ones.

- A In this German satirical cartoon (c. 1910), the rabbit declares: 'Now no phoney sentimentality! The principle of free research requires that I vivisect this human for the health of the entire animal world.'
- B This caricature on Goering's antivivisection law of 1933 appeared in the satirical journal Kladdersdatsch. Surprising to many, the Nazi Party pushed for a range of progressive animal rights protections.
- C in The Vegen News (1944), Donald Watson wrote: "... we believe the spiritual destiny of man is such that in time he will view with abhorrence the idea that men once fed on the products of animals' bodies."

Donald Watson (1910–2005) was an English animal rights activist. Growing up in Yorkshire, not eating meat was unheard of, but Watson was haunted after witnessing the slaughter of a pig on his uncle's farm and gave up meat at the age of 14. He stopped eating eggs and dairy as an adult.

During post-war rationing, engaging in a more restricted diet was not very appealing. The fact that Hitler was a vegetarian did not help the movement's image in the West either. How strict or consistent a vegetarian Hitler was remains debatable. His food taster claimed that he never ate meat during her tenure, whereas his cook before the war said he ate it regularly. In any case, his interest in vegetarianism seems to have stemmed from notions of bodily purity that were developed in the late 19th century by vegetarians such as John Harvey Kellogg.





More than one farmer or farm worker commits suicide every week in Britain, and rates are markedly high in many other countries, too, including the USA, Australia, India and Canada. In France, farmers commit suicide at a rate that is 22% higher than the general population. Stress, injury and a traditional sense of self-reliance all play a part in these elevated figures.

The speed at which meat-processing workers are asked to operate and the sharp tools and strong chemicals used mean that they face injury at twice the national average for similar jobs. And injuries can be significant: back problems, torn muscles, pinched nerves, broken bones and deep cuts are all common.

Fertilizer is used to return valuable nitrogen and carbon to the soil. Manure is particularly prized because it slowly releases nitrogen. Too much nitrogen at once can 'burn' plants.

A vegan diet is one way to take a stance against the system of industrialized processing and its cruelty to animals and people. Veganism means that none of your food budget is being spent in direct support of such practices.



The environmental fallout of industrial farming can be as horrific as its treatment of animals. It is another reason why people may choose to follow a vegan diet.

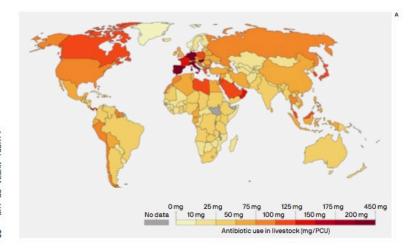
- A Workers at a Chinese chicken factory process whole birds into pieces for sale. Cheap labour means that China both imports chicken to process and exports the processed
- B Bosnian workers package halial chicken at a factory near Vlaoko. Bosnia is positioning itself as an exporter of halial meat products. Such exports obviously increase the carbon footprint of the meat in question.

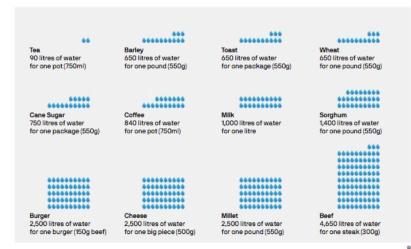
In traditional farming, animal waste is part of a 'virtuous cycle', in which manure is tilled back into the soil as a fertilizer. Ruminants aerate the soil on fields as they graze; chickens keep insects in check as they peck. This feedback loop is cut off when animals are sequestered in sheds. When animals are kept in confined and crowded conditions, they produce more waste than can be absorbed by neighbouring fields.



But antibiotic resistance is growing. Reasons for this include the over-prescription of antibiotics to humans, people taking antibiotics when they will not work (for a virus, for example) and not taking a full dose as prescribed. It can also happen when animals are given sub-therapeutic doses of antibiotics, as they often are in large-scale animal husbandry. However, progress is being made on this front. The use of antibiotics in broiler chicken has reduced in Britain dramatically since 2012. It now accounts

Antibiotic resistance occurs when a bacterium becomes resistant to an antibiotic. This happens because the bacterium is exposed to but not killed by the antibiotic and then reproduces.





for 22% of antibiotic use in meat production even though poultry makes up about 50% of the meat eaten. Due to public demand, and a new expectation in many circles that poultry be free of antibiotics, large producers are reducing their use in the USA, too. Perdue Farms, for example, has become 98 to 99% antibiotic free and other producers are following suit.

Overall, a meat eater's diet uses 17 times more land, 14 times more water and 10 times more energy than that of a vegan. Part of this equation is that we use so much land to grow crops to feed the animals we eat. Of the 5 billion hectares of agricultural land on the planet, we use almost 70% to graze or grow feed for livestock. About 40% of the grains grown and a quarter of a million tons of soybeans go to feed livestock each year.

- A The use of antibiotics in livestock is still highly concentrated in industrialized countries, but it is steadily becoming widespread across the globe.
- B These statistics for water use for different foodstuffs according to waterfootprint.org illustrate how most animal products require far more water than the majority of plantbased foods.

The environmental impact of eating animals does not stop on land. Declining fish populations around the world, destruction of environments by fishing methods and increased ocean pollution are all results of eating fish and seafood.





In general, vegans tend to eat more dietary fibre and take in more polyunsaturated fatty acids, folic acid, vitamins C and E, magnesium and even iron. A vegan diet also tends to be lower in calories, saturated fat and cholesterol. All of these elements have health implications. Vegans tend to have lower bad cholesterol, lower blood pressure, a reduced risk of heart disease and lower rates of type 2 diabetes. They even have a lesser risk of certain cancers.

Type 2 diabetes, formerly known as adult onset diabetes, means the body either does not produce enough insulin or cannot utilize the insulin it does produce, thus making it difficult for the body to use or process glucose in the blood. In turn, this raises blood sugar levels and leads to a range of symptoms, including fatigue, kidney problems, vision loss and

circulation issues. Without proper care, it can lead to heart attack or stroke.

Cholesterol is a fat-like substance that is needed to build cells and make hormones as well as other bodily functions. Our bodies make all the cholesterol they require. Consequently, ingesting additional cholesterol can increase the amount in our bodies.

particularly of LDL, or the 'bad' kind of cholesterol. in our blood. Too much cholesterol can block arteries or cause increased blood pressure or heart disease.

Saturated fat is any fat that turns solid at room temperature. It is found in meat, eggs, dairy and some fish and shellfish, as well as in coconut oil and palm oil.

Since vegans do not eat any animal products, and cholesterol comes solely from animal products, it is no surprise that they have better cholesterol numbers and a lower risk of developing diseases connected to high cholesterol.

In addition, vegans tend to eat less saturated fat than meat eaters. While some tropical oils, such as coconut oil and palm oil, contain saturated fat, most saturated fat is found in animal products. In the traditional Western pattern diet, with its focus on meat, people tend to take in far more saturated fat than is considered healthy. The average Briton, for example, eats 29% more saturated fat than is recommended, while the average American eats 18% more than recommended. Of course, there is the French paradox: French people consume far more animal fat than do Americans - 108 grams compared to 72 - and yet have much lower rates of heart disease. This contradiction has been explained in many ways, including theories about higher levels of red wine consumption, but overall there appears to be no real paradox: the French may consume more animal fat, but this is within an overall diet that is otherwise filled with fruits, vegetables and other whole ingredients.

Even the most healthy meat is going to have some cholesterol and saturated fat. The least nutritious will contain high levels, and, if processed, is likely to include high amounts of sodium and possibly additives. In 2015, the World Health Organization went so far as to categorize processed meat as 'carcinogenic', along with asbestos and arsenic.

- Although the connection between a diet heavy in red meat and potential health problems is no secret, the Heart Attack Grill In Las Vegas Nevada, offers its customers large portions of food that is high in fat and cholesterol.
- On Man v. Food, the host travels the USA eating regions foods and taking on 'big food' challenges, from eating super spicy food or 5-pound sandwiches to downing large pitchers of Bloody Marys.







This is because animal products tend to have more calories per gram than plant products. For example, 100 grams of beef contains 188 calories, the same amount of cheese 402 and eggs 155. Meanwhile, 100 grams of lentils is 116 calories, oatmeal 68 and guinoa 120. There are exceptions, of course, with milk coming in at 42 calories per 100 grams, while almonds and other nuts and seeds are in the 500 to 600 range.

- A Ella Mills (left), better known as Deliciously Ella, and Gaz Oakley (right) of Avant Garde Vegan promote plant-based cooking to new audiences by emphasizing fresh, delicious recipes.
- B Both Amanda Le (left) @raw_manda and Noémie Cazier @parisbyvegan (right) promote veganism on Instagram and other platforms by conveying through their dishes that a plant-based diet can be healthful,

Along with weight loss, many vegans report clear skin, stronger nails and glossier hair. Some also note higher energy levels and better sleep patterns while eating vegan. If vanity is the subject, a 2006 study published in Chemical Senses found that women preferred the smell of men who followed a vegan diet.





For people who love animals and are seeking a more compassionate existence, the personal benefits of being vegan are far greater than a flat stomach and decreased health risks. For them, avoiding animal products is a benefit unto itself. They find it morally, philosophically and even spiritually fulfilling to live in what they see as a more compassionate way.

Vegans tend to know far more about what is in their food and how it was made. That curiosity applies to other lifestyle products and culminates in a wakefulness whose political and economic impact is just beginning to be felt.



So, the potential marginalizing effects of a vegan diet should not be downplayed, nor should the difficulty of trying to stick to the diet in the face of societal and social adversity. Social pressure is real, and the conditioning of our food preferences by experience, advertising and educators is immense.

A vegan diet also necessitates changes to our cooking habits. It can be difficult to locate a variety of prepared vegan foods, so many vegans find themselves cooking from scratch, especially if they want to avoid processed foods. For people with a love of and curiosity about food, this can mean exploring exciting new cuisines, but for others more time in the kitchen is a chore. Fortunately, many supermarkets are responding to the increasing number of people who are exploring a vegan lifestyle and are stocking their shelves accordingly.















- A These colourful and nutritious vegan meals, prepped and ready to go, feature the best of vegan eating: freeh, whole foods with lots of fruits and vegetables.
- B By contrast, @uglyvegan on Instagram shows that vegan food need not be colourful or fresh, it can be as fried, monotone and nutritionally questionable as any convenience or processed food.

One discomforting personal issue for a vegan is the impact of extra dietary fibre on the body's digestive system. People who are not used to it may experience an uncomfortable amount of gas and bloating at first. However, once the body adjusts to digesting more fibre, the symptoms usually subside.

Yet, the challenges of veganism extend beyond individual inconvenience and nutrition.

Another practical consideration is fertilizer. Most farmers agree that the most effective ones come from manure. However, a strict vegan, who opposes the exploitation of animals by humans, would be against using manure, thus frustrating the production of vegan foodstuffs. If humans are not raising livestock, access to large amounts of manure will end.

Dietary fibre is a carbohydrate that humans cannot dige

humans cannot digest. It is found in large amounts in whole grains, produce and legumes.

Manure can be composted, or allowed to decompose, often with additional plant material before being sold as fertilizer.



In fact, millions of animals would never be bred and raised; intensive animal husbandry operations and feedlots would close. Animal welfare issues in the agricultural space would become moot because there would not be any animals there.

Smaller, integrated farms that use the virtuous cycle to fertilize fields by pasturing animals on them for part of the year would need to move to methods that use only compost and green manure. Since this cycle is a fundamental practice on many organic farms, it is easy to imagine that some farms - especially those still in the process of rebuilding the health of the soil or where soil is naturally less robust - might need to turn to synthetic fertilizers to have an economically viable yield.

Regenerative agriculture projects that depend on domesticated animals to revitalize over-farmed land would be forced to stop. Efforts that rely on grazing animals to reestablish ecosystems, such as those that depend on the soil aeration, grass control and natural fertilizer provided by large grazing ruminants - bison in the western USA, for example - could conceivably release the animals to wild or federal grazing lands. However, without the oversight of moving the herds, the targeted regeneration would



end. Other regenerative agricultural projects that harness the power of poultry - hunting and pecking certain plants and insects while scratching the soil - to revive overused land would close.

Raising animals for food is inherently inefficient in terms of calories in and calories out.

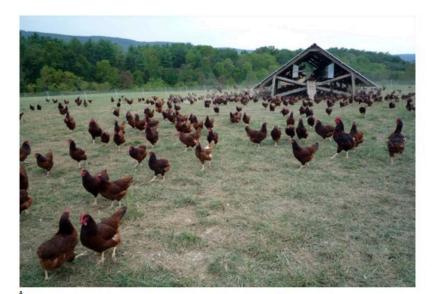
Animals use as much as 90% of the food they eat to breathe, walk and reproduce; only about 10% is turned into muscle that becomes meat for humans to eat. Yet, animals, particularly ruminants such as cows and sheep, can eat things that humans cannot - large amounts of grass, for example - and turn them into food we can eat. They can also make use of land that is not otherwise suited to raising food. For example, sheep may prefer lush green meadows, but they are capable of grazing on otherwise arid and thus unproductive land and have long provided an important food source in such areas. They have also been used as a form of weed control and have been shown to be as effective as herbicides on winter or fallow fields.

Regenerative agriculture is a set of varied farming practices that aim to enrich soil, improve watersheds and increase biodiversity.

Ecosystem refers to a biological community and how the members interact within a specific environment.

- as this one in the Catskills, New York, care for and protect animals
- shomed. Some of them have very





Chickens, both broilers and layers, could be pasture-raised. They could spend a portion of their time out of doors, not just in name but in spirit: hunting and pecking and scratching on meadow and pasture. They would then lay eggs full of the vitamins and minerals – and brilliantly coloured yolks – that come with a varied, natural diet, and produce meat created from a healthy diet and exercise, not Frankenstein-like breeding. Similarly, pigs could move back out of doors, nurse their piglets and wallow in mud to cool down. They could be fed a varied, nutritious omnivorous diet and produce flavourful, antibiotic-free meat.

- A Chickens at Polyface Farm in Swoope, Virginia, live outdoors during the day and in safe hen houses with perches at night. They are able to live as chickens would naturally: scratching and pecking for a varied diet and establishing pecking orders that keep the flock socially stable.
- B The improvement of school lunches in Britain and the USA has focused on getting fresh fruits and vegetables onto students' trays in place of highly processed foods.

Cattle could return to being entirely grass-fed, with nary a grain or feedlot in sight. Their grazing could be well managed and regenerative, improving the soil on which they graze instead of destroying it. As a result, their meat would be full of naturally occurring fatty acids to offset the cholesterol and saturated fat it contains, and still provide an impressive source of protein, iron and vitamin B12. Beef could go back to being something that is eaten occasionally, for celebration.

Diets featuring more plants and less meat would lead to health improvements even if everyone did not go completely or strictly vegan. Indeed, there are many possible models for ways of eating that harness some of the benefits of veganism without a wholesale rejection of all animal products. Some studies estimate the death rate would decrease by 10 to 15% if people simply did not eat red meat.

Such changes can also have environmental impact. In 2019, a study in *The Lancet* promoted the 'planetary health diet' to decrease diabetes, stroke and heart disease, as well as to mitigate environmental damage. The diet includes a dramatic reduction in red meat, sugar and processed foods while increasing whole grains, fruits, vegetables, nuts and legumes. Although far from vegan – the diet places importance on eating dairy, eggs, poultry and seafood – it shows that great health and environmental benefits promised by many vegan advocates can be realized by adopting diets that aren't 'all or nothing'.

Meatless Mondays is a prime example of a simple step towards eating less meat. The idea began in the USA in 2003 as a marketing initiative in cooperation with the Johns Hopkins Bloomberg School of Public Health to encourage people to avoid eating meat at least one day per week. Similar efforts now exist around the world to reduce the consumption of meat for environmental and public health reasons.



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