

The retreat from meat

Why people in rich countries are eating more vegan food

The further they go, the better

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IT IS lunchtime and a queue is forming for the burgers at Krowarzywa, voted the city's best in an online poll: students, families, businessmen in suits. This is Warsaw, where (you might think) lunch is usually a slab of meat with a side order of sausage. But at Krowarzywa—which means “cow alive” and contains the word *warzywa*, meaning vegetables—no animals were harmed in the making of the food. The burgers are made of millet, tofu or chickpeas. The bestselling “vegan pastrami” is made of seitan, a wheat-based meat substitute.

Warsaw has almost 50 vegan restaurants. That does not mean it has all that many vegans. Kassia, a 20-something professional in the queue, says she has no ethical objection to eating meat. She comes to Krowarzywa because she likes the food. Kornel Kisala, the head chef, thinks that most of Krowarzywa's clientele eat meat, but it does not worry him. “Animals don't care whether you eat a vegan burger because it is fashionable or because it is tasty.” Altogether, 60% of Poles say they plan to cut back on meat this year. Eating vegetarian and vegan meals now and then is one of the ways some choose to do so.

Interest in vegan food has been booming across the rich world. Celebrity claims of veganism are everywhere: Bill Clinton and Al Gore, Serena and Venus Williams, Lewis Hamilton, Mike Tyson, Beyoncé, take your pick. In America sales of “plant-based” foods—a term for foods that contain no meat, eggs or dairy that reliably says “vegan” to vegans but doesn’t say “weird” to the less committed—rose 20% in the year to June 2018, according to Nielsen, a market-research group. That was ten times the growth in food as a whole that year and two and a half times faster than vegan foods grew in the year before.

McDonald’s is offering McVegan burgers in Scandinavia. The American restaurants in the TGI Fridays chain sell soyabean burgers that ooze blood made of beetroot juice. Tyson Foods, one of the world’s largest meat producers, recently bought 5% of Beyond Meat, the company which makes them. Waitrose, a posh British grocery chain, introduced a range of vegan food in 2017, expanded the selection by 60% in mid-2018 and says sales of vegan and vegetarian foods in July 2018 were 70% above the level in July 2017.

Some people see great things in this. Two years ago Eric Schmidt, a Silicon Valley figure who used to be chairman of Google, called plant-based meat substitutes the world’s most important future technology; he foresaw them improving people’s health, reducing environmental degradation and making food more affordable for the poor in developing countries. The founder of the first vegan society said in 1944 that “in time [people] will view with abhorrence the idea that men once fed on the products of animals’ bodies.” Many since have shared his hope. Perhaps their time is come at last.

If so, it is a slow coming. Meat consumption worldwide has been growing consistently by almost 3% a year since 1960, mostly because people in poor countries buy more meat as they get richer, and the trend has yet to slow. In the early 1970s the average Chinese person ate 14kg (31lb) of meat a year. Now they eat 55kg, which is 150g, or five ounces, a day. But though most growth in consumption has been in the developing world, rich countries are eating more meat, too; their consumption is just not growing as fast as it used to. According to the UN’s Food and Agriculture Organisation (FAO), meat consumption in the richest nations has risen 0.7% a year since 1991.

Polling data is used to claim that the number of vegans in rich countries is both quite high—around 10% in some European countries—and growing. But there is reason to doubt at least the first of these. Some of the best data come from Britain, home of the world's first vegan society. A poll carried out by that society in 2016 found that 1.05% of people in Britain never ate meat or animal products. This is considerably higher than the result the society got in 2007, which suggests real growth in numbers. But it is a far cry from the 5.3% of the population reported as vegan in a more recent poll. 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.

In America, Nielsen found in 2017 that 3% of the population called themselves vegans and 6% vegetarians (people who eschew meat, but eat eggs and/or dairy products). This proportion seems more or less stable; the country's largest polling organisations, Gallup and Harris, both found 3% of the population calling themselves vegan over the period 2012-18. But more detailed research by Faunalytics, a company which has been running large surveys of eating habits for 20 years, puts the numbers at just 0.5% for vegans and 3.4% for vegetarians. Fully a quarter of 25- to 34-year-olds in America claim to be either vegan or vegetarian, whereas studies by Faunalytics find the median age of American vegans to be 42, four years older than the national median. It seems that a fair amount of aspirational self-deception, terminological inexactitude or simple hypocrisy is at play.

The idea that veganism is most widely espoused, if not necessarily adhered to, by the young seems to be true in many countries. In Germany, according to Mintel, a research firm, 15% of 16- to 24-year-olds say that they are vegetarian, compared with 7% of the population at large. In many countries declared vegans lean towards the political left. In America polling by Pew has found that 15% of liberals espouse a meat-free diet, as opposed to 4% of Republicans. American vegans and vegetarians are also poorer than average, and twice as likely to be single. Three-quarters of them are women. This all fits veganism's association with valuing health, simplicity and low environmental impact—an implicit rejection of the values and coronary arteries of older red-meat-eating men.

Veganism is not a way of life that it is easy to keep up. According to Faunalytics, for every active American vegetarian or vegan there are more than five people who say they have abandoned such a diet. The growth in the number of restaurants catering to veganism and the availability of plant-based products on shelves may reduce this churn and allow more to stick with the programme. As it is, a moving target makes it unsurprising that accurate figures on veganism are hard to come by.

Overall, though, it seems safe to say that the number of people sometimes or regularly choosing to eat vegan food is growing much faster than the growth in people deeply committed to a meat-, egg- and dairy-free life. Patrice Bula, a vice-president at Nestlé, says he thinks that only a quarter of the people buying his company's vegan meals are committed vegetarians or vegans. People in this larger group are often called "flexitarians", who shift back and forth between omnivorous and vegetable diets. Almost two Americans in five say they fit this category, says Nielsen. The true vegan efflorescence lies in casual, part-time veganism.

Flexible friends of the Earth

In rich countries, people become flexitarians as a response to three concerns: their own health; the health of the environment; and the welfare of animals. On all three, they have a point; on at least the first two, though, a lot of the benefits can be captured without strict veganism.

The direct evidence that vegan and vegetarian diets are in themselves good for people is mixed. Between 2002 and 2007, 73,000 Seventh Day Adventists, a religious group in America, participated in a study of eating habits. The 27,000 vegans and vegetarians among them had significantly lower mortality rates. A smaller survey of British vegetarians from 2016, though, found no such link.

Aspects of veganism do go with the grain of some health advice. Large studies have shown that people who eat a lot of red meat have higher overall mortality rates (the same does not apply to eating poultry). Eating a lot of processed meat is linked to colorectal cancer. The evidence on this seems clear enough for various authorities to recommend limits to the total ingestion of red meat—the World Cancer Research Fund suggests less than 500g a week—and minimising the intake of processed meats such as bacon and salami.

And the damage to health done by meat is not all captured in the sort of studies that reliably cast doubt on diets heavy in red meat. Lots of factors, both dietary and non-dietary, influence health problems such as obesity, high blood pressure or diabetes, and it is hard to understand exactly what is responsible for what. Comparing diets on a statistical basis, though, allows some striking inferences. In 2016 a study by Marco Springmann and colleagues at the University of Oxford found that, globally, a transition to well-balanced vegan diets might result in 8.1m fewer deaths a year. Universal vegetarianism would avoid 7.3m deaths.

If the associations on which this computer modelling is based are robust, those are impressive figures. But much of the benefit they claim to demonstrate could still be realised if omnivores ate better-balanced diets with less meat. If the world adopted what the study called a healthy global diet, with less sugar than most in the West consume, plenty of fruit and veg and just 43g of red meat a day, the number of deaths avoided would still be 5.1m.

Red meat is typically a quarter to a third protein by weight, so just 43g is nowhere near enough to supply the 50-60g of protein a day that people require (the exact amount depends on a person's weight, amount of exercise and several other factors). The global healthy diet thus has people relying on quite a lot of plant protein, too. Rich-world diets, though, tend to get all their daily protein requirement from animals, and then some. Americans eat 90g of protein a day, Europeans 85g, and most of it comes from animal products.

Because meat is energy rich, eating more than your protein needs dictate means taking on a lot of calories, which may well be stored as fat. Vegans both eat less protein and get it from less energy-rich and potentially fattening products. In 2017 a French study found that both vegans (62g of protein a day) and vegetarians (67g) were healthier than the meat eaters wolfing down 81g. They were also eating more varied diets, and, perhaps crucially, fewer calories overall; it may have been those choices, rather than veganism per se, that made the difference.

On the environment, too, vegans and vegetarians have a point. Growing their food requires less land than raising meat does. Animals do not turn all the energy in the crops they eat into calories in their muscles. They need some of that energy to stay alive—and while that overhead is good for the animals, from a food-production standpoint it looks like a waste. This waste means you need more land per calorie of food if you are producing beef than if you are producing broccoli. Admittedly, a lot of grazing is on land that would not necessarily be suitable for arable farming. But the FAO's finding that raising livestock takes about 80% of all agricultural land and produces just 18% of the world's calories is still telling.

Alon Shepon of the Weizmann Institute and colleagues have looked at this in terms of opportunity costs. Choosing to make a gram of protein by feeding an egg-laying hen, rather than getting the equivalent of a gram of egg protein from plants, has an opportunity cost of 40%. Getting the gram of protein from beef represents an opportunity cost of 96% (see chart 1). They argue that if America stopped paying these opportunity costs and got the protein from plants in the first place, it would be equivalent to increasing the food supply by a third—or eliminating all of the losses due to food waste.

Being so land hungry means cattle farming changes the climate; clearing land for pasture creates greenhouse gases. On top of that, the bugs in ruminant digestive systems produce methane, a fairly powerful greenhouse gas. Once it gets out of the cows—by belching, mainly, not, as is commonly thought, farting—this warms the world. The FAO calculates that cattle generate up to two-thirds of the greenhouse gases from livestock, and are the world's fifth largest source of methane. If cows were a country, the United Herds of Earth would be the planet's third largest greenhouse-gas emitter.

Mr Springmann and his colleagues calculated that in 2050 greenhouse

emissions from agriculture in a vegan world would be 70% lower than in a world where people ate as they do today; in the “healthy global diet” world they would be 29% lower. The savings are not all owing to cows; but a large part of them are (see chart 2). Raising cattle produces seven times more in terms of emissions per tonne of protein than raising pork or poultry does, 12 times more than soya and 30 times more than wheat. Giving up beef captures many of the benefits of going vegan. Other animals make a lot less difference. Getting your protein from insects—very efficient converters—might be almost indistinguishable from veganism in environmental terms.

Except, that is, to the insects. One of the main things that motivates many vegans and vegetarians is a belief that killing and eating animals is wrong. The vegans also abstain from milk and eggs because there, too, they see a lot of exploitation, death and suffering (the question of honey remains a point of contention). In dairy herds calves are typically taken from their mothers within 24 hours, compared with the nine months to a year they would suckle if left to themselves. Male calves are killed or reared for meat. In industrial egg-production day-old male chicks are killed and simply discarded. Even if one keeps strictly to meat, though, the death toll involved is immense. Over 50bn farm animals are killed for meat every year.

#MooToo

The best known proponent of the case that this matters is Peter Singer, a philosopher at Princeton University. Mr Singer argues that treating the interests of humans as superior to those of other animals is a prejudice, analogous to treating men as superior to women or whites as superior to blacks. It depends on an arbitrary distinction between two groups, one of which has the power to make the distinction stick.

What matters, he says, is not what species an individual belongs to but its capacity for suffering. If an animal suffers as much as a person, then things that it would be impermissible to do to a person—killing and eating him, immobilising him in a cage—are unacceptable if done to the animal, too. “In suffering,” Mr Singer writes, “the animals are our equals.”

This moral point would seem to depend in part on an empirical point; to what extent and in what manner do animals suffer? Animals' brains contain regions clearly analogous to those correlated with consciousness, perception and emotion in humans. What that reveals about their suffering as compared with a human's is a subtle question. But they definitely feel pain, and some can both express preferences and, it would appear, hold beliefs about the preferences of others. That would seem to have some moral salience.

But would it be better for animals that suffer not to exist at all? A vegan world would have no need of cows, happy or sad. The genus *Bos* currently numbers some 1.5bn. Should those lives be valued less than the lives of the wildlife which might repopulate their overgrown pastures when they are gone? When it comes to wild animals, people tend to abhor population collapse; are things that different when it comes to domestic animals?

Mr Singer's project of seeking legal rights for animals is certainly going to be a tough row to hoe, if not an impossible one. Neither courts nor legislatures seem very interested. Reducing the cruelty that animals suffer, though, is more plausible, both through legislation—battery cages for hens have been banned in the EU since 2013—and through consumer pressure, such as a preference for free-range products, cruelty-free certification, transparent sourcing and the like. This second route, though, is not available to vegans.

Though biology is not destiny, humans, like their relatives the chimpanzees, evolved as omnivores; the evidence is in the teeth and the guts. *If* people's diet is otherwise restricted, for example to staple starches, meat does them good. As the increasing consumption of meat worldwide shows, a lot of people in most cultures really do like eating it; the vast majority will do so, at least a bit, when they get the chance. The great exception is India, where, mostly for religious reasons, about 30% of the population has a vegetarian lifestyle.

None of that makes veganism, full- or part-time, and the spread of plant-based foods irrelevant. A mixture of ethical concerns, innovative cuisine like Mr Kisala's and more convenient vegan shopping at supermarkets could yet see the rich world reach "peak meat" and head down the other side. If so, and in particular if reduced consumption of red meat is part of the process, there will probably be substantial gains in health and happiness. And if the world improves standards in the meat-rearing operations that remain, some of that may even be shared with animals.