



The Game Changers: How vegan propaganda harms potential vegans

The growing tendency to present important social issues as a form of religious war rather than to engage in forward-looking scientific debate is one that is starting to grate – and I am not just talking about climate change. Boris Johnson is offering the moon, yet many of his conservative voters will never experience the Brexit benefits he is promising. Donald Trump is winning over sections of the population that believe him when he claims to be able to keep old industries alive. They appear unaware of the brutal cuts in social security, while the super-rich enjoy minimal tax rates. Similarly, social discourse on the "right" diet is now also being styled as a crusade.

"The Game Changers"¹ is a recent pro-vegan film that is making waves in all dietary camps. It is the first vegan film to be produced in perfect Hollywood quality. Quality is unfortunately not, however, a term that could be applied to its scientific basis. The film promises the truth whilst employing every trick in the book in its presentation of evidence. It goes all out with its storytelling to create maximum plausibility with a mixture of bold claims and images of powerful, energetic athletes working on a vegan diet. The film is an excellently made piece of propaganda. Propaganda for a vegan diet supposedly superior to all others.



BrainCandy is not a forum for dietary debates. What we are interested in is insights into human behaviour, and this film and real behaviour offer much food for thought on this point. Many experts have taken the trouble to compare Game Changer's claims with the current state of scientific research. Take for example the in-depth response of the medical professional and sports coach Dr. Lane Norton,^{2,3} who was himself a researcher in the field of protein synthesis and cites the two most respected professors of sports medicine in the USA (caution: this is almost a misleading appeal to authority fallacy: the presentation of authorities as evidence in themselves. Game Changers frequently uses such mental leverage when it talks of unspecified "leading experts", or when it incorrectly quotes respected experts, as happened with both professors).

As a marketing man and someone who understands people, what fascinates me about Game Changers is how the film uses advertising techniques for its mission; how the film-makers employ extreme, attention-grabbing statements to position themselves to their best advantage. What troubles me about the film is that it has the potential to harm those interested in veganism: it uses a host of tricks and often the intentional distortion of current research to "prove" to the emotionally affected viewer that a vegan diet is the best diet. (There is a lot of cherry-picking: findings of studies presented as definitive despite their weak validity where they support the film's world view, while studies that contradict that view are dismissed as invalid for identical weaknesses).



This is a potential disaster for anyone inspired by the film to switch to a vegan lifestyle, honestly believing that this will automatically (!) make everything better.

Firstly: why is there actually any debate about diets? Why does science not help us to end the argument once and for all? The relation between foodstuffs and our body's biochemistry is highly complex. So complex, in fact, that there is as yet no good model of the right diet for an individual – indeed, such a model is impossible.⁴ Yet it is in the face of such complexity that humans feel the need for simple truths:

Vegan is better. Meat is worse. Such "truths" give us the very important sense of having our life under control. Game Changers plays on that need. Things are made even easier if we think in terms of black and white: fat is bad, animal products are bad, and fruit and vegetables are good. Our brains have trouble understanding the u-shaped curve of food. Too little is bad, too much is usually also bad, and somewhere in the middle is the optimum amount – even for water. Too little water and you will die of thirst. Too much water (probably six litres daily or more) will eventually kill you, because it will destroy your electrolyte balance.

Even I, a market researcher, was surprised at how incredibly complex dietary studies in accordance with the strictest scientific standard (controlled and double-blind) would be. That is why epidemiological analyses of population cohorts are used and often fallacious conclusions are drawn. The fundamental problem with this type of study?

Data on eating habits are collected in a one-off questionnaire and then assumed to be constant for the following decades. What exactly did you eat last week? What were the quantities and composition? That is a question that our brains can never correctly answer, and not just because we automatically tend to present our diet as healthier than it actually is. Do you smoke? That is easy. You could provide a reasonably accurate statement on the quantity – but not on exactly how many grams or the proportion of fat. I tried (there are apps to help you). Recording everything correctly is extremely complicated, and I was very far from my assumptions. Smoking has a considerable impact on health, which is why epidemiology works here. The impact of diet, however, is much weaker. How many people do you know who live off fast food and soft drinks, and still appear fairly healthy for many years?

The makers of "Game Changers" primarily cite hand-picked epidemiological analyses of population cohorts, in other words an often weak scientific basis. Those analyses are sold as proof of causality and findings to the contrary are simply ignored. One of the most important criticisms of this type of finding is what is known as "healthy user bias". Participants in such studies who state that they are vegan or vegetarian have often made other conscious changes in their lives such as more exercise, no smoking, fewer calories, etc. So what proportion of health effects is linked to each lifestyle aspect? The studies cannot provide a clear answer to that question, not least because they do not sufficiently monitor subjects' diet.



(Incidentally, medical studies have recently been focusing more and more on calories. People on a high-quality vegan diet consume on average 600 fewer calories per day than the average meat-eater because of the lower energy density of that diet. Current hypothesis: calories have a greater impact than dietary style).

A meta-analysis of a large number of epidemiological studies recently correctly concluded that a very small potential negative health effect of red meat is not a sufficient basis on which to recommend a change in behaviour⁵ (high-quality studies found there was no health effect; low-quality studies found there was). Such studies cannot answer the question of whether meat-eaters would be healthier were they a. to stop eating meat, b. to eat fewer highly processed meat products, c. to eat more lean meat – despite regular claims to the contrary.⁶ According to John P. A. Ioannidis, a Stanford professor and epidemiologist, "claimed research findings may often be simply accurate measures of the prevailing bias".⁷ Spoiler: compared to a standard diet comprising a high proportion of fast food and industrially produced convenience foods (high energy density and low nutrient density), any other diet appears to offer similar benefits to veganism from an epidemiological perspective.

Here are a few examples of how "evidence" is presented by "The Game Changers":

- Claim: athletes can perform better when they switch to a vegan diet. The film shows an impressive strength athlete, who has set the world record in a niche sport. Congratulations to him. What the film does not mention is that he has long since lost the title – to non-vegan athletes lifting 20% more weight.
- Claim: dairy products leave you more susceptible to cancer, in particular prostate cancer. This claim cannot be backed up. In fact, dairy products actually appear to have a slight positive effect.³
- And my favourite example: cows and gorillas have huge muscles – and live off grass/plants. A powerful, symbolic image. And clearly utter rubbish. Anyone who tries chewing on the grass that feeds cows will realise that he or she is unable to metabolise it. After all, the role of ruminants is to convert grass into nutritious food for humans.
- Claim: vegans get sufficient quantities of high-quality protein. This claim has been clearly and scientifically disproved, in particular for athletes^{2,3} and the elderly. Vegan proteins have an unfavourable profile for protein synthesis, one aspect of which is insufficient levels of leucine. Vegans therefore need to consume up to 50% more protein to achieve the same muscle development. However, that would result in many extra calories and the quantity would not be easy to consume. (The strength athlete mentioned above drinks four large protein shakes every day, something that is strangely not mentioned at all in the film).



Gorillas eat 18 (!) kg of plant matter every day. They spend half the day eating. A vegan will not even manage 10% of that amount – and does not have a gorilla's digestive system, which can break down cellulose.

If only the film had focused on arguing that vegans can be really sporty too. But no, it had to claim that vegans are automatically better than "conventional" athletes, who usually have an optimised diet.

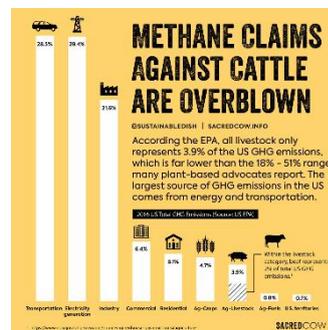
Irrespective of whether someone is interested in veganism for dietary (health) or ethical (animal welfare) reasons, it would be useful to know where the potential nutrient deficiencies lie so that these can be balanced out. Films such as Game Changers are instead potentially dangerous. If people believe the "simple" truth that giving up any and all forms of animal food will automatically improve their health, they will not worry about potential deficiencies. And this is where our brains come in again: if I believe that I am doing the right thing, I will ignore warning signals from my body for a very long time. Frighteningly, some parents do not notice when their children are not developing normally, as a number of spectacular court cases have demonstrated.⁹ Previously vegan YouTube stars have now also reported ignoring bodily signals for too long.^{10/11}

A strong indication of the challenges of a vegan diet is actual human behaviour. The percentage of genuine vegans has for years been around 1%. But do lots of meat eaters eat less meat – i.e. are there a lot of flexitarians? It is hard to say. Surveys indicate that there are, but in that case, meat consumption ought to be falling.

Instead, we are seeing new sales records. My hypothesis is that significantly more people are indeed trying out veganism than in the past.

Often, however, the expected health impact does not occur in the long term. Many then switch back to their previous diet, resulting in the proportion remaining relatively stable.

A vegan diet is at least genuinely worthwhile for the climate, for methane released by cows is particularly bad for the environment. Not only "The Game Changers" but also the media are still harping on about this, and a figure of around 18% of greenhouse gas is doing the rounds. That figure has in fact long been disproved as a calculation error, and has since been corrected in the States to 3-6%.^{12,13} Indeed, according to some calculations, CO²-negative cattle breeding is in fact possible with intelligent agriculture.¹⁴ Moreover, c. 60% of all agricultural land globally is not suitable for vegetable production, as the FAO of the United Nations has found. All that grows in those areas is grass or scrub, which only ruminants can process. I recently visited Chile/Patagonia, where doubtless even less land is appropriate for growing vegetables.





And what about animal welfare? This question is not black and white either. Drastic improvements are required in animal farming. That is not in question. However, the demand side will not fuel such improvements, no matter how many appeals to the public are made. Political action is needed. Well-meant attempts by retail supermarkets clearly show that price is more important.

Here too, there is an interesting flaw in our perception. We do not consider what we do not see. For example, the fact that most forms of mechanised harvesting cause the death of large numbers of small animals, birds and insects. Are those creatures worth less? This is not something that those concerned with animal ethics experience, and therefore they do not think about it in the supermarket vegetable aisle. Everyone sees the meat in the chiller, however.

Here are some important probable deficiencies of a vegan diet (apart from protein deficiency) raised in the scientific debate sparked by "The Game Changers" claims:

- Iron deficiency: vegetable sources have a much lower bioavailability of iron. A particular problem for women (menstruation). In our latest pharmacological studies on iron deficiency, doctors report that iron deficiency occurs unusually frequently in vegetarians and vegans. The same applies for zinc and calcium deficiencies (dental problems).
- Omega 3 fatty acids: The bioavailability of these important fatty acids is much lower in vegetable fats than claimed by "Game Changers". According to Professor Bill Harris, an omega 3 expert, "you can't get a meaningful amount of EPA or DHA from ingesting ALA¹⁵". Omega 3s are important for brain function and development. Particularly for children.

- Most vegans are aware of the potential for a B12 deficiency, also widespread in people who eat junk food.
- Creatine. Only occurs in meat. Important for muscles and for the memory.¹² Also only found in animal products: choline, carnosine and taurine (Red Bull does not count).
- Deficiencies are not the only issue. Potentially harmful high levels of certain substances are also possible with a purely vegetable diet. Plant toxins such as lectins and phytates (these are not removed in cooking). Likely the main causes of the increasingly common irritable bowel syndrome.

Conclusion: the world is and remains complex. A radical increase in veganism does not offer a simple solution for health, greenhouse gases and animal welfare. Nonetheless, intelligent vegan diet can make a contribution to animal welfare, even if overall this is much smaller than people imagine. Provided your body can cope.

People will automatically act according to what is easier or more efficient for them in their own particular circumstances (context). Sometimes, that is a flight to the sun, a lower price and the foodstuff with a high nutrient density and bioavailability. I do not think that the many appeals to sacrifice efficiency will have a sufficient impact. Such appeals may change attitudes, but they will have little effect on behaviour. We need more technical innovations to fight climate change without requiring people to give up too much. Those innovations will include medical technology to analyse dietary effects. Germany is a centre of technology and could be a key player in this area. Hopefully.



Sources: Please contact me if you would like more sources.

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14. <https://www.whiteoakpastures.com/meet-us/environmental-sustainability/>
15. <https://peterattiamd.com/billharris/> Fundiertes Interview zur Bedeutung von Omega 3. Danach werden Sie vermutlich mit EPA supplementieren

Recommended reading

By Ralph Ohnemus:

Markenerleben. Die Strategie im Hyperwettbewerb und Informationstsunami > [Order here](#)

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