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Corresponding Author	Family Name	Stephens
	Particle	
	Given Name	William
	Given Name	0.
	Suffix	
	Division/Department	Department of Philosophy
	Organization/University	Creighton University
	City	Omaha
	State	NE
	Country	USA
	Email	stoic@creighton.edu
	Email	stphns@creighton.edu
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Fake Meat 2

- William O. Stephens 3
- Department of Philosophy, Creighton University, 4
- Omaha, NE, USA AU1 5

Keywords

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Carnism; Clean meat; Cultured meat; Fake 7 meat; Faux meat; Imitation meat; In vitro 8 meat; Lab-grown meat; Meat alternative; 9 Meat substitute; Mock meat; Synthetic meat 10

Introduction 11

Fake meat, also known as faux meat, imitation 12 meat, mock meat, meat alternative, or meat sub-13 stitute, is a food designed to approximate the 14 culinary qualities of flavor, texture, and appear-15 ance of different types of meat. Many fake meats 16 are made from gluten (seitan) or soybeans (tofu 17 and tempeh). Fake meat is different from clean 18 meat. Clean meat, also known as cultured meat, 19 lab-grown meat, in vitro meat, or synthetic meat, 20 is muscle tissue grown in cell culture in a labora-21 tory (Shapiro 2018). Clean meat is produced using 22 many of the same tissue engineering techniques 23 used in regenerative medicine. Carnal meat, in 24 contrast, is flesh taken from the corpse of an 25 animal. Fake meat is a meatless substitute for 26 both carnal meat and clean meat. 27

Advantages of Fake Meat

Reasons that commend fake meat over carnal 29 meat can be grouped into six groups of consider- 30 ations. These considerations appeal to (1) health 31 benefits, (2) reducing environmental harms, 32 (3) conserving agricultural resources and energy 33 to feed more people, (4) rejecting the patriarchy 34 implicated in meat, (5) moral consideration for 35 nonhuman animals, and (6) religious or spiritual 36 commitments. 37

Health Benefits

Vegetarian diets tend to be healthier than diets 39 based on meat and animal fat. Meat-based diets 40 are associated with higher rates of heart disease, 41 atherosclerosis, high cholesterol, stroke, peptic 42 ulcers, osteoporosis, kidney disease, colon cancer, 43 lung cancer, breast cancer, uterine cancer, cervical 44 cancer, and prostate cancer. People suffering from 45 diabetes, angina, asthma, bladder disease, diver- 46 ticulitis, gallbladder disease, hypertension, kidney 47 stones, peptic ulcers, and rheumatoid arthritis 48 have been shown to benefit from switching to 49 vegetarian diets. Meat eaters risk serious and 50 sometimes fatal food-borne illnesses (Stephens 51 1994). Thus, other dietary factors being equal, 52 fake meat contributes to a healthier diet than 53 carnal meat. 54

Reducing Environmental Harms

The global populations of chickens, cattle, pigs, 56 and sheep continue to grow with the global human 57

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population. In 2011 the world's average stock of 58 chickens was almost 19 billion; there were 1.4 59 billion cattle, about 1 billion sheep, and nearly 60 1 billion pigs (Economist 2011). Industrial live-61 stock production is a leading source of organic 62 freshwater pollutants and nitrate groundwater pol-63 lutants. Cattle are major causes of soil compac-64 tion, erosion, and depletion of freshwater aquifers. 65 Cattle are a leading cause of deforestation, desert-66 ification, habitat loss, and destruction of thou-67 sands of species of plants, insects, birds, reptiles, 68 and mammals. Moreover, industrial livestock pro-69 duction consumes great amounts of nonrenewable 70 energies (Stephens 1994). On one analysis, live-71 stock and their by-products account for 51% of 72 annual worldwide greenhouse gas emissions 73 (Goodland and Anhang 2009). Consequently, 74 livestock contribute considerably to global cli-75 mate change. Concentrated animal feeding opera-76 tions (CAFOs) are where an increasing percentage 77 of the world's meat, milk, fish, and eggs are pro-78 duced (Imhoff 2010). Therefore, the meat indus-79 trial complex is responsible, both directly and 80 indirectly, for devastating, manifold, worldwide 81 environmental harms. Compared to industrial 82 meat, fake meat treads much more lightly on the 83 planet. 84

Conserving Resources and Feeding More 85

People 86

Breeding livestock and feeding them grain and 87 soy in order to make meat is an extremely wasteful 88 way of feeding people. Most of the calories and 89 protein in the grain and soy fed to livestock is lost 90 by cycling it through their bodies instead of con-91 suming the grain and soy directly. Transforming 92 grain and soy into fake meat requires some addi-93 tional inputs, depending on the kind of fake meat 94 product. Nonetheless, fake meat products are a 95 more efficient means of making foods from grain 96 and soy than are meat products. Citizens of afflu-97 ent, developed nations consume far more meat per 98 capita than citizens of developing nations. So, one 99 can argue that those who lack enough to eat 100 deserve basic food more than the wealthy deserve 101 the unnecessary luxury of meat from CAFOs. 102 Justice suggests that agricultural resources be dis-103 tributed equitably in order to reduce unnecessary 104

human suffering and death caused by malnutrition 105 (Stephens 1994). Thus, fairness favors fake meat. 106

Meat and Patriarchy

Another argument for meat substitutes is that there 108 is an intimate connection between meat and male 109 dominance. Meat is exalted in our patriarchal 110 culture. The male prerogative for meat is 111 exhibited in the Bible in Leviticus 6, in the ancient 112 Greek myth of Zeus and Metis, and in fairy tales 113 that portray meat eating as the male's role. In 114 societies with animal-based economies, men 115 hunt, control meat distribution, and wield social 116 power typically to dominate women. In many 117 nontechnological societies, women are forbidden 118 to eat meat. Violence against animals intersects 119 with sexual violence against women. Anthropo- 120 logical, sociological, and historical studies illus- 121 trate that the oppression of women and other 122 animals is interdependent. Twentieth-century 123 meat textbooks proclaim that meat is a virile 124 food. Our society equates vegetarianism with 125 emasculation or femininity (Adams 1990). Con- 126 sequently, to reject meat in cultures where meat is 127 plentiful signals rejection of male control and 128 violence. Adams concludes that feminism and 129 vegetarianism ought to be embraced by members 130 of our "meat is king" patriarchal culture in order to 131 transform it from within (Stephens 1994). How effective the choice of fake meat is in achieving 133 this goal will be addressed below. 134

Sparing Nonhuman Animals

Moral consideration for the animals bred into 136 existence, made to suffer, and killed to make 137 meat is a popular reason for adopting vegetarian- 138 ism. The most influential arguments motivated by 139 moral consideration for the animals themselves 140 have been formulated in either utilitarian or deon- 141 tological theories. Utilitarians object to the tre- 142 mendous suffering animals experience in 143 CAFOs and argue that meat is unnecessary for 144 virtually everyone nearly everywhere (Singer 145 1990). Deontologists argue that animals are 146 experiencing subjects of a life with inherent 147 value, so we have a duty to treat them with 148 respect, not as our resources. This duty includes 149 boycotting all animal products, including meat 150

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(Regan 1983). The global meat industrial complex grievously harms and destroys billions of
innocent animals every year. Therefore, replacing
murdered meat with a meatless substitute rights a
real wrong.

156 Religious or Spiritual Purity

Some religions prohibit or discourage eating 157 meat. Because of their commitment to the Dhar-158 mic concept of ahimsa (non-violence), Jains 159 entirely abstain from meat, fish, and eggs. Vege-160 tarianism is also common in Hinduism, Mahayana 161 Buddhism, Sikhism, and Taoism. Some Chris-162 tians argue for vegetarianism based on the escha-163 tological hope in the promises and the 164 providential work of God (Webb 2001). Others 165 see vegetarianism as a logical expression of one's 166 understanding of oneself as a Christian and one's 167 exercise of one's Christian faith and discipleship 168 (Largen 2009). The ancient Greek philosopher 169 Pythagoras taught metempsychosis – the belief 170 that the soul is immortal and transmigrates into 171 other kinds of animals. Their spiritual beliefs led 172 Pythagoreans to abstain from meat, fish, and 173 beans. The third-century polymath Porphyry of 174 Tyre, a follower of Plotinus, also believed in 175 metempsychosis. In On Abstinence from Animal 176 Food, Porphyry defends vegetarianism both for 177 178 the purpose of freeing one's soul from the body and the sensible world and for ethical reasons. 179 Thus, for thousands of years, vegetarianism has 180 been adopted for the sake of spiritual purity. Fake 181 meat can promote this goal. 182

183 Fake Meat and Carnism

Fake meat products are intended to persuade meat 184 eaters to replace real meat with a meat substitute. 185 Fake meat is designed to cater to those who have 186 been conditioned to prefer meat. Companies that 187 produce fake meat presume that foods that resem-188 ble meat are the norm for appetizing food. 189 Carnism is the ideology that conditions people to 190 eat certain animals (Joy 2010). Carnists regard 191 meat as normal, natural, and necessary. Conse-192 quently, one could argue that purveyors of fake 193 meat actually capitulate to and perpetuate carnism 194

under the guise of supplanting it. For example, if 195 someone is not a racist but at a glance appears to 196 act like a racist, then there is a risk that racism 197 could be reinforced. Similarly, if someone is a 198 vegan but at a glance appears to act like a carnist 199 by eating what looks like meat but isn't, then this 200 might subvert achieving the goal of veganism. 201

Do fake meat products reinforce carnism? Pro-202 ponents of fake meat could deny this. They could 203 argue that fake meat products give people the 204 option of eating less carnal meat, or none at all. 205 From this perspective fake meat could serve as a 206 bridge to help meat eaters cross from carnism to 207 vegetarianism. Once accustomed to eating a sub- 208 stitute for meat in her diet, the consumer may no 209 longer miss carnal meat. The person for whom 210 fake meat becomes the new normal may come to 211 find the appearance and smell of carnal meat dis- 212 gusting. Such a consumer could then explore 213 vegan foods that do not resemble carnal meat at 214 all. Perhaps an analog is the use of e-cigarettes to 215 quit smoking tobacco. Vaping can serve as a 216 bridge from tobacco use to vaping an e-liquid 217 that contains nicotine to vaping an e-liquid 218 entirely free of nicotine. 219

Ultimately, this argument for fake meat as a 220 transition to vegetarianism or veganism is 221 pragmatic. Most meat eaters are likely to be per-222 suaded only to try meatless foods that closely 223 resemble meat in appearance, texture, flavor, and 224 perhaps smell. Fake meat gives consumers the 225 option for sources protein that is not as morally 226 dubious as actual meat products. 227

Summary

Fake meat products are healthier to eat than carnal 229 meat. Fake meat products inflict far less damage 230 on the environment than meat from CAFOs. Eco-231 logically, fake meat requires fewer agricultural 232 resources, less water, and less energy to produce 233 than carnal meat. Using the same amount of agri-234 cultural inputs, fake meat feeds more people than 235 carnal meat. Unlike carnal meat, fake meat harms 236 no animals. Still, the advocate of veganism could 237 object to making food that *looks* like it supports 238 carnism. If fake meat is marketed with the slogan 239

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that "it tastes like meat, but is better for you," then 240 a worry remains that, by taking meat as the norm, 241 fake meat capitulates to carnism. Defenders of 242 fake meat argue that such products help people 243 transition away from carnal meat. Perhaps in the 244 future, if fake meat aids in persuading enough 245 consumers to overcome carnism, vegans will be 246 content with foods that look like fruits, vegeta-247 bles, grains, legumes, nuts, and seeds. 248

249 Cross-References

- 250 ► Carnism
- 251 ► In Vitro Meat
- 252 Meat: Ethical Considerations
- ²⁵³ ► Synthetic Meat
- 254 ► Vegan Lifestyle
- 255 ► Veganism
- 256 ► Vegetarianism

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