

Vegetarianism

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Abstract

This conceptual research analyzes the different aspects that support the proposal of vegetarianism in order to show the complexity of dietary and cultural established practices and stimulate further studies in the country. A literature review was conducted, using authors of different areas. The article shows the controversies that involve the researches about the nutritional value of the vegetarian diets and the relationship between vegetarianism and health; it emphasizes the need to consider the profile of the researched population and the multiplicity of the healthy diet concepts. The socio-environmental impacts of current industrial practices endorse the importance of supporting sustainable systems that promote animal welfare and health and point to the need to reduce meat consumption. Under the cultural approach, vegetarianism shows up as a cultural practice that embraces the most complex humans' needs and choices and puts feminism, sexism and culture-nature relationship back on the agenda. This food trend tends to gain more supporters, as well as the attention of experts who should consider this cultural perspective of vegetarianism and expand the reductionist parameters of nutritional adequacy, which prevails in the nutritional science.

Key words: Vegetarianism. Nutritive Value. Culture. Feminism.

Introduction

Food activism has been pointed as one of the most dynamic and heterogeneous contemporary movements, which discusses environmental, social, economic and cultural issues. Vegetarianism fits this perspective incorporating controversial dimensions that have been discussed with scientific enthusiasm since the 1990s.

To foster local studies, this article explores the different aspects that comprise this debate arena. With no intention to exhaust the subject, the purpose of the article is to show the complexity of this diet choice and cultural practice, which is sustained by a plural and instigating perspective and dialogues with feminism and ethical principles in a field still little explored in social studies in Brazil. The study includes a nutritional approach and the relationship between vegetarianism and disease prevention, discusses the socio-environmental perspective and, finally, presents a historical and cultural context. To this end, authors from different fields of knowledge, such as nutrition and health, social sciences and philosophy, environment and food agricultural system are included in the study.

The term vegetarianism, according to the common sense, is used to refer to meat-free diets. Strict vegetarianism (veganism) excludes all animal products (meat, fish, milk, egg, and sometimes honey) and is based on the consumption of grains, legumes, vegetables, fruits, greens and oilseeds. Ovo-lactovegetarians complement their diet with eggs, milk and dairy products.

Vegetarianism has been growing and gaining more adherents. No scientific study on the growth of vegetarianism was found, but a survey commissioned by the e-magazine *Vegetarian Times*¹ shows that 3.2% of the adult population in the USA is vegetarian, and 0.5% of such vegetarians are vegans. In addition, the survey reveals that 10% of the US population follows a vegetarian-inclined diet. Fifty-three percent of the respondents adopt a vegetarian diet to boost health; 47% mention environmental concerns; 31% for food sanitary safety reasons; and 49% are concerned with weight control. This same study shows that a similar research conducted by the *Vegetarian Resource Group* in 2004 estimated that 2.8% of the adult population has chosen vegetarianism, data that indicate the growing number of vegetarians in the USA.

Study on food consumption in Europe shows that vegetarianism gained many supporters after the impact of the mad cow disease, a fact that made England the European country with the largest vegetarian population. In 2006, 6% of the English people were vegetarians (and 10% did not eat red meat).^{2,3} In the other western Europe countries, the number ranges from 2% to 9% of the population. Regarding the rest of the world, data are incomplete, and it is estimated that between 0.2% and 4% of the world population is vegetarian, except Israel (8.5%) and India,

where 40% of the population is vegetarian, mostly due to caste issues and religion.^{2,3} In Brazil, 8% of the population is vegetarian, according to data compiled by the European Vegetarian Union^a.

Nutritional value and diseases prevention

As in many contemporary nutrition fields, there are controversies involving the relationship between vegetarian diet, adequate nutrients intake and diseases prevention.

Studies^{3,4} demonstrate that ovo-lactovegetarian diets tend to have a low content of protein, saturated fatty acids, n-3 fatty acids, retinol, iron, zinc and vitamin B₁₂, and the three latter nutrients and also calcium may be insufficient in vegan diets. This is because the concentration of these minerals is low in vegetable foods and also because of the interference of phytate and dietary fibers that exist in their absorption. But in the case of iron, the higher content of vitamin C in vegetarian diets may be a factor that contributes to the appropriate absorption of iron in vegetarian diets.

Although they question the lack of the above mentioned nutrients, the Keys group³ shows that the ovo-lactovegetarian diets are balanced in carbohydrates, n-6 fatty acids, dietary fibers, carotenoids, folic acid, vitamins E and C, in addition to magnesium.

A study by Siqueira et al.⁵ does not show concerns with the contents of iron and calcium in meat-free diets and show that this diet can offer increased contents of these minerals and cannot be influenced by phytates. But these authors point to the vulnerability of zinc, particularly in male vegetarians.

Vitamin B₁₂ is a nutrient of concern to the specialists, mainly because of the required appropriate intake of this vitamin by children, nursing mothers and vegans in reproductive age. Although the bacterial colony in the human intestine produces vitamin B₁₂, it is not absorbed and the single reliable source of this vitamin is animal foods. Thus, vegans need synthetic supplementation, and such recommendation was confirmed on a report issued by the Regional Council of Nutrition of the 3rd region in Brazil⁶.

The American Dietetic Association⁷ admits the supplemental need for other nutrients, among them vitamin B₁₂ in some vegetarians and in vegans, but argues that the needs for protein, n-3 fatty acids, iron, zinc, iodine, calcium and vitamins D can be supplied by well-planned ovo-lactovegetarian diets.

a Source: *European Vegetarian and Animal News Alliance*. How many vegetarians...? Available from: <http://www.evana.org/index.php?id=70650>. Accessed on 13 June 2013. Inaccuracy of many of these data and the consequent need for further academic research in this area should be considered.

The opinion of CRN⁶ warns that the elements requiring more attention in the ovo-lactovegetarians' diet are: vitamin B₁₂, iron, zinc, and omega-3. In strict vegetarian diets, there should also be a concern for calcium and proteins, and supplementation of vitamin B₁₂ and zinc (and secondarily iron and calcium) is required for the vegans.

On the other hand, for non-strict vegetarians, the most susceptible element, especially for children, seems to be zinc, as well as calcium and iron. Supplementation must be provided if clinical tests confirm the need. Such recommendation is necessary due to the inconclusive results about the adequacy of these nutrients in ovo-lactovegetarian diets.

Among vegetarians in general, the diversification and quality of the diet and the intake of whole and organic foods must be particularly emphasized. It is also important to pay special attention to the children's development, pregnant and nursing women and adults in reproductive age who adhere to vegetarianism, especially veganism, because in these stages of life the body becomes particularly demanding of the nutrients cited above. Such precautions are necessary in order that vegetarians avoid assuming a radical process of "diet medicalization", almost nonsense for anyone seeking for a more natural form of nutrition.

Concerning the relationship between vegetarian diet and disease prevention, studies are also controversial.

A research⁸ shows that vegetarians and vegans present increased rates of homocysteine and lower rates of cholesterol, total triglycerides and LDL cholesterol, when compared to omnivorous individuals, clinical trends that are beneficial to the prevention of cardiovascular diseases.

A study⁷ assumes that vegan and ovo-lacto vegetarian diets are healthy, appropriate from the nutritional point of view and all-important in the treatment and prevention of certain diseases, such as heart diseases, dyslipidemias, high blood pressure, and diabetes type 2. Furthermore, vegetarians tend to have a lower body mass index and low incidence of some types of cancer, such as colorectal and pulmonary cancer.⁹⁻¹² Other studies argue that a balanced vegetarian diet may have positive effects on the prevention and treatment of some chronic kidney diseases.^{13,14}

Another study¹⁵ shows that there is no difference between the two groups (vegetarian and omnivorous) regarding the incidence of cancer and other causes of mortality of great impact, except for heart ischemic diseases, among which a moderate reduction in the mortality rates was found in vegetarians.

In general, studies on vegetarianism focus only on a disorder or disease or the deficiency or presence of a given nutrient. Therefore, such researches must be analyzed with caution, once they may conceal other inadequacies or deficiencies and/or disqualify or overvalue the proposal. Example is the multi-causality of diseases, often overlooked in researches of this kind.

Finally, one may question the comparative studies involving health-conscious vegetarians, or vegetarian individuals who tend to assume healthy habits and lifestyles, comparing them with omnivorous individuals who have unbalanced diets and lifestyles. Another varied combinations of compared groups can be found, and the results may be biased. Because of this problem, some researchers^{3,15} were attentive to the profile of surveys' participants and compared health-conscious vegetarians with health-conscious non-vegetarians and found no significant differences between these groups, as already mentioned.

Likewise, a study by Dourado et al.¹⁶ suggests that even if the ovo-lactovegetarians' diet is considered healthier because of the lower consumption of total fats, saturated fatty acids and cholesterol, when lifestyle and total calories intake are similar in both vegetarians and omnivorous individuals studied, there are no significant differences in the nutritional status and the anthropometric indicators of cardiovascular risk.

Other studies on omnivorous individuals suggest that the dietary patterns that emphasize an increased consumption of fruits and vegetables combined with a decreased consumption of meats also leads to a lower risk of cardiovascular diseases, as similarly found in studies on vegetarians.^{17,18}

Coming to the same conclusion, Fraser,¹⁹ when analyzing comparative studies on Californian and British vegetarians, found that one may expect a low incidence of diabetes and heart diseases in vegetarians due to the causal factors of these diseases and suggests that vegetarianism is not the only way to achieve the same result, which may also be achieved via diverse omnivorous diets and healthy lifestyles. This author proposes to look for more refined dietary categories other than "vegetarian and non-vegetarian", based on the fact that diets can be much more diversified and different than the "no meat" factor imposes.

In summary, the concept of meat-free (and healthy) diets can be manifold, depending on the country, the group of individuals and the quality and source of the foods included in the diet. Therefore, the individuals participating in the surveys and data should be examined with judicious care, with emphasis on the coherence of profile of compared groups.

Socio-environmental issues

An important issue in assessments of vegetarianism is the socio-environmental impacts of the industrial production and overconsumption of meat, supported by nutritional recommendations based on contemporary hyper-protein diets.

The most powerful arguments on the socio-environmental impacts of the modern livestock industry can be found on reports such as those of the Food and Agriculture Organization of the United Nations²⁰ and the Brazilian Vegetarian Society,²¹ which compiled data from diverse

national institutions. As negative effects of the extensive animal husbandry, we can mention: non-availability of grains destined to animal raising, also with emphasis on the world hunger issue; water contamination and silting of water bodies; desertification and the negative impact on biodiversity and native forests, as a consequence of deforestation of lands to create cattle pastures; degradation of vegetation and soils compaction, which is particularly expressive in the case of overgrazing and increased degradation and losses of soil nutrients because of the intensive cattle trampling and burnt-down trees; the reduced capacity of water percolation into the soil caused by compacting; and finally, contamination of products from animal source because of inappropriate use of veterinary products used in the treatment of animal diseases and the use of pesticides and chemical fertilizers in pastures.

A study²² warns of the environmental impacts caused by the greenhouse gas effect from emissions concentrated in the stage of foods production in the agrifood system and with greater impact on confined livestock. The study shows that the production of beef, pork and lamb consumes more energy (150% more) than the production of chicken and fish, and argues in favor of the shift to a predominantly ovo-lactovegetarian diet with occasional consumption of meat as a more effective means to reduce the “CO₂ footprint” than consuming local foods, for example. This proposal has been divulged in campaigns such as the “Meatless Monday.”^b

Further in-depth studies should be conducted on the relationship between diets rich in animal protein and diseases, such as kidney diseases, osteoporosis and cancer, to support a reduction of meats in the diet. The reduction of the total amount of animal protein in the diet is an implicit proposal of various traditional diets and culturally adjusted (and considered healthy). Such recommendation may help minimize the socio-environmental impacts of animal production. But it is still unclear what should be the ratio between the protein from animal and plant sources to keep both human health and the environment healthy.

Anyway, data relating to the socio-environmental impacts of animal production, even questionable with regard to its scientific accuracy, are of great concern and reiterate the already researched socio-environmental impacts of the modern agricultural system of foods production. This discussion tends to be biased once it does not deal with the actual determinant of this condition, which is exactly the inadequacy of this system. If we consider, for example, the socio-environmental impacts of the conventional soybean culture, we would have very similar results, as Azevedo²³ shows.

There is not doubt that the impact of the conventional animal production must be discussed and characterized as an important socio-environmental risk, but must be contextualized within

^b See the “Meatless Monday” movement. Available at: <http://www.segundasemcarne.com.br>. Access on 10 Jun 2013.

the range of the analysis of the effects of the dominant production system. Concomitantly, it is of vital importance to discuss the political and economic issues related to the distribution of land, income and wealth that shape the complex problem of hunger and food insecurity and that will not be solved with an increased supply of grains in the world or by adopting vegetarianism.

Beardsworth & Keil²⁴ also support this idea and argue that many products consumed by vegetarians contribute to the destruction of the environment and social destabilization caused by the production system.

Historical aspects and cultural issues

Although veganism is a practice that has been discussed more recently, vegetarianism already appears in many historical instances.

In the Hinduism's core belief of soul transmigration through a recurrent cycle of deaths and rebirths, to be released from this cycle one should purify the soul to achieve the reunification with one of the gods of the trinity, Brahma. The act of killing an animal and creating a liability – a karma – which will be assumed in future lives, associated with practices of non-violence and the belief that all human beings have a soul, are the fundamentals of vegetarianism among the Hindus, followers of Jainism and some kinds of Buddhists.²⁴

Groups of sage vegetarians existed since the classical age until the Hellenistic and imperial periods. In ancient Greece, Pythagoras proposed a doctrine that included the immortality of the soul and imposed vegetarianism to his followers to oppose the *status quo* of the time, which included the cult of the body and physical strength through food abundance and high meat consumption. Herodotus argued that vegetarian peoples developed the arts, sciences, physical and spiritual culture, while the carnivore peoples were warriors and cultivated qualities as bravery, courage and boldness.²⁵ In that period, supporters of vegetarianism questioned the strict social rules and deliberately sought solitude and isolation. Among the intellectuals of ancient Rome, some vegetarians stand out, such as Seneca, the poet Ovid, philosophers Plutarch and Porphyry, who proposed vegetarianism with moral bases.²⁶

During Renaissance, the opposition to the cruelty imposed on animals appears in the work of the Dutch humanist Erasmus of Rotterdam, the English philosopher Thomas More, the French writer and philosopher Michel de Montaigne and the Italian artist Leonardo da Vinci. When the Vegetarian Society was founded in England in 1847, the humanist proposal, combined with economic and health concerns, was officially taken on by other prominent persons such as Bernard Shaw and Leon Tolstoy. The vegetarianism of these intellectuals can be understood as a criticism to the moral and cultural concepts of their time.²⁴

To Grotanelli,²⁵ the refusal to shed the blood of animals has always been associated with cosmological doctrines and religions that are well defined and resistant to the common world vision and the political and cosmic orders accepted by the majority. Anthroposophy, the Rudolf Steiner's evolutionary philosophy, assumes vegetarianism as a dietary practice to be incorporated to the continuous spiritual development of human beings. Many saints, nuns, and idealists such as Gandhi and St. Teresa of Avila lived in prolonged fasts and opted for vegetarianism. They had in common the renunciation to worldly goods, the pursuit of a holy life and a full spiritual development. A study conducted in the 1990s highlights the vegetarians' tendency to assume altruistic values.²⁷ However, it should be emphasized that Adolf Hitler's vegetarianism or that of the highest Hindu hierarchies, which supported perverse caste systems, did not secure to their protagonists the altruism and holiness that have been attributed to some adherents to vegetarianism.

Despite said relation between generous and spiritually superior beings and vegetarianism, some racist theories^{c,28} have emphasized just the opposite, i.e., that meat consumption would produce privileged and smarter classes. This premise is implicit in the work by Wherry,²⁹ 1913, who argued that the reason of the British successful occupation of India was that few Englishmen – fed on diets rich in animal protein – could dominate and keep under control all Hindu – vegetarian people.

In this intriguing framework, vegetarianism has changed in recent times, resumed discussions involving the animal's welfare and pacifism and supported socio-environmental principles and gender issues. Some approaches suggest that the adoption of the vegetarian diet includes attitudes of friendliness and respect for living standards that currently have been incorporated by groups of ordinary individuals, besides the intellectual elite.

Blended with the concepts of the culture of self-restraint and refinement” of Beardsworth & Keil,²⁴ of “civilizing of appetite” of Mennel,³⁰ of the “ideology of care opposing to the ideology of exploitation” of Fiddes,³¹ the anthropocentric notions of dominance of man over nature begin to be questioned, resuming the moral fight for the animals' rights and highlighting the concerns of the impact of animal farming on the environment and the development of new ethical values in society. All these issues open new dimensions to the sociological and anthropological studies on vegetarianism.

Beardsworth & Keil²⁴ mention a form of asepsis embodied in vegetarianism that prevents contamination by meat, considered in subjective terms “less natural and pure” than vegetables. In addition, sociologists point out that the contemporary vegetarianism keeps its questioning character and follow the old way of keeping some distance from individuals and groups with

c The approach involving vegetarianism and racism will not be discussed in this article and can be seen in Bailey.²⁸

whom they have any sort of antagonism or resentment. It can also be seen as a way of joining an innovative movement that breaks up outdated patterns or paradigms or a way to strengthen the sacred or essential values of a given group.

Diverse feminist approaches, in addition to gender equality and the linkage between women and animals oppression, also mention equality and commonality^d between the animal and human kingdoms. From this relationship, entirely opposite approaches emerged. Carol Adams^e, for example, defends the position of “vegan feminist”, considering that humans, for being an animal among many others, cannot impose a hierarchy of consumption upon this relationship, which refers to a condition of reproductive enslavement of female producers of milk and eggs. On this perspective that questions the ethics of dominance of men over animals, the speciesism or discrimination against some beings, also discussed by the Australian activist and philosopher Peter Singer, humans should not use their power to kill and eat other animals. This idea permeates the notion of Bailey’s²⁸ “ethical vegetarianism”, who defends the cause and rights of animals (p. 49).

In the concepts of a new moral order, vegetarianism is analyzed as a challenge to male power, archetypically symbolized by physical strength, hunting, warmongering and consumption of foods that stimulate virility, such as meat.³² By assuming that meat has the connotation of male food, in a male chauvinist society that symbolizes woman as something to be consumed, the man (and the woman) who avoids eating meat is seen as a failure in their heterosexual condition.²⁸ According to Adams,³² adhering to vegetarianism, especially women, would be a way of destabilizing the patriarchal consumption and challenge male dominance. The author also makes some historical mentions between feminism, vegetarianism and lesbianism.

Although this same author considers vegetarianism almost as an ethical requirement to assume feminism, other feminists have different positions. Eating meat would just be a way of “challenging sexist stereotypes”, keeping equality between men and women and denying the idea of a feminine, fragile and delicate woman who chooses a salad instead of a steak²⁸ (p. 45).

Bailey²⁸ presents the discussion by Kathryn Paxton George³³, who criticizes the absolutism of the vegetarian feminism for being elitist, ethnocentric and discriminatory and for ignoring that

d A more simplistic approach of commonality based on the different physiological structure of animals argue that human beings are considered closer to herbivores in their physiology. According to this view, humans would be potentially vegetarian and not carnivore. Evolutionary premises, also based on physiology, hold that the development of the human brain was only possible thanks to the increase of meat protein in the diet.

e Available in an interview by Tom Tyle: “An Animal Manifesto. Gender, Identity, and Vegan-Feminism the Twenty-First Century. Carol J. Adams Interviewed by Tom Tyle.” Available at: <http://www.cyberchimp.co.uk/research/manifesto.htm>. Access in 12 May 2013.

not all women live in societies where appropriate food supply, food availability and choices are the rule. Being vegetarian to be feminist may be a burden in some poor communities, even if George had not considered that in most of these places, unlike the USA, for example, diets tend to be predominantly vegetarian because of the non-accessibility to animal protein or by cultural choice.²⁸

Plumwood³⁴ accepts the same egalitarian premise, but does not grant special rights either to humans or animals and does not advocate meat abstinence. The eco-philosopher proposes the breaking up of the boundaries between the human and animal kingdoms, assuming that both belong to the second category and are subject to the same laws and forces. Humans would just be one among many others species and, according to this idea, they can either eat other animals or be the food of other animals. In other words, humans are part of, without privileges and impartialities, the foods chain. By choosing not to eat meat and protecting the right of the animals, as Adams advocates, humans would be taking a position of privilege and evolutionary superiority over carnivores and predators. Plumwood³⁴ defends proposals aimed to the promotion of the animals' well-being, but argues that vegetarianism goes against the major feminist goal, which is to embrace merger, incorporation and equality. By supporting the animals' survival, vegetarianism assumes a "moral dualism that endorses reductionist assumptions with respect to food, denies the evolutionary and ethical continuity and is incompatible with the ecological approaches and the full equality of species"³⁴ (p. 292).

Rudy³⁵ explains that Plumwood's view leads to the understanding of the interdependence of humans with other animals and with nature and its mutual vulnerability. "This is a call for compassion based not on the principles of veganism, but on the communion with all forms of lives."³⁵ (p. 31).

Critics of Plumwood's view argue that human beings can control nature and animals and have free will. Such account of self-determination would be, according to the philosopher, the framework that supports and justifies the dominance and control of humans over animals and nature and the consequent destruction of the planet.³⁵

Rudy³⁵ also shows as Donna Haraway's work contributes to the studies on human-animal relationship. According to her, it is not possible for humans to withdraw from the inexorable cultural determinism that led the human beings to hunt, domesticate animals and prepare meats in culturally different ways. Thus, human beings see nature through the powerful lens of culture, and we could be part of the food chains based on nature, as suggested by Plumwood. Haraway also argues that many species are sacrificed in any kind of dietary practice and eating and killing cannot be hygienically separated. Thus, neither

vegetarians nor carnivores are completely natural and there are no ethical arguments that defeat established cultural practices. Nonetheless, it is noteworthy that Haraway, as Plumwood, does not support irresponsible ways of producing and killing animals, rejects the meat industry complex and is favorable to modern animal farming systems.³⁵

Final considerations

The complexity of the discussions endorses the relevance of the theme and the importance of promoting academic studies to deal with the diverse premises involving vegetarianism. In general, we can say that the great difficulty in analyzing social groups – in this case, vegetarians or feminists – is to consider the differences that exist among and within them. Examining the groups as homogeneous and boundary-free blocks suggest a methodological monism that case studies may help pluralize.

Contributions of the social sciences and philosophy come to elucidate vegetarianism in the light of contemporary thinking. This dimension brings new challenges to the studies and leaves vegetarianism as a complex option to humans today, which must be understood in order to expand the reductionist parameters of nutritional appropriateness that still underlie the nutrition science.

Surely, the cultural perspective does not allow standardizing the dietary options and ends up discussing moral and ethical values and put feminism, anthropocentrism, sexism and the culture-nature relationship back on the agenda, which are still challenging the philosophical thinking and social studies.

It seems clear that adherence to vegetarianism entails very intimate decisions that do not deserve moral judgments and should not be imposed or standardized, regardless the fact that the impacts of these practices are far-reaching and goes beyond the individual space. Even if behind the defense of the animals' well-being – or any other minority – is the desire of promoting civilized attitudes, what cannot be overlooked is the respect for the diversity of thought and human actions. Vegetarianism – or any other kind of activism and eating practice – should not be used to cause discrimination or isolation.

Without the pretense of smoothing over the controversies or defending a specific point of view, it is possible to minimize the divergences between the ethical aspirations and the cultural and socio-environmental challenges that are implicit in vegetarianism. What seems likely to be changed without causing a dispute that might become worthless is the issue involving environmental irresponsibility and the unethical industrial system of animal farming, besides the high consumption of meat in contemporary diets. The shift could begin with the support to sustainable farming

systems, a first step toward an ideology of welfare and care of animals, against their exploitation and against the wickedness of the prevailing farming systems. Since the sustainable systems neither are intended to, nor can achieve high animal yields, one of the consequences of this choice would inevitably be a change in meat supply and in the daily consumption pattern, incorporated as a habit, convenience or unconsciousness. This attitude implies a position of socio-environmental responsibility and civility with positive impacts on human health and the planet health.

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