

Discrimination and Bias in the Vegan Ideal

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Abstract *The vegan ideal is entailed by arguments for ethical veganism based on traditional moral theory (rights and/or utilitarianism) extended to animals. The most ideal lifestyle would abjure the use of animals or their products for food since animals suffer and have rights not to be killed. The ideal is discriminatory because the arguments presuppose a "male physiological norm" that gives a privileged position to adult, middle-class males living in industrialized countries. Women, children, the aged, and others have substantially different nutritional requirements and would bear a greater burden on vegetarian and vegan diets with respect to health and economic risks, than do these males. The poor and many persons in Third World nations live in circumstances that make the obligatory adoption of such diets, where they are not already a matter of sheer necessity, even more risky.*

Traditional moral theorists (such as Evelyn Pluhar and Gary Varner whose essays appear in this issue) argue that those who are at risk would be excused from a duty to attain the virtue associated with ethical vegan lifestyles. The routine excuse of nearly everyone in the world besides adult, middle-class males in industrialized countries suggests bias in the perspective from which traditional arguments for animal rights and (utilitarian) animal welfare are formulated.

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Introduction

In his book, *Rachel and Her Children*, Jonathan Kozol (1988) interviews the poor and homeless of New York City. Mr. Alessandro, an Italian man, has lost his wife, his job, his home, and 45 pounds from hunger. He lives with his 73-year-old mother and his three children in a single room in the Martinique Hotel (pp. 54–59). Every day Mr. Alessandro looks for work, and he looks for permanent housing on a welfare allowance too small ever to give him hope of leaving the hotel. His food stamp allowance for himself and the three children is \$50 per month (p. 60). During the interview Kozol realizes that the children are quite literally starving. He gives

the man \$20 to buy food. There is no local supermarket, only a convenience store. Mr. Alessandro brings back “a box of Kellogg’s Special K, a gallon of juice, a half gallon of milk, a loaf of bread, a dozen eggs, a package of sausages, a roll of toilet paper” (p. 59). Rachel and her children live in the same hotel in a similar room:

When we moved here I was forced to sign a paper. Everybody has to do it. It’s a promise that you will not cook inside your room. So we lived on cold bologna (p. 66).

Plenty of children livin’ here on nothin’ but bread and bologna. Peanut butter. Jelly. Drinkin’ water. You buy milk. I bought one gallon yesterday. Got *this* much left. They drink it fast. Orange juice, they drink it fast. End up drinkin’ Kool Aid (p. 68).

These are America’s urban poor, 700,000 of whom are children living in New York City alone (p. 5). Most of them live in households headed by women. They do not have a healthy diet. Their parents cannot cook fresh vegetables for them, even if they could buy them. Although many hotel residents break the rules and use hotplates, Kozol attests to the difficulty of cooking any kind of meal in these conditions. Many hotel residents do not even have refrigerators to keep food from spoiling.

Did Mr. Alessandro do something wrong when he brought meat, eggs, and milk home for his children to eat? My colleagues arguing on the basis of traditional moral theory (rights and utilitarianism) would say yes, but these people are *excused*. They cannot help doing these wrongful things (e.g., Regan, 1983; Pluhar, 1992). We aren’t supposed to blame them but forgive them.

I object to the attitude that all these people are by circumstance and by physiology, as I shall later show, morally deficient. The vegan ideal, the idea that people *ought* to abstain from eating not only meat but all animal by-products, is the standard against which they are measured and fail. In this paper I will show that the ideal itself is discriminatory in that it supposes that a single definable class of persons is better than—more *virtuous* than—all others. The class of morally superior people is defined by its physiology and by its power.¹

What is “vegan ideal”? As I am referring to it here, it is a vision of oneself to which some persons think we should *all* aspire. Those who attain the ideal or attempt to attain it come to possess an admirable character trait or a *virtue*. Regan (1983) and Singer (1975) argue explicitly for a rule of moral vegetarianism based on the interests of animals in not suffering pain and death. Those who follow the rule are moral, those who do not are doing something immoral. By direct implication, persons who consistently follow such rules are said to be virtuous; those who ignore or fail to obey valid moral rules are said to be vicious. Thus, if Regan and Singer are correct, virtuous persons would be vegetarians at least, and vegans ideally since vegans eat no animal flesh or products. Thus, Regan and Singer endorse the “vegan ideal.”² Now, this ideal in their view is *morally required* of good persons. It is not simply something a good person would do as a charitable act of kindness. Charity is not required in any strong sense. In their view it is

a matter of justice to pursue the vegan ideal. Following a simple moral rule that forbids the killing of animals who pose no threat to us is required for those who aspire to be truly *good persons*—persons of integrity, virtue, and high moral character—persons who would be *just* as well as charitable.

The vegan or vegetarian ideal did not arise *ex nihilo*, but instead has complex historical roots in many different religions, morality, and even in the origins of agriculture itself. For instance, when related to dietary practices, the improvement of the soul and especially the promotion of rationalistic and mystical knowledge has been thought to be served by restrictions on meat consumption. In fact, all major world religions have vegetarian sects within them. The more exquisitely spiritualistic the religious order, the more likely the monastic male is to exist on a limited diet of bread and water—a vegan ideal. In fact, bread and wine (both all-plant foods) are still the celebrated Christian sacred symbols of life and spirit. Likewise, the idealization of vegan and vegetarian food practice is linked to class distinctions and the hierarchical search for power. It has been used to separate men from men, women from men, the poor from the rich, the “dregs” of society from the “highest and most holy.” While these themes could and do take up whole books, my aim here, as in the past (George, 1990, 1992, 1994), is simply to show that the “vegan ideal” is not an ideal for all. It may be adopted as a personal lifestyle choice or a political stratagem, but it cannot be a *moral* ideal applicable to all regardless of age, sex, class, ethnicity, or culture. To argue for such a universal application would be discriminatory and presuppose a bias in favor of adult, middle-class males living in high-tech societies—the group with the most power in our world. The appropriateness of vegan or vegetarian lifestyles is *relative* to individual and cultural circumstance. It is *not universal*.

In arguing for vegetarian or vegan diets on traditional moral grounds, philosophers suppose that all humans have the same *bodies* and that the burdens are relatively evenly distributed—we are all pretty much the same physiologically and differences among us may safely be ignored as *morally irrelevant*. Both assumptions are false. Women and men are not the same physiologically. Children and adults are not the same. The aged and the young are not the same. Indeed, in at least a few respects relevant to food practice, races and ethnicities are not the same. The empirical evidence for this has been a recent topic of debate in this journal (see Pluhar, 1992; George 1990, 1992 in addition to the articles in this issue). What all my opponents center on is *risk*. But risk is not the primary issue.³ What is at issue is this: From whose perspective shall we assess risk? From the perspective of predominantly white, adult Western males? Or from the perspective of Third World women or their children? Shall we ask these questions from the perspective of the powerful or the vulnerable? The answer to such questions depends upon whom you think ethics is meant to serve. If ethics is meant to protect the rich and the powerful, their rights and privileges, then perhaps you will not agree with my arguments in this paper. But I believe that ethics must consider the concerns of the vulnerable and that some attempt must be made to draft an ethics which accounts for and concerns itself with the perspectives of the very differently situated persons and animals with whom we share the earth. Only in that way will ethics truly be for everyone.

Discrimination in the Vegan Ideal

It is understandable that my critics have focused on refuting my empirical claims (Pluhar, 1992) or on assessing relative risk (Varner, this issue). In prior papers published in this journal, I have cited several studies showing differential risks for women, infants and children, the aged, those of other races, classes, and ethnicities, among others. But the main idea in citing some of the risks of vegan and vegetarian diets is to show that the ethical ideal actually *discriminates* against these classes of persons. The burden of being a vegan, even in our society, is greater for many of these persons than it is for adult males. In fact, the duty of moral vegetarianism imposes *systematically* greater burdens on these classes than it does on the adult male class. These burdens have been recounted in George (1990, 1992) and are further elaborated in George (1994). The primary concerns are with the adequacy of calcium and iron as well as for certain vitamins such as D and B₁₂.⁴

This discrimination occurs because the philosophers who argue for ethical vegetarianism have (probably unwittingly) assumed what I have termed a “male physiological norm.” They have assumed that all human bodies are generally *interchangeable* with respect to dietary requirements. In other words, they assume that all persons, no matter what age, sex, race or ethnicity could easily become vegans or vegetarians by following a few simple dietary rules and perhaps taking a few supplements (see Varner, this issue). Even though the nutrition literature has for decades reported the empirical differences in dietary requirements at different stages of life and across sexes (as reflected in the RDAs, for instance), those arguing for the vegan ideal probably did not notice that they were basing their arguments on a false premise—that we are all the same.⁵ But we are not all the same. In fact, broadly speaking, the classes I mention all have significantly different dietary requirements. So now, if we want to make moral judgments about food practice, about what we *should* eat and why, from which of these perspectives shall we begin? The male? The female? The infant? The adolescent? Who is our ideal human? Why choose one and not the other? The answers to these questions go beyond the scope of this paper, but it seems clear that we cannot *arbitrarily* name any single class. In general, if a moral rule systematically places more burdens on some classes than others, this is a good reason to think the rule is discriminatory. The vegan ideal does place systematically greater burdens on women, children, the elderly and others named above. Some philosophers, notably Rawls (1971), have argued that distributions of benefits and burdens should be arranged to benefit the worst-off class, not the best. And, as I argue in George (1994), there are several reasons to think that even the benefits of vegan and/or vegetarian diets are disproportionately distributed towards males.⁶ Thus, it is simply *unfair* to require women, children, the aged, those of other ethnicities, races, and economic classes to live as if they were adult males in high-tech societies.

Exceptions to the Rule

To be fair to Pluhar, Regan, Singer, Varner and the others defending the traditional moral theories, none of them would say that anyone who needs milk,

eggs, or meat should abstain anyway. But all of them argue that these persons will be *exceptional cases*, which can be interpreted to mean falling outside the norm. Even Regan's (1983) abolitionist animal rights position allows certain persons to consume meat as exceptional cases (p. 333). He says that any humans having a strong welfare-interest in consuming meat or animal products would be *excused* from a duty to be vegetarians. But Regan clearly thinks most persons do not or would not (ideally) fall into such a category. He can only assume this if he also assumes that there is a paradigm "normal" human physiology. That paradigm "normal" human is an herbivore in a descriptive sense, and so is able to be a vegan in a moral sense. But as I have argued in George (1990, 1992, 1994), adult males living in western societies between the ages of 20 and 50 are best suited physiologically to this diet and description.⁷ All others are excused.

The Problem with Excuses

If women, and infants, and children, and the elderly, and those who live almost everywhere else besides western societies are *routinely* excused for doing what would normally be considered wrong, in practice this relegates them to a *moral underclass* of beings who, because of their natures or cultures, are not capable of being fully moral. They are *physiologically* barred from doing the "right thing." This is not only ridiculous, it is irrational. When nearly everyone on earth, except the most privileged class of humans, is excused from living the most virtuous life on the grounds that their natures or their cultures bar them from it, we should suspect that the moral tradition itself has been set up to serve that class and that class alone. We should suspect that we need a better ethical theory.

We live in a global community. We need moral guidance that does not dissolve into abject cultural relativism. Even if moral veganism were required of people in western, high-tech societies (and I believe it is not *as a general rule*), this rule would be only a provisional duty. It would be *relative* to our culture alone. But we need to know how to treat humans and animals all over the world. As it is now, the vegan ideal would discriminate against other socioeconomic classes: there is ethnocentric bias in the vegan ideal; it presupposes power; it entwines power with a false virtue. Why? Because the moral command to a vegan diet presupposes a wealthy society and an industrialized culture with open access to information and a wide variety of food, education, and medical care. These privileges form a web within which a vegan lifestyle is a *healthy alternative*. Vegans must supplement their diets with certain vitamins, especially B₁₂ and D, and infants, children, women and others may need supplementation for certain minerals, especially calcium and iron (Dwyer, 1991).

The continued understanding of differences in nutritional requirements among women and men at various stages of life and of various ethnic/genetic ancestry presupposes a sophisticated research scientific and industrial complex. It presupposes the existence of vitamin and mineral factories with the ability to synthesize supplements without using animal products. For that, research biochemistry and chemistry labs are necessary. Imparting the necessary information about how to

be healthy on vegan diets presupposes a population of lay persons who are very well educated by world standards; as an example, consider the last section of *The New Laurel's Kitchen* (Robertson et al., 1986). This renowned vegetarian cookbook gives extremely detailed information on dietary concerns.⁸ To understand it, the reader must have some knowledge of basic chemistry and biology, and an advanced (by world standards) reading level. Most persons in western countries take for granted this kind of knowledge and/or the resources to find it. Nevertheless, many western persons are still relatively “illiterate” about science and medicine, despite the fact that health messages are delivered daily on television and through the news media. The vast industry that deals in health quackery is testament to the difficulty in educating the public, too (Herbert, 1980). Ironically, as well, the better educated people become, studies show, the more likely they are to overuse and even abuse supplements to the point of toxicity (McDonald, 1986).

If moral vegans wish to argue for a *universal* ideal as opposed to a *relative* one, they *must* accept the assumptions that attend it—that our western way of life is best and being an adult male in that culture is best. On the other hand, they cannot accept these assumptions and remain consistent in their moral beliefs. The argument for moral veganism is logically founded on an even more fundamental moral principle—the principle of equality. People whose bodies differ from our own may not be arbitrarily required to bear greater or even the same burdens we do. Likewise, we cannot simply assume that our culture is *morally* better than those in less developed countries because their practices differ from ours. Having our way of life depends on an industrialized complex that has implications for culture, the environment and the expenditure of labor and resources, i.e. wealth.

Should we think that Mr. Alessandro or Rachel and her children are to be forgiven and excused for doing something wrong? Or should we say that they have done the *right* thing in their contexts? What about all those people who live in environments that are rural, migratory, marginal, tropical, arctic, alpine, arid, oceanic, isolated or otherwise non-industrialized and largely non-arable? Shall we *routinely* excuse them, too, just as women, children, the aged and others would be routinely excused from attempting to attain the vegan ideal? Shouldn't we say instead that there are honorable and virtuous ways for them to live, too? If the Inuit in the Arctic must hunt to live, are they inferior to us simply because we are able to plant seeds and farm? Again, the routine excuse of nearly everyone in the world except western young adult males from “true morality” suggests that there is something wrong with the morality, not with the other persons. Why should we think that our culture—with its attitude of dominating nature, of manipulating nature for human ends—is the only one capable of a moral relationship to food animals? We might wonder, instead, whether our culture is not on the wrong track entirely.

Notes

1. Those interested in a more complete, theoretical explanation of my position should read George (1993), since what follows here emphasizes the discriminatory nature of the vegan ideal and its origins in ancient hierarchies of power.

2. Singer's view is less absolute than Regan's because Singer is a utilitarian. If it could be shown that more *aggregate* harm would result from universal vegan diets, then he could admit some use of animal products and even some meat-eating. His view still fails on the same assumptions as Regan's, however, as will later become apparent.

3. Risk is minimized in our society because of improved health care, education, and an enormously varied and *preserved* food supply. Varner's arguments (this issue) lose much of their force if we consider, as I have always done, a global context for our ethics. He confines his "defense" to western, high-tech societies by assuming the presence of adequate food supplies, vitamin supplements, medical advice, and education. If the vegan ideal is truly an ideal for all, he *must* claim that it should be adopted by all persons everywhere. He could defend this by saying that we must, of course, make all these amenities available to them so that they can achieve the ideal, but this, as we shall later see, assumes that all those people should be living as we live, that in order to be truly ethical they must live *our* kind of life. With that we must also assume that our lifestyle, which includes all of the presuppositions necessary to achieve the vegan ideal, is the only truly moral one. But doesn't this begin to sound rather arrogant?

4. An abbreviated version of the conclusions of the studies cited in George (1993) follows here:

All vegans must supplement their diets with a bioavailable source of vitamin B₁₂ (Herbert, 1984, 1988). Vegan infants and toddlers "may fail to thrive because their diets are too low in energy and too high in bulk" and may lack sufficient quantities of vitamins D and B₁₂, iron, calcium, and zinc (Dwyer, 1991, p. 76). Adolescent girls who consume diets low in calcium have been shown to have lower bone density later in life and so have a greater risk of osteoporosis (Sandler et al., 1985; Peacock, 1991). Continued inadequacy of calcium in the diet is thought to be a major contributing factor to osteoporosis (Matkovic et al., 1979; Rodysill, 1987; Dawson-Hughes, 1991), and milk is still recommended as the best source of calcium (Allen, 1986, p. 7). Lactating vegans may have reduced amounts of vitamins D and B₁₂, and supplementation of these nutrients is recommended not only to protect the woman's health but to reduce risk to the nursing infant (Dwyer, 1991, pp. 75-76). Gestating vegan women may be at greater nutritional risk for "inadequate weight gain, low protein intake, inadequate iron intake with resulting anemias, low calcium, zinc, and vitamin B₁₂ intakes, and in some instances low vitamin D, zinc and iodide intakes" (Dwyer, 1991, pp. 75-76). Because the health of the fetus depends upon the health of the individual woman, these factors may pose a risk to the fetus as well. Even lactoovovegetarian diets pose some risks. Greater incidence and severity of iron deficiency in women and children occurs in areas where education concerning adequate intakes of iron and B₁₂ is not available and/or where the food supply is inadequate or undependable. Scrimshaw (1991) attributes "poor absorption from the predominantly vegetarian diets of most people in developing countries [as] a primary cause of iron deficiency" (p. 48). Scrimshaw (1991) also notes that "two-thirds of children and women of childbearing age in most developing nations are estimated to suffer from iron deficiency.... In the U.S., Japan, and Europe, between 10 and 20 percent of women of childbearing age are anemic" (p. 48). Iron is now known to play an important role in the physiological development and maintenance of the central nervous system, organ function, and immune function (Dallman, 1989). Hercberg and Galan (1989) note that iron deficiency (a state preceding anemia) has "effects on skeletal muscle, cardiac muscle, brain tissue, liver tissue, gastrointestinal tractus [sic], body temperature relation, [and] DNA synthesis [because] iron participates in a wide variety of biochemical processes. . . . The key liabilities of tissue iron deficiency, even at a mild degree relate to decrease in intellectual performance, and in physical capacity during exercise, alteration of temperature regulation, [and] immune function" (emphasis added, p. 63). Dallman (1989) notes "there is convincing evidence of impaired psychomotor development and cognitive performance" in iron-deficient infants and children (p. 367), and Scrimshaw (1991, p. 50) cites studies that show that iron deficiency anemia has been associated with irreversible neurological impairment in young children (see also Parks and Wharton, 1989). Thus, the effects of diets without adequate available sources of iron in infancy and

young childhood cannot be compensated for by later improvements and/or later supplementation. In addition, "maternal mortality, prenatal and perinatal infant death and prematurity are significantly increased" for iron deficiency in pregnancy (Scrimshaw, 1991, p. 50; see also Dallman 1989). A significant number of women become iron deficient during pregnancy even when they are not vegetarians (Bothwell et al., 1989), and nutritionists have expressed a concern that vegetarian diets may not provide adequate iron (Dwyer, 1991). Milk and other dairy products are poor sources of iron, whereas heme-iron from beef is available in the highest quantities (Scrimshaw, 1991, p. 48). At menopause, many women face a significant threat of bone loss without absorbable calcium. The elderly in general also have different requirements for several nutrients (Munro et al., 1987). Males have consistently higher iron levels than females and suffer much less risk of osteoporosis in late middle and old age. Black women have a lower incidence of osteoporosis; Japanese women are vulnerable to osteoporosis, and it has been suggested that these and other differences are associated with inherited differences in ability to build skeletal mass (see Pollitzer and Anderson, 1989). Soysa (1987) reviewed the nutritional status of women in developing countries and comments that the FAO/WHO recommended requirements for adult women refer largely to the industrialized countries and "would not be relevant for women in the developing world" (p. 17). Deficiencies in diet are associated with poverty, discrimination against women, inadequate kcal intake, anorexia secondary to parasitic infection and stress from other infections, plus heavy physical workloads (p. 17). In India, a largely vegetarian society, life expectancy is 52.1 years for females and 52.5 years for males (United Nations, 1991). Sharma et al. (1991), in a study of pregnant women and their newborns in Udaipur, India, conclude that "vegetarianism may be one of the important causative factor [sic] of anaemia in pregnant women in this region and their newborn children" (p. 13).

5. In George (1994), I offer a brief speculation on the reason for this. Philosophers are used to thinking in terms of the equality of persons. Each person is to be accorded equal respect and equal treatment. We are supposed to be *indifferent to the differences* between us. This is itself a moral imperative of equity. Thus, it is wrong to consider the race or sex of a person when hiring for a job, admitting a person to a program of study, or treating a person for an illness. This is a moral norm. It prescribes how we should treat persons. I speculate that an indifference to differences has been carried across unwittingly. Philosophers have supposed that women, men, children, and others are the same and *deserve* to be treated the same, but they have not noticed that the differences here are morally relevant. They have substituted a physiological norm (which is *descriptive*) for a moral norm (which is *prescriptive*).

6. Vegetarian diets have become popular lately, not on moral grounds, but on health grounds. Many persons are apparently adopting vegetarian and semi-vegetarian lifestyles in the belief that they will avoid heart disease and cancer. But the trade-off in risks and benefits is different for women and children. For instance, adult women are already at reduced risk of heart disease because of the apparent protection offered by estrogen until menopause. They are less likely to benefit from vegan diets and those women who drink very little milk or do not drink milk at all may suffer more osteoporosis than their milk-drinking counterparts (Sandler et al., 1985). Again, this means that women are carrying a greater burden in being *morally required* to be vegans.

7. To generalize this for both sexes, all ages, races, ethnicities, and classes ignores any and all differences of biological constitution, especially those which are genetically inherited. In contrast, scientists are beginning to find that these inherited differences in metabolism are correlated with health and well-being or failure to thrive in alternative environments and circumstances. Real people are not interchangeable with a presupposed "ideal human."

8. Incidentally, the authors prefer to recommend against the adoption of vegan diets for infants and children (Robertson et al., 1986, pp. 417-418).

References

- Allen, Lindsay H. 1986. Calcium and osteoporosis. *Nutrition Today* 21: 6-10.

- Bothwell, T. H., R. D. Baynes, B. J. MacFarlane, and A. P. MacPhail. 1989. Nutritional Iron Requirements and Food Iron Absorption. *Journal of Internal Medicine* 226: 357–365 (review of 72 sources).
- Dallman, P. R. 1989. Iron Deficiency: Does It Matter? *Journal of Internal Medicine* 226: 367–372 (review of 31 sources).
- Dawson-Hughes, Bess. 1991. Calcium Supplementation and Bone Loss: A Review of Controlled Clinical Trials. *American Journal of Clinical Nutrition* 54 (Suppl.): 274S–280S (review of 66 studies).
- Dwyer, Johanna T. 1991. Nutritional Consequences of Vegetarianism. *Annual Reviews in Nutrition* 11: 61–91 (review of 135 studies).
- George, Kathryn Paxton. 1990. So Animal a Human,.Or the Moral Relevance of Being an Omnivore. *Journal of Agricultural Ethics* 1: 175–192.
- _____. 1992. The Use and Abuse of Scientific Studies. *Journal of Agricultural and Environmental Ethics* 5: 217–233.
- _____. 1994. Should Feminists Be Vegetarians? *Signs: Journal of Women and Culture* 19: 405–434.
- Herbert, Victor. 1980. *Nutrition Cultism*. Philadelphia, PA: George F. Stickley Co.
- _____. 1984. Vitamin B-12. In *Nutrition Reviews' Present Knowledge in Nutrition*, 5th ed. Washington, DC: The Nutrition Foundation, Inc. (76 sources). pp. 347–364.
- _____. 1988. Vitamin B-12: Plant Sources, Requirements, Assay. *American Journal of Clinical Nutrition* 48: 852–858.
- Herberg, S., and P. Galan. 1989. Biochemical Effects of Iron Deprivation. *Acta Paediatrica Scandinavica* 361 (Suppl.): 63–70 (review of 45 sources).
- Kozol, Jonathan. 1988. *Rachel and Her Children: Homeless Families in America*. New York, NY: Crown.
- Matkovic, Velimir K., K. Kostial, I. Simonovic, R. Buzina, A. Broderac, and B. E. C. Nordin. 1979. Bone Status and Fracture Rates in Two Regions of Yugoslavia. *American Journal of Clinical Nutrition* 32: 540–549.
- McDonald, Janet T. 1986. Vitamin and Mineral Supplement Use in the United States. *Clinical Nutrition* 5: 27–33 (review of 57 studies).
- Munro, Hamish N., Paulo M. Suter, and Robert M. Russell. 1987. Nutritional Requirements of the Elderly. *Annual Reviews in Nutrition* 7: 23–49 (review of 171 sources).
- Parks, Y. A., and B. A. Wharton. 1989. Iron Deficiency and the Brain. *Acta Paediatrica Scandinavica* 361 (Suppl.): 71–77 (review of 25 sources).
- Peacock, Munro. 1991. Calcium Absorption Efficiency and Calcium Requirements in Children and Adolescents. *American Journal of Clinical Nutrition* 54 (Suppl.): 261S–265S (review of 40 studies).
- Pluhar, Evelyn. 1992. Who Can Be Morally Obligated to Be a Vegetarian?" *Journal of Agricultural and Environmental Ethics* 5: 189–216.
- Pollitzer, William S., and John J. B. Anderson. 1989. Ethnic and Genetic Differences in Bone Mass: A Review with a Hereditary vs. Environmental Perspective. *American Journal of Clinical Nutrition* 50: 1244–1259 (review of 90 sources).

- Rawls, John. 1971. *A Theory of Justice*. Cambridge, MA: Harvard University Press.
- Regan, Tom. 1983. *The Case for Animal Rights*. Berkeley, CA: University of California Press.
- Robertson, Laurel, Carol Flinders, and Brian Ruppenthal. 1986. *The New Laurel's Kitchen*. Berkeley, CA: Ten Speed Press.
- Rodysill, Kirk J. 1987. Postmenopausal Osteoporosis—Intervention and Prophylaxis. A Review. *Journal of Chronic Diseases* 40(8): 743–760 (review of 178 sources).
- Sandler, Rivka Black, Charles W. Slemenda, Ronald E. LaPorte, Jane A. Cauley, Margaret M. Schramm, Mary Lynn Barresi, and Andrea M. Kriska. 1985. Postmenopausal Bone Density and Milk Consumption in Childhood and Adolescence. *American Journal of Clinical Nutrition* 42: 270–274.
- Scrimshaw, Nevin S. 1991. Iron Deficiency. *Scientific American* (October): 46–52.
- Sharma, D. C., V. Pendse, K. Sahay, and B. L. Soni. 1991. The Changing Pattern of Maternal and Neonatal Anaemia at Udaipur during Two Decades in Relation to Poverty, Parity, Prematurity, and Vegetarianism. *Asia Oceania Journal of Obstetrics and Gynecology* 17: 13–17.
- Singer, Peter. 1975. *Animal Liberation*. New York, NY: Avon.
- Soysa, Priyani. 1987. Women and Nutrition. *World Review of Nutrition and Dietetics* 52: 1–70 (review of 54 sources).
- United Nations. 1991. *1990 Demographic Yearbook (Annuaire Demographique)*. New York, NY: United Nations, Department of International Economic and Social Affairs, Statistical Office.