

Nutritional narratives: Cultural and communications perspectives on plant-based diets

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Abstract

This paper responds to a range of popular materials circulating in the public sphere asserting a plant-based (PB) diet is of benefit to humans and a protection against many chronic diseases. Although directed at a lay audience, books such as *The China Study* (Campbell & Campbell) are based upon extensive academic research, and highlight multiple health, environmental and social advantages of PB diets over traditional western diets.

Arguments advocating PB nutrition, however, generally struggle to achieve traction in the public sphere. Narratives around PB food choices, and difficulties in shifting mainstream eating patterns, reflect the cultural symbolism attached to food, and the significance of food as an economic commodity. Moreover, the ‘expert’ status of the medical establishment privileges medical interventions over preventative PB approaches. This paper applies Cultural Studies and Health Communications perspectives to investigate bottlenecks preventing the adoption of a PD diet by a wider cross-section of the population.

Keywords: Environment and science (climate change, sustainability, science communication, etc.), Health, Audience Studies

Introduction

This paper responds to a range of popular health-focused materials circulating in the public sphere asserting that a plant-based (PB) diet is of benefit to humans and a protection against many common western illnesses. One such book is a cross-over text for a general audience, first-authored by a United States academic in receipt of National Institutes of Health research funding, Professor Colin T. Campbell. His argument uses a range of data to promote the superiority of the traditional, plant-based diet, over the ubiquitous standard western diet. *The China Study* (Campbell and Campbell, 2004) is one of a significant number of books celebrating plant-based nutrition (see e.g. *Your life in your hands*, Plant, 2007, Fuhrman, 2011).

Although directed at a lay audience, *The China Study* is based upon extensive peer-reviewed academic research. While Campbell's focus was on the health advantages of following a PB diet, other researchers have extended the analysis to draw attention to a range of additional benefits associated with a shift to PB diets. These include more sustainable food production practices and the ethical treatment of animals. However, while there is now compelling evidence supporting the value of PB diets, arguments around PB nutrition generally struggle to achieve traction in the public sphere. Commentary around PB diets often essentialises the plant-based diet choice with reductive comments, which position the PB debate as illegitimate and typically stereotype PB advocates with pejorative labels.

Narratives around plant-based food choices reflect the symbolic role food plays within diverse cultural groups, and also draw attention to the significance of food as an economic commodity in relation to large-scale food production and mainstream eating habits. Similarly, the 'expert' status of the medical establishment perpetuates the reliance on medical interventions as superior to preventative PB approaches which may be more effective and less invasive. These dynamics may help to explain some of the bottlenecks which prevent PB diets from being taken seriously, and possibly limit their uptake by a wider cross-section of the population. These are significant issues central to an understanding of cultures of health and mainstream health communication which influence health outcomes and environmental sustainability.

Background

Two years ago Charles Godfray and his colleagues drew attention to the challenges of 'navigating the storm' around providing food for 9 billion people by 2050, while at the same time reducing the environmental impact of the food system and addressing concerns of social justice (Godfray et al., 2010). In addressing these challenges, Godfray et al. called for a 'revolution in the social and natural sciences concerned with food production, as well as a breaking down of barriers between fields' (817). As they argued, 'the goal is no longer simply to maximize productivity, but to optimize across a far more complex landscape of production, environmental, and social justice outcomes' (817). From their perspective, such outcomes could be realised by promoting the widespread adoption of a plant-based (PB) diet commonly understood as one that derives 90+% of daily calories from mainly whole-food, plant-based sources. While they briefly mention the health benefits which accompany PB diets, there is a large body of health-related research that could be drawn upon to support their call for change. In a recent MJA article, prominent nutritionist Dr Rosemary Stanton also made the connection between PB diets, social justice and environmental sustainability by asserting that 'diets dominated by plant food are almost certainly the way of the future' (Stanton, 2012: 6). Hence, this paper provides a timely overview of the key drivers commonly cited for a shift to PB diets, including arguments around animal rights, sustainable food production and social justice, and also incorporates an important discussion around health advantages. It then draws on Cultural Studies and Health Communications literature to examine some of the barriers to the acceptance of PB diets as a legitimate response to issues related to food security, sustainability and health.

Key Drivers

As a global issue, a wholefood PB diet is more environmentally sustainable than one involving meat. This reflects the fact that most meat eaten by humans comes from herbivores, such as cows and sheep, which eat solely plants. It is much more efficient to use the resources that produce plants to feed animals to instead produce plants to feed humans. Godfray et al. (2010: 816) argued that 'the conversion efficiency of plant into animal matter is ~10%; thus, there is a prima facie case that more people could be supported from the same amount of land if they were vegetarians.' Further, raising fewer animals reduces the pressure on scarce land resources. Steinfeld et al. (2006: xxi) noted that 'the total area occupied by grazing is equivalent to 26 percent of the ice-free terrestrial surface of the

planet', adding that 'in addition, the total area dedicated to feedcrop production amounts to 33 percent of total arable land. In all, livestock production accounts for 70 percent of all agricultural land and 30 percent of the land surface of the planet.' Not only would a reduction in the farming of animals for food allow more efficient use of land resources, it also eliminates the greenhouse gases produced by livestock which themselves constitute 18% of anthropogenic global warming (Steinfeld et al.: 116).

As well as providing a more sustainable approach to land management, PB food production is more humane from a social justice and animal rights perspective. Twenty years after she first wrote *Diet for a Small Planet* in 1971, Frances Moore Lappe issued an update confirming that the situation had worsened, rather than improved: 'We feed almost half the world's grain to livestock, returning only a fraction in meat – while millions starve [...] Hunger is human made' (Lappe, 1991: xvii). Lappe convincingly demonstrated that western food choices have demonstrable impacts upon the majority of the world. Additionally, and relevant to both Cultural and Communications Studies, are audience responses to the evidence of animal suffering as a result of their integral role in the food chain. Scandals over Indonesian slaughter-house treatment of Australian cattle (Burke, 2011) resulted in a short-term ban on live animal trade with that nation and a long-term revision of operational requirements, yet even approved processes of abattoir killing remain an ethical issue (e.g. Singer and Mason, 2006). When animals are raised and killed humanely, in places they know and by people they trust, thus reducing the creature's fear and discomfort, this typically occurs in the context of organic farming production which is land intensive and replicates as close as possible the animal's natural living environment. While this might be ethically appropriate for the animal, it can be constructed as more wasteful in terms of land use in comparison to grain production.

Further, Steinfeld et al. (2006: xxiii) argue that 'the livestock sector may well be the leading player in the reduction of biodiversity', reinforcing earlier comments that 'the loss of species is estimated to be running at 50 to 500 times the background rate found in the fossil record. Fifteen out of 24 important ecosystem services are assessed to be in decline'.. Discourses around social and environmental sustainability constitute an important contribution to the call for a humanities-based response to these challenges.

In tandem with debates around ethics and sustainability, knowledge about the positive health outcomes associated with PB diets has been accumulating for some time. The initial evidence base for this was spawned by a large epidemiological study conducted in China in the early 1970s. It involved 96% of the population and resulted in the *Cancer Atlas* which raised questions about the links between lifestyle and cancer (see Li et al., 1981). These findings were the impetus for one of the largest studies on nutrition conducted over a 20 year period, which became widely known as the *China Study*. Established by T. Colin Campbell, now Emeritus Professor of Nutritional Biochemistry at Cornell University, the team included a renowned epidemiologist from Oxford University, and two leading Chinese Health Scientists. The China Study was based on provocative findings from Campbell's early experimental work which indicated that cancer growth could be 'switched on and off' by feeding rats either plant-based protein or animal-based protein. The geographical distribution of cancer in China, as illustrated in the Cancer Atlas, provided the perfect environment to test the findings in humans. The results and implications were so compelling that Campbell eventually published a book – *The China Study* (Campbell and Campbell, 2004) – which moved beyond the usual research and science audience to capture a broader audience. The book is based on complex scientific evidence with 'over 8000 statistically significant correlations' (Campbell and Campbell, 2004: 40), and includes reference to extensive peer-reviewed studies. The overarching finding presented is that the risk of contracting cancer and other deadly diseases can be dramatically reduced by eating the right diet (Campbell and Campbell, 2004: 105): a wholefood, plant-based diet which derives less than 10% of its calories from animal protein (Campbell and Campbell, 2004: 242).

At around the same time as the China Study research, Caldwell Esselstyn, a surgeon, researcher, and clinician at the prestigious Cleveland Clinic in Ohio, embarked on a longitudinal experiment with 24 heart patients whose situations were such that conventional medical treatment had nothing further to offer them. By following a plant-based diet, the 17 who remained compliant after 12 years had not experienced any coronary events during that time, and instead experienced a reversal of their heart disease, whereas the patients who withdrew experienced multiple new heart events (Esselstyn, 2007: 55).

Research has continued to reinforce the advantages of PB diets and, with proper meal planning, they have been shown to be 'appropriate for all stages of the life cycle' (Leitzmann, 2005: 147). The

benefits extend beyond prevention of cancer and heart disease to include diabetes, osteoporosis, renal disease and dementia (Leitzmann, 2005), poor bone health (Frassetto et al., 2000) and obesity (e.g. Key and Davey, 1996). Such evidence emphasises the 'significant health advantage' (Reid et al., 2012: para. 2) offered by PB diets over a traditional western diet. Despite this, one of the main criticisms of PB diets is that B12 is not readily available in PB food sources (e.g. Zeuschner et al., 2012). However, B12 is available in fortified food sources (Craig and Mangels, 2009), in much the same way as iodine is added to salt or folate is added to bread to address the risk of other deficiencies for the general population. Given the high bioavailability of B12 in readily available fortified foods (Zeuschner et al., 2012), the risk of deficiency should not be a reason for discounting the value of a PB diet.

While the evidence for PB diets is compelling, the challenge for Cultural Studies and Communications research is to understand why that knowledge does not prompt positive lifestyle change, why debates around PB diets are constrained, and why adopters of PB diets are considered extreme. Part of the answer may lie in the complex position food occupies in society. Food is intimately connected to broader cultural practices and social norms. Hence, a humanities perspective usefully interrogates the cultural mechanisms which may work to perpetuate mainstream food choices, including the traditional western diet.

Food , Culture, and Communication

Building upon classical cultural studies research, such as Mary Douglas's seminal work on *Purity and Danger* (1966), it has long been accepted that food carries a cultural weight greater than straightforward issues of health, nutrition, or even pleasure and convenience. A recent example of the cross-over between 'purity' and 'danger' is evident in scandals in northern Europe, particularly the UK, around the inclusion of horse-meat in minced meat that was warranted as being derived from cows (Press Association, 2013). These indicate cultural sensitivity over which kinds of animals are eaten for meat, even in the absence of religious perspectives.

When religious prohibitions are taken into account, issues around food become even more complicated and regulated. From the Hindu taboo regarding eating cows through to rules around the verification of Halal and Kosher foods, to the Lenten fast between Shrove Tuesday and Easter Sunday and the meat-free Friday of some Christian traditions, cultural and religious background influences attitudes to food. In the same way that food practices can distinguish a community from the broader host society, and make it appear both separate and different, so too can shared food rituals and choices build solidarity and community. Using Bourdieu's (1984) theory of distinction, it is possible to view food choices as ways by which individuals distinguish social status and group membership. This is as true in 'poor food choices' as it is in the active policing of food rules which are constructed as building health (such as the Seventh Day Adventist commitment to plant-based nutrition). Research with video gamers indicates that the:

social gaming ritual, when intersected with food, is closely linked to issues of identity, community, fantasy and escape, gustatory rebellion and prolonged hedonism. Commensality during the core social gaming ritual contributes to a sense of *communitas*, while the 'junk' nature of the shared food products helps to manufacture the hedonism of the event. The social ritual then is sovereign and bound by its own subcultural parameters, which oppose mainstream culture's norms and dietary regulations. From its role in helping to create a Utopian and rebellious experience, food is then leveraged as part of the gamers' collective identity (Cronin and McCarthy, 2011: 720).

Such an overt rejection of accepted food practices reflects social stratification, a process explored in Bourdieu's (1984) work on class and distinction. As Bourdieu noted, the working class were characterised by their 'taste for the heavy, the fat and the coarse' in contrast to the upper class, who were defined by their preference for the 'light, the refined and the delicate' (Bourdieu, 1984: 185). Similar distinctions between 'fat and heavy' or 'light and refined' are also associated with gendered food choices. The consumption of meat, for example, has typically been constructed as a marker of masculinity: the 'feed the man meat' campaign in the 1980's; Sam Neill's portrayal of man's primal instinct to hunt for meat; Sam Kekovich and his satirical personification of the great Australian male.

While these campaigns represent iconic portrayals of masculinity, they also reflect broader notions of patriotism and national identity.

What we know about shared culture and the sense of belonging indicates that promoting changed perceptions of food which have strong cultural associations is always, and will continue to be, extremely difficult. It *is* possible, however, as is evident in the shift by the global middle class to increasingly eat food first popularised by westerners: the very food associated with spiralling rates of obesity, diabetes, lifestyle-related cancer risk, and heart disease (Marsh et al., 2012). This growing demand from the developing world for access to the traditional western diet is part of the dynamic identified by Godfray et al. (2010: 816) as putting pressure on food supplies over the coming decades: 'one of the major challenges to the food system is the rapidly increasing demand for meat and dairy products [...] largely attributable to the increased wealth of consumers everywhere and most recently in countries such as China and India.' Migrant studies also tend to indicate that immigrant populations adopt the food preferences of the host nation, and in the process adopt its disease profile (Kliewer and Smith, Plant, 2007: 76).

If Cultural Studies seeks to understand the formation of taste cultures and sub-cultural lifestyles based around food and nutrition choices, Communications can seek to understand why the public sphere tends to lack serious discussion around the possibilities presented by the widespread adoption of plant-based nutrition. It is clear that the meat and dairy industries in particular are hugely influential in politics, economics, media markets and share markets, yet it seems hard to believe that they are in a position to close down discussion and influence nutritional guidelines, even if this is what some advocates of plant-based nutrition assert (see Campbell and Campbell, 2004). However, stark evidence of this was seen during the development of the first U.S. Dietary Guidelines introduced in 1977 (popularly known as the *McGovern Report*) which were subsequently heavily censured and revised after strong lobbying by the meat and dairy industries (see Gregor, 2013).

In Australia, similar external influences have been experienced more recently with the release of the *2013 National Health and Medical Research Council Dietary Guidelines* (National Health and Medical Research Council, 2013). One newspaper article cited an industry source as saying '[w]hen food

regulation blurs into lifestyle regulation it loses sight of common sense and the punters end up ignoring it' (Kerr, 2013), while the Australian Food and Grocery Council CEO Gary Dawson went on the record to note 'a concern across a number of areas that the science was being viewed through a prism of predetermined political positions', singling out 'the treatment of sugar, fats, oils and dairy in draft versions' (Kerr, 2013). This indicates how difficult it is to communicate clearly in a space which is so crowded with vested interests.

Notwithstanding external influences, there are still communication differences within peak professional bodies. For example, both the American Dietetic Association (Craig and Mangels, 2009) and Dietitians of Canada (2010) endorse PB diets as offering health advantages over traditional western diets. It seems, however, that the Dietitians Association of Australia (DAA) and Nutrition Australia (NA) have adopted a more conservative approach in their communication around PB diets. While acknowledging that a well-planned PB diet can provide all nutritional needs, the DAA does not acknowledge the evidence that PB diets can offer real health advantages (n.d.). Furthermore, Nutrition Australia uses language which sidelines the scientific debate, and instead portrays vegetarianism as a subjective choice rather than an informed decision based on scientific evidence. Nutrition Australia's fact sheet on vegetarian diets does not draw on any of the PB science, and essentialises PB advocates as relying on belief and their moral convictions: 'Many vegetarians *believe* [emphasis added] that, in addition to health benefits and moral considerations, there is also reduced environmental degradation (i.e. increased sustainability) associated with vegetarianism' (Nutrition Australia, 2011 para. Why do people adopt vegetarian diets?). That is, instead of being taken seriously in policy and medical circles, the value of PB diets is relegated from a mainstream approach towards health maximisation, to a fringe argument more generally about politics and lifestyle. This may contribute to the popular vernacular used to label vegetarians (or worse, vegans) in pejorative terms, such as 'mung bean' lover or, as a Western Australian restaurant critic recently described, the 'hair shirt-wearing worried well'. (Broadfield, 2013: 21).

The outcome of this marginalisation and trivialisation is that PB nutrition is not being translated and adopted by mainstream public health interventions. For example, the treatment of heart disease

through PB nutrition is considered an illegitimate science, while more drastic interventions, such as surgery and drug therapy, are considered the legitimate gold standard. The few medical professionals who do advocate PB diets note the irony in this situation: 'I don't understand why asking people to eat a well-balanced vegetarian diet is considered drastic, while it is medically conservative to cut people open' (cited in Esselstyn, 2007: 93). In part, each medical intervention (e.g. Gawande, 2002; Gawande, 2007) offers a possible dramatic reversal: saving a patient against the odds which serves to construct the doctor as hero. This contrasts with prevention, where there is no drama and no specific person is saved. The difference has been described as teaching people to walk safely along the top of a cliff rather than jumping forward on bungee ropes, trying to catch them as they leap over the edge. These constructions of the role of doctors' impact upon the way that society selects, funds and celebrates medical professionals, and further entrenches the privileging of treatment over prevention.

Although they are in the minority, a number of leading authors with medical qualifications have published popular books and use other mediums to communicate their view that PB nutrition has many advantages (e.g. McDougall, 1990) and suggest that the normalisation of medical interventions reflects the power of, among others, 'Big Medicine', and also 'Big Industry', the meat, dairy and egg industries (Campbell and Campbell, 2004). *The China Study* book is one example of the way popular culture is serving to translate science for a lay audience, helping to cut through the clutter and introduce the evidence that is otherwise difficult to obtain and interpret. Reaching people this way has the capacity to enhance personal knowledge and lead to more informed dietary choices. While this is an important issue from an individual health perspective, it also offers the opportunity for collective benefit through the promotion of a sustainable approach to food security and equity (Godfray et al., 2010).

There is evidence (e.g. Lockie et al., 2002) that diverse eating habits, from organic and vegan through to gluten-free, are becoming more accepted in Australia as food producers target increasingly specific market segments. This intense interest in segmented food choices tends to go hand-in-hand with a number of health-related and environmental concerns, indicating there is some movement in

changing dominant food markets. Michael Pollan (2010), in particular, has drawn attention to the expanding discourse around food choices and the range of agendas represented by different players:

It's a big, lumpy tent, and sometimes the various factions beneath it work at cross-purposes....But there are indications that these various voices may be coming together in something that looks more and more like a coherent movement. (Pollan, 2010: Food Politics section, para. 3, 4)

The challenge remains, however, of feeding 9 billion people by 2050, as does moving towards mainstream acceptance of a PB diet as health promoting.

Conclusion

The construction of PB nutrition as a minority option adopted by extremists fails to acknowledge that even well-respected medical journals such as the Medical Journal of Australia are now publishing articles which assert that:

well-planned vegetarian diets are not only nutritionally adequate but also provide many health benefits, particularly in the prevention and treatment of many chronic diseases. In fact, in Western countries, a vegetarian diet may present a significant advantage over meat-based diets, and a number of studies have shown increased longevity in vegetarians (Marsh et al., 2012: 263).

There is a significant mismatch of perceptions related to PB nutrition circulating in the public sphere. On the one hand there is the construction of a wholefood PB diet as extreme. On the other is a range of common health conditions which are presented as being appropriately addressed by interventions from pharmaceuticals to open-heart surgery, when, in fact, a change in diet might achieve the desired result. Such an approach also has the added capacity to contribute to solutions around environmental sustainability and social justice.

Drawing on the perspectives offered by Cultural Studies and Communications, this paper has explored the bottlenecks which need to be addressed and overcome before the benefits of a PB diet can be fully realised.

References

- Bourdieu, P, 1984, *Distinction: A Social Critique of the Judgement of Taste*, Harvard University Press, Cambridge, Mass.
- Broadfield, R, 2013, 'Faux Food Feasts for Worried Well', *The West Australian*, 20-21 July, p. 21.
- Burke, K, 2011, 'Shocking Slaughterhouse Abuse Sparks Investigation', *Sydney Morning Herald*, 31 May.
- Campbell, TC and Campbell, T, 2004, *The China Study: Startling Implications for Diet, Weight Loss and Long-Term Health*, Benbella Books, Dallas, TX.
- Craig, W and Mangels, A, 2009, 'Position of the American Dietetic Association: Vegetarian Diets', *Journal of the American Dietetic Association*, 109, pp. 1266-1282.
- Cronin, J and McCarthy, M, 2011, 'Fast Food and Fast Games: An Ethnographic Exploration of Food Consumption Complexity among the Videogames Subculture', *British Food Journal*, 113, pp. 720-743.
- Dieticians Association of Australia, nd, '*Vegetarian Diets*', retrieved 5 May 2013, <http://daa.asn.au/for-the-public/smart-eating-for-you/nutrition-a-z/vegetarian-diets/>
- Dietiticians of Canada, 2010, '*Eating Guidelines for Vegans: Fact Sheet*', retrieved 6 May 2013, <http://www.dietitians.ca/Nutrition-Resources-A-Z/Factsheets/Vegetarian/Eating-Guidelines-for-Vegans.aspx>
- Douglas, M, 1966, *Purity and Danger: An Analysis of the Concepts of Taboo and Danger*, Routledge, New York.
- Esselstyn, C, 2007, *Prevent and Reverse Heart Disease: The Revolutionary, Scientifically Proven, Nutrition-Based Cure*, Avery, New York.
- Frassetto, L, K, T, C., M and Sebastian, A, 2000, 'Worldwide Incidence of Hip Fracture in Elderly Women: Relation to Consumption of Animal and Vegetable Foods', *Journal of Gerontology*, 55, pp. 585-592.
- Fuhrman, J, 2011, *Eat to Live: The Amazing Nutrient-Rich Program for Fast and Sustained Weight Loss*, Little, Brown and Company, New York.
- Gawande, A, 2002, *Complications: A Surgeon's Notes on an Imperfect Science*, Profile Books, London.
- Gawande, A, 2007, *Better: A Surgeon's Notes on Performance*, Metropolitan Books, New York.
- Godfray, H, Beddington, J, Crute, I, Haddad, L, Lawrence, D, Muir, J, Pretty, J, Robinson, S, Thomas, S and Toulmin, C, 2010, 'Food Security: The Challenge of Feeding 9 Billion People', *Science*, 327, pp. 812-818.
- Gregor, M, 2013, '*The MCGovern Report*', retrieved 5 May 2013, <http://nutritionfacts.org/video/the-mcgovern-report/>
- Kerr, C, 2013, 'Fat in the Fire Amid Fears New Dietary Guidelines Fudge the Facts', *The Australian*, 9 February.
- Key, T and Davey, G, 1996, 'Prevalence of Obesity Is Low in People Who Do Not Eat Meat', *British Medical Journal*, 313, pp. 816-817.
- Lappe, F, 1991, *Diet for a Small Planet*, Ballantine Books, New York.

- Leitzmann, C, 2005, 'Vegetarian Diets: What Are the Advantages?', *Forum of Nutrition*, 57, pp. 147-156.
- Li, J, Liu, B and Li, G, 1981, 'Atlas of Cancer Mortality in the People's Republic of China: An Aid for Cancer Control and Research', *International Journal of Epidemiology*, 10, pp. 127-133.
- Lockie, S, Lyons, K, Lawrence, G & Mummery, K, 2002, 'Eating "Green": Motivations Behind Organic Food Consumption in Australia', *Sociologia Ruralis*, 42, pp. 23-40.
- Marsh, K, Zeuschner, C and Saunders, A, 2012, 'Health Implications of a Vegetarian Diet', *American Journal of Lifestyle Medicine*, 6, pp. 250-267.
- Mcdougall, J, 1990, *The Mcdougall Program: 12 Days to Dynamic Health*, Plume, New York.
- National Health and Medical Research Council, 2013, 'Eat for Health: Australian Dietary Guidelines', retrieved 6 May 2013, http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n55_australian_dietary_guidelines_1.pdf
- Nutrition Australia, 2011, 'Vegetarian Diets', retrieved 6 May 2013, <http://www.nutritionaustralia.org/national/frequently-asked-questions/vegetarian-diets>
- Plant, J, 2007, *Your Life in Your Hands: Understand, Prevent and Overcome Breast Cancer and Ovarian Cancer*, Virgin Books, London.
- Pollan, M, 2010, The Food Movement, Rising. *New York Book Review* [Online], June. Retrieved from: https://content.slowfood.it/upload/2010/C2744B880cb8e16BE1Rjt1188CA4/files/USA_nybooks.com_21-05-10.pdf
- Press Association, 2013, 'How the Horsemeat Scandal Unfolded: Timeline', *The Guardian*, 15 February.
- Reid, M, Marsh, K, Zeuschner, C and Saunders, A, 2012, 'Meeting the Nutrient References Values on a Vegetarian Diet', *Medical Journal of Australia (MJA) Open*, 1, pp. 33-40.
- Singer, P and Mason, J, 2006, *The Ethics of What We Eat*, Melbourne, Australia, Text Publishing Company.
- Stanton, R, 2012, 'A Plant-Based Diet: Good for Us and for the Planet', *Medical Journal of Australia (MJA) Open*, 1, pp. 5-6.
- Steinfeld, H, Gerber, P, Wassenaar, T, Castel, V, Rosales, M and De Haan, C, 2006, 'Livestock's Long Shadow: Environmental Issues and Options', retrieved 7 May 2013, <ftp://ftp.fao.org/docrep/fao/010/a0701e/a0701e.pdf>
- Zeuschner, CL, Hokin, BD, Marsh, KA, Saunders, AV, Reid, MA and Ramsay, MR, 2012, 'Vitamin B12 and Vegetarian Diets', *Medical Journal of Australia (MJA) Open*, 1, pp. 27-32.