

**'The food nature intended you to eat':
Nutritional primitivism in low-carbohydrate diet discourse**

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Abstract

In this thesis I examine the low-carbohydrate diet trend as one response to the twin obesity and diabetes epidemics. Sociological and cultural studies of dieting to date have been dominated by feminist critique of the thin ideal. Because of their focus on health, low-carbohydrate diets cannot be adequately understood via a feminist approach. Instead, I take a multidisciplinary approach drawing on literature from cultural and literary theory, sociology, history and philosophy in the broader fields of food studies, public health and postcolonial studies. Methodologically, this thesis is based on a close reading of five bestselling low-carbohydrate diet books (*Dr. Atkins' New Diet Revolution*, *The South Beach Diet*, *Protein Power*, *The Zone* and *Sugar Busters*), supplemented by interviews with low-carbohydrate dieters living in South Australia.

What I term *nutritional primitivism* is one of the distinguishing features of low-carbohydrate diet discourse, though it is not unique to low-carbohydrate dieting. I use the phrase *nutritional primitivism* to refer to the pursuit of supposedly simpler, more natural and more authentic ways of eating as part of a quest for health. I argue that nutritional primitivism in low-carbohydrate diet discourse comprises appeals to Nature, nostalgia, authentic ethnic cuisine, evolutionary theory and genetics, and images of the Noble Savage. Together these form a reactive response to modern Western nutrition: that is, a backlash against modern Western ways of eating as they impact upon health.

This thesis offers a critique of nutritional primitivism in low-carbohydrate diet discourse. Nutritional primitivism presents both logical/evidential and political/philosophical difficulties. Its definitions of natural and authentic food and evolutionary diet are tautological, and it uses a highly romanticised image of the past to criticise modern Western diet. Further, nutritional primitivism relies on Eurocentric and racist evolutionary hierarchies which align contemporary fourth-world peoples with prehistoric hunter-gatherers. In proposing a return to more 'natural' and 'traditional' ways of eating as the solution to obesity and diabetes, nutritional primitivism also obscures known socioeconomic and environmental factors in the development of ill-health and disease.

In interviews with low-carbohydrate dieters I found a critical approach and heterogeneous response to nutritional primitivism in low-carbohydrate diet discourse. Like low-carbohydrate diet authors, dieters generally privileged natural foods above processed foods, but their dieting practice might best be described as a creative reworking of culinary tradition, rather than any simple reclamation of a so-called authentic diet. Dieters demonstrated a critical and sceptical approach towards evolutionary and genetic justifications for low-carbohydrate diets.

While popular critique of modern Western ways of eating is an integral part of response to the obesity and diabetes epidemics, nutritional primitivism in low-carbohydrate diet discourse reinforces a romanticised view of the past, racist and utilitarian attitudes towards non-Western people, and the elision of socioeconomic and environmental factors which promote inequalities in ill-health and disease.

Thesis declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Christine Knight, November 2007

What we are seeing in the United States today is the full-tilt exploration of patterns formed in the 1920s: fascination with the primitive as an expression of fears about what the West has wrought in the world, even of white European self-loathing – often with an accompanying utopian impetus for change. Utopian desires are emerging strongly once again at the end of the twentieth century, in movements that envision the primitive as a locus of harmony and as a shelter from the dangers and fragmentation of modern life.¹

¹ Marianna Torgovnick, *Primitive Passions: Men, Women, and the Quest for Ecstasy* (New York: Alfred A. Knopf, 1997), 18.

Chapter 1. Low-carbohydrate diets and nutritional primitivism: an introduction

Be food aware – remember that fresh meat, fish, fowl, vegetables, nuts, seeds and occasional fruits and starches are the foods nature intended you to eat. That packaged refined carbohydrate stuff in the supermarket puts money in somebody’s pocket. And it puts garbage into your stomach.

*Dr. Atkins’ New Diet Revolution*¹

Our regimen provides all the benefits of the hunter-gatherer diet but uses foods that you capture at the grocery store and even in the wilds of the nearest fast-food outlet. All we need do to gain the benefits of the hunter-gatherer diet is to consume a diet that approximates it in nutritional composition, which we can do easily.

*Protein Power*²

A Zone-favorable diet is based on humanity’s genetic makeup. Your genes favor a diet with a relatively constant protein-to-carbohydrate ratio and with most of the carbohydrates being low-density and low-glycemic carbohydrates. In other words, human beings are “designed” by evolution to eat a Zone-favorable diet. Over the past 100,000 years these genes have not changed. A small portion of the population has a genetic capacity to have a blunted insulin response to carbohydrates. Genetically, they’re lucky. But most people are simply not designed to eat pasta.

*The Zone*³

The three passages cited above are all examples of what I call nutritional primitivism in low-carbohydrate diet discourse: the pursuit of ostensibly simpler, more natural and more authentic ways of eating as part of a quest for health through diet. What I term nutritional primitivism is one of the hallmarks of the popular low-carbohydrate diet literature, though it is not unique to it. In this thesis I argue that nutritional primitivism constitutes a reactive response to modern Western nutrition: a backlash against the so-called ‘modern Western diet’ and its impact upon health. This backlash is figured via nostalgic invocations of that which is *not* modern, *not* Western, or both: the pre-industrial, often pre-agricultural, food systems of our ancestors, especially ‘our primitive ancestors’.⁴ I argue that nutritional primitivism in low-carbohydrate discourse comprises appeals to Nature and natural food, Western and Other culinary traditions, Stone-Age prehistory, and the foodways of contemporary fourth-world hunter-gatherer peoples.

Outside the context of food and diet, the ‘cluster of ideas’ known as primitivism is the subject of a niche scholarly literature dating back at least a century.⁵ In the opening paragraph of his book

¹ Robert C. Atkins, *Dr. Atkins’ New Diet Revolution* (New York: HarperCollins, 2002), 221.

² Michael R. Eades and Mary Dan Eades, *Protein Power* (New York: Bantam, 1996), 48.

³ Barry Sears, *The Zone: A Dietary Road Map* (New York: HarperCollins, 1995), 203-04. I have capitalised the initial ‘a’ in this quotation for the sake of readability.

⁴ Atkins, *New Diet Revolution*, 329.

⁵ The quotation in this sentence is taken from George Boas, “Primitivism,” in *Dictionary of the History of Ideas*, ed. Philip P. Wiener (New York: Charles Scribner’s Sons, 1974), 577. For earlier twentieth-century work on primitivism, see eg George Boas, *Essays on Primitivism and Related Ideas in the Middle Ages* (Baltimore: 1948); H. N. Fairchild, *The Noble Savage* (New York: 1928); Robert J. Goldwater, *Primitivism in Modern Painting* (New York: 1938); Harry Levin, *The Myth of the Golden Age in the Renaissance* (Indiana: 1969);

entitled simply *Primitivism*, Michael Bell describes primitivism as '[t]he nostalgia of civilized man for a return to a primitive or pre-civilized condition',⁶ a deceptively simple definition which incorporates at least three key features. Firstly, Bell attributes primitivism to 'civilized man', understood in opposition to the 'primitive or pre-civilized'. In other words, primitivism belongs specifically to what we might call the modern condition. Secondly, Bell suggests that primitivism seeks a 'return' (actual or imagined) to what must, by definition, be some prior state. Thus the primitivist conceives of the primitive as *origin*. Thirdly, Bell indicates that primitivism is a nostalgic ideology: its view of the primitive is hence positive and idealistic. Later in the same paragraph Bell adds (fourthly and finally, for my purposes) that primitivism incorporates 'doubts about the whole enterprise of civilization'.⁷ Put more decisively, the primitivist claims that civilisation represents not progress but decline. In *The Philosophical Roots of Anthropology*, William Adams contrasts primitivism helpfully with progressivism, as two sides of the same coin. Adams describes primitivism as 'an ideology that views the development of civilization with regret rather than with approval'.⁸ Primitivism, Adams notes, locates 'the Golden Age [...] far in the past [...] Everything since has been a tale of increasing corruption of the originally pure state of nature'.⁹

Since primitivism treats the process of civilisation as one of degeneration and decline, the primitivist is, *ipso facto*, deeply dissatisfied with the contemporary state of humanity and the world. Adams argues that primitivists share a 'discontent with the existing human condition'.¹⁰ This discontent is expressed via a symbolic contrast between modern civilised life and a putative primitive ideal. For this reason, primitivism tends to surface in periods of 'doubt and uncertainty': as Adams stresses, primitivism 'flourishes in disaffected times', or 'unsettled and uneasy times'.¹¹ In her book *Primitive Passions*, Marianna Torgovnick suggests that the primitivist resurgence in the 1910s and 1920s in modernist art and literature, as well as intellectual thought in general, may be attributed to 'a sense of despair and anxiety caused by World War I, which made people ask the vexed question of how and why the West had taken the wrong path'.¹² Michael Bell notes, too, that writers and thinkers like D. H. Lawrence and Carl Jung 'saw the First World War as the catastrophic result of contemporary civilized man's denial and distrust of the unconscious and instinctual self'.¹³ Bell concludes that 'primitivism denotes, or arises from, a sense of crisis in civilization'.¹⁴

In this thesis I argue that the nutritional primitivism of the recent low-carbohydrate diet movement arises from a perceived crisis in contemporary Western health: that is, the so-called obesity and diabetes epidemics. Especially since 1994, with the release of statistics indicating that one in three Americans was overweight or obese and the launch of the *Shape Up! America*

Arthur O. Lovejoy and George Boas, *Primitivism and Related Ideas in Antiquity* (Baltimore: John Hopkins, 1935); Edith A. Runge, *Primitivism and Related Ideas in Sturm Und Drang Literature* (Baltimore: 1946); Lois Whitney, *Primitivism and the Idea of Progress in English Popular Literature of the Eighteenth Century* (Baltimore: 1934). As Michael Bell points out, '[m]ost of these historical studies are in the Lovejoy tradition of documentation rather than critical analysis'. See Michael Bell, *Primitivism* (London: Methuen, 1972), 84.

⁶ Bell, *Primitivism*, 1.

⁷ *Ibid.*

⁸ William Y. Adams, *The Philosophical Roots of Anthropology* (Stanford, California: CSLI Publications, 1998), 111.

⁹ *Ibid.*, 75.

¹⁰ *Ibid.*, 76.

¹¹ *Ibid.*, 78, 110, 111.

¹² Torgovnick, *Primitive Passions*, 10.

¹³ Bell, *Primitivism*, 70.

¹⁴ *Ibid.*, 80.

campaign, obesity has attracted escalating public health concern and media attention both in the United States and around the world.¹⁵ A number of critics from the sciences, social sciences and other academic fields have questioned the evidence for epidemic rates of obesity, as well as the use of the term ‘epidemic’ to refer to a non-contagious condition and the construction of overweight as inherently ‘pathological and a primary direct cause of disease’.¹⁶ My reading here of nutritional primitivism in low-carbohydrate discourse as a response to the perceived public health crisis does not depend logically on whether or not the obesity epidemic is ‘real’. Rather, I follow researchers such as Michael Gard and Jan Wright, John Coveney and Natalie Boero in treating the obesity epidemic as a social and cultural construction: as Gard and Wright put it, ‘a complex pot-pourri of science, morality and ideological assumptions about people and their lives’.¹⁷ I suggest that low-carbohydrate discourse contrasts a constructed version of civilised diet and lifestyle with an equally constructed primitive ideal, taking the supposed obesity epidemic as a point of departure and a focus for primitivist discontent.

Critics note consistently that the primitivist uses idealised images of primitive life as a discursive vehicle by which to criticise his or her own society and time. David Spurr notes that in the writings of Montaigne and Rousseau, ‘savage man is less a real and living presence than an abstract ideal whose purpose lies in his symbolic value for the social and political configurations of eighteenth-century Europe’.¹⁸ Similarly, in *Gone Primitive*, the precursor to her later *Primitive Passions*, Torgovnick points out that:

Those who study or write about the primitive usually begin by defining it as different from (usually opposite to) the present. After that, reactions to the present take over. Is the present too materialistic? Primitive life is not – it is a precapitalist utopia in which only use value, never exchange value, prevails. Is the present sexually repressed? Not primitive life – primitives live life whole, without fear of the body. [...] In each case, the needs of the present determine the nature and value of the primitive.¹⁹

The consequence of this pattern is that by examining the specific discursive form that primitivism takes in a given text, we may illuminate the contours of the cultural moment in which it was produced. As Torgovnick later puts it, ‘[w]hen versions of the primitive show specific historical and cultural variations, they expose different aspects of the West itself’.²⁰ Is the present chronically unhealthy and overweight? Not primitive life – primitives were ‘strong and healthy’, with ‘the bone structures of world-class athletes’.²¹ In examining the precise form taken by primitivism in recent low-carbohydrate discourse, I seek in this thesis to uncover the specific anxieties and desires which haunt contemporary Western thinking about food and health.

¹⁵ Natalie Boero, “All the News That’s Fat to Print: The American ‘Obesity Epidemic’ and the Media,” *Qualitative Sociology* 30 (2007): 46; John Coveney, *Food, Morals and Meaning: The Pleasure and Anxiety of Eating*, 2nd ed. (London and New York: Routledge, 2006), 143-44; April Michelle Herndon, “Collateral Damage from Friendly Fire?: Race, Nation, Class and the ‘War against Obesity’,” *Social Semiotics* 15, no. 2 (2005): 128.

¹⁶ Paul Campos et al., “The Epidemiology of Overweight and Obesity: Public Health Crisis or Moral Panic?” *International Journal of Epidemiology* 35 (2006): 55. See also Michael Gard and Jan Wright, *The Obesity Epidemic: Science, Morality and Ideology* (London: Routledge, 2005), esp. 86-106.

¹⁷ Gard and Wright, *The Obesity Epidemic*, 3. See also Boero, “All the News That’s Fat to Print,” 42; Coveney, *Food, Morals and Meaning*, 143-50.

¹⁸ David Spurr, *The Rhetoric of Empire: Colonial Discourse in Journalism, Travel Writing, and Imperial Administration* (Durham: Duke University Press, 1993), 126.

¹⁹ Marianna Torgovnick, *Gone Primitive: Savage Intellectuals, Modern Lives* (Chicago: University of Chicago Press, 1990), 8-9.

²⁰ *Ibid.*, 193.

²¹ Atkins, *New Diet Revolution*, 23; Sears, *The Zone*, 101.

Writing about the history of American journalism on Vietnam, Spurr describes the pattern of representation discussed above as ‘an unconscious act of self-reflection,’ in which ‘[t]he successive idealizations of Vietnam said more about American virtues and American values than about anything Vietnamese’.²² Drawing on Spurr’s vocabulary here, I refer in this thesis to the discursive pattern in which the primitivist defines the primitive in symbolic opposition to the civilised Self as *self-reflexive*. By this I do not mean to evoke the concept of self-reflexivity used in literary criticism, as ‘applied to literary works that openly reflect upon their own processes of artful composition’.²³ Nor do I wish to recall the notion of reflexivity as it denotes a methodology in the social sciences, in which the researcher employs ‘thoughtful, self-aware analysis of the intersubjective dynamics between researcher and the researched’.²⁴ Rather, I refer to what Bell describes in *Primitivism* as ‘the radical relativity of meaning that we encounter in the use of primitive motifs’.²⁵ Apposite here is John Frow’s description of the self-confirming binaristic definitions often used to distinguish the modern from the postmodern:

The function of the opposition between modernism and postmodernism is [...] to act as an operator of value [...], the simple binary structure of which is capable of generating an almost infinite number of further oppositions. Typically the operator sets up a series of categorical oppositions between, for example, modernity and postmodernity, without ever questioning the status of the opposition itself. [...] / The effect of any such charting of oppositions is to construct an idealist representation of a historical time which proceeds by the epochal succession of spiritual totalities. Binarism works as a mode of historical explanation. This generative activity of the operator is independent of whether or not you accept the reality of the postmodern.²⁶

Primitivist discourse, I suggest, functions via a similar opposition between civilised Self and primitive Other, ‘the simple binary structure of which [...] generat[es] an almost infinite number of further oppositions’ between, for example, West and non-West, modernity and tradition, culture and nature, artifice and innocence, degeneration and wholeness.

Primitivism thus takes little interest in representing accurately (should such a thing be possible) any particular human society, whether prehistoric or contemporary. Rather, primitivism draws on what Torgovnick describes in *Primitive Passions* as ‘a vast, generalized image, an aggregate of places, things, and experiences associated with various groups and peoples: Africa, the Amazon, or the American Southwest’.²⁷ Torgovnick points out that the term *primitive* today ‘often refers to specific groups living traditional lives’, such as the Yanomani of Brazil and the Asmat of Irian Jaya. But the term *primitive*, she adds, also has much broader scope:

“The primitive” denotes the eons of prehistoric human experience; it refers as well to societies such as the Aztecs, with highly developed but now mysterious or exotic-seeming ancient histories.²⁸

²² Spurr, *Rhetoric of Empire*, 125.

²³ Chris Baldick, *Concise Oxford Dictionary of Literary Terms*, 2nd ed. (Oxford: Oxford University Press, 2001), 231.

²⁴ Linda Finlay and Brendan Gough, eds., *Reflexivity: A Practical Guide for Researchers in Health and Social Sciences* (Oxford: Blackwell Science, 2003), ix.

²⁵ Bell, *Primitivism*, 4.

²⁶ John Frow, *Time and Commodity Culture: Essays in Cultural Theory and Postmodernity* (Oxford: Clarendon Press, 1997), 15-17 (footnotes omitted).

²⁷ Torgovnick, *Primitive Passions*, 4.

²⁸ *Ibid.*

As Torgovnick's survey implies, as an expression of radical discontent with modern Western life primitivism incorporates both temporal and racial elements, seeking that which is *not* modern, *not* Western, but uncivilised, exotic, or both. In his discussion of primitivism in the modernist art movement, Alastair Bonnett describes how 'the place to look for models and inspiration to oppose the modern West was the non-West and the pre-modern. The more non-Western, the further away and the less modern, the better'.²⁹ Bonnett argues that primitivism necessarily incorporates a 'moment of racialised politics', in which 'non-whiteness' functions in opposition to the modern 'as an identity that is *not* alienated and *not* dominated by instrumental logic'.³⁰

In *Gone Primitive*, Torgovnick describes how at particular sociohistorical moments, the category of the primitive exhibits slippage or 'seepage' to other value-laden categories based on gender, race, class, or sexuality:

For example, "sexual freedom" has always been a characteristic attributed to primitives; "homosexuality" was not generally mentioned until late in [the twentieth] century. Similarly, "peasants" and, later, "the working class" always shared with primitives in the aristocratic or the bourgeois mind the potential for imminent violence, irrationality, shiftlessness, and promiscuity; but analogies between primitives and the peasantry or the working class were iterated more and more strongly in the late nineteenth and first half of the twentieth century.³¹

In his entry on primitivism for the *Dictionary of the History of Ideas*, George Boas notes, similarly, the slippage between images of the Noble Savage and the Peasant, who was 'endowed with simplicity, innate wisdom, guilelessness, and [...] poetic insight', and 'seemed to be living in intimate communion with forces over which men had no control, the wind and the rain'.³² These slippages between Noble Savage and Peasant, between the primitive and the ethnoracial Other, and so on through 'an almost infinite number of further oppositions' explain why low-carbohydrate diet discourse may appeal to a broad and generalised range of primitive and quasi-primitive nutritional ideals, as argued in this thesis. Natural foods, Asian and Mediterranean culinary traditions, and the Paleolithic hunter-gatherer diet (amongst others) are all defined in opposition to the monolithic 'modern Western diet', for which refined carbohydrate is the pre-eminent symbol.

Primitivism, food studies and low-carbohydrate dieting: a literature review

Recent critical scholarship on primitivism has examined cultural products, texts and practices across fields as diverse as anthropology, art, psychology, literature, film and popular culture. Torgovnick's two influential and acclaimed books on primitivism, *Gone Primitive* and *Primitive Passions*, between them include chapters on ethnography, modern art, the literature of Joseph Conrad and D. H. Lawrence, the work of Freud and Jung, the films *Last of the Mohicans* and *Dances with Wolves*, Tarzan, the New Age and mythopoetic men's movements, and body-piercing. The subcultural movement known as modern primitivism or neo-tribalism, associated with body

²⁹ Alastair Bonnett, *White Identities: Historical and International Perspectives* (Harlow, Essex: Prentice Hall, 2000), 80.

³⁰ *Ibid.*, 78.

³¹ Torgovnick, *Gone Primitive*, 192-93.

³² Boas, "Primitivism," 595. Boas attributes the slippage between Noble Savage and Peasant to European exploration and colonial expansion, which ultimately put paid to the possibility that an imaginary primitive utopia existed somewhere else in the world.

modification practices such as tattooing, scarification, branding and body-piercing, is now the subject of its own distinct critical literature.³³ However, the emerging interdisciplinary field of food studies has yet to engage directly and fully with the critical literature on primitivism in these other areas of modern Western culture. This thesis places the concept of primitivism front and centre and explores its relevance to contemporary nutrition, in the specific context of low-carbohydrate dieting.

In saying that food studies has not engaged with existing scholarship on primitivism, I do not mean to suggest that individual food studies researchers (and some in related fields such as public health) have not analysed gastronomic nostalgia and related quasi-primitivist tendencies in contemporary food culture in considerable depth. Numerous scholars have done so, and I draw on their insights throughout this thesis. However, no research of which I am aware covers ‘under one roof’, as it were, all the various discursive tropes I consider here under the rubric of nutritional primitivism. The food studies literature refers not to primitivism but instead to formulations such as ‘Culinary Luddism’, ‘nutritional nostalgia’, ‘culinary xenophilia’ and ‘food adventuring’.³⁴ This is not merely a question of semantics: each of these critiques engages with only one or two at most of the primitivist ‘cluster of ideas’ represented in low-carbohydrate discourse, quite probably because other food movements and cultural tendencies are less wide-ranging. For instance, culinary historian Rachel Laudan puts forward a thorough and provocative critique of the discourse she dubs ‘Culinary Luddism’, by which she refers to the backlash ‘against the foods of modern industrial societies’.³⁵ Laudan identifies Culinary Luddism expansively with the ‘foodie’ and countercultural movements, and most recently with organisations such as Slow Food and Oldways.³⁶ As a historian, Laudan’s critique focuses primarily on the inaccuracies of Culinary Luddites’ romanticised version of food history; she concludes that ‘the sunlit past of the Culinary Luddites never existed [...] their ethos is based not on history but on a fairy tale’.³⁷ However, for my purposes in this thesis, the relevance of Laudan’s work is partial because it is concerned only with nostalgia for relatively recent post-agricultural culinary traditions. *Primitivist* nostalgia, by contrast, hungers in turn for myriad periods of human history, including (and especially) the Stone-Age hunter-gatherer era now hundreds of thousands of years past.

³³ See eg William Cummings, “Modern Primitivism: The Recent History of Civilization’s Discontents,” *Critical Studies* 15, no. 1 (2001); Virginia Eubanks, “Zones of Dither: Writing the Postmodern Body,” *Body & Society* 2, no. 3 (1996); Mike Featherstone, “Body Modification: An Introduction,” *Body & Society* 5, no. 2 (1999); Jane Goodall, “An Order of Pure Decision: Un-Natural Selection in the Work of Stelarc and Orlan,” *Body & Society* 5, no. 2 (1999); Christian Klesse, “‘Modern Primitivism’: Non-Mainstream Body Modification and Racialized Representation,” *Body & Society* 5, no. 2 (1999); Victoria L. Pitts, *In the Flesh: The Cultural Politics of Body Modification* (New York: Palgrave MacMillan, 2003); Graham St John, “Going Feral: Authentica on the Edge of Australian Culture,” *Australian Journal of Anthropology* 8, no. 2 (1997); Bryan S. Turner, “The Possibility of Primitiveness: Towards a Sociology of Body Marks in Cool Societies,” *Body & Society* 5, no. 2 (1999). The term *modern primitivism* was used by critics until at least the 1970s to refer simply to modern (as opposed to medieval or ancient) literary and philosophical instances of primitivism. Boas employs the term with reference to sources from the late fifteenth century to the present day; Bell uses it to designate primitivist tendencies in nineteenth- and twentieth-century literature. See Bell, *Primitivism*, 4; Boas, “Primitivism,” 593ff.

³⁴ Alan Beardsworth, “Nutritional Nostalgia and the Erosion of Eating Skills: The English Experience” (paper presented at Food, Body and Health: A Cross-Cultural Approach, OCHA Symposium, Paris, 2002); Lisa M. Heldke, *Exotic Appetites: Ruminations of a Food Adventurer* (New York & London: Routledge, 2003); Rachel Laudan, “A Plea for Culinary Modernism: Why We Should Love New, Fast, Processed Food,” *Gastronomica* 1, no. 1 (2001); Rachel Laudan, “A World of Inauthentic Cuisine” (paper presented at the Cultural and Historical Aspects of Foods Symposium, Oregon State University, Corvallis, 1999); Raymond Sokolov, “Culture and Obesity,” *Social Research* 66, no. 1 (1999).

³⁵ Laudan, “A World of Inauthentic Cuisine,” para 1.

³⁶ Laudan, “A Plea for Culinary Modernism,” 36; Laudan, “A World of Inauthentic Cuisine,” paras 1-5.

³⁷ Laudan, “A Plea for Culinary Modernism,” 42.

Similar differences exist between my own work on nutritional primitivism and Lisa Heldke's thoughtful philosophical critique of the set of practices she terms 'food adventuring' or, more broadly, 'cultural food colonialism'. In her book *Exotic Appetites*, Heldke describes cultural food colonialism as the 'tendency to go culture hopping in the kitchen and in restaurants': the 'penchant' of white Euroamericans 'for cooking and eating ethnic foods – most frequently and most notably the foods of economically dominated or “third world” cultures'.³⁸ Like Laudan's Culinary Luddites, Heldke's food adventurers share much of their ethos with nutritional primitivists, especially in their 'deep desire to have contact with, and to somehow own an experience of, an Exotic Other'.³⁹ I draw on Heldke's work in detail in Chapter 5 of this thesis. However, Heldke, like Laudan, is interested in Westerners' desire to experience relatively recent (ethnic) culinary traditions. *Exotic Appetites* is not concerned with the primitivist obsession with Paleolithic or evolutionary diet, as witnessed in the low-carbohydrate literature. Further, questions of nutrition (that is, the purported health benefits of exotic ethnic cuisines) are entirely absent from Heldke's notion of food adventuring. My own concern in this thesis is with the ways in which foodways that are *not* modern and *not* Western become linked discursively to claims about health, rather than questions of gastronomic taste.

Laudan briefly discusses the health benefits Culinary Luddism attributes to pre-industrial diet in her two papers, 'A World of Inauthentic Cuisine' and 'A Plea for Culinary Modernism'. Again, Laudan's critique focuses on 'debunking' the Culinary Luddist belief that traditional foodways were healthier than modern ones. She concludes that:

No amount of nostalgia for the pastoral foods of the distant past can wish away the fact that our ancestors lived mean, short lives, constantly afflicted with diseases, many of which can be directly attributed to what they did and did not eat.⁴⁰

My own concern is not so much with the historical accuracy of nutritional primitivism but with its discursive features, internal logic and ethico-political implications. These are briefly considered by Raymond Sokolov in relation to what he calls 'culinary xenophilia', a very similar concept to Heldke's notion of food adventuring. At its most extreme, Sokolov argues, 'culinary xenophilia uses foreign ingredients and culinary ideas as a way of rejecting hateful, imperialist Eurocuisine. In particular, Asian and third-world foodways are embraced, on various pretexts'.⁴¹ One of these pretexts, Sokolov notes, is health and nutrition: 'Statistics seem to show that Asian cuisines are better for you – leaner and meaner, so to speak. Fish instead of steak; low animal fat, and so on'.⁴² I examine these ideas further in Chapter 5. However, as I noted earlier in relation to Laudan's critique of Culinary Luddism, the relevance of the work of both Laudan and Sokolov to my own is somewhat limited because both deal only with post-agricultural culinary history, and not with the Paleolithic period central to low-carbohydrate logic (though some of the same arguments apply).

Closest to my own concerns is Barrett Brenton's research on 'Cave-Diets', which Brenton defines thus:

³⁸ Heldke, *Exotic Appetites*, xv.

³⁹ *Ibid.*, xvi.

⁴⁰ Laudan, "A Plea for Culinary Modernism," 40-41.

⁴¹ Sokolov, "Culture and Obesity," 35.

⁴² *Ibid.*

Cave-Diets reflect the foraging traditions of our stone-age past. To reverse the negative health threats of our current diets (a consequence of the agricultural/farming revolution), proponents of the various Cave-Diets recommend that we alter our food choices and eating habits to be more in sync with our Paleolithic genetic ancestry.⁴³

Brenton includes low-carbohydrate diets in this category, as well as stricter 'Paleo diet' plans (discussed further in Chapter 6).⁴⁴ Brenton's newsletter articles and conference papers trace the historical and anthropological genealogy of contemporary Cave-Diets from classical times to the modern era.⁴⁵ Brenton also sketches a critique of Cave-Diet logic, pointing out (for example) that Cave-Diets often betray historical and ethnographic inaccuracies, and also 'ignore the political economy of food' (that is, the political and economic systems which produce and constrain people's food choices).⁴⁶ Both Brenton's genealogical survey and his critical comments have been extremely valuable in developing my own critique of the evolutionary logic deployed in low-carbohydrate diet books. However, again Brenton's work engages with only part of the phenomenon I term nutritional primitivism. Notably, he omits any consideration of the concomitant tendency in the low-carbohydrate literature to romanticise more recent Western foodways alongside those of our primitive ancestors. To summarise, this thesis therefore necessarily synthesises a range of critical scholarship on trends in contemporary Western food culture, rather than picking up any single thread of existing research.

As the literature review above may imply, my interest in nutritional primitivism as a hallmark of low-carbohydrate discourse derives from diet books themselves, rather than from existing critical scholarship on low-carbohydrate dieting. When I began this research project in early 2004, at the height of the low-carbohydrate trend, the critical literature on low-carbohydrate diets (by which I refer to all work on the topic by scholars from the humanities and social sciences) consisted of a single refereed journal article, an unpublished master's thesis and a brief newspaper opinion piece.⁴⁷ More than three years on, the literature now includes a sixteen-chapter anthology as well as two further published essays.⁴⁸ On first impressions, this would suggest a well-developed body of work, although there have not yet been any book-length studies of the low-carbohydrate trend. However, the informal nature of much of the literature unfortunately limits its theoretical depth.

⁴³ Barrett P. Brenton, "From 'Ape-Man' to the Atkins Plan: Evolutionary Dialectics on the Symbolic Foraging to Farming Divide" (paper presented at the Joint Annual Meetings of the Association for the Study of Food and Society and the Agriculture, Food, and Human Values Society, Culinary Institute of America, Hyde Park (NY), 2004).

⁴⁴ Eg Ray Audette, *Neanderthin* (New York: St Martin's Press, 1999); Loren Cordain, *The Paleo Diet: Lose Weight and Get Healthy by Eating the Food You Were Designed to Eat* (John Wiley & Sons, 2001); S. Boyd Eaton, Marjorie Shostak, and Melvin Konner, *The Paleolithic Prescription* (New York: Harper & Row, 1988).

⁴⁵ See Barrett P. Brenton, "Evolutionary Nutrition and Paleolithic Proscriptions on Eating: Part I," *Northeastern Anthropological Association Newsletter* 26, no. 1 (2003); Barrett P. Brenton, "Evolutionary Nutrition and Paleolithic Proscriptions on Eating: Part II," *Northeastern Anthropological Association Newsletter* 26, no. 3 (2004); Brenton, "From 'Ape-Man' to the Atkins Plan"; Barrett P. Brenton, "Stalking the Gastronomic Primitive: Ecotourism, Postmodern Foragers and the Quest for Nostalgic Nutrition" (paper presented at the Joint Annual Meetings of the Association for the Study of Food and Society and the Agriculture, Food, and Human Values Society, Boston University, 2006).

⁴⁶ Brenton, "From 'Ape-Man' to the Atkins Plan."

⁴⁷ Michelle Mouton, "'Doing Banting': High-Protein Diets in the Victorian Period and Now," *Studies in Popular Culture* 24, no. 1 (2001); Elspeth Probyn, "Trick Question Delivers Goods," *The Australian*, 1 October 2003; Sean R. Scheiderer, "Mass Consumption: Scientific Fact-(Un)Making in Popular Diet Literature" (master's thesis, Ohio State University, 2002).

⁴⁸ Amy Bentley, "The Other Atkins Revolution: Atkins and the Shifting Culture of Dieting," *Gastronomica* 4, no. 3 (2004); Lisa Heldke, Kerri Mommer, and Cynthia Pineo, eds., *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche* (Chicago and La Salle, Illinois: Open Court, 2005); Steven Shapin, "The Great Neurotic Art," *London Review of Books* 26, no. 15 (2004).

Critics have tended to publish work in popular fora and in publications which span the divide between the academy and the public sphere. Only two papers on low-carbohydrate dieting have appeared in peer-reviewed journals: Michelle Mouton's "'Doing Banting': High-Protein Diets in the Victorian Period and Now," published in *Studies in Popular Culture*, and Amy Bentley's "The Other Atkins Revolution: Atkins and the Shifting Culture of Dieting," published in *Gastronomica*.⁴⁹ Other essays, though written by high-profile university professors, have appeared in literary magazines and major newspapers rather than the research literature. For instance, Elspeth Probyn's piece on the Atkins Diet appeared in *The Australian's* higher education supplement; Steven Shapin's essay on low-carbohydrate dieting was published in the *London Review of Books*.⁵⁰

Similarly, the single anthology to date on low-carbohydrate dieting, *The Atkins Diet and Philosophy*, bridges academia and popular culture.⁵¹ Co-edited by Lisa Heldke, whose philosophical critique of 'food adventuring' I discussed earlier,⁵² *The Atkins Diet and Philosophy* forms part of Open Court Publishing Company's Popular Culture and Philosophy series, aimed at a general audience. In summary, the critical literature on low-carbohydrate diets tends to be stylistically polished, amusing and highly accessible, but also relatively short, generalised and often unreferenced (or under-referenced). The literature also leans frequently and heavily on narratives of personal experience, especially in the *Atkins Diet and Philosophy* collection.⁵³ Dieting confessions sit uncomfortably in academic writing, and, whilst I acknowledge that much critical work (often the best critical work) is inspired and informed by personal experience, the validity of interpretations which appear to derive solely or substantially from the author's own experiences is, to say the least, questionable.

For my purposes, a further limitation of the *Atkins Diet and Philosophy* anthology, which comprises the bulk of the published literature on low-carbohydrate dieting thus far, is that contributors to the volume were asked to use the Atkins Diet to illustrate their explanation of a particular philosophical theory, rather than the other way round. In many chapters this means that low-carbohydrate dieting is only mentioned in passing, with little analysis of the phenomenon itself. In some essays, low-carbohydrate dieting could effectively be replaced with any other example behaviour, sometimes not even related to food, eating, or diet at all. For instance, Dan Dennis's chapter on Kantian theories of decision-making, entitled 'How do you decide what to eat?', ostensibly discusses the hypothetical choice of whether or not to go on a low-carbohydrate diet.⁵⁴ However, Dennis's argument does not relate specifically to low-carbohydrate dieting at all. The choice of whether or not to go on a low-carbohydrate diet could logically be replaced by any

⁴⁹ Bentley, "The Other Atkins Revolution"; Mouton, "Doing Banting." Bentley's choice of journal is significant: unlike other food studies journals, *Gastronomica* is published in a glossy magazine-style format and mixes academic scholarship with fiction, poetry, artwork and other images. Although *Gastronomica* caters to food studies and gastronomy scholars, it is also marketed to a broader public and is stocked in major bookstores.

⁵⁰ Probyn, "Trick Question Delivers Goods"; Shapin, "The Great Neurotic Art."

⁵¹ Heldke, Mommer, and Pineo, eds., *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*.

⁵² Heldke, *Exotic Appetites*.

⁵³ See eg Randall E. Auxier, "Cutting the Conceptual Carbs: Dewey as Dietician, Atkins as Pragmatist," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005); Dan Dennis, "How Do You Decide What to Eat? Kantian Reflections on Dieting," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005); William Irwin, "Nietzsche and the Art of Eating: A Sound Mind in an Atkins Body," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005).

⁵⁴ Dennis, "How Do You Decide What to Eat?"

other example decision without affecting the paper's substance. This is not to deny that Dennis provides a clear and thorough explanation of an aspect of Kantian philosophy, but simply to point out that he does not offer any insight specific to low-carbohydrate dieting in the process.

Other chapters of *The Atkins Diet and Philosophy* in which the attention to the specifics of low-carbohydrate dieting is similarly superficial include those by Randall Auxier and Bat-Ami Bar On, on pragmatism and Marxist theory respectively.⁵⁵ Several further papers in the collection attend only to the very broad features of low-carbohydrate diets: for instance, their general association with meat-eating rather than vegetarianism, or the fact that such diets encourage weight-loss. In taking this route these papers again fail to develop an argument which is specific to low-carbohydrate dieting. David Detmer, for instance, proposes a convincing moral critique of meat-eating in his chapter 'A Vegetarian's Beef with Atkins', but his argument applies equally to anyone who eats meat, not just (most) Atkins dieters.⁵⁶ Similarly, Stan Cox and Marty Bender's critique of the environmental (un)sustainability of meat production ('Warning – This Diet Is Not for Everyone') is by no means specific to low-carbohydrate diets.⁵⁷ Catherine Womack, Abby Wilkerson and Corrinne Bedecarré all (individually) take issue with weight-loss dieting as a cultural practice and policy. Womack advocates a socio-environmental approach to obesity to replace the individualist paradigm, while Wilkerson offers a Fat Liberationist perspective and Bedecarré a feminist critique. But again, all these arguments could apply equally to any weight-loss diet, not just Atkins.

In part, the lack of critical attention to the specifics of low-carbohydrate dieting (that is, what makes low-carbohydrate diets different from other diets) reflects methodological limitations. Of the many critics who have written about low-carbohydrate dieting, only one, Amy Bentley, draws on discussions with low-carbohydrate dieters themselves, and then only in a relatively informal way.⁵⁸ A number of researchers cite closely from low-carbohydrate diet books,⁵⁹ but too many others rely on general commentary rather than detailed attention to primary sources.⁶⁰ It is frustrating to see generalisations about 'the Atkins Diet' take the place of rigorous analysis of diet books, media reports, low-carbohydrate websites, or other cultural artefacts. Further possibilities

⁵⁵ Auxier, "Cutting the Conceptual Carbs"; Bat-Ami Bar On, "Commodious Diets, or Could a Marxist Do Atkins?" in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005). A brief exception to this claim occurs on the final page of Bar On's chapter, where she rapidly suggests a politico-economic critique of the 'luxuriousness' of the Atkins Diet.

⁵⁶ David Detmer, "A Vegetarian's Beef with Atkins," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005).

⁵⁷ Stan Cox and Marty Bender, "Warning – This Diet Is Not for Everyone: The Atkins Diet's Ecological Side Effects," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005).

⁵⁸ Amy Bentley, "Men on Atkins: Dieting, Meat, and Masculinity," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005); Bentley, "The Other Atkins Revolution." Bentley's chapter in *The Atkins Diet and Philosophy* is adapted from her *Gastronomica* article. Bentley's papers also refer to dieter testimonials or 'success stories' posted on the Atkins website at www.atkins.com.

⁵⁹ See esp. Shapin, "The Great Neurotic Art"; Abby Wilkerson, "Bias and Body Size: The Social Contract and the Fat Liberation Movement," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005).

⁶⁰ Eg Cox and Bender, "Warning – This Diet Is Not for Everyone"; Detmer, "A Vegetarian's Beef with Atkins"; David Ramsay Steele, "Why and When Should We Rely on Scientific Experts? The Atkins Diet as an Alternative Theory," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005).

might include interviews or ethnographic research with current or former dieters, or perhaps with nutrition researchers or food technologists ‘at the front line’. The disappointing superficiality of the existing literature highlights the need for multifaceted and multidisciplinary approaches to what is, after all, a multidimensional phenomenon. Some of the most thought-provoking analyses (notably those of Amy Bentley, discussed above) draw on a very wide range of sources, including media reports, the food industry trade literature, personal interviews, diet websites and diet books.

The lack of close attention to primary sources which characterises much of the critical literature on low-carbohydrate dieting in part reflects its informal nature, as mentioned above. However, it also reflects stereotypical assumptions and generalisations about what low-carbohydrate diets involve and what dieters eat. Such stereotypes are further reinforced by scholars who recirculate them in the research literature. For example, vegetarian and environmental critiques, such as those by Detmer and Cox and Bender, are based on the assumption that the Atkins Diet requires the consumption of large amounts of protein, especially red meat.⁶¹ As I argue in more detail in Chapter 2, the Atkins Diet does not necessitate higher-than-average levels of protein intake (there is no minimum benchmark), and it is quite possible to follow Atkins without eating any red meat at all. Moreover, other low-carbohydrate diets vary dramatically in their protein recommendations. Some, such as the Zone, discourage the consumption of red meat in favour of chicken, turkey, seafood, egg white and fat-free cheeses.⁶² The plethora of vegetarian and even vegan low-carbohydrate diet and recipe books on the market should also give critics food for thought.⁶³

As the above paragraph implies, the Atkins Diet is by no means representative of popular low-carbohydrate diets in general. The close-to-exclusive focus on Atkins in the critical literature, coupled with the explicit or implicit assumption that conclusions drawn in relation to Atkins can be extended straightforwardly to other low-carbohydrate diets, constitutes one of the literature’s most serious limitations. A case in point is Shapin’s otherwise excellent essay ‘The Great Neurotic Art’. Drawing textual evidence largely from *Dr. Atkins’ New Diet Revolution*, Shapin argues that recent low-carbohydrate diets ‘reject [...] the notion that self-control is either instrumentally necessary or morally desirable’. In other words, ‘[t]he discipline of dietary moderation [...] is no longer the way to health’.⁶⁴ Shapin briefly cites *The South Beach Diet* in support of this claim:

“The point of this diet,” Agatston writes [in *South Beach*], “is to eat well. Food is one of life’s dependable pleasures.” And when you reach the shining plateau of Phase 3 [of the South Beach Diet], there are times when “you should go ahead and enjoy.” Be a devil.⁶⁵

These brief citations from *South Beach* omit contextual detail which arguably conflicts with Shapin’s conclusions. In its original context on page 25 of *South Beach*, the reference to ‘eat[ing]

⁶¹ Cox and Bender, “Warning – This Diet Is Not for Everyone,” 174; Detmer, “A Vegetarian’s Beef with Atkins,” 152.

⁶² Sears, *The Zone*, 227-30.

⁶³ Eg Celia Brooks Brown, *Low-Carb Vegetarian* (London: Pavilion, 2004); Rose Elliot, *The Vegetarian Low-Carb Diet Cookbook: The Fast, No-Hunger Weightloss Cookbook for Vegetarians* (London: Piatkus, 2006); Robin Robertson, *Carb Conscious Vegetarian: 150 Delicious Recipes for a Healthy Lifestyle* (Rodale, 2005). Robertson’s recipes are vegan; Brown’s and Elliot’s include dairy products and eggs.

⁶⁴ Shapin, “The Great Neurotic Art,” paras 13, 9.

⁶⁵ *Ibid.*, para 10. The quotations within this passage are taken from Arthur Agatston, *The South Beach Diet: The Delicious, Doctor-Designed Plan for Fast and Healthy Weight Loss* (London: Headline, 2003), 25, 222.

well' relates to what Agatston deems the 'proper things': lunch salads with chicken, fish or seafood.⁶⁶ When it comes to the 'improper things' (such as desserts), portion control is extreme: Agatston advises dieters, even when eating out, to limit themselves to three teaspoons of ice-cream or three bites of cake. By following this advice, he suggests, 'you'll still respect yourself in the morning'.⁶⁷ In Chapters 4 and 5 of this thesis, I argue that *The South Beach Diet* preaches moderation, self-denial and hard work as the keys to a good and healthy life, though it reorders the dietary schema to which these virtues are attached. By contrast, Shapin appears simply to extend his reading of the Atkins Diet to South Beach, rather than attending to the significant discursive and practical differences between the two regimes.

Interestingly, critics who refer to diets other than Atkins, however briefly, tend to highlight what I call the primitivist logic of low-carbohydrate discourse, suggesting that familiarity with the low-carbohydrate literature as a whole enables recognition of nutritional primitivism as a common and striking feature. Thus the critical literature on low-carbohydrate diets occasionally hints at primitivist tendencies, although no papers aside from my own take primitivism (by that or any other name) as their critical focus. Aside from my own published work on this theme,⁶⁸ the most extended discussion of nutritional primitivism in low-carbohydrate discourse appears as part of Shapin's essay discussed above. Shapin offers a short but elegant critique of what he calls Atkins's 'primitive dietetics', illuminating the way in which human biology and primitivist discontent (though he does not call it that) intersect in Atkins's rhetoric. Noting that 'an (admittedly depoliticised) critique of late capitalism has to be part of Atkins's appeal', Shapin argues (as do I) that diets like Atkins draw their nutritional logic from a denunciation of late modern civilisation:

Refined carbohydrates [...] have been brought into being by recent human artifice [...]. None of [this so-called food] existed in the state of nature and not much of it in the more natural cultures of the past. [...] Nor did such foods come into prevalence because of natural human appetites. The appetites themselves were called forth by the instruments of corporate capitalism.⁶⁹

According to Shapin, Atkins constructs the human appetite for refined carbohydrates as the unnatural result of the commercial and industrial food system specific to late capitalist civilisation. Since refined carbohydrates cause overweight and disease, Atkins claims, modern post-industrial civilisation is therefore ultimately responsible for the current public health crisis:

Obesity, and such related conditions as type-2 diabetes, are, in the Atkins cosmology, diseases of the special civilisation that makes and markets refined carbohydrates. The result of all this making and marketing is addiction. The appetites are perverted; a monstrously hybrid self is produced, whose appetites are parsed between the natural and the unnatural, the ones to be gratified and the ones to be disciplined and eliminated.⁷⁰

I agree with Shapin's reading here wholeheartedly, although (as I have argued) I believe the details of his argument in relation to the South Beach Diet need to be reconsidered. This thesis

⁶⁶ Agatston, *South Beach*, 25.

⁶⁷ *Ibid.*, 81.

⁶⁸ Christine Knight, "'The Food Nature Intended You to Eat': Low-Carbohydrate Diets and Primitivist Philosophy," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005); Christine Knight, "Nostalgia and Authenticity in Low-Carbohydrate Dieting," in *Authenticity in the Kitchen: Proceedings of the Oxford Symposium on Food and Cookery 2005*, ed. Richard Hosking (Totnes, Devon: Prospect Books, 2006).

⁶⁹ Shapin, "The Great Neurotic Art," para 15.

⁷⁰ *Ibid.*, para 16.

extends Shapin's arguments into a full-length critique, as well as testing their applicability to a wider range of popular low-carbohydrate diets. In doing so I aim to bring together various other snippets of commentary on nutritional primitivism from the critical literature on low-carbohydrate dieting, which currently form a highly fragmented and preliminary critique of what I view as a single coherent discourse. For example, while Shapin (as I have described) interrogates Atkins's dissatisfaction with the late modern industrial food system, he fails to identify the evolutionist underpinnings of this discourse and its consequent racialised dynamics. By contrast, Mouton's article comparing nineteenth- and twentieth-century high-protein diets briefly considers the tendency of recent low-carbohydrate diet books to 'make nutritional claims based on cross-cultural comparisons or nutritional anthropology', especially with reference to fourth-world Indigenous peoples. In a broadly postcolonial move, Mouton notes the Eurocentric and racist hierarchy on which much low-carbohydrate logic depends, arguing that

such cultural comparisons appeal to Americans' sense of cultural superiority. Underlying these comparisons is a false assumption that all Americans, by contrast with more homogenous [*sic*] and "primitive" peoples, have ultimate diversity in, access to, and choice over the foods they eat.⁷¹

Again, I agree with Mouton's argument as far as it goes, but the issues she raises represent only a small part of a much larger discourse. In particular, Mouton fails to link the racialisation of low-carbohydrate logic to its generalised discontent with modern Western civilisation and its diet. In this thesis, I seek to connect these concerns (and others) in a comprehensive reading of nutritional primitivism in low-carbohydrate discourse.

Low-carbohydrate diets and health

Implicit in much of the critical literature on low-carbohydrate dieting is the assumption that weight-loss is the central objective and concern of low-carbohydrate diet proponents. For example, a key issue to occupy researchers has been the question of whether or not low-carbohydrate dieting constitutes a 'paradigm shift' or 'scientific revolution' (as conceived by Thomas Kuhn) in weight-loss science.⁷² In his master's thesis, entitled *Mass Consumption*, Sean Scheiderer argues that low-carbohydrate diets produce weight-loss by indirectly restricting calories. Consequently, 'a low-carb diet is actually just a low-calorie diet and is thus well within the caloric paradigm'.⁷³ In his chapter in *The Atkins Diet and Philosophy*, David Ramsay Steele also notes that low-calorie apologists rely on this line of argument. However, he suggests that this in itself shows that the low-calorie paradigm has been 'modified by its responses to the alternative [low-carbohydrate] theory'.⁷⁴ By contrast, Womack, also in *The Atkins Diet and Philosophy*, argues that low-carbohydrate dieting does not amount to a paradigm shift because it is no more effective than other diets in promoting lasting weight-loss. She contends that 'the dieting paradigm itself is

⁷¹ Mouton, "Doing Banting," para 20.

⁷² See Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962). A Kuhnian vocabulary is also evident in recent scientific literature on low-carbohydrate diets. In November 2004 the journal *Obesity Research* published a special supplement on 'Paradigm Shifts in Obesity Research and Treatment'.

⁷³ The quotation here is taken from Scheiderer, "Mass Consumption", para 3 (abstract). See Chapter 2, Section 2, of Scheiderer's dissertation for full discussion of this point. As I argue in Chapter 2 of this thesis, more recent clinical trials do not support Scheiderer's claim that indirect caloric reduction is the cause of the weight-loss which occurs on a low-carbohydrate diet.

⁷⁴ Steele, "Why and When Should We Rely on Scientific Experts?" 98.

flawed and should be replaced with a new paradigm that proposes to address problems of obesity by focusing on the community, not the individual'.⁷⁵

The presumption that low-carbohydrate diets are 'all about weight-loss' is an understandable one, especially given the ambiguity of the word *diet* itself, which may refer either generally to any way of eating, or more specifically to a special regime that a person goes 'on' for weight-loss or health. Atkins himself distinguishes between these two meanings when he stresses that '[t]he Atkins Nutritional Approach is not a "diet." In the limiting sense of a weight loss program that you go on and off, it doesn't deserve to be called a diet at all. It's a way of eating for the rest of your (healthy) life'.⁷⁶ Of course, such claims are common to many (if not most) weight-loss diets. However, low-carbohydrate discourse is unusual in the extent of its engagement with questions of health over and above weight-loss *per se*. Popular diet books treat weight-loss as a *side effect* of a low-carbohydrate way of eating, rather than its primary function. For example, in *The X Factor Diet*, British author Leslie Kenton explains that 'weight loss is really only part of the process – in a sense, it's not a goal in itself. Permanent fat loss becomes a wonderful gift that comes with restoring your body's metabolic functioning and physiological well-being'.⁷⁷

The critical literature's references to low-carbohydrate dieting too often betray an assumption that diets such as Atkins are a dangerous fad (with all the negative connotations the word implies), promoting quick weight-loss with reckless disregard for overall health. For example, in *Confessing Excess: Women and the Politics of Body Reduction*, Carole Spitzack describes the Atkins Diet as ineffective and dangerous, arguing that Dr Atkins 'enjoyed enormous financial success by betting on the medical naiveté and desperation of consumers'.⁷⁸ Writing in 1990, Spitzack's position may perhaps be excused given the almost total lack of scientific research on low-carbohydrate diets at that time. Her discussion refers to the earlier cycle of Atkins-Diet popularity, in the 1970s. More recently, in the 2007 edition of *Appetite for Change*, Warren Belasco attributes the financial collapse of Atkins Nutritionals to the exposure of 'the obvious flaws in such an imbalanced diet'.⁷⁹ Such interpretations are unfounded. In Chapter 2 of this thesis I examine in some detail the current state of scientific research on the efficacy and safety of low-carbohydrate diets. To summarise my conclusions in that chapter, existing scientific evidence simply does not support allegations that low-carbohydrate diets present a risk to health. This thesis does not claim that low-carbohydrate diets are necessarily healthier than high-carbohydrate diets, or vice versa.⁸⁰ However, I do contend that any critical interpretation based on the assertion that low-carbohydrate diets are 'obviously' unhealthy is wrong. Whatever one's own opinion might be about the healthiness (or otherwise) of low-carbohydrate dieting, it is crucial to recognise that health is absolutely central to low-carbohydrate discourse and logic in both scientific and popular fora.

⁷⁵ Catherine A. Womack, "The Structure of Atkins's New Diet Revolution: Proposing a Paradigm Shift in Fighting Obesity," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005), 115. For discussion of the long-term effectiveness of low-carbohydrate diets for weight-loss, see Chapter 2.

⁷⁶ Atkins, *New Diet Revolution*, 16. Italics in the original have been omitted for the sake of readability.

⁷⁷ Leslie Kenton, *The X Factor Diet* (London: Vermilion, 2002), 106.

⁷⁸ Carole Spitzack, *Confessing Excess: Women and the Politics of Body Reduction* (Albany: State University of New York Press, 1990), 22.

⁷⁹ Warren J. Belasco, *Appetite for Change: How the Counterculture Took on the Food Industry*, 2nd updated ed. (Ithaca and London: Cornell University Press, 2007), 251.

⁸⁰ My personal view, based on the interviews I carried out with low-carbohydrate dieters, is that no single diet is right for everyone.

In low-carbohydrate diet books, the concept of health encompasses not just physical wellbeing and the absence of disease, but spiritual, mental and emotional balance as well. As this may suggest, low-carbohydrate dieting has close discursive, historical, institutional and economic links with the alternative health movement, many of which I discuss in more detail in Chapter 4. Of particular note is the common rejection of mainstream pharmaceutical drugs in favour of vitamin, mineral and herbal alternatives.⁸¹ Both Robert Atkins and Mary Dan Eades (coauthor of *Protein Power*) have published books on vitamin and mineral supplementation.⁸² Until his death in 2003, Atkins ran a clinical practice which, in his own words, ‘treat[ed] individuals with optimized diets and vitanutrients’.⁸³ His eponymous diet book offers numerous suggestions for alternatives to prescription drugs, including hormone replacement therapy, anti-depressants, non-steroidal anti-inflammatories (NSAIDs), diuretics and beta-blockers.⁸⁴ It also refers to a wide range of controversial health conditions whose existence or prevalence is disputed by the medical establishment, including chronic candida infection, food intolerances and allergies, leaky gut syndrome and heavy-metal toxicity.⁸⁵ The experiences reported by dieters whom I interviewed as part of this research project lend further support to my contention that low-carbohydrate dieting is closely imbricated with the alternative health movement, at least in Australia.⁸⁶ Of the fifteen dieters who participated in my study, four had been recommended a low-carbohydrate diet by an alternative therapist: three by a naturopath and one by a chiropractor. A fifth dieter had begun a low-carbohydrate diet after it was recommended by a local health-food shop. Specialised low-carbohydrate diet products are widely available in health-food stores and via naturopaths, as dieters and diet books alike point out.⁸⁷

The desire to lose weight was certainly a significant motivating factor for most dieters whom I interviewed. However, six out of fifteen dieters identified health concerns as their primary, or a concurrent, motivation. Conditions cited included chronic fatigue syndrome, chronic back pain, high cholesterol, type 2 diabetes and insulin resistance.⁸⁸ For two further interviewees, specific health issues (non-alcoholic fatty liver disease and hypoglycemia) prompted their choice of a low-carbohydrate diet over other possible weight-loss diets, though not the decision to diet in itself. As these examples suggest, some dieters whom I interviewed cited health concerns in conjunction with a desire to lose weight. But others described a ‘search to be well’ which was completely independent of weight concerns.⁸⁹ At least two participants in my study (both young

⁸¹ On the avoidance of drugs in alternative therapies, see Rosalind Coward, *The Whole Truth: The Myth of Alternative Health* (London: Faber and Faber, 1989), 19-20.

⁸² Robert C. Atkins, *Dr. Atkins’ Vita-Nutrient Solution: Nature’s Answer to Drugs* (New York: Fireside, 1998); Mary Dan Eades, *The Doctor’s Complete Guide to Vitamins and Minerals* (New York: Dell, 1994).

⁸³ Atkins, *New Diet Revolution*, 7.

⁸⁴ *Ibid.*, 262-68.

⁸⁵ *Ibid.*, 185-87, 331-43.

⁸⁶ I discuss the objectives and method of my interview study in detail in Chapter 3. In brief, I interviewed 15 men and women who either were currently on, or had previously followed, a low-carbohydrate diet. Interviews took place in Adelaide, South Australia, in early 2006.

⁸⁷ Eg Atkins, *New Diet Revolution*, 379; H. Leighton Steward et al., *Sugar Busters! Cut Sugar to Trim Fat* (New York: Ballantine, 1998), 164.

⁸⁸ The major physiological function of insulin is to stimulate uptake of glucose from the bloodstream, thereby regulating blood sugar levels. Insulin resistance is an abnormality in which the body’s tissues are unusually insensitive (or resistant) to insulin, causing chronically elevated insulin levels (hyperinsulinemia). For further discussion, see footnote 92 below.

⁸⁹ The quotation in this sentence is from the transcript of an interview with low-carbohydrate dieter ‘Pam’, in her 50s.

women in their 30s) had been of normal, healthy weight before they began dieting.⁹⁰ One went on a high-protein, low-carbohydrate diet to build muscle to support a ‘bad back’; the other began a low-carbohydrate diet to support her partner, who wanted to lose weight. Both of these women experienced an unexpectedly significant weight-loss which left at least one struggling to keep weight *on*. These narratives belie the blanket assumption that everyone who follows a low-carbohydrate diet does so with the aim of losing weight.

Popular low-carbohydrate diet books display a wide-ranging discourse of health. Texts such as *Dr. Atkins’ New Diet Revolution*, *The South Beach Diet* and *Protein Power* all refer extensively to the so-called ‘twin’ obesity and diabetes epidemics, which result, they argue, from the modern Western diet high in refined carbohydrates.⁹¹ In proffering a low-carbohydrate regime as the solution to diabetes and its precursor, the insulin resistance syndrome, low-carbohydrate diet books also promise to reduce related cardiovascular risk factors such as high blood pressure (hypertension) and high cholesterol.⁹² (To be more precise, low-carbohydrate diets claim to lower triglycerides and ‘bad’ LDL cholesterol while increasing ‘good’ HDL cholesterol, thus lowering the ratio of LDL to HDL.) In *The South Beach Diet*, author Arthur Agatston, a practising cardiologist, describes how he and his colleagues developed the diet with the aim of improving patients’ cardiovascular health: ‘our top priority was *not* weight loss for its own sake – it was to improve our patients’ heart health by changing their blood chemistry’.⁹³ Similarly, the authors of *Sugar Busters* place cardiovascular health and diabetes prevention and control ahead of weight-loss in describing the goals of their regime. The Sugar Busters plan, they warrant, will ‘eliminate unwanted quantities of weight’, but also, ‘*more importantly*, [address] the adverse effects current eating habits have on blood cholesterol, triglycerides, and [...] diabetes’.⁹⁴

Beyond diabetes and heart disease, low-carbohydrate diets promise to prevent or reverse an apparently limitless range of maladies, from everyday colds and flu to killers such as cancer. Barry Sears, author of *The Zone*, writes:

[R]eaching the Zone and staying in it can help prevent heart disease. It should even help reverse heart disease when it does occur. Staying in the Zone is your best defense to ward off cancer, and has a positive impact on a host of other diseases, including diabetes, arthritis, “mental” diseases like depression and alcoholism, even chronic fatigue.⁹⁵

Sears also argues that the Zone Diet can alleviate the symptoms of HIV/AIDS.⁹⁶ *Sugar Busters* and *Protein Power* make smaller claims: niggling complaints such as rashes, aches and pains, indigestion and allergies are all likely to improve, if not disappear entirely.⁹⁷ In similar vein, Atkins

⁹⁰ As self-reported.

⁹¹ Eg Agatston, *South Beach*, 68-74; Atkins, *New Diet Revolution*, 11-16, 25, 259, 313-30; Eades and Eades, *Protein Power*, 298-301.

⁹² See eg Atkins, *New Diet Revolution*, 344-59; Eades and Eades, *Protein Power*, 19-50, 314-24. The insulin resistance syndrome (IRS) is a ‘pathophysiological construct’ by which to describe a cluster of metabolic abnormalities and clinical disorders which are associated with insulin resistance (on which see footnote 88 above). These include glucose intolerance, dyslipidemia (including elevated triglyceride levels and low HDL levels), high blood pressure, type 2 diabetes, heart disease, polycystic ovary syndrome (PCOS) and sleep apnoea. See Gerald M. Reaven, “The Insulin Resistance Syndrome: Definition and Dietary Approaches to Treatment,” *Annual Reviews in Nutrition* 25 (2005); Gerald M. Reaven, “Why Syndrome X? From Harold Himsworth to the Insulin Resistance Syndrome,” *Cell Metabolism* 1 (2005).

⁹³ Agatston, *South Beach*, 30. The italics are original.

⁹⁴ Steward et al., *Sugar Busters*, xiv (italics added).

⁹⁵ Sears, *The Zone*, xvi.

⁹⁶ *Ibid.*, 174-82.

⁹⁷ Eades and Eades, *Protein Power*, 333; Steward et al., *Sugar Busters*, 12.

confidently predicts that ‘the most significant revelation of controlled carbohydrate eating is the discovery that some nagging physical ills, from headaches to various aches and pains, have completely vanished’.⁹⁸ *Protein Power* forecasts improvements in general wellbeing and appearance, including ‘increased luster and body in your hair, increased skin moisture and suppleness, increased endurance, [and] sounder sleep, to mention just a few’.⁹⁹

More holistically, the assurance of high-level wellbeing, total wellness, or optimum health is a consistent feature of low-carbohydrate discourse, suggesting further parallels with the alternative health movement.¹⁰⁰ Atkins asserts that a low-carbohydrate diet is ‘the key to good health in general, even if you do not have a weight problem’.¹⁰¹ The South Beach Diet is marketed as ‘a regime for long-term well-being’.¹⁰² *Sugar Busters* refers repeatedly to enhanced ‘health and performance’ as the reward of the successful dieter.¹⁰³ *Protein Power* describes how dieters feel ‘mentally sharp, physically strong and well, emotionally stable’.¹⁰⁴ The Zone, Sears claims, ‘is about *optimal health*’: Zone dieters ‘enjoy optimal body function: freedom from hunger, greater energy and physical performance, as well as improved mental focus and productivity’.¹⁰⁵ Further, they ‘experience sweeping changes in the way [they] feel – physically, mentally, even emotionally – changes which flow from heeding ‘the way human beings are designed to eat’.¹⁰⁶

I have discussed the engagement of low-carbohydrate diets with questions of health at some length in order to contextualise my theoretical approach in this thesis. To date, sociological and cultural studies of dieting have been dominated by feminist critique of the thin ideal.¹⁰⁷ I share feminists’ concern with the psychological impact of the thin ideal on women in particular. I also acknowledge that obesity discourse remains gendered, especially in its disproportionate attention to maternal behaviour as a cause of overweight in children.¹⁰⁸ However, in the context of the obesity and diabetes epidemics (whether they are deemed ‘real’ or a social construction) I suggest that a feminist approach to the study of dieting is no longer adequate. Arguably, both the obesity epidemic and the low-carbohydrate trend represent a shift in the gendering of dieting in Western

⁹⁸ Atkins, *New Diet Revolution*, 146.

⁹⁹ Eades and Eades, *Protein Power*, 332.

¹⁰⁰ See Coward, *The Whole Truth*, 42-67.

¹⁰¹ Atkins, *New Diet Revolution*, 135.

¹⁰² Agatston, *South Beach*, back cover.

¹⁰³ Steward et al., *Sugar Busters*, xiv, 113, 144.

¹⁰⁴ Eades and Eades, *Protein Power*, 137.

¹⁰⁵ Sears, *The Zone*, 2 (original italics).

¹⁰⁶ *Ibid.*, 99. Italics in the final clause have been removed for the sake of readability.

¹⁰⁷ See eg Susan R. Bordo, *Unbearable Weight: Feminism, Western Culture, and the Body* (Berkeley: University of California Press, 1993); Kim Chernin, *Womansize: The Tyranny of Slenderness* (London: The Women’s Press, 1981); John Germov and Lauren Williams, “Dieting Women: Self-Surveillance and the Body Panopticon,” in *Weighty Issues: Fatness and Thinness as Social Problems*, ed. Jeffrey Sobal and Donna Maurer (New York: Aldine de Gruyter, 1999); John Germov and Lauren Williams, “The Epidemic of Dieting Women: The Need for a Sociological Approach to Food and Nutrition,” *Appetite* 27 (1996); John Germov and Lauren Williams, “The Sexual Division of Dieting: Women’s Voices,” *Sociological Review* 44, no. 4 (1996); Nita Mary McKinley, “Ideal Weight/Ideal Women: Society Constructs the Female,” in *Weighty Issues: Fatness and Thinness as Social Problems*, ed. Jeffrey Sobal and Donna Maurer (New York: Aldine de Gruyter, 1999); Susie Orbach, *Fat Is a Feminist Issue: The Anti-Diet Guide to Permanent Weight Loss* (New York: Paddington, 1978); Spitzack, *Confessing Excess: Women and the Politics of Body Reduction*; N. Wolf, *The Beauty Myth: How Images of Beauty Are Used against Women* (New York: Anchor, 1991); Orland W. Wooley, Susan C. Wooley, and Sue R. Dyrenforth, “Obesity and Women II: A Neglected Feminist Topic,” *Women’s Studies International Quarterly* 2 (1979).

¹⁰⁸ See Boero, “All the News That’s Fat to Print,” 54-57; Gard and Wright, *The Obesity Epidemic*, 132-36.

societies. Boero notes that concern over the perceived obesity epidemic has shifted weight-loss coverage in the media away from women specifically.¹⁰⁹ Bentley argues that low-carbohydrate diets such as Atkins appeal particularly to men, and at least one survey of low-carbohydrate dieting prevalence in the United States found that men were much more likely than women to follow a low-carbohydrate diet long-term.¹¹⁰ As a response to the perceived crisis in public health, low-carbohydrate diets forego ‘appearance claims’ in favour of urgent warnings about the dangers of the modern Western diet.¹¹¹ In this thesis I examine the primitive ideal they posit in its stead: the supposedly healthier, simpler and more natural food habits of our ancestors.

Thesis outline

The body of this thesis may be divided into two broad sections. The first, comprising Chapters 1, 2 and 3, introduces low-carbohydrate diets and the key concept of nutritional primitivism, and outlines my theoretical and methodological approach. In Chapter 1, I have reviewed the critical literature on primitivism and low-carbohydrate diets, emphasised the centrality of health to low-carbohydrate discourse, and indicated the general scope and trajectory of this project. Chapter 2 provides an overview of the social and scientific context of low-carbohydrate dieting. I trace the recent popularity of low-carbohydrate diets, discuss competing definitions of low-carbohydrate, and assess the current state of scientific research concerning low-carbohydrate diets’ efficacy and safety. Chapter 3 details the research methods used in this thesis, including the selection of diet books for critical analysis, the objectives and design of my interview study with low-carbohydrate dieters, the analytical approach taken to both texts and interview data, and the methodological relationship between the two phases of research.

In the second section of this thesis, comprising Chapters 4 to 9, I present my critique of nutritional primitivism in low-carbohydrate discourse, structured around a set of interconnected sub-themes. Chapter 4 examines the function of the natural / unnatural binary in the low-carbohydrate dietary schema. I argue that refined carbohydrate operates in low-carbohydrate discourse as the central symbol of the unhealthy modern industrial diet, against which sanctioned diet foods must be defined in opposition. With reference to my interview study, I conclude that the significance of the categories *natural* and *unnatural* within low-carbohydrate discourse is relatively stable, serving to underpin the more contentious aspects of primitivist logic discussed later in this thesis. Chapter 5 explores the anti-modern and anti-Western backlash in low-carbohydrate discourse with particular reference to *The South Beach Diet*, which brings together nostalgia for the supposedly healthier, more virtuous eating habits of the pre-industrial West, and an appetite for the ‘authentic’ culinary traditions of the Mediterranean, Middle East and Asia. However, dieters’ descriptions of their experiences did not tally with *South Beach*’s rhetoric, suggesting that while tradition functions as a romantic ideal in the low-carbohydrate literature, the

¹⁰⁹ Boero, “All the News That’s Fat to Print,” 44 n. 11.

¹¹⁰ Bentley, “Men on Atkins”; Bentley, “The Other Atkins Revolution”; Heidi Michels Blanck et al., *Use of Low-Carbohydrate, High-Protein Diets among Americans: Correlates, Duration, and Weight Loss* (Medscape General Medicine, 5 April 2006 [accessed 20 June 2006]); available from <http://www.medscape.com/viewarticle/528758>. Blanck and colleagues also found that the simple prevalence of low-carbohydrate dieting was not significantly different amongst men and women. Paradoxically, this is a highly significant finding, since women have always been much more likely than men to go on a diet.

¹¹¹ Mouton, “Doing Banting,” para 19.

practical requirements of low-carbohydrate dieting mediate against any simple reclamation of 'authentic' home-grown or exotic foodways for dieters themselves.

In Chapter 6 I turn to Stone-Age prehistory, identifying the two major neo-Darwinian theories which appear in low-carbohydrate texts: namely, evolutionary nutrition and the thrifty gene hypothesis. I trace the ways in which authors deploy evolutionary and genetic explanations for obesity and diabetes to justify their dietary recommendations, and argue that such explanatory models are crucial to low-carbohydrate diets' investment in the nutritional primitive as a return to human origins. Chapter 7 discusses the deployment of anthropological and nutritional research about contemporary fourth-world Indigenous people in the low-carbohydrate diet literature, with specific attention to *Protein Power*. I argue that alongside idealised representations of Indigenous people as Noble Savages, *Protein Power* turns the popular scientific gaze onto Indigenous groups as a kind of explanatory microcosm of the West, in which the deleterious effects of so-called civilised diet and lifestyle are magnified and accelerated. In Chapter 8, I consider low-carbohydrate dieters' responses to the evolutionary and anthropological ideas covered in Chapters 6 and 7. I find that dieters approach such thinking critically and sceptically, challenging its evidence base, relevance and explanatory power. Finally, Chapter 9 explains the interconnections between the sub-topics explored in Chapters 4 to 8, and relates them to the integrated discursive whole which I call nutritional primitivism.

Chapter 2. Low-carbohydrate diets in social and scientific context

In the critical literature on the recent low-carbohydrate trend, it has become a commonplace to note that low-carbohydrate dieting is nothing new, a discursive manoeuvre paralleled in the mass media.¹ Low-carbohydrate diets (here conceived as a special regime for weight-loss or health) have gone through cycles of popularity since at least the nineteenth century,² with particular upsurges in the late 1920s and 1930s, and again in the 1960s and 1970s.³ This thesis concentrates on the most recent cycle, which began in the early 1990s, coinciding with growing public health concern about the so-called obesity epidemic. The 1990s saw the release of a number of new and revised low-carbohydrate diet books, including *Dr. Atkins' New Diet Revolution* in 1992, *The Carbohydrate Addict's Diet* in 1993, *The Zone* in 1995, *Protein Power* in 1996 and *Sugar Busters* in 1998.⁴ By 1999, *Time* magazine could refer confidently to the 'low-carb diet craze' in a special edition on low-carbohydrate diets.⁵ *Dr. Atkins' New Diet Revolution* was revised and re-released in 1999 and

¹ For instances in the critical literature, see eg Mouton, "Doing Banting," para 4; Probyn, "Trick Question Delivers Goods," para 10; Scheiderer, "Mass Consumption", chapter 1, section 2. For a mass media example, see eg Walter C. Willett and Patrick J. Skerrett, "Going Beyond Atkins," *Newsweek*, 19 January 2004. In part the assertion that low-carbohydrate diets are 'old news' arises because of claims made by low-carbohydrate diet authors, notably Atkins in the title of *Dr. Atkins' New Diet Revolution*. However, critics insist on this point so frequently that their reasons are worth considering. Arguably, this move betrays a perhaps unconscious desire to defuse the perceived threat posed by low-carbohydrate diets to the dominant low-fat nutritional paradigm, as well as to ethico-environmental vegetarian diets. Further, Mouton notes a classed divide in attitudes to low-carbohydrate dieting, 'between a populist dieting discourse and a skeptical elite' (para 21). I suspect this split may have filtered into the academy.

² Jean Anthelme Brillat-Savarin espoused a low-carbohydrate regime in his essays 'On Obesity' and 'Prevention and Cure of Obesity' in *The Physiology of Taste* (1825). See Jean Anthelme Brillat-Savarin, *The Physiology of Taste* (New York: Penguin, 1994). For a philosophical discussion of Brillat-Savarin's 'proto-Atkins' diet, see Daniel O'Connell, "Brillat-Savarin's Nineteenth-Century Proto-Atkins Diet: A Case Study in Inductive Inference," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005). In the 1860s, William Banting's self-published low-carbohydrate recommendations garnered extreme popularity in both Britain and the United States. See William Banting, *A Letter on Corpulence, Addressed to the Public*, 4th ed. (New York: 1864). For a critical discussion of Banting's diet, with comparison to the recent low-carbohydrate trend, see Mouton, "Doing Banting."

³ In the 1920s and 1930s, anthropological research by Vilhjalmur Stefánsson and Weston Price was particularly influential. See esp. C. W. Lieb, "The Effects on Human Beings of a Twelve-Month Exclusive Meat Diet," *Journal of the American Medical Association* 93, no. 1 (1929); Weston A. Price, *Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects* (New York & London: P. B. Hoeber, 1939). Stefánsson's later publications include Vilhjalmur Stefánsson, *Cancer, Disease of Civilization? An Anthropological and Historical Study* (New York: Hill and Wang, 1960); Vilhjalmur Stefánsson, *Discovery: The Autobiography of Vilhjalmur Stefánsson* (New York: McGraw-Hill, 1964); Vilhjalmur Stefánsson, *The Fat of the Land* (New York: MacMillan, 1956); Vilhjalmur Stefánsson, *Not by Bread Alone* (New York: MacMillan, 1946). Popular low-carbohydrate diet books and related texts of the 1960s and 1970s include Robert C. Atkins, *Dr. Atkins' Diet Revolution: The High Calorie Way to Stay Thin Forever* (New York: D. McKay Co., 1972); T. L. Cleave, *The Saccharine Disease: Conditions Caused by the Taking of Refined Carbohydrates, Such as Sugar and White Flour* (Bristol: J. Wright, 1974); William Dufty, *Sugar Blues* (New York: Warner Books, 1976); Irwin Stillman, *The Doctor's Quick Weight Loss Diet* (Englewood Cliffs, New Jersey: Prentice-Hall, 1967); Herman Tarnower, *The Complete Scarsdale Medical Diet*, revised ed. (London: Bantam, 2003); John Yudkin, *Sweet and Dangerous* (New York: Van Rees Press, 1972); John Yudkin, *This Slimming Business* (Harmondsworth: Penguin, 1962); John Yudkin, *A-Z of Slimming* (London: Davis-Poynter, 1977). For an overview of low-carbohydrate diet history and its key texts, see Eades and Eades, *Protein Power*, 15-18; Kenton, *The X Factor Diet*, 25-31. It is no coincidence that the two twentieth-century periods in which low-carbohydrate diets resurfaced also saw the renewal of primitivist ideology and sensibility in politics, art and popular culture. See generally (as discussed in Chapter 1 of this thesis) Torgovnick, *Gone Primitive*; Torgovnick, *Primitive Passions*.

⁴ In addition to texts cited in Chapter 1, see Rachael F. Heller and Richard F. Heller, *Carbohydrate Addict's Diet* (New York: New American Library, 1993).

⁵ Joel Stein et al., "The Low-Carb Diet Craze," *Time*, 1 November 1999.

again in 2002, followed shortly by the publication in 2003 of *The South Beach Diet*, its only real competitor in terms of sales.

Tracing the recent low-carbohydrate trend

Title	Highest ranking	Weeks on chart	Entry date	Exit date
<i>Dr. Atkins' New Diet Revolution</i>	1	454	June 1995	May 2004
<i>The South Beach Diet</i>	1	211	April 2003	September 2007
<i>Sugar Busters</i>	2	139	April 1998	August 2001
<i>Carbohydrate Addict's Diet</i>	4	55	March 1994	October 2000
<i>The Zone</i>	7	149	August 1995	February 2003
<i>Protein Power</i>	9	118	April 1996	April 2000

Table 1. Bestselling low-carbohydrate diet books in the United States since 1993

The popularity of low-carbohydrate diets has been most extreme in the United States and other English-speaking Western nations such as Australia. A July 2004 food industry trade report named Britain, Canada, Israel, Australia and South Africa as the strongest markets for low-carbohydrate products outside the United States, with Germany, Switzerland and the Scandinavian countries some way behind.⁶ Book sales data from the United States, as shown in Table 1, suggest that low-carbohydrate diets became increasingly popular during the mid- and late-1990s, and took off spectacularly around 2002.⁷ Based on the USA Today Best-Selling Books Database, all the diet books mentioned in the previous paragraph reached the 'top ten' of book sales in the United States at some point between 1994 and 2004. Both *Atkins* and *South Beach* reached number one, and at the time of writing *South Beach* had only very recently dropped off the USA Today charts.⁸ In 2003 alone, *Dr. Atkins' New Diet Revolution* sold 2 million copies in the United States, while the spin-off titles *Atkins for Life* and *Dr. Atkins' New Carbohydrate Gram Counter* sold 1 million and 641,000 copies respectively.⁹ *The South Beach Diet* topped the 2003 non-

⁶ *Low-Carb Losing Its Sparkle?* [online report] (Food & Drink Europe, 16 July 2004 [accessed 20 July 2004]); available from <http://foodanddrinkeurope.com/news/ng.asp?id=53564&n=wh29&ec=hsiptarhbfkxgcc>. See also James N. Klaphor, *Americans Lay Claim to the Low-Carb Title* [media release] (Institute of Food Technologists, 14 July 2004 [accessed 27 July 2004]); available from <http://www.ift.org/cms/?pid=1001067>. An Australian news item in March 2004 reported little enthusiasm in Asia for low-carbohydrate diets: see *Asians Choose Fat over Fad as Dietary Habits Change* [news item] (ABC Online, 1 March 2004 [accessed 5 March 2004]); available from <http://www.abc.net.au/news/newsitems/s1055901.htm>.

⁷ The information in Table 1 is based on the interactive online USA Today Best-Selling Books Database, which lists the top 150 bestselling books in the United States for every week back to October 1993. The database is available at <http://asp.usatoday.com/life/books/booksdatabase>. Although less well-known than some other American bestseller lists (notably that of the *New York Times*), the USA Today database has the advantage of providing online access to archived lists, and allows users to search by book title, author, or date. Note that the number of weeks a book spends on the list need not be consecutive. Figures cited here were updated on 9 October 2007.

⁸ According to my last database search, performed on 9 October 2007, *The South Beach Diet* had last appeared on the USA Today bestseller charts on 20 September 2007, less than three weeks before. It is quite possible that *South Beach* may again re-enter and then drop off the list over the coming weeks and months.

⁹ Robert C. Atkins, *Atkins for Life* (New York: St. Martin's Press, 2003); Robert C. Atkins, *Dr. Atkins' New Carbohydrate Gram Counter*, totally updated and expanded ed. (New York: M. Evans and Company, 2002).

fiction bestseller list with 2.3 million copies sold, and by January 2004 had more than 5 million copies in print; *Dr. Atkins' New Diet Revolution* had over 16.5 million.¹⁰

Surveys of low-carbohydrate dieting prevalence in the United States generally support book sales data, suggesting that low-carbohydrate diets gradually increased in popularity during the late 1990s, took off around 2003, and peaked in popularity in the first half of 2004.¹¹ According to Phelan and colleagues' review of statistics from the United States National Weight Control Registry, the number of successful dieters consuming less than 90 grams of carbohydrate per day (deemed a low-carbohydrate diet in the study) increased from 5.9 percent in 1995 to 17.1 percent in 2003.¹² Market research by the NPD Group between 2001 and 2003 found that 4 percent of the population was on a low-carbohydrate diet at any given time, and 17 percent had tried a low-carbohydrate diet at some point.¹³ A survey by nutrition researchers between September 2002 and February 2003 found generally similar prevalence rates: 3.4 percent of those surveyed were currently on a low-carbohydrate diet, while 12.5 percent had tried one at some point.¹⁴ By contrast, numerous market research studies conducted in late 2003 and early 2004 confirmed prevalence rates double or even triple those of the earlier surveys (see Table 2).¹⁵ In addition, a further one-fifth to one-third of the population reported reducing carbohydrate intake in general without specifically being 'on' a low-carbohydrate diet, indicating very high levels of

¹⁰ Paul D. Colford, *Diet Books Hit the Spot* [news item] (New York Daily News, 24 December 2003 [accessed 4 March 2004]); available from <http://www.nydailynews.com/business/v-pfriendly/story/148721p-131182c.html>; Daisy Maryles, "Behind the Bestsellers," *Publishers Weekly* 251, no. 3 (2004).

¹¹ This review is based primarily on media releases and report summaries provided by market research firms. Unfortunately, the detailed demographic data included in full market research reports is only available at substantial cost.

¹² Suzanne Phelan et al., "Are the Eating and Exercise Habits of Successful Weight Losers Changing?" *Obesity* 14, no. 4 (2006). As Phelan and coauthors explain, the National Weight Control Registry is a voluntary registry of Americans who have successfully lost weight long-term, defined as a weight-loss of at least 30 pounds (13.6 kilograms) maintained for at least one year. For further information, see www.nwcr.ws.

¹³ NPD Group, *The NPD Group Reports on Low-Carb's Impact on America's Diet: NPD's New Study Finds Actual Carb Consumption Is Higher Than Expected* [press release] (NPD Group, 5 April 2004 [accessed 20 April 2004]); available from http://press.npd.com/press/releases/press_040405.htm; "US Goes Low-Carb Crazy," *Sydney Morning Herald*, 15 June 2004. Average carbohydrate consumption amongst self-described low-carbohydrate dieters in this study was 128 grams per day, significantly higher than Phelan and colleagues' benchmark of 90 grams per day. I discuss definitional issues in detail later in this chapter.

¹⁴ Blanck et al., *Use of Low-Carbohydrate, High-Protein Diets among Americans*. It is not completely clear from Blanck and colleagues' paper whether the 12.5 percent figure for those who had ever been on a low-carbohydrate diet included the 3.4 percent of respondents currently on a low-carbohydrate diet. The phrasing of their survey questions tends to suggest that the two categories were exclusive of one another; that is, that a further 12.5 percent of respondents had tried a low-carbohydrate diet in the past, in addition to the current 3.4 percent.

¹⁵ For figures in Table 2, see Mintel, *Low Carb* [online report] (2004 [accessed May 2004]); available from <http://reports.mintel.com/sinatra/reports/index/&letter=12/display/id=117146&anchor=a117146/display/id=72543>; *Study: Carb-Counting Goes on after Diets* [report] (Associated Press, 14 April 2004 [accessed 21 April 2004]); available from http://customwire.ap.org/dynamic/stories/F/FIT_LOW_CARB_SURVEY?SITE=INMUN&SECTION=HOME&TEMPLATE=DEFAULT; "US Goes Low-Carb Crazy"; *The Valen Group Finds 59 Million U.S. Adults Are Currently Controlling Carbohydrates – Landmark Study Results to Be Release [sic] at LowCarbiz Summit This Week* [press release] (LowCarbiz/Valen Group, 19 January 2004 [accessed 1 April 2004]); available from http://www.valengroup.com/low_carb_summit_press_release.htm; Daisy Whitney, *News from the LowCarbiz Summit* [web report] (LowCarbiz, 8 February 2004 [accessed 1 April 2004]); available from https://www.lowcarbiz.com/Special_Report/012604Summit_briefs.htm. An ACNielsen study in February 2004 found that 17.2 percent of households included someone currently on a low-carbohydrate diet; a further 19.2 percent included someone who used to be. However, household figures are not directly comparable to those for individuals. See ACNielsen, *ACNielsen Quantifies Impact of Low Carb Diets* [news release] (ACNielsen, 9 February 2004 [accessed 9 March 2004]); available from <http://www.acnielsen.com/news/american/us/2004/20040209.htm>.

'carbohydrate awareness' amongst the population as a whole.¹⁶ Morgan Stanley also found that consumers continued to limit carbohydrate consumption even after going 'off' a low-carbohydrate diet as such.¹⁷

Market research firm	Date	Prevalence (%)
Morgan Stanley	Late 2003	10
Valen Group	December 2003	8
Morgan Stanley	January 2004	13
Mintel	February 2004	7
Morgan Stanley	March 2004	11

Table 2. Prevalence of low-carbohydrate dieting in the United States, Late 2003-March 2004

The impact of low-carbohydrate dieting in the United States is also demonstrated by the sales fortunes of carbohydrate-rich foods such as wheat, rice, potatoes and orange juice.¹⁸ Between 2002 and 2003 domestic potato consumption fell by 4.7 percent, and by 2004, wheat sales had suffered a decline unprecedented since the 1950s.¹⁹ In response to declining sales, the grain, potato and orange juice industries launched million-dollar marketing campaigns in an attempt to lure back carbohydrate-conscious consumers. Amongst others, the US Potato Board, Idaho Potato Commission and Florida Department of Citrus ran marketing campaigns worth US\$4 million, \$2 million and \$1.8 million respectively.²⁰ Conversely, sales of bacon, pork rinds, beef jerky, eggs and sausages all increased, as did those of salad vegetables, in part due to increased demand from fast-food restaurants keen to add low-carbohydrate options to their menus.²¹ In addition, the low-carbohydrate trend created an enormous market for processed low-carbohydrate foods: in the six months to July 2004, more than a thousand low-carbohydrate products were introduced in the United States, including reduced-carbohydrate breads, pasta, cakes, chocolate bars and ice-cream.²² After the trend peaked in 2004, this market rapidly collapsed. In August 2005, Atkins Nutritionals (manufacturers of the Atkins own-brand line of low-carbohydrate products) filed for bankruptcy protection in the United States, re-emerging in

¹⁶ Mintel, *Low Carb; The Valen Group Finds 59 Million U.S. Adults Are Currently Controlling Carbohydrates*; Whitney, *News from the LowCarbiz Summit*. The Valen Group study found 20 percent of people were reducing their carbohydrate intake; Mintel found 33 percent.

¹⁷ *Study: Carb-Counting Goes on after Diets*.

¹⁸ For an overview, see "Low Carb Moves from 'Fad' to 'Trend'," in *Facts, Figures & the Future* (Food Marketing Institute/ACNielsen/The Lempert Report, 9 February 2004 [accessed 9 March 2004]); available from http://www.factsfiguresfuture.com/archive/february_2004.htm.

¹⁹ Dale Buss, *Potato, Orange Growers Go on Health Offensive* [report] (New Nutrition Business, 27 February 2004 [accessed 11 March 2004]); available from <http://www.new-nutrition.com/newspage/270204c.asp>; *Wheat Sales Hit by Diet Fads* [news report] (BBC News, 28 April 2003 [accessed 5 March 2004]); available from <http://news.bbc.co.uk/go/pr/fr/-/2/hi/business/2981929.stm>.

²⁰ Buss, *Potato, Orange Growers Go on Health Offensive*.

²¹ Bentley, "The Other Atkins Revolution"; Anne Riley-Katz, *Hold the Bun, Please: The Low-Carb Diet Craze Means Fast-Food Restaurants Are Starting to Wrap Burgers in Lettuce Instead of Buns* [news report] (The Californian, 10 November 2003 [accessed 2 August 2004]); available from <http://www.californiaonline.com/news/stories/20031110/localnews/616555.html>.

²² Klapthor, *Americans Lay Claim to the Low-Carb Title*.

2006 with a far more slender range.²³ '[U]nsold low-carb food products', *The Australian* newspaper reported in 2006, 'now stack the shelves of American food banks for distribution to charities'.²⁴

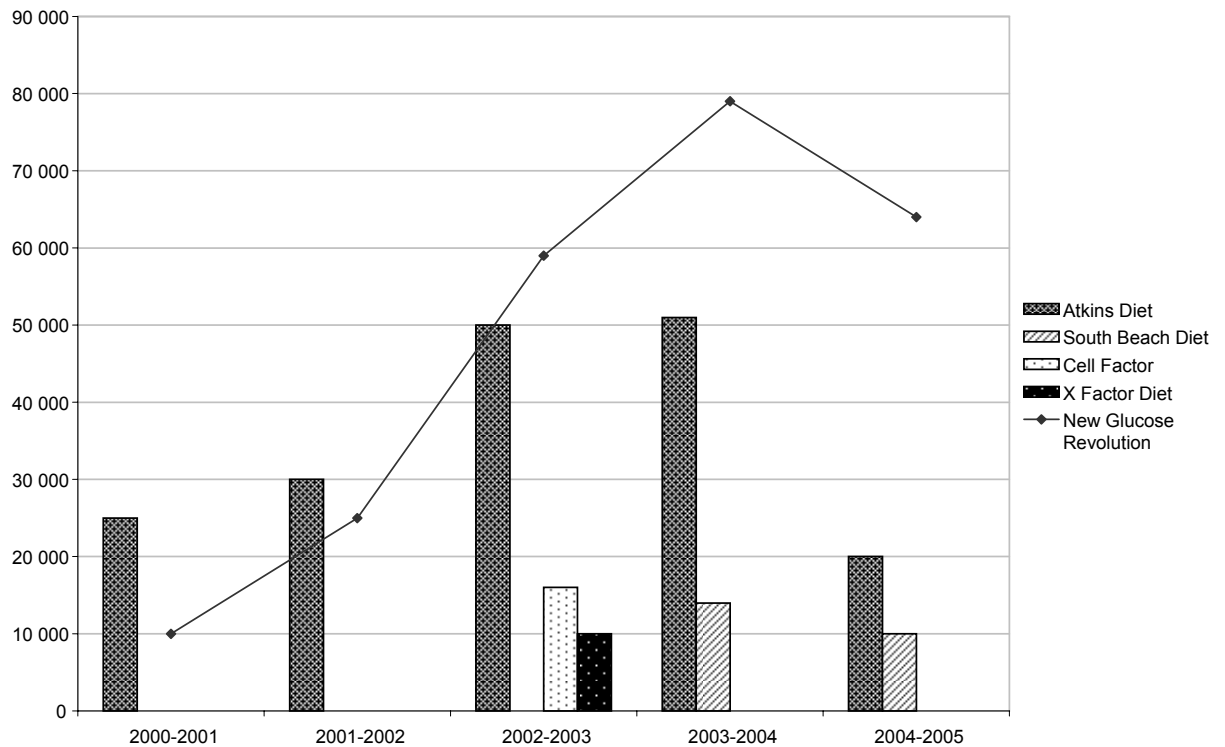


Figure 1. Sales of bestselling low-carbohydrate diet books in Australia, April 2000-March 2005

Australian sales figures for low-carbohydrate diet books, as shown in Figure 1, suggest a similar, though less intense, pattern of popularity to that of the United States.²⁵ *Dr. Atkins' New Diet Revolution* appeared on the annual Australian Publishers Association bestseller lists every year between 2000-2001 and 2004-2005. For the first four of these years it was either the first or second bestselling diet book in Australia, peaking at sales of 51,000 in 2003-2004. (In 2004-2005 it was supplanted by bestselling newcomers *Dr Phil's Ultimate Weight Solution*, *French Women Don't Get Fat*, *The Perricone Promise* and *You Are What You Eat*.)²⁶ Three other low-carbohydrate diet

²³ Jeremy Grant, "Atkins' Quest to Put the Lean Years Behind It," *Financial Times*, 13 April 2006.

²⁴ Ed Moloney, "The Diet That Died," *Weekend Australian Magazine*, 11-12 March 2006.

²⁵ The information presented in Figure 1 is based on my own original analysis of the Australian Publishers Association Bestseller Surveys from 1995-1996 to 2005-2006, focussing specifically on diet book sales. The annual APA surveys are now posted each year on the association's website at <http://www.publishers.asn.au>; the APA kindly provided me with paper copies of earlier surveys. The APA data is based on sales figures collected directly from publishers, and the survey period runs from April 1 to March 31 each year. The surveys list annual sales for all adult hardbacks selling over 7500 copies, adult trade paperbacks over 10,000 copies, and adult mass-market paperbacks over 15,000 copies. (Children's books are also listed but these are not relevant here.) The surveys report book sales as rounded-down figures, usually to the nearest thousand. Because diet books are often published in multiple editions and formats, sometimes with changes in title, sales for any individual edition can be misleading. Figure 1 shows total sales for what I call 'flagship' publications: that is, full-priced diet books designed to stand alone as the initial purchase in a series. Supplementary or 'spin-off' publications, such as cookbooks and nutrient counters, were excluded.

²⁶ Mireille Guiliano, *French Women Don't Get Fat* (London: Vintage, 2005); Phil McGraw, *The Ultimate Weight Solution: The 7 Keys to Weight Loss Freedom* (New York: Free Press, 2003); Gillian McKeith, *You Are*

books also appeared on annual Australian bestseller lists between 2000-2001 and 2004-2005: *The South Beach Diet*, *The X Factor Diet* (by Leslie Kenton) and *The Cell Factor* (by Australian cardiologist Ross Walker).²⁷ In 2004, market research firm ACNielsen released figures showing that 60 percent of diet books sold in Australia at that time recommended a low-carbohydrate regime.²⁸ However, popular American diet books such as *The Zone*, *Protein Power* and *Sugar Busters* have been notably absent from the Australian bestseller charts.

Survey results in Australia, unfortunately, have been extremely inconsistent. A poll conducted by Roger James & Associates in January 2004 found that 26 percent of Australian women who were dieting were following a low-carbohydrate regime, up from 18 percent in 2003.²⁹ ACNielsen in June 2004, on the other hand, found that less than 5 percent of Australian dieters were using a low-carbohydrate diet, but an informal poll the same month by television current affairs program *Today Tonight* found 40 percent of dieters on a low-carbohydrate plan.³⁰ Newspoll research in August 2004 suggested that about 17 percent of Australian adults either had tried, or intended to try, a low-carbohydrate diet.³¹ Although the precise popularity of low-carbohydrate dieting in Australia thus remains unclear, by late 2003 it was sufficient to prompt an intensive media campaign by industry group Go Grains to promote the importance of carbohydrates in a healthy diet.³² The low-carbohydrate trend also spawned at least two Australian companies, Empower Foods and Picture of Health, devoted to the production and sale of low-carbohydrate products, and low-carbohydrate ice-cream and pasta appeared beside their regular counterparts on supermarket shelves.³³

Contested definitions

Despite the enormous popularity of low-carbohydrate diets, their definition remains controversial. The scientific literature tends to define a low-carbohydrate diet in terms of the amount of carbohydrate consumed by the dieter per day, measured either by weight or as a

What You Eat (Camberwell, Victoria: Michael Joseph, 2004); Nicholas Perricone, *The Perricone Promise: Look Younger, Live Longer in Three Easy Steps* (London: Time Warner, 2004).

²⁷ In addition to texts cited in Chapter 1, see Ross Walker, *The Cell Factor* (Pan MacMillan, 2002). I do not include in Figure 1 the CSIRO's hugely popular *Total Wellbeing Diet*, first published in May 2005, which sold over 650,000 copies in the 2005-2006 survey year alone. The *Total Wellbeing Diet*'s authors describe it as a 'protein-plus, low-fat diet' which 'contains moderate lower amounts of slow-release carbohydrates' and 'bears virtually no resemblance to other popular high-protein diets'. See Manny Noakes, *The CSIRO Total Wellbeing Diet* (Penguin, 2005), 12. In fact, the macronutrient breakdown of the Total Wellbeing Diet is very similar to that of the Zone. I discuss the definitional contest surrounding low-carbohydrate diets later in this chapter and again in Chapter 3. In brief, I do not include the *Total Wellbeing Diet* here because it has effectively avoided the low-carbohydrate tag: that is, its authors have successfully constructed their regime discursively as belonging to a different diet category.

²⁸ ACNielsen, *The Low Fat vs Low Carb Diet Battle Continues* [report] (ACNielsen, 21 August 2003 [accessed 5 March 2004]); available from <http://www.acnielsen.com.au/news.asp?newsID=229>.

²⁹ *More Aussie Dieters Going Low Carb* [internet report] (Aussie Bodies, 30 January 2004 [accessed 2 August 2004]); available from <http://www.aussiebodies.com/news/2004/more+aussie+dieters+going+low+carb.htm>.

³⁰ Michael Bradley, "Low-Carb Diets Are Being Taken with a Pinch of Salt," *Sydney Morning Herald*, 24 June 2004; Michelle Tapper, *Low-Carb Revolution Spreading* (Today Tonight, 28 June 2004 [accessed 11 July 2004]); available from <http://seven.com.au/todaytonight/story/lowcarbs>.

³¹ Timothy C. Crowe and David Cameron-Smith, "Low-Carbohydrate Diets in Australia: Prevalence and Public Perceptions," *Medical Journal of Australia* 182, no. 11 (2005).

³² Annabel Day, "Grain Campaign Targets Fad Diets," *Australian Financial Review*, 4 September 2003.

³³ Although Picture of Health has since closed down, Empower Foods remains in business. Its products are widely available in health food shops and via naturopaths. See www.empowerfoods.com.au.

percentage of the dieter's total energy intake. However, thresholds for what is deemed *low*-carbohydrate vary markedly. As Bravata and colleagues note in their review of 94 clinical trials, 'the literature has no clear consensus as to what amount of carbohydrates per day constitutes a low-carbohydrate diet'.³⁴ Some scientists determine a benchmark based on their reading of one or more popular low-carbohydrate diet books. For instance, based on their reading of *Dr. Atkins' New Diet Revolution*, *The Zone* and *The Carbohydrate Addict's Diet*, Bravata and colleagues categorise 'lowest-carbohydrate' diets as those containing up to 20 grams of dietary carbohydrate per day, and 'lower-carbohydrate' diets as those containing up to 60 grams of carbohydrate per day. Low-carbohydrate diets classified as 'higher-carbohydrate' were those containing more than 60 grams of carbohydrate per day (the equivalent of about four slices of white bread). A number of recent dietary interventions have been modelled on the Atkins Diet, beginning with an initial Induction phase restricting carbohydrate intake to 20 grams per day, subsequently increasing to between 40 and 60 grams per day.³⁵

The difficulty with such definitions is that they beg the very question they seek to answer. While some popular diet books used as exemplars in the scientific literature actively describe their regime as low-carbohydrate (as does, for instance, *Dr. Atkins' New Diet Revolution*), other texts avoid the term (*The Zone* being one example). Therefore, deciding whether a particular diet is low-carbohydrate or not must occur on some other grounds. But alternative definitions in the scientific literature often seem arbitrary, unnecessarily restrictive, or both. To date, most clinical trials which have expressly described their dietary intervention as low-carbohydrate, especially the largest and most frequently cited studies, have used a particularly low carbohydrate threshold.³⁶ In

³⁴ Dena M. Bravata et al., "Efficacy and Safety of Low-Carbohydrate Diets: A Systematic Review," *Journal of the American Medical Association* 289, no. 14 (2003).

³⁵ Eg B. J. Brehm et al., "A Randomized Trial Comparing a Very Low Carbohydrate Diet and a Calorie-Restricted Low Fat Diet on Body Weight and Cardiovascular Risk Factors in Healthy Women," *Journal of Clinical Endocrinology and Metabolism* 88, no. 4 (2003); J. D. Carter, F. B. Vasey, and J. Valeriano, "The Effect of a Low-Carbohydrate Diet on Bone Turnover," *Osteoporosis International* 17, no. 9 (2006); S. M. Nickols-Richardson et al., "Perceived Hunger Is Lower and Weight Loss Is Greater in Overweight Premenopausal Women Consuming a Low-Carbohydrate/High-Protein vs High-Carbohydrate/Low-Fat Diet," *Journal of the American Dietetic Association* 105, no. 9 (2005); S. B. Sondike, N. Copperman, and M. S. Jacobson, "Effects of a Low-Carbohydrate Diet on Weight Loss and Cardiovascular Risk Factor in Overweight Adolescents," *Journal of Pediatrics* 142, no. 3 (2003); E. C. Westman et al., "Effect of 6-Month Adherence to a Very Low Carbohydrate Diet Program," *American Journal of Medicine* 113, no. 1 (2002). As I argue below, these benchmarks do not necessarily reflect Atkins's individualised advice to dieters.

³⁶ See eg G. L. Austin et al., "A Very Low-Carbohydrate Diet Improves Gastroesophageal Reflux and Its Symptoms," *Digestive Diseases Sciences* 51, no. 8 (2006); G. Boden et al., "Effect of a Low-Carbohydrate Diet on Appetite, Blood Glucose Levels, and Insulin Resistance in Obese Patients with Type 2 Diabetes," *Annals of Internal Medicine* 142, no. 6 (2005); Brehm et al., "A Randomized Trial Comparing a Very Low Carbohydrate Diet and a Calorie-Restricted Low Fat Diet"; Carter, Vasey, and Valeriano, "The Effect of a Low-Carbohydrate Diet on Bone Turnover"; J. C. Mavropoulos et al., "The Effects of a Low-Carbohydrate, Ketogenic Diet on the Polycystic Ovary Syndrome: A Pilot Study," *Nutrition & Metabolism* 2 (2005); Nickols-Richardson et al., "Perceived Hunger Is Lower and Weight Loss Is Greater in Overweight Premenopausal Women Consuming a Low-Carbohydrate/High-Protein vs High-Carbohydrate/Low-Fat Diet"; M. Noakes et al., "Comparison of Isocaloric Very Low Carbohydrate/High Saturated Fat and High Carbohydrate/Low Saturated Fat Diets on Body Composition and Cardiovascular Risk," *Nutrition & Metabolism* 3 (2006); F. F. Samaha et al., "A Low-Carbohydrate as Compared with a Low-Fat Diet in Severe Obesity," *New England Journal of Medicine* 348, no. 21 (2003); C. J. Segal-Isaacson et al., "A Randomized Trial Comparing Low-Fat and Low-Carbohydrate Diets Matched for Energy and Protein," *Obesity Research* 12 Supplement 2 (2004); M. J. Sharman et al., "Very Low-Carbohydrate and Low-Fat Diets Affect Fasting Lipids and Postprandial Lipemia Differently in Overweight Men," *Journal of Nutrition* 134, no. 4 (2004); Sondike, Copperman, and Jacobson, "Effects of a Low-Carbohydrate Diet"; Linda Stern et al., "The Effects of Low-Carbohydrate Versus Conventional Weight Loss Diets in Severely Obese Adults: One-Year Follow-up of a Randomized Trial," *Annals of Internal Medicine* 140, no. 10 (2004); J. S. Volek et al., "Comparison of a Very Low-Carbohydrate and Low-Fat Diet on Fasting Lipids, LDL Subclasses, Insulin Resistance, and Postprandial Lipemic Responses in Overweight Women," *Journal of*

a review of five clinical trials comparing the effects of low-carbohydrate diets with those of low-fat diets, Nordmann and colleagues defined low-carbohydrate diets as those containing a maximum of 60 grams of carbohydrate per day.³⁷ This effectively treats a low-carbohydrate diet as synonymous with a ketogenic diet: one which induces ketosis, the metabolic state in which the body shifts from using glucose as its primary energy source to using fat. Ketosis occurs at carbohydrate intakes less than about 50 to 60 grams per day.³⁸ However, even the Atkins Diet is non-ketogenic in its later stages, as I discuss below. The only popular diet that I know of to reduce carbohydrate below this level indefinitely is Protein Power, and even that maintains ongoing carbohydrate intake in Phase 2 at 55 grams per day, a borderline-ketogenic figure. Further, these very low benchmarks contrast with a number of other scientific studies of so-called low-carbohydrate diets which use much higher carbohydrate intakes, ranging up to 40 percent of daily energy, for all or part of the intervention period. This equates to well over 100 grams of carbohydrate per day even on an energy-restricted diet.³⁹

Arguably, these attempts at definition ignore the key question: low compared to what? The answer would seem to be either low compared to the average, or low compared to what is generally recommended. Average carbohydrate intake in Australia is 46 percent of total energy, while the 'typical' standard is 55 percent, or at least 200 grams of carbohydrate per day even on an energy-restricted diet.⁴⁰ In the United States, the Recommended Daily Allowance for carbohydrate is 130 grams.⁴¹ Using these higher thresholds, the category *low*-carbohydrate would

the American College of Nutrition 23, no. 2 (2004); J. Volek et al., "Comparison of Energy-Restricted Very Low-Carbohydrate and Low-Fat Diets on Weight Loss and Body Composition in Overweight Men and Women," *Nutrition and Metabolism* 1, no. 1 (2004); Westman et al., "Effect of 6-Month Adherence to a Very Low Carbohydrate Diet Program"; R. J. Wood et al., "Effects of a Carbohydrate-Restricted Diet on Emerging Plasma Markers for Cardiovascular Disease," *Nutrition & Metabolism* 3 (2006).

³⁷ Alain J. Nordmann et al., "Effects of Low-Carbohydrate vs Low-Fat Diets on Weight Loss and Cardiovascular Risk Factors: A Meta-Analysis of Randomized Controlled Trials," *Archives of Internal Medicine* 166 (2006).

³⁸ Manny Noakes, "Lower Carbohydrate Diets for Weight Control – Can We Allow Them into Our Comfort Zone?" (paper presented at the 'Obesity and the Dysmetabolic Syndrome,' inaugural conference of the Australasian Society for the Study of Obesity – New Zealand branch [ASSO-NZ], 30 October 2004).

³⁹ For carbohydrate thresholds between 60 and 100 grams per day, see M. C. Gannon and F. Q. Nuttall, "Effect of a High-Protein, Low-Carbohydrate Diet on Blood Glucose Control in People with Type 2 Diabetes," *Diabetes* 53, no. 9 (2004); K. A. Meckling et al., "Effects of a Hypocaloric, Low-Carbohydrate Diet on Weight Loss, Blood Lipids, Blood Pressure, Glucose Tolerance, and Body Composition in Free-Living Overweight Women," *Canadian Journal of Physiology and Pharmacology* 80, no. 11 (2002); K. A. Meckling, C. O'Sullivan, and D. Saari, "Comparison of a Low-Fat Diet to a Low-Carbohydrate Diet on Weight Loss, Body Composition, and Risk Factors for Diabetes and Cardiovascular Disease in Free-Living, Overweight Men and Women," *Journal of Clinical Endocrinology and Metabolism* 89, no. 6 (2004); J. V. Nielsen and E. Joensson, "Low-Carbohydrate Diet in Type 2 Diabetes. Stable Improvement of Bodyweight and Glycemic Control During 22 Months Follow-Up," *Nutrition & Metabolism* 3 (2006); J. V. Nielsen, E. Jonsson, and A. K. Nilsson, "Lasting Improvement of Hyperglycaemia and Bodyweight: Low-Carbohydrate Diet in Type 2 Diabetes. A Brief Report," *Uppsala Journal of Medical Sciences* 110, no. 2 (2005). For higher benchmarks, see G. D. Brinkworth et al., "Long-Term Effects of a High-Protein, Low-Carbohydrate Diet on Weight Control and Cardiovascular Risk Markers in Obese Hyperinsulinemic Subjects," *International Journal of Obesity and Related Metabolic Disorders* 28, no. 5 (2004); C. S. Johnston et al., "Ketogenic Low-Carbohydrate Diets Have No Metabolic Advantage over Nonketogenic Low-Carbohydrate Diets," *American Journal of Clinical Nutrition* 83, no. 5 (2006); Y. Miyashita et al., "Beneficial Effect of Low Carbohydrate in Low Calorie Diets on Visceral Fat Reduction in Type 2 Diabetic Patients with Obesity," *Diabetes Research and Clinical Practice* 65, no. 3 (2004); S. M. Willi et al., "The Effects of a High-Protein, Low-Fat, Ketogenic Diet on Adolescents with Morbid Obesity: Body Composition, Blood Chemistries, and Sleep Abnormalities," *Pediatrics* 101, no. 1 Pt 1 (1998).

⁴⁰ For average macronutrient intakes in Australia, see W. McLennan and A. Podger, "National Nutrition Survey: Nutrient Intakes and Physical Measurements. Australia: 1995," (Canberra: Australian Bureau of Statistics, 1998), 22. For the 'typical' standard, see Noakes, "Lower Carbohydrate Diets for Weight Control."

⁴¹ Panel on Macronutrients et al., *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids* (Washington, DC: National Academies Press, 2005), 265.

encompass a wider range of popular diets, including the Zone (as discussed by Bravata and colleagues), in which carbohydrate makes up 40 percent of energy intake. As I have noted, although a number of popular diets, including Atkins, begin with an initial ketogenic phase, very few advocate ketogenic dieting as a long-term lifestyle.⁴² For example, the Atkins Diet is a four-stage diet, beginning with an initial two-week Induction phase in which carbohydrate intake is restricted to a maximum of 20 grams per day. In practical terms, Induction limits the palette of foods consumed to meat, poultry, fish, salad, low-carbohydrate vegetables, moderate amounts of cheese, small amounts of cream, and fats and oils. Grain-foods, starchy vegetables, sugars, fruit and nuts are all strictly excluded. The second, third and fourth phases of the Atkins Diet (Ongoing Weight Loss, Pre-Maintenance and Lifetime Maintenance) allow the dieter to reintroduce higher-carbohydrate foods such as nuts, fruit, wine, pulses, starchy vegetables and grains. This takes place incrementally: each week the dieter adds an extra 5 to 10 grams of daily carbohydrate, gradually slowing weight loss until his or her goal weight is achieved. Through this process, the dieter calculates his or her personal ‘Critical Carbohydrate Level for Losing’ (CCLL) and ‘Critical Carbohydrate Level for Maintenance’ (CCLM). These levels vary widely between individuals, especially according to activity levels. Atkins suggests that for a dieter with an average level of metabolic resistance, the maximum level of carbohydrate for Ongoing Weight Loss will be between 15 and 40 grams per day, progressing to between 40 and 60 grams per day for Lifetime Maintenance. However, regular exercisers will be able to eat 60 to 90 grams of carbohydrate per day for Ongoing Weight Loss, and anything above 90 grams per day for Maintenance.⁴³ Although the dieter may remain in ketosis during Ongoing Weight Loss, the Pre-Maintenance and Lifetime Maintenance phases of the diet are not designed to be ketogenic. ‘[W]hile you are on Pre-Maintenance,’ Atkins makes clear, ‘in all likelihood you are no longer in ketosis’.⁴⁴

The Atkins-Diet texts actively describe the regime as low-carbohydrate or, more recently, ‘controlled-carbohydrate’.⁴⁵ By contrast, *The South Beach Diet* denies in its very first sentence that South Beach is a low-carbohydrate diet. Agatston claims instead that South Beach promotes ‘the right carbs and the right fats’.⁴⁶ According to *South Beach*, good carbohydrates are whole grains with a low Glycemic Index (GI), a measure of how much and how rapidly a given food raises blood sugar.⁴⁷ Good fats are mono- and polyunsaturated fats, especially omega-3 fatty acids. However, notwithstanding this disclaimer, the South Beach Diet begins (like Atkins) with an initial strict two-week phase which excludes all starches, added sugars, fruit and alcohol (Phase 1). In this phase, carbohydrate intake is restricted to 10 percent of total energy intake, or about 33 grams per day for women and 40 grams for men.⁴⁸ In Phases 2 and 3 (for continuing weight-loss

⁴² As noted above, the only exception of which I am aware is *Protein Power*, which maintains a borderline-ketogenic level.

⁴³ Atkins, *New Diet Revolution*, 173, 209. Atkins defines regular exercise as 45 minutes or more of vigorous exercise, five days per week.

⁴⁴ *Ibid.*, 200.

⁴⁵ Scheiderer notes that this shift in vocabulary occurred in the 2002 edition of *Dr. Atkins’ New Diet Revolution*; the 1999 version continued to refer to ‘low-carbohydrate’. See Scheiderer, ‘Mass Consumption’, chapter 6.

⁴⁶ Agatston, *South Beach*, 3.

⁴⁷ For further information on the Glycemic Index, see www.glycemicindex.com.

⁴⁸ Numerical carbohydrate levels are not given in *The South Beach Diet*. However, they are provided in the published report of the clinical trial in which Agatston and his team tested their diet plan. The paper describes the diet as a ‘modified low-carbohydrate diet’. The authors give the carbohydrate content of the diet as percentage figures; I have converted this to approximate carbohydrate intake in grams based on the fact that the diet was fixed at 1300 calories per day for women and 1600 calories per day for men (as stated by the authors).

and maintenance), 27 and 28 percent of energy respectively comes from carbohydrates, around 90 grams per day for women and 110 grams for men. In these phases, the dieter gradually reintroduces fruits, whole grains, wine and minute amounts of chocolate and sugar. Unlike *Dr. Atkins' New Diet Revolution*, which primarily explains its recommendations via numerical carbohydrate thresholds, *The South Beach Diet* provides six full weeks of meal plans, plus lists of acceptable and unacceptable foods for each phase of the diet. In practice, starches and fruits are still heavily restricted in Phase 2 of the diet, but slightly freer consumption is allowed in Phase 3.

When the proportion of carbohydrate in the diet decreases, the percentage of one or both of the other macronutrients (protein and fat) will necessarily increase, although absolute intake of protein and fat may remain the same if overall energy intake is restricted. Thus a low-carbohydrate diet may, in relative terms, be either high-protein or high-fat. Popular diets vary markedly in their approaches to dietary protein and fat. In contrast to diet books such as *The Zone* and *Protein Power* (discussed below), *Dr. Atkins' New Diet Revolution* largely ignores protein, stipulating neither minimum nor maximum intake, in contrast to its tight numerical restriction of carbohydrates. Effectively, both protein and fat consumption are left to the dieter's appetite. South Beach maintains protein at around 30 percent of energy intake throughout, while fat drops from 62 percent of energy on Phase 1, to 43 and 39 percent respectively on Phases 2 and 3.⁴⁹ Sugar Busters, another popular 'good carbs' (low-GI) diet, stipulates a minimum of one gram of protein daily per kilogram of body weight, a relatively conservative benchmark.⁵⁰

By contrast, *Protein Power* and *The Zone* provide a complex mathematical formula by which the dieter is to calculate his or her minimum daily protein requirement.⁵¹ This formula is the same across both diet books, namely:

$$\text{Lean Body Mass (lbs)} \times \text{Activity Factor} = \text{Daily Protein Requirement (grams)}$$

Dieters estimate their lean body mass using conversion tables provided in each book, based on their weight, height, and waist-to-hip ratio (for women) or waist-to-wrist ratio (for men).⁵² Activity Factors range from 0.5 for sedentary through to 1 for very heavy or frequent exercise. Because of this, individual protein requirements are highly dependent on activity levels. To take an example from *The Zone*, a sedentary male of average height and weight (154 pounds, or about 70 kilograms) would require 59 grams of protein per day, the amount contained in about 240 grams of lean meat. However, if he were physically active (activity factor 0.8) the same man would need 94 grams of protein per day (about 380 grams of lean meat), significantly more than the Sugar Busters benchmark of one gram per kilogram of body weight. Fat intake on the Zone is strictly limited to 30 percent of energy intake. Protein Power, on the other hand, takes a relaxed approach to dietary fat. 'Don't worry about fat,' the Eadeses advise, 'but choose healthy fats: olive oil, nut oils, avocado, and butter'.⁵³

See Y. Wady Aude et al., "The National Cholesterol Education Program Diet vs a Diet Lower in Carbohydrates and Higher in Protein and Monounsaturated Fat," *Archives of Internal Medicine* 164 (2004).

⁴⁹ Ibid., 2142. Precise protein levels for Phases 1, 2 and 3 are 28, 30 and 33 percent respectively.

⁵⁰ Steward et al., *Sugar Busters*, 46-47. Unlike Atkins and South Beach, Sugar Busters does not have multiple phases. The diet is explicated through lists of acceptable and unacceptable foods (Chapter 11) and fourteen days of meal plans (Chapter 14).

⁵¹ See Eades and Eades, *Protein Power*, 92-97; Sears, *The Zone*, 78-82.

⁵² Lean body mass is the weight of all that part of the body which is not fat, including bone and muscle.

⁵³ Eades and Eades, *Protein Power*, 91.

My review here of scientific attempts to define a low-carbohydrate diet, and popular regimes which reduce carbohydrate intake below national guidelines and norms, indicates that there is no single eating pattern which constitutes a low-carbohydrate diet. Carbohydrate levels vary from less than 20 grams per day to more than 100 grams per day, and in percentage terms from less than 10 percent of energy to more than 40 percent. Both protein and fat intake may be left to appetite, or alternatively strictly regulated. In this thesis I suggest that the category low-carbohydrate is best considered a fluid and contested one. While some popular diets embrace the term, others avoid or reject it. However, such discursive manoeuvres are not always successful. For instance, *The Zone* scrupulously avoids any reference to low-carbohydrate dieting. However, a critical review which appeared shortly after its publication is entitled ‘Carbo-Phobia: Zoning Out on the New Diet Books’, and describes the Zone Diet as low-carbohydrate and even anti-carbohydrate.⁵⁴ By contrast, the proportion of carbohydrate consumed on the CSIRO’s Total Wellbeing Diet is almost exactly the same as that allowed on the Zone, if not slightly lower.⁵⁵ But the authors of the *Total Wellbeing Diet* have successfully promoted their regime as moderate in carbohydrate and high in protein, effectively distancing their program from the controversy associated with the low-carbohydrate category.⁵⁶

Health and safety debates

Despite their popularity (perhaps even partly because of it), low-carbohydrate diets remain highly controversial. In his paper ‘Why and when should we rely on scientific experts? The Atkins Diet as an alternative theory,’ David Ramsay Steele describes low-carbohydrate diets as ‘an example of an unorthodox doctrine or a dissident school of thought’.⁵⁷ As Steele points out,

The Atkins Diet has been condemned by the majority of qualified experts – nutritionists, dieticians, and physicians. Although the preponderance of hostile expert opinion has somewhat lessened since the publication, beginning in 2002, of studies which seem to vindicate Atkins, the majority of established authorities still denounce the Atkins Diet and warn sternly against its conjectured dangerous consequences.⁵⁸

The controversy surrounding low-carbohydrate diets derives from the fact that such diets flout prevailing dietary wisdom, as summarised in national dietary guidelines for countries such as the United States and Australia.⁵⁹ By definition, as I have argued, low-carbohydrate diets have lower carbohydrate levels than those generally recommended. Further, dieters following low-carbohydrate diets which do not specifically restrict fat intake (such as Atkins and Protein Power) may exceed recommended levels of dietary fat, depending on how they choose to eat. A maximum of 30 percent of total energy from fat is recommended for all adult Australians, and

⁵⁴ Bonnie Liebman, “Carbo-Phobia: Zoning out on the New Diet Books,” *Nutrition Action Healthletter*, July/August 1996.

⁵⁵ See Noakes, *The CSIRO Total Wellbeing Diet*, 21.

⁵⁶ The definitional contest identified in this section has methodological implications for this thesis. These are discussed in Chapter 3.

⁵⁷ Steele, “Why and When Should We Rely on Scientific Experts?” 85.

⁵⁸ *Ibid.*, 83. Footnotes have been omitted.

⁵⁹ The Dietary Guidelines for Americans are available at <http://www.health.gov/DietaryGuidelines/>; the Dietary Guidelines for Australians can be downloaded at <http://www.nhmrc.gov.au/publications/synopses/dietsyn.htm>. The American and Australian Dietary Guidelines are generally similar, at least in relation to the issues discussed here. My discussion focuses on the Australian Dietary Guidelines but is equally applicable to the American recommendations.

only 20 to 25 percent for those who are overweight.⁶⁰ All three phases of the South Beach Diet, as I noted above, exceed these thresholds by a wide margin. Moreover, diets such as Atkins, which actively promote the consumption of animal fats (especially in their early, stricter phases), defy conventional recommendations to limit saturated fat in particular.⁶¹

Further concerns relate to the ostensibly high levels of protein, especially red meat, consumed by low-carbohydrate dieters. As discussed earlier, the protein recommendations of popular diets vary widely. Some diets (such as the Zone and Protein Power) stipulate relatively high levels of protein, while others (such as Atkins) leave protein intake to the dieter's appetite. While the Atkins Diet and Protein Power actively promote red meat, the Zone (as noted in Chapter 1) discourages the consumption of red meat in favour of poultry, fish and fat-free cheese. In part, concerns about high red meat intake relate to the perceived dangers of saturated fat, since certain cuts of red meat are relatively high in saturated fat (as are many processed meats such as bacon and sausage). Further, heavy consumption of red meat is sometimes thought to be associated with an increased risk of colorectal cancer, although the latest Australian Dietary Guidelines conclude that this perception is unfounded.⁶² Finally, strict low-carbohydrate diets limit or exclude particular foods and food groups which conventional guidelines consider fundamental to a healthy diet, such as grain-foods, starchy vegetables, fruit, and lower-fat dairy products such as milk and yoghurt. These restrictions are generally much less severe than sceptics often suggest: menus for even the strict initial phases of Atkins and South Beach include salad, vegetables, or both at virtually every meal and snack, including breakfast.⁶³ However, by requiring that dieters cut out what are deemed to be entire food groups, at least for a time, low-carbohydrate diets flout the recommendation that we should eat a 'wide variety' of foods for good health.⁶⁴ In particular, the Dietary Guidelines for Australians view cereals (including bread, rice, pasta, and noodles) as an essential part of a healthy diet, an irreconcilable difference with low-carbohydrate plans.⁶⁵

Because of the conflict between low-carbohydrate recommendations and official dietary guidelines, numerous medical associations and even some government agencies have issued public health warnings about the potentially life-threatening consequences of low-carbohydrate diets. In the United States, the American Kidney Fund, American Heart Association, American Association of Diabetes Educators, American Institute for Cancer Research, American Cancer Society and American Obesity Association, amongst others, all released public warnings about the possible dangers of low-carbohydrate dieting.⁶⁶ In Australia, the Victorian state government issued a similar warning with the support of the Australian Medical Association, stating that 'the effectiveness and safety of such diets cannot be substantiated'.⁶⁷ Reviews and commentary in the

⁶⁰ National Health & Medical Research Council, *Dietary Guidelines for Australian Adults* (National Health & Medical Research Council, 2003), 123.

⁶¹ *Ibid.*, 107-32. See Atkins, *New Diet Revolution*, 123.

⁶² National Health & Medical Research Council, *Dietary Guidelines for Australian Adults*, 62-63.

⁶³ Agatston, *South Beach*, 102-15; Atkins, *New Diet Revolution*, 380.

⁶⁴ National Health & Medical Research Council, *Dietary Guidelines for Australian Adults*, 1-16.

⁶⁵ *Ibid.*, 31-49.

⁶⁶ American Cancer Society, *Weighing in on Low-Carb Diets* [accessed 7 September 2006]; available from http://www.cancer.org/docroot/SPC/content/SPC_1_A_Low_Carb_Diet_to_Prevent_Cancer.asp; Bradley, "Low-Carb Diets Are Being Taken with a Pinch of Salt"; Nicholas A. Pyle, *Re: Center for Nutrition Policy and Promotion; Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period*. Federal Register Notice September 11, 2003 [correspondence] (27 October 2003); available from <http://www.cnpp.usda.gov/pyramid-update/Comments/oct-27-2003%20f%20-%2029%20comments.pdf>.

⁶⁷ "AMA & Vic Government Take Aim at Low-Carb Diets," in *Go Grains E-News* (BRI Australia Ltd,

scientific literature continue to warn of the perceived health risks associated with low-carbohydrate diets.⁶⁸ There remains no scientific consensus on low-carbohydrate dieting, and the prevailing mood might best be summarised as persistent scepticism.

Until 2002 relatively little published research on low-carbohydrate diets existed, and as Westman and colleagues noted in the introduction to their ground-breaking six-month study published that year, ‘the research regarding very low carbohydrate diets [was] limited by small sample sizes and short treatment duration’.⁶⁹ Consequently, a key objective of early low-carbohydrate diet studies was simply to establish whether diets such as Atkins ‘work’: that is, whether it is possible to lose weight on a diet which does not specifically restrict energy intake.⁷⁰ Five years later, the efficacy of low-carbohydrate diets for weight-loss is no longer in doubt. Studies consistently show that low-carbohydrate diets result in significantly greater weight-loss than traditional low-fat and/or low-calorie diets in the short term (up to six months).⁷¹ Over longer periods of up to one year, differences in weight-loss are no longer significant.⁷² Some researchers have suggested that the greater short-term weight-loss occurs because low-carbohydrate diets increase satiety, causing dieters to reduce energy intake spontaneously.⁷³ However, even when energy intake is controlled and matched in the two diets, differences in percentage weight-loss remain significant over the short term, suggesting that low-carbohydrate diets may have a metabolic advantage.⁷⁴ Recent studies have shown that low-carbohydrate diets dramatically improve glycemic control in type 2 diabetics.⁷⁵ Early investigations with other conditions associated with insulin resistance, such as polycystic ovary syndrome, have shown similar benefits: one 24-week study resulted in two spontaneous pregnancies amongst five women completing the trial.⁷⁶

Grains Research and Development Corporation, March 2004 [accessed 3 August 2004]; available from <http://gograins.grdc.com.au/eNews/issue2.htm>.

⁶⁸ Eg T. C. Crowe, “Safety of Low-Carbohydrate Diets,” *Obesity Reviews* 6, no. 3 (2005).

⁶⁹ Westman et al., “Effect of 6-Month Adherence to a Very Low Carbohydrate Diet Program,” 30.

⁷⁰ For a journalistic investigation of the ‘nutritional heresy’ that ‘calories don’t count’, see BBC Horizon, *The Atkins Diet: Part One* [television documentary] (Sophie Harris and Jackie Higgins, 8 April 2004 [accessed 26 June 2006]); available from <http://www.abc.net.au/cgi-bin/common/printfriendly.pl?catalyst/stories/s1084112.htm>; BBC Horizon, *The Atkins Diet: Part Two* [television documentary] (Sophie Harris and Jackie Higgins, 15 April 2004 [accessed 26 June 2006]); available from <http://www.abc.net.au/cgi-bin/common/printfriendly.pl?catalyst/stories/s1087754.htm>.

⁷¹ Eg Brehm et al., “A Randomized Trial Comparing a Very Low Carbohydrate Diet and a Calorie-Restricted Low Fat Diet”; Nickols-Richardson et al., “Perceived Hunger Is Lower and Weight Loss Is Greater in Overweight Premenopausal Women Consuming a Low-Carbohydrate/High-Protein vs High-Carbohydrate/Low-Fat Diet”; Samaha et al., “A Low-Carbohydrate as Compared with a Low-Fat Diet in Severe Obesity”; Sondike, Copperman, and Jacobson, “Effects of a Low-Carbohydrate Diet”; Volek et al., “Comparison of a Very Low-Carbohydrate and Low-Fat Diet”; Volek et al., “Comparison of Energy-Restricted Very Low-Carbohydrate and Low-Fat Diets”; William S. Yancy, Jr. et al., “A Low-Carbohydrate, Ketogenic Diet Versus a Low-Fat Diet to Treat Obesity and Hyperlipidemia,” *Annals of Internal Medicine* 140, no. 10 (2004).

⁷² Eg Gary D. Foster et al., “A Randomized Trial of a Low-Carbohydrate Diet for Obesity,” *New England Journal of Medicine* 348, no. 21 (2003); Stern et al., “The Effects of Low-Carbohydrate Versus Conventional Weight Loss Diets in Severely Obese Adults.”

⁷³ Eg Nickols-Richardson et al., “Perceived Hunger Is Lower and Weight Loss Is Greater in Overweight Premenopausal Women Consuming a Low-Carbohydrate/High-Protein vs High-Carbohydrate/Low-Fat Diet.”

⁷⁴ Eg Volek et al., “Comparison of Energy-Restricted Very Low-Carbohydrate and Low-Fat Diets.”

⁷⁵ Boden et al., “Effect of a Low-Carbohydrate Diet on Appetite, Blood Glucose Levels, and Insulin Resistance”; Gannon and Nuttall, “Effect of a High-Protein, Low-Carbohydrate Diet on Blood Glucose Control in People with Type 2 Diabetes”; Nielsen and Joensson, “Low-Carbohydrate Diet in Type 2 Diabetes”; Nielsen, Jonsson, and Nilsson, “Lasting Improvement of Hyperglycaemia and Bodyweight”; W. S. Yancy, Jr. et al., “A Low-Carbohydrate, Ketogenic Diet to Treat Type 2 Diabetes,” *Nutrition & Metabolism* 2 (2005).

⁷⁶ Mavropoulos et al., “The Effects of a Low-Carbohydrate, Ketogenic Diet on the Polycystic Ovary Syndrome.” On insulin resistance and the insulin resistance syndrome, see Chapter 1, footnotes 88 and 92.

As the focus of these recent studies suggests, the initial scientific question of the weight-loss efficacy of low-carbohydrate diets has since been eclipsed by interest in their potential health benefits. However, perceived health *risks* remain a concern for some. Over the last ten years, possible dangers have been raised by everyone from doctors and scientists to politicians and journalists. The alleged dangers include calcium deficiency and osteoporosis, colorectal and breast cancers, kidney damage, gout, heart arrhythmias, cardiovascular disease and even sudden death.⁷⁷ Within this list, the persistent point of friction is undoubtedly the ostensible risk of heart disease. Opponents argue that low-carbohydrate diets are necessarily high in saturated fat, which is said to raise cholesterol levels (especially those of ‘bad’ LDL cholesterol) and thereby increase the risk of cardiovascular disease. As I pointed out earlier, low-carbohydrate diets need not be high in total or saturated fats, and popular diets vary in their recommendations. Moreover, clinical trials consistently show that low-carbohydrate diets produce favourable changes in blood lipids, even when saturated fat intake is high.⁷⁸ Most frequently, studies show a reduction in triglyceride levels and an increase in HDL (‘good’) cholesterol levels. Early, uncontrolled studies also found a significant reduction in ‘bad’ LDL cholesterol levels with a low-carbohydrate intervention.⁷⁹ However, in some subsequent studies low-carbohydrate diets have compared unfavourably with low-fat diets in their effects on LDL.⁸⁰ In particular, researchers have expressed concern that ‘individual data indicate a large degree of variability in the magnitude and [...] direction’ of change in LDL levels, ‘mak[ing] it hard to defend a single diet recommendation’.⁸¹

⁷⁷ For government and medical warnings, see footnotes 66-68 above, and see also Shane A. Bilborough and Timothy C. Crowe, “Low-Carbohydrate Diets: What Are the Potential Short- and Long-Term Health Implications?” *Asia Pacific Journal of Clinical Nutrition* 12, no. 4 (2003). For journalism and media coverage, see eg A Current Affair, *The Atkins Diet: The Benefits and the Risks* [television report] (Channel 9, 22 May 2003 [accessed 26 June 2006]); available from <http://aca.ninemsn.com.au/stories/1377.asp>; A Current Affair, *Low-Carbohydrate Diets: Why They’re Hard to Swallow* [television report] (Channel 9, 7 January 2004 [accessed 26 June 2006]); available from <http://aca.ninemsn.com.au/stories/1596.asp>; Australian Consumers’ Association, “DiETING: Hollywood-Style,” *Choice*, March 2002; Australian Consumers’ Association, “Low-Carb – but Highly Processed,” *Choice*, August 2005; Horizon, *The Atkins Diet: Part Two*; Bonnie Liebman, “Big Fat Lies: The Truth About the Atkins Diet,” *Nutrition Action Health Letter*, November 2002; Stein et al., “The Low-Carb Diet Craze.”

⁷⁸ Boden et al., “Effect of a Low-Carbohydrate Diet on Appetite, Blood Glucose Levels, and Insulin Resistance”; Foster et al., “A Randomized Trial of a Low-Carbohydrate Diet for Obesity”; Noakes et al., “Comparison of Isocaloric Very Low Carbohydrate/High Saturated Fat and High Carbohydrate/Low Saturated Fat Diets”; Samaha et al., “A Low-Carbohydrate as Compared with a Low-Fat Diet in Severe Obesity”; Stern et al., “The Effects of Low-Carbohydrate Versus Conventional Weight Loss Diets in Severely Obese Adults”; Volek et al., “Comparison of a Very Low-Carbohydrate and Low-Fat Diet”; Westman et al., “Effect of 6-Month Adherence to a Very Low Carbohydrate Diet Program”; Wood et al., “Effects of a Carbohydrate-Restricted Diet on Emerging Plasma Markers for Cardiovascular Disease”; Yancy et al., “A Low-Carbohydrate, Ketogenic Diet Versus a Low-Fat Diet.”

⁷⁹ Eg Westman et al., “Effect of 6-Month Adherence to a Very Low Carbohydrate Diet Program.”

⁸⁰ Eg Noakes et al., “Comparison of Isocaloric Very Low Carbohydrate/High Saturated Fat and High Carbohydrate/Low Saturated Fat Diets”; Sharman et al., “Very Low-Carbohydrate and Low-Fat Diets Affect Fasting Lipids and Postprandial Lipemia Differently in Overweight Men”; Sondike, Copperman, and Jacobson, “Effects of a Low-Carbohydrate Diet”; Volek et al., “Comparison of a Very Low-Carbohydrate and Low-Fat Diet.” However, other studies have found no significant differences in LDL changes between low-carbohydrate and low-fat diets. See eg Foster et al., “A Randomized Trial of a Low-Carbohydrate Diet for Obesity”; Samaha et al., “A Low-Carbohydrate as Compared with a Low-Fat Diet in Severe Obesity”; Segal-Isaacson et al., “A Randomized Trial Comparing Low-Fat and Low-Carbohydrate Diets Matched for Energy and Protein”; Stern et al., “The Effects of Low-Carbohydrate Versus Conventional Weight Loss Diets in Severely Obese Adults”; Yancy et al., “A Low-Carbohydrate, Ketogenic Diet Versus a Low-Fat Diet.”

⁸¹ J. S. Volek, M. J. Sharman, and C. E. Forsythe, “Modification of Lipoproteins by Very Low-Carbohydrate Diets,” *Journal of Nutrition* 135, no. 6 (2005): 1339.

My review here of the scientific literature suggests that a low-carbohydrate diet is not necessarily a healthy choice for everyone.⁸² Nonetheless, clinical evidence does not support the dire health and safety warnings which continue to shadow low-carbohydrate dieting. Rather, it suggests a cautiously positive and open-minded approach to low-carbohydrate diets as potential vehicles for long-term health, in addition to short-term weight-loss. Elsewhere in this chapter my discussion of various popular diet regimes highlighted the considerable differences between diets such as Atkins, South Beach, Protein Power and the Zone. Further, most named diets cannot be considered to represent a single way of eating: within any single program there are often multiple diet phases, and many plans allow or even require dieters to develop an individualised regime to suit their particular needs. Of course, dieters are also free to adapt or design their own way of eating without strict heed to diet books' recommendations. Given these variations, as well as the lack of an agreed scientific definition of low-carbohydrate, I suggest that low-carbohydrate dieting is best thought of as a contested and shifting category, within which there exists a multiplicity of low-carbohydrate diets (as many as there are low-carbohydrate dieters). This conclusion has been crucial to my methodological decision-making about the most appropriate way to study the recent low-carbohydrate trend.

⁸² Nor is it necessarily a culturally or personally acceptable choice for all.

Chapter 3. Studying low-carbohydrate discourse: diet books and their readers

This thesis is a study of low-carbohydrate discourse: that is, the coherent and structured set of concepts, expressed through language, which underpins the logic of low-carbohydrate diets.¹ As discussed in Chapter 1, I focus in particular on the interconnected ideas which together I call nutritional primitivism. I approach this topic primarily through a critical analysis of bestselling low-carbohydrate diet books, supplemented by interviews with low-carbohydrate dieters. This project is inevitably interdisciplinary. I take methods most familiar from literary criticism and apply them to a phenomenon which belongs undeniably to popular culture, although it also engages closely with expert knowledge in science and medicine. In my critique, I draw widely on literature from cultural and literary studies, sociology, history and philosophy, especially in the interdisciplinary fields of food studies, science studies and public health. As an interdisciplinary project, this thesis aims to be theoretically and methodologically straightforward whilst offering rich and detailed analysis: that is, to be both accessible, and of interest, to researchers across a wide range of fields. As an integrated whole my work sits most easily within the multidisciplinary arena of food studies, an emerging field ‘dedicated to exploring the complex relationships among food, culture, and society’, which ‘draw[s] on a wide range of theoretical and practical approaches and seek[s] to promote discussions about food that transgress traditional boundaries’.²

Reading low-carbohydrate diet books

In practical terms, I conducted this research project in two phases: a critical reading of popular low-carbohydrate diet books (Phase 1) followed by interviews with low-carbohydrate dieters (Phase 2). In selecting texts for analysis in Phase 1, I took into account three factors in turn. Firstly, I considered whether or not a particular diet book is, in fact, a *low-carbohydrate* diet book, or should be classified as such for the purposes of this research. Secondly, I considered the relative popularity of different low-carbohydrate diets, as evidenced by recent book sales figures for the United States and Australia. Thirdly, I considered whether or not a particular text engages with the discourse of central interest to this project: nutritional primitivism. By using these selection criteria I aimed to focus my critical attention on those texts which have been most influential in the recent low-carbohydrate trend, and which would be most relevant to my specific research topic. In addition, concentrating on the most popular recent diet books, including *Dr. Atkins’ New Diet Revolution*, would allow me to compare my own readings against those of the existing critical literature, since popularity (or, more precisely, notoriety) appears to have driven text selection for the majority of other researchers working on this topic. As I noted in Chapter 1, nearly all the published critiques of low-carbohydrate dieting focus exclusively on the Atkins Diet.

The first of these selection criteria (whether or not a particular diet book should be considered a *low-carbohydrate* diet book) was without doubt the most difficult to apply. To restate my position

¹ For a definition of *discourse*, see Baldick, *Dictionary of Literary Terms*, 68. I discuss the notion of discourse further later in this chapter.

² I have adapted this working definition from the website of the Association for the Study of Food and Society, the foremost international scholarly association for food studies. See www.food-culture.org.

from Chapter 2, there is no universal agreement on what constitutes a low-carbohydrate diet. Scientific definitions vary, and while some popular diet books (including *Dr. Atkins' New Diet Revolution* and *Protein Power*) refer to the regimes they promote as low-carbohydrate, others avoid the term (*The Zone*, *Sugar Busters*) or expressly reject it (*South Beach*). Arguably, any diet recommending that carbohydrate intake be reduced below official guidelines or national averages might be considered low-carbohydrate. However, as discussed, I prefer to recognise that the meaning of the term *low-carbohydrate* is contested, and that diet book authors, dieters, scientists and commentators (in which category I include myself) all actively negotiate its applicability to a range of eating practices. This definitional contest has arisen largely because of the perceived health risks associated with low-carbohydrate diets, especially the Atkins Diet. To counter these negative associations, diet books which recommend restricting carbohydrate intake often actively attempt to distance themselves from the category, and especially from Atkins.³ As noted earlier, even the 2002 edition of *Dr. Atkins' New Diet Revolution* itself avoids the term low-carbohydrate, in favour of the expression 'controlled carbohydrate' and the trade-marked 'Atkins Nutritional Approach'. Discursive manoeuvres of this kind may be more or less successful. For instance, the South Beach Diet has by no means avoided the low-carbohydrate label, despite Agatston's insistent denials. *The Atkins Diet and Philosophy* even describes South Beach as an 'Atkins imitator'.⁴ On the other hand, the authors of *The CSIRO Total Wellbeing Diet* have largely succeeded in constructing their regime publicly as high-protein, moderate-carbohydrate, although its carbohydrate content is actually lower than that of the Zone, which has not succeeded in this tactic.

In order to manage this central definitional issue methodologically in this thesis, I take a *social constructivist* and *inclusive* approach. In other words, rather than attempting to determine whether or not a particular diet is or is not low-carbohydrate according to some chosen definition, I proceeded by including all those diets over which the low-carbohydrate designation is actively contested, as well as those whose low-carbohydrate status is universally acknowledged and agreed. (*Protein Power* is one of the few popular diets to which this last statement applies.) In taking this approach I follow the strategy employed by Nick Fiddes in his study of meat-eating and vegetarianism, *Meat: A Natural Symbol*. Fiddes points out that the word *meat* (like the word *vegetarian*) is fluid and contested in its frame of reference. *Meat* generally refers to beef, lamb, pork and game, but may or may not include poultry, fish, or both. For practical purposes, Fiddes therefore offers a broad and flexible definition of meat, as simply 'the flesh of animals destined for our consumption'.⁵ He then states:

I do not intend to define meat any more closely than this. To do so would only invite unnecessary definitional dilemmas [...] / Meat, instead, is taken to mean simply that which people regard as meat. If one person thinks only beef to be meat then that, for them [*sic*], is what meat is. If another includes also lamb, poultry, game and fish then so

³ See eg Agatston, *South Beach*, 10, 20. Mouton notes the same tendency in *Protein Power* but attributes it instead to marketplace competition: 'all of these authors work to distinguish their diets from those of their competitors for possibly confused readers. [...] / Such conventions of self-help discourse suggest veracity and authority in a competitive market.' See Mouton, "Doing Banting," paras 18-19.

⁴ Heldke, Mommer, and Pineo, eds., *The Atkins Diet and Philosophy*, back cover. I have paraphrased the original here, which reads: 'Atkins [...] eventually spawned a legion of imitators, including the Zone, Protein Power, and South Beach diets.'

⁵ Nick Fiddes, *Meat: A Natural Symbol* (London and New York: Routledge, 1991), 3.

too, for that person, that is the definition of meat. [...] The subject under scrutiny is not the substance, but the concept.⁶

For my purposes, this approach recognises that there is no single agreed definition of a low-carbohydrate diet, and promotes interpretative readings which are contingent and contextual, and which engage with, rather than elide, differences within and between diet texts.

The second selection criterion, popularity, posed fewer difficulties. Worldwide, low-carbohydrate diets have been most popular in the United States. The authors of the most popular low-carbohydrate diet books are Americans, and their books have been published originally in the same country. The United States might rightly be considered the 'home' of low-carbohydrate dieting. In assessing the relative popularity of different low-carbohydrate diets, I therefore considered first and foremost data from the United States. Because market research studies tend not to distinguish between different low-carbohydrate plans, I turned to book sales figures. Since the early 1990s, at least six low-carbohydrate diet books have appeared on American bestseller lists, as shown in Table 1, Chapter 2: *Dr. Atkins' New Diet Revolution*, *The South Beach Diet*, *Sugar Busters*, *The Carbohydrate Addict's Diet*, *The Zone* and *Protein Power*. As shown in Table 1, *Atkins* spent more than double the number of weeks on the USA Today list compared with any other low-carbohydrate diet book. *The Carbohydrate Addict's Diet* spent less than half the number of weeks on the list compared with any other text. However, the number of weeks spent on the bestseller list does not correlate neatly with the highest ranking each book reached. There is thus no clear distinction between more or less popular books amongst the half-dozen bestsellers listed, which were all prima-facie inclusions in this thesis unless otherwise ruled out.

Because I was based for the duration of this project in Adelaide, South Australia, and planned (given constraints of time and funding, and the difficulty of obtaining overseas institutional support) to carry out interviews with low-carbohydrate dieters in and around Adelaide, I compared the American bestseller figures with book sales data from Australia. As shown in Figure 1, Chapter 2, four books recommending a low-carbohydrate diet have appeared on annual Australian bestseller lists over the last ten years: *Dr. Atkins' New Diet Revolution*, *The South Beach Diet*, *The Cell Factor* and *The X Factor Diet*. Of these four, *Atkins* was very clearly the most popular, appearing on the bestseller lists every year for five consecutive years. Of the other three books, only *South Beach* appeared on the Australian charts for more than one year. Further, the popularity of low-carbohydrate diet books other than *Atkins* was marginal when compared to the 'top ten' status of bestselling low-carbohydrate diet books in the United States. In Australia, apart from *Atkins*, the highest sales figure for any low-carbohydrate diet book in a single year was only 16,000 copies in 2002-2003 for *The Cell Factor*. Although book sales in Australia are inevitably low compared to the United States, given Australia's relatively small population, this figure is not far above the cut-off of 10,000 copies at which a trade paperback enters the annual bestseller list.⁷ I therefore decided ultimately to rely on American sales figures in selecting texts for analysis in Phase 1 of my research. Effectively, this decision meant that I included the two most popular low-carbohydrate diet books in Australia (*Dr. Atkins' New Diet Revolution* and *South Beach*), but excluded two others (*The Cell Factor* and *The X Factor Diet*) which had been of marginal popularity

⁶ Ibid., 3-4.

⁷ For the purposes of the Australian Publishers Association Bestseller Surveys, paperback books are classified as either trade paperback or mass-market paperback. Mass-market paperbacks are smaller, either 180 by 110 millimetres or 198 by 129 millimetres. All paperbacks larger than this are classified as trade paperbacks. For further information on the APA Bestseller Surveys, see footnote 25, Chapter 2.

in Australia and which had not appeared on American bestseller lists. This decision also recognised the practical need (given constraints of time and word-length) to limit the total number of texts to be analysed, while maximising the relevance and generalisability of my conclusions across English-speaking Western nations where low-carbohydrate diets have been popular, notably the United States.⁸

Having established a pool of six potential texts for analysis based primarily on recent book sales in the United States, I undertook a preliminary reading of the two most popular diet books, *Atkins* and *South Beach*, to identify possible foci for my research. Up to this point, my specific interest in nutritional primitivism in low-carbohydrate discourse had not been established. As I indicated in Chapter 1, the very preliminary state of the critical literature on low-carbohydrate dieting when I began this project meant that existing research did not establish any definite lines of inquiry for further investigation. Instead, my choice of thematic focus arose from my reading of the low-carbohydrate texts, rather than being pre-determined and imposed by me as the researcher. In my preliminary reading of *Atkins* and *South Beach* I identified several themes common to both texts which might sustain an extended analysis. These included the notion of individual choice and control over the body, the contested nature of gustatory and gastronomic pleasure, and the moralistic and evangelical discourse associated with dieting. However, the theme which struck me especially in both books was the idea that Westerners, especially Americans, need to return to a more natural and traditional way of eating in order to stem the rising tide of obesity and disease caused by ‘modern life’: the idea I later termed nutritional primitivism.

On first reading, I found the nutritional primitivism of low-carbohydrate diet books compelling, even seductive.⁹ In its resistance to technology, industrialism and capitalist modernity, primitivism may appear politically radical. The paradoxical association of primitivism with progressive politics is perhaps particularly strong for people of my generation (I was born in 1980), for many of whom the Sixties and early Seventies represent a mythic era of countercultural protest, in contrast to the perceived political disengagement of today. As Torgovnick points out:

Especially since the sixties, versions of the primitive have been used by the Left – in antitechnological protest, as inspiration for jewelry and dress, as model for communal life. Contemporary writers, especially those on the Left, often invoke an idealized version of the primitive as a precapitalist social and economic model [...].¹⁰

But as I continued my reading of low-carbohydrate diet books, I began to be troubled by their seemingly obsessive quest for primitive origins and their strong sense of racial and genetic determinism. Nutritional primitivism, it seemed to me, is particularly problematic in the postcolonial settler nations where low-carbohydrate diets were most popular, including the United States and Australia. The primitivist injunction to follow one’s ancestral diet is, in practice, deceptively difficult in countries where one’s ethnicity is likely to be a ‘hodgepodge’ (as Heldke puts it).¹¹ These concerns and others strengthened my view that the nutritional primitivism of

⁸ This decision was later reinforced in my interviews with low-carbohydrate dieters. None of the dieters whom I had interviewed had followed either the X Factor or Cell Factor plan. Several, on the other hand, had followed popular American diets such as Protein Power and the Zone.

⁹ Torgovnick uses the same term in the opening paragraph of her first book on primitivism. See Torgovnick, *Gone Primitive*, 4.

¹⁰ *Ibid.*, 9.

¹¹ Heldke, *Exotic Appetites*, 161. Heldke highlights the same difficulties that I do here: ‘The practical impossibility of eating at home stems from the fact that it’s not entirely clear just where home would be for me,

low-carbohydrate discourse deserves further scrutiny. As a consequence of this choice of thematic focus, I excluded *The Carbohydrate Addict's Diet* from my final pool of texts for analysis, as the only diet book in my preliminary six which displayed no engagement with nutritional primitivism.

The five low-carbohydrate diet books covered in this thesis are, therefore, *Dr. Atkins' New Diet Revolution*, *The South Beach Diet*, *Sugar Busters*, *The Zone* and *Protein Power*. In this project I apply techniques of literary criticism and analysis to this set of non-fiction, non-literary texts: popular diet books. This research hence falls broadly within the realm of cultural studies, which, as Jonathan Culler notes, 'arose as the application of techniques of literary analysis to other cultural materials'.¹² However, this thesis does not take up the Marxist cultural studies of Raymond Williams and the Birmingham School. Rather, I follow the critical tradition of close textual reading in literary studies, which derives historically from the New Criticism and considers 'that the main point of interest is the distinctive complexity of individual works'.¹³ Although literary criticism (in contrast to the negative connotations of *criticism* in everyday language) generally 'assumes that the works it discusses are valuable', I use close reading in the service of what Baldick terms *critique*: that is,

a considered assessment of a literary work [...]. Also, in philosophy, politics, and the social sciences, a systematic inquiry into the nature of some principle, idea, institution, or ideology, usually devoted to revealing its limits or self-contradictions.¹⁴

Further, I reject any necessary link between (literary) criticism and aesthetic appreciation of the text. As Culler puts it, '[c]lose reading of non-literary writing does not imply aesthetic valuation of the object'.¹⁵ This is not to suggest that low-carbohydrate diet books are necessarily incapable of stylistic elegance or generic excellence, but their aesthetic value as texts is not at issue in this thesis.

In highlighting the use of close reading in this thesis, I do not suggest any reversion to the Cambridge school of practical criticism, in which the text was analysed without reference to 'authorship, date, or circumstances of composition', compelling exclusive consideration of 'the "words on the page" rather than [...] biographical and historical contexts'.¹⁶ This thesis places popular low-carbohydrate diet books firmly in social, cultural, historical and scientific context and argues that such texts produce meaning only in relation to that context. This thesis is also keenly informed by contemporary cultural and critical theory, especially postcolonial theory (discussed below). My analysis is by no means post-structuralist in any strict sense.¹⁷ Nonetheless, I rely on key post-structuralist concepts and axioms, especially the notion of *discourse* (low-carbohydrate *discourse*, primitivist *discourse*) as a 'coherent body of statements that produces a self-confirming account of reality by defining an object of attention and generating concepts with which to analyse it'.¹⁸ I also take as given the post-structuralist 'critique of notions of objective

culinarily. Would it be based on my ethnicity? Like many Euroamericans, mine is a hodgepodge; how would I decide *which* of my ethnicities to stay home in? [...] Majority rule? Most recent immigration to this country? The one whose foods I like the most?"

¹² Jonathan Culler, *Literary Theory: A Very Short Introduction* (Oxford: Oxford University Press, 1997), 46.

¹³ *Ibid.*, 49. On the New Criticism, see pp. 122-123.

¹⁴ Baldick, *Dictionary of Literary Terms*, 54, 55.

¹⁵ Culler, *Literary Theory*, 54.

¹⁶ Baldick, *Dictionary of Literary Terms*, 203.

¹⁷ I am thinking here of Jacques Derrida's work on deconstruction, on which see Culler, *Literary Theory*, 125-26.

¹⁸ Baldick, *Dictionary of Literary Terms*, 68.

knowledge’,¹⁹ as will be evident from my discussion above of the definitional issues relating to low-carbohydrate diets. Specifically, I follow Torgovnick’s methodological stance in *Gone Primitive*:

I would not at all deny the reality and multiplicity of the societies we have tended to call primitive, but would deny that such societies have been, or could be, represented and conceived with disinterested objectivity and accuracy.²⁰

For the purposes of this project, I extend this stance to eating practices, such as so-called primitive diets, traditional foodways, or authentic cuisine. All of these exist materially in specific societies as particular modes of nourishment, but are also discursively constructed.

By recognising the constructed nature of knowledge about the primitive, Torgovnick acknowledges that scientific and anthropological knowledge can never be disinterested, objective, or accurate. But by concomitantly recognising the reality of so-called primitive societies, Torgovnick’s approach makes it possible to identify and correct errors in primary sources (in my case, low-carbohydrate diet books), while acknowledging that any scientific or anthropological account can only ever *approach* reality, as one version amongst many. As Torgovnick writes:

To study modern culture’s image of the primitive requires that I weave in and out of generalized versions of the primitive, as reflected and promulgated in the various texts I discuss, and documentary accounts of specific peoples, institutions, and productions. I will want, at times, to correct misconceptions when I find them, by drawing to the best of my abilities upon authorities in various fields.²¹

Torgovnick notes that the notion of ‘authoritative’ knowledge in this context is fraught. Each of the writers, art scholars and others whose work she critiques is to some extent an expert on the primitive: that is, ‘possesses some claim to ethnographic authority, to making statements that deserve to be heard about primitive peoples, societies, institutions, or productions’.²² Some, such as Bronislaw Malinowski and Margaret Mead, were themselves ethnographers who spent extended periods of time with so-called primitive peoples. Others, such as Sigmund Freud, ‘read widely and with obvious interest in available literature concerning primitive societies as they pertained to their disciplines’. This second claim is equally true of many low-carbohydrate diet authors, including Robert Atkins, Michael and Mary Dan Eades, and Barry Sears.²³ However, like Torgovnick I note that the ‘ethnographic authority [of these authors] does not always help them and is often readily surrendered’. Instead, ‘specific kinds of ethnographic knowledge give way to [...] generalized tropes and images of the primitive’. Following Torgovnick, I am therefore concerned in this thesis with ‘opening the seam’ in low-carbohydrate discourse ‘between “ethnographic authority” [...] and a vaguer, emotional or “intuitive” response to the primitive often at odds with scientific or scholarly knowledge’.

In ‘opening the seam’ between ‘authoritative’ knowledge and intuitive responses to the primitive in low-carbohydrate discourse I rely in part upon what Torgovnick describes as ‘documentary accounts of specific peoples, institutions, and productions’. In my case, this includes gastronomic scholarship, anthropological and archeological research, the medical literature on obesity and diabetes, government reports on nutrition and public health, and Indigenous cultural histories. I

¹⁹ Culler, *Literary Theory*, 125.

²⁰ Torgovnick, *Gone Primitive*, 20.

²¹ *Ibid.*, 22.

²² *Ibid.*, 23. Further citations in this paragraph are taken from the same page of *Gone Primitive*.

²³ It is also true of many committed ‘low-carbers’, as discussed in Chapter 8.

also draw upon critical literature on primitivism (and related themes) from cultural and literary studies, sociology, history and philosophy, often in the interdisciplinary field of food studies. In addition, postcolonial theory serves as an inspiration throughout this thesis, though its presence is most apparent in Chapters 5, 6 and 7. The production of knowledge about the primitive (that is, *primitivism*) has been enabled in the modern era by European colonial expansion in Africa, the Americas, Australasia and Oceania. Hence, research on primitivism actively invites, and dovetails neatly with, a postcolonial theoretical approach. Postcolonial theory encompasses a broad set of concerns relating to current and former European colonies and their people: as Baldick elaborates, ‘vexed cultural-political questions of national and ethnic identity, “otherness”, race, imperialism, and language, during and after the colonial periods’.²⁴ In this thesis, my engagement with postcolonial theory relates specifically to its concern, following Edward Said, with the representation of the (primitive) Other in colonial and neo-colonial discourse, within which I include primitivism.²⁵ As will already be evident, I draw extensively on Torgovnick’s two books on primitivism, *Gone Primitive* and *Primitive Passions*. I am also particularly indebted to Spurr’s unique study of *The Rhetoric of Empire*, which offers a detailed, chapter-by-chapter analysis of key linguistic and discursive tropes which have dominated Western representations of the Other historically, and continue to do so today.²⁶

Interviewing low-carbohydrate dieters

As I noted in Chapter 1, the critical literature on low-carbohydrate dieting displays an almost total lack of research with low-carbohydrate dieters themselves. The dearth of interview studies is difficult to explain, given that low-carbohydrate dieting would not exist as a material practice without its many followers, past and present. There is certainly no shortage of participants for qualitative research on the topic. By its very nature, low-carbohydrate dieting is a multifaceted cultural phenomenon, involving a wide range of texts, products, practices and institutions. As I suggested in Chapter 1, the general lack of depth in the existing literature highlights the need for plural research methods in analysing the trend. My own project is a study of low-carbohydrate discourse rather than the material practices or products associated with low-carbohydrate diets, though these necessarily contextualise my research. (Of course, diet books are commodities as well as texts, but their analysis as such is not relevant to my own research questions.) In this I distinguish my work from that of Bentley, who offers symbolic readings of material practices linked to the low-carbohydrate trend, such as increased consumption of pork rinds and beef jerky in the United States.²⁷ Instead, I would generally align my approach with Shapin’s close textual reading of diet books, but I supplement this strategy with in-depth interviewing in recognition of the fact that there is no single site or source of low-carbohydrate discourse.

Methodologically, this thesis compares a thematically-focussed critical reading of low-carbohydrate diet books with dieters’ discussion on the same theme (that theme, of course, being nutritional primitivism). In comparing ‘what dieters say’ with ‘what diet books say’, I do not seek to ‘adjudicate between accounts’, as David Silverman puts it: that is, to establish some ‘truth’

²⁴ Baldick, *Dictionary of Literary Terms*, 200.

²⁵ Edward W. Said, *Orientalism* (New York: Pantheon, 1978).

²⁶ Spurr, *Rhetoric of Empire*. Individual chapters cover tropes such as aestheticization, debasement, negation, idealization, naturalization and eroticization.

²⁷ Bentley, “The Other Atkins Revolution,” 41-42.

about low-carbohydrate dieting by triangulating methods and data.²⁸ As discussed above, this project takes as given the post-structuralist critique of objective truth, recognising that knowledge about low-carbohydrate dieting is culturally and contextually constructed. As Silverman argues, a social constructivist perspective is incompatible with the conventional aims of triangulation: ‘if you treat social reality as constructed in different ways in different contexts, then you cannot appeal to a single “phenomenon” which all your data apparently represent’.²⁹ Instead, following Denzin and Lincoln, I proceed on the basis that ‘[t]he combination of multiple methodological practices, empirical materials, perspectives, and observers in a single study is best understood [...] as a strategy that adds rigor, breadth, complexity, richness, and depth to any inquiry’.³⁰

By comparing low-carbohydrate diet books’ engagement with nutritional primitivism to that of low-carbohydrate dieters, this project examines the extent to which a seductive but ultimately troubling discourse which circulates widely in the low-carbohydrate diet literature permeates dieters’ ideas and experiences ‘on the ground’. Literature on self-help book reading suggests that readers do not ‘swallow’ the self-help text whole.³¹ Rather, readers are *active*, *selective* and *interpretive* in their reading, and ‘pick and choose’ ideas and information from multiple sources.³² By interviewing low-carbohydrate dieters, I aimed to investigate whether these conclusions also apply to readers of diet books, a specific form of self-help text.³³ Thus in Phase 2 of this research project I asked: to what extent do dieters take up the discourse of nutritional primitivism which circulates in the low-carbohydrate literature? My approach is not, strictly speaking, a form of reader-response criticism, since it does not focus on the reading experience itself, nor on the precise ways in which readers ‘produce meaning by making connections, filling in things left unsaid, anticipating and conjecturing and then having their expectations disappointed or confirmed’.³⁴ Nonetheless, my concern with the extent to which readers ‘absorb’ troublesome textual discourses has been informed by reader-response research, especially Janice Radway’s now-classic study of romance-reading, *Reading the Romance*.³⁵ Recognised as a key work in the history of audience-based research on popular cultural texts, *Reading the Romance* brings together a critical analysis of romantic fiction and an interview study with women romance-readers. Radway is thus able to combine a feminist critique of the romance as a cultural form, with attention to the views and experiences of the individual women who participate in romance-reading as a cultural

²⁸ David Silverman, *Interpreting Qualitative Data: Methods for Analyzing Talk, Text and Interaction*, 3rd ed. (London, Thousand Oaks, & New Delhi: SAGE, 2006), 292.

²⁹ *Ibid.*, 51.

³⁰ Norman K. Denzin and Yvonna S. Lincoln, “Introduction: The Discipline and Practice of Qualitative Research,” in *The SAGE Handbook of Qualitative Research*, ed. Norman K. Denzin and Yvonna S. Lincoln (Thousand Oaks: SAGE, 2005), 5. Silverman cites (with approval) the same passage from the second edition of the *Handbook* (2000). See Silverman, *Interpreting Qualitative Data*, 292.

³¹ On this metaphor, see Janice Radway, “Reading Is Not Eating: Mass-Produced Literature and the Theoretical, Methodological, and Political Consequences of a Metaphor,” *Book Research Quarterly* 2, no. 3 (1986).

³² Kelly Coyle and Debra Grodin, “Self-Help Books and the Construction of Reading: Readers and Reading in Textual Representation,” *Text and Performance Quarterly* 13, no. 2 (1993): 62, 63, 74; Debra Grodin, “The Interpreting Audience: The Therapeutics of Self-Help Book Reading,” *Critical Studies in Mass Communication* 8, no. 4 (1991): 410; Paul Lichterman, “Self-Help Reading as a Thin Culture,” *Media, Culture and Society* 14, no. 3 (1992): 430.

³³ A special issue of *Women’s Studies in Communication* devoted to self-help books includes a critique of diet and fitness manuals. See Elizabeth Arveda Kissling, “I Don’t Have a Great Body, but I Play One on TV: The Celebrity Guide to Fitness and Weight Loss in the United States,” *Women’s Studies in Communication* 18, no. 2 (1995).

³⁴ Culler, *Literary Theory*, 123.

³⁵ Janice A. Radway, *Reading the Romance: Women, Patriarchy, and Popular Literature* (Chapel Hill: University of North Carolina Press, 1984).

practice. In line with subsequent research on self-help reading, the evidence of women romance-readers by no means simply reinforced Radway's own critical reading of romantic fiction.

Because of my interest in the *discourse* of low-carbohydrate dieting, I chose to carry out in-depth one-on-one interviews in order to generate a rich sample of data for analysis. Although I was particularly interested in how dieters engaged with the discourse of nutritional primitivism I had identified in the published diet literature, I wanted to interview more generally to gain a sense of how dieters themselves would narrate their experiences. I also wanted to understand the context in which low-carbohydrate dieters engaged with the nutritional primitive (if at all). I therefore chose semi-structured interviews as the most appropriate for my objectives, to strike a balance between covering the particular questions of interest to me and locating these in the context of dieters' own experiences and concerns. My provisional list of interview questions is appended to this thesis as part of my ethics application and functioned as a rough guide during the interviews themselves. Broadly, I aimed to cover dieters' motivations, practices, experiences, and beliefs and attitudes about low-carbohydrate dieting and nutrition. However, I also allowed participants to take the interview in whatever direction was of particular importance to them, following topics as they arose.

Before beginning recruitment, my study design was approved by the Human Research Ethics Committees of both the University of Adelaide and CSIRO Human Nutrition. (In practice, my ethics submission was reviewed and approved by the university's committee and their approval endorsed by CSIRO's committee, as ethics requirements are virtually identical across the two institutions.) A copy of my approved submission, including the participant consent form, information sheet and other relevant documents, is appended to this thesis. In recruiting dieters to participate in interviews, I did not aim for a strictly 'representative' sample. The issue of representativeness is a controversial one in qualitative research. In the case of low-carbohydrate dieting, the lack of consistent demographic data, especially in Australia (as discussed in Chapter 2), made the question of representativeness more or less hypothetical. For instance, one Australian market research study found that women low-carbohydrate dieters outnumbered men by two to one.³⁶ On the other hand, a survey conducted by nutrition researchers in the United States found that the prevalence of low-carbohydrate dieting did not vary significantly by gender.³⁷ There is a similar lack of data, especially in Australia, on the specifics of low-carbohydrate dieting practice, including simple questions such as which diets people choose to follow. Even if it were possible to determine an ideal 'representative' sample, reflecting the appropriate ratio of men to women, Atkins dieters to other dieters, and overweight to normal-weight volunteers (for example), it would be prohibitively difficult, costly and time-consuming to recruit such a group. Further, as Silverman points out, 'the sample size would be likely to be so large as to preclude the kind of intensive analysis usually preferred in qualitative research'.³⁸ Moreover, the choice of criteria by which representativeness might be defined would seem to pre-empt the very questions this study seeks to explore, by (pre)identifying the experiences and characteristics deemed pivotal to low-carbohydrate dieting.

³⁶ Crowe and Cameron-Smith, "Low-Carbohydrate Diets in Australia," 595.

³⁷ Blanck et al., *Use of Low-Carbohydrate, High-Protein Diets among Americans*.

³⁸ Silverman, *Interpreting Qualitative Data*, 304.

Instead, I sought a group of participants to reflect a wide range of experiences, in order to collect a rich and varied range of narratives. To fulfil this aim I recruited as broadly as possible, via a general media release which I drafted and which was slightly revised by the University of Adelaide media office.³⁹ In the release I invited current and former low-carbohydrate and low-Glycemic-Index (low-GI) dieters to contact me if they would be willing to participate in an interview.⁴⁰ I asked the media office to send the release to all local newspapers and radio stations, in order to reach the widest possible audience. This resulted in a short radio interview on local public radio (ABC 891), which generated about half my final participant cohort. Although I had requested that the media release not be sent to university publications, in order to avoid a sample overly weighted toward students and university staff, I did not realise that all University of Adelaide media releases are automatically posted on the university's website. In the event this resulted in a relatively balanced range of responses from students, faculty members, administrative and support staff, and relatives and friends of university members. (Recruitment took place during the university's summer vacation, which probably reduced the potential number of responses from undergraduate students.) These collectively made up the other half of the study cohort. Given the in-depth nature of the interviews, I had initially hoped to recruit between ten and twenty volunteers. In line with this, my final participant group numbered seventeen, including fourteen women and three men, ranging in age from 22 to 59 years. Fourteen participants were from metropolitan Adelaide and three from regional areas. All were of European background and the sample was overwhelmingly middle-class. Fifteen participants were low-carbohydrate dieters and two were low-GI dieters.

As stated above, I initially included low-GI dieters in my recruitment, and carried out interviews with the two low-GI dieters who volunteered. However, I subsequently decided that this material would need to be discarded to ensure the ethical and methodological integrity of my research. When I first began this project, I had hoped to compare the Australian low-GI bestseller *New Glucose Revolution* with American low-carbohydrate diet books such as *Dr. Atkins' New Diet Revolution*.⁴¹ *New Glucose Revolution* engages extensively with the discourse of nutritional primitivism, and in the early stages of my research I read, analysed and published on this text in conjunction with work on the low-carbohydrate literature.⁴² However, following the release of the CSIRO's *Total Wellbeing Diet* in 2005, I decided that *New Glucose Revolution* should be excluded from my pool of texts, in order to avoid any perception that I was using CSIRO resources to criticise the *Total Wellbeing Diet*'s closest Australian rival. This decision was taken gradually and was not finalised at the time when I began recruiting dieters for my interview study. In retrospect I believe that the inclusion of low-GI diets in my research was confused, and that their exclusion has resulted in a tighter methodological and conceptual focus on the low-carbohydrate trend.

Once volunteers made contact with me (by email or telephone) they were supplied by post with the *Participant Information Sheet*, *Consent Form* and *Complaints Procedure Information Sheet*. I also asked volunteers to complete a short questionnaire about their reasons for dieting, choice of diet, and

³⁹ The draft release is appended to this thesis as part of my ethics submission.

⁴⁰ I later excluded interviews with low-GI dieters. This decision is discussed further below. For further information on the Glycemic Index (GI), see footnote 47, Chapter 2.

⁴¹ Jennie Brand-Miller, Kaye Foster-Powell, and Stephen Colagiuri, *The New Glucose Revolution* (Sydney: Hodder, 2002). For a graphic representation of the popularity of *New Glucose Revolution* in Australia compared to low-carbohydrate diet books, see Figure 1, Chapter 2.

⁴² See Knight, "The Food Nature Intended You to Eat'."

sources of dieting information. The questionnaire was designed to assist with the interview process by ensuring that I did not miss any aspect of dieters' experiences. (This and other documents are all appended to this thesis as part of my ethics submission.) Those volunteers who chose to go ahead then returned the signed consent form and completed questionnaire to me prior to their interview. Since interviews for the study were to be audiotaped for subsequent transcription, specific written consent was gained from each volunteer. I also checked with volunteers to ensure that they were not concurrently participating in another CSIRO Human Nutrition study, and had not participated in any in the past. A number of the clinical trials undertaken by CSIRO Human Nutrition in recent years have been used in the development of the Total Wellbeing Diet. By excluding anyone who had participated in another CSIRO Human Nutrition study, I sought to avoid any potential conflict of interest (discussed further below). At this stage, I also offered participants the option to elect to view and make changes to the transcript of their interview once available. Eight participants elected to check their transcripts. Two subsequently returned them with comments and changes, which I incorporated into the final version used for analysis.

I conducted interviews for this project between February and April 2006. Each interview lasted around one hour, and all but one took place at the CSIRO Human Nutrition building in central Adelaide. One interview took place in the participant's home at her request. Each participant received a \$20 Coles-Myer shopping voucher in compensation for his or her time and travel expenses. I tape-recorded all the interviews and these were then transcribed by a local audio-transcription agency. CSIRO Human Nutrition paid for shopping vouchers and audio-transcription as part of my PhD operating costs allowance. To ensure confidentiality, no participant details were supplied to the transcription agency. In addition, I have subsequently kept interview transcripts separate from participant identifying details and the transcripts have been dealt with only by me as the principal researcher. I use pseudonyms to refer to participants in this thesis and in publications and presentations that draw upon this study. I also omit personal details which might identify the dieters who assisted with this research, including places of work and residence, specifics of family relationships, professions, and so on. I have been especially stringent as many 'low-carbers' follow the research literature on low-carbohydrate dieting closely, and might reasonably be expected to read this thesis and any publications which arise from it. As far as possible I have therefore sought to prevent readers identifying friends or fellow-dieters whom I interviewed. As views and experiences did appear to vary by age and gender to some degree, I do provide age-ranges where relevant (20s, 30s, 40s and 50s), and the pseudonyms I use are gender-appropriate.

As noted above, the potential for conflict of interest arose in this study because my research has been partly funded by CSIRO Human Nutrition, which in May 2005 (just over a year into my PhD candidature) released in book form a weight-loss diet known as the Total Wellbeing Diet. Although my supervisors and I were aware at the time that I enrolled of the upcoming publication of the *Total Wellbeing Diet*, none of us could have foreseen how popular it would be, nor envisaged its impact on Australian dieting culture. The *Total Wellbeing Diet* has proven extremely popular in Australia, selling over 650,000 copies in the ten months to March 2006 alone.⁴³ As discussed previously, the macronutrient breakdown of the Total Wellbeing Diet is

⁴³ This figure is taken from the 2005-2006 Australian Publishers Association Bestsellers Survey. For further details, see footnote 25, Chapter 2.

virtually identical to that of the Zone, although the authors describe the regime as a ‘protein-plus, low-fat diet’ which ‘contains moderate lower amounts of slow-release carbohydrates’.⁴⁴ As I have argued, this construction has been accepted in Australian public discourse about the diet, and for this reason I did not address the *Total Wellbeing Diet* text in Phase 1 of my research. Moreover, the *Total Wellbeing Diet* does not engage with the discourse of nutritional primitivism with which I am concerned in this thesis.

Nonetheless, because many low-carbohydrate diets are also high-protein diets, as discussed in Chapter 2, there was the potential for confusion and a perceived conflict of interest in the interview stage of my research (Phase 2). I addressed this issue in the following ways in the design of my interview study:

- The sources of funding for the study, as well as my institutional affiliations and those of my supervisors, were clearly explained in the *Participant Information Sheet*.
- Participants in other CSIRO Human Nutrition studies, past or present, were excluded (as discussed above).
- Followers of the Total Wellbeing Diet were not specifically sought for my study. Consequently, the Total Wellbeing Diet was not mentioned in the recruitment media release, *Participant Information Sheet*, or *Questionnaire*. However, this did not exclude dieters who had tried the Total Wellbeing Diet as well as a low-carbohydrate (or low-GI) diet from participating.

In practice, a number of participants brought up the Total Wellbeing Diet in the course of their interviews. This happened in a range of contexts: several interviewees owned the *Total Wellbeing Diet* book, had tried the diet, or knew someone who had; others referred to the diet in relation to controversy about high red meat consumption. My policy if this occurred was to explain my affiliations and funding sources, and hence my decision to exclude consideration of the Total Wellbeing Diet from my research. While I did not actively cut off discussion of the Total Wellbeing Diet, I also did not pursue questioning on the topic when it arose, and explained to participants that this material would not be included in subsequent analysis.

In analysing the material derived from my interviews with low-carbohydrate dieters, I chose to follow a critical method close to that which I used to analyse the low-carbohydrate diet texts, in order to maintain a level of methodological and interpretative consistency. Because of the volume of material the interviews generated, I initially ‘coded’ the data manually at a very broad level to identify passages of relevance to my research question. In doing so, I applied categories derived from at least three sources: the critical literature on primitivism (and related tendencies in contemporary food culture), the low-carbohydrate diet texts, and the interview transcripts themselves. For instance, the critical literature on primitivism suggested the category *evolutionary theory*, and the diet books suggested *nostalgia for the recent past*. A related category which emerged from the interview transcripts was *family food traditions*. In general terms, I would consider my analytic method to be a form of discourse analysis, conceived here loosely as ‘a heterogeneous range of social science research based on the analysis of interviews and texts as well as recorded talk’, which shares a common post-structuralist concern with the way in which social phenomena are constructed through language.⁴⁵ However, my interview analysis does not belong to any particular school of ‘DA’. Rather, my analytic method was strongly informed by my training as a

⁴⁴ Noakes, *The CSIRO Total Wellbeing Diet*, 12. For macronutrient breakdown, see p. 21.

⁴⁵ Silverman, *Interpreting Qualitative Data*, 223-24.

literary critic in close reading, and its attention to ‘the distinctive complexity of individual works’.⁴⁶ Applied to interview data, this method allowed me a much greater level of detail and depth of analysis than would many other qualitative methods, with a particular focus on the discursive manoeuvres participants used to construct their dieting experiences and their meaning.

By taking a social constructivist approach and combining different research methods, this project sets out to produce multiple interpretative conclusions rather than any single definitive reading of low-carbohydrate discourse. In this thesis I bring together a critical close reading of five recent bestselling low-carbohydrate diet books (*Dr. Atkins’ New Diet Revolution*, *The South Beach Diet*, *Sugar Busters*, *The Zone* and *Protein Power*) with the results of in-depth semi-structured interviews with fifteen low-carbohydrate dieters, carried out in South Australia in early 2006. Methodologically, the design of this project proceeded from the bottom up. Preliminary readings of selected low-carbohydrate texts suggested a thematic focus on what I call nutritional primitivism: the pursuit of supposedly more natural, traditional and authentic ways of eating as part of a quest for health. In turn, this thematic focus invited a postcolonial theoretical approach, with additional critical inspiration drawn especially from the food studies literature. While necessarily interdisciplinary, the strength of this thesis depends on close and detailed attention to language and text and the precise ways in which these produce a particular set of meanings in relation to their socio-historical context. In the chapters that follow, I consider the specific discursive tropes through which low-carbohydrate texts (and, on occasion, low-carbohydrate dieters) construct the obesity and diabetes epidemics as the consequence of a departure from ‘nature’, and present a particular set of (low-carbohydrate) eating practices as their logical solution.

⁴⁶ Culler, *Literary Theory*, 49.

Chapter 4. The natural / unnatural binary in low-carbohydrate dieting

As an expression of discontent with the so-called ‘modern Western diet’, nutritional primitivism incorporates opposition to both modernity and the West, prizing instead foods and foodways that are *not* modern and *not* Western (as discussed in Chapter 1).¹ In this chapter, I argue that low-carbohydrate discourse establishes *refined carbohydrate* as the chief symbol of modern Western diet, in contradistinction to the ideal *natural food*. As I demonstrate, this binary recurs across numerous low-carbohydrate texts and is also evident in the discourse of dieters themselves. I suggest, therefore, that as well as regulating food choice for dieters, the natural / unnatural binary functions as the foundation on which the primitivist logic of low-carbohydrate diets is built. Concepts such as naturalness, wholeness and purity circulate freely in contemporary nutritional thinking, especially in the alternative health movement. However, low-carbohydrate diets detach these concepts from many of the foods to which they generally refer today in countries such as Australia and the United States, reapplying them to their own divergent dietary schema. The category *natural* in relation to food is thus by no means fixed. Rather, as Deborah Lupton points out, naturalness and unnaturalness are ‘cultural constructions that ignore the conditions of food production and distribution in modern societies’.²

As stated above, the preference for natural food is not limited to low-carbohydrate dieters. In research amongst the general public in the United States, Paul Rozin and colleagues found that 63 percent of their sample would prefer a natural food or medicine over a processed or synthetic one.³ A majority of participants maintained this preference even when the ‘unnatural’ substance was specified to be chemically identical to the natural one, and also when it was specified to be equivalent in healthfulness. Researchers have identified a similar preference for natural foods in qualitative work. In a study carried out in 1990 with low-income women in Adelaide, South Australia, Barbara Santich found that ‘natural foods, which were associated with fresh, uncooked, unprocessed foods, were seen as “good” because they were pure, uncontaminated by unknown substances’.⁴ In further Australian research carried in Sydney in the early 1990s, Lupton observed that ‘[t]he categories of “good”, “healthy” and “natural” foods are routinely merged and are then contrasted with those of “bad”, “unhealthy” and “artificial” foods’.⁵ Food advertising both perpetuates and exploits such attitudes: marketing for a wide range of products draws on the powerful associations of nature and naturalness. Paul Atkinson, for example, notes the deployment of these associations in advertisements for dairy products, bread, cereals, cakes and biscuits.⁶ Santich argues, too, that nutritionists generally favour and recommend unprocessed natural foods. Indeed, she suggests, ‘one can easily gain the impression that between nutritionists

¹ See Bonnett, *White Identities*, 80.

² Deborah Lupton, *Food, the Body and the Self* (London: SAGE, 1996), 91.

³ Paul Rozin et al., “Preference for Natural: Instrumental and Ideational/Moral Motivations, and the Contrast between Foods and Medicines,” *Appetite* 43 (2004).

⁴ Barbara Santich, “Good for You: Beliefs About Food and Their Relation to Eating Habits,” *Australian Journal of Nutrition and Dietetics* 51, no. 2 (1994): 70.

⁵ Lupton, *Food, the Body and the Self*, 93.

⁶ Paul Atkinson, “Eating Virtue,” in *The Sociology of Food and Eating: Essays on the Sociological Significance of Food*, ed. Anne Murcott (Aldershot, Hants: Gower, 1983), 15-16.

and the food manufacturing industry is smouldering an undeclared war for the hearts and minds of the population'.⁷

Notwithstanding the dominant preference for natural foods, the *meaning* of natural in the context of food (or any other context, for that matter) is far from simple. As Raymond Williams notes in his book *Keywords*, '[n]ature is perhaps the most complex word in the language'.⁸ Christina Fjellström, in the *Encyclopedia of Food and Culture*, opens her entry on natural foods by highlighting the problem of definition, despite the familiarity of the concept and its widespread use:

The concept of natural foods is obscure from many perspectives. Although international literature offers no clear definition, the term is used in food surveys, in the food industry, in the marketing of foods, and in modern discourses surrounding food choice.⁹

The complexity and obscurity of the term *natural* creates particular problems in quantitative studies of food preferences and choice, for which an operational definition of natural food may be required so that research can proceed.¹⁰ For instance, in their recent survey on the preference for natural food, Rozin and colleagues are forced to define what natural food is, rather than investigating what participants themselves actually mean by the phrase. The authors define a natural food as one 'that had not been changed in any significant way by contact with humans. It could have been picked or transported, but it was chemically identical to the same item in its natural place'.¹¹

By contrast, the *Oxford English Dictionary* includes two definitions of the word *natural* specific to food and drink. In the first of these, natural food is defined as that which 'contain[s] no artificial colourings, flavourings, or preservatives'. In the second definition, natural food is described as 'food that needs little or no processing; (in later use also) a food which contains no additives, a health food'.¹² This second definition especially is not entirely satisfactory. I would argue that its first section ('food that *needs* little or no processing') should be labelled as obsolete: it recalls a Romantic-era vocabulary in which 'natural diet' referred to a raw-food, vegetarian regime of foods which could be eaten without being cooked or otherwise processed.¹³ Further, the final

⁷ Barbara Santich, *What the Doctors Ordered: 150 Years of Dietary Advice in Australia* (South Melbourne: Hyland House, 1995), 195-96. As Santich's statement implies, the preference for natural foods is not universal, despite its predominance. There is certainly a strong counter-argument in favour of food processing, as Christina Fjellström points out: '[n]atural foods in fact can include more harmful and naturally occurring toxic substances than highly processed food. The latter, thanks to modern developments in biotechnology, (i.e., genetic manipulation) can be more "healthy" and can more effectively prevent diseases than the so-called natural foods [...]. Advances in biotechnology have produced foods that are much safer from a hygienic perspective with the same tastes, appearances, textures, and colors as foods produced in the conventional way.' See Christina Maria Fjellström, "Natural Foods," in *Encyclopedia of Food and Culture*, ed. Solomon H. Katz and William Woys Weaver (New York: Charles Scribner's Sons, 2003), 552.

⁸ Raymond Williams, *Keywords*, revised ed. (London: Fontana Press, 1983), 219. Williams's original text highlights the word *nature* in bold; I omit this here and in subsequent citations for the sake of readability.

⁹ Fjellström, "Natural Foods," 551.

¹⁰ On operational definitions and their implications in quantitative research, see Silverman, *Interpreting Qualitative Data*, 305.

¹¹ Rozin et al., "Preference for Natural," 148.

¹² I quote here senses 6e and 19b respectively of the *Oxford English Dictionary*'s definition of *natural*.

¹³ The italics earlier in this sentence are added to distinguish between the sense that a food *needs* to be processed and the simple fact that a food *is* processed. I argue that the first sense is obsolete as a definition of natural food, but that the second is current. On the Romantics' 'natural diet', see Timothy Morton, ed., *Radical Food: The Culture and Politics of Eating and Drinking 1790-1820*, vol. 1 (London and New York: Routledge, 2000), 12. Morton tends to suggest that *natural food* functions today solely to designate a 'marked' category: that is, a special category of foods distinct from normal or regular food. (Morton gives the example of organics.) I

clause of the second *OED* definition identifies *health food* as a synonym for *natural food*. I regard this claim as problematic, as discussed in more detail below. Leaving aside these unsatisfactory clauses, the two *OED* definitions suggest that the absence of ‘additives’ is the key quality of natural food. I do not dispute this definition as far as it goes, but it by no means reflects the range of meanings of *natural food* either in common usage or in low-carbohydrate discourse. Even the *OED*’s examples of usage for *natural food* indicate at least one additional sense: one citation refers to the benefits of ‘natural rice’ over ‘polished rice’. This example reflects a further meaning of the word natural in relation to food: that is, the quality of being unprocessed or unrefined.¹⁴

Summarising these two meanings, we may isolate two key qualities of natural food. Firstly, natural food has *nothing added*, especially if an additive is itself synthetic. This applies equally to primary production (avoidance of synthetic fertilisers and pesticides) and secondary processing (no artificial colours, flavours, or preservatives). Secondly, natural food has *nothing taken away*: it is unrefined, or unprocessed. Putting these two qualities together, we may conclude that natural foods must be in their original (or *natural*) state, not modified by human intervention. We have thus come full circle to the definition proposed by Rozin and colleagues: natural foods are the same as they would be in nature, not ‘changed [...] by contact with humans’.¹⁵ Similarly, Fjellström suggests that ‘natural foods are foods not deliberately altered in the course of production and processing’.¹⁶ From these more general statements it is possible to imagine further ways in which humans may intervene in the production and processing of food, notably via genetic modification. Given recent biotechnological developments, we might suggest that natural foods are not modified by human intervention either physically, chemically, or biologically.¹⁷ Implicit in all these definitions is a final and fundamental quality: natural food arises in ‘nature’, rather than being man-made or synthetic. As Williams notes outside the specific context of food, ‘nature is what man has not made’.¹⁸ Thus words like *real* and *authentic* appear as synonyms for natural in references to food; *fake* and *artificial* are often used as antonyms.

My review at the beginning of this chapter of the literature on the preference for natural food indicates that this preference has a strong moral dimension, but is also closely tied to beliefs about health. Fjellström points out that advertising emphasises the naturalness of foods because of the perceived healthiness this implies.¹⁹ Naturalness is also a key value in the health-food movement, the tenets of which now overlap considerably with those of mainstream nutrition.²⁰

disagree: this meaning certainly exists, but *natural food* retains a further, broader frame of reference. See my discussion below regarding the relationship between natural food and health food.

¹⁴ This example appears under sense 6e, although it does not reflect that definition (namely, ‘containing no artificial colourings, flavourings, or preservatives’).

¹⁵ Rozin et al., “Preference for Natural,” 148.

¹⁶ Fjellström, “Natural Foods,” 551.

¹⁷ Bob Ashley and colleagues note the deployment of notions of nature and the natural by opponents of genetic modification (GM). They argue that resistance to GM foods ‘closely relates to fears about “meddling with nature”’, and that this reflects the assumption ‘that foods that are unmodified are “natural” and therefore inherently preferable to manufactured products’. See Bob Ashley et al., *Food and Cultural Studies* (London and New York: Routledge, 2004), 200. For further discussion, with a focus on how GM advocates negotiate the issue of naturalness, see Guy Cook, *Genetically Modified Language: The Discourse of Arguments for GM Crops and Food* (London and New York: Routledge, 2005), 98-103.

¹⁸ Williams, *Keywords*, 223.

¹⁹ Fjellström, “Natural Foods,” 552.

²⁰ For example, national dietary guidelines now embrace health-food staples such as whole grains and pulses (as discussed further below). The Australian dietary guidelines recommend eating ‘plenty of vegetables, legumes

As noted above, the *Oxford English Dictionary* lists *health food* as a synonym for natural food. To a certain extent this definition is accurate, especially in relation to American English, in which the terms *natural foods* and *wholefoods* are often used interchangeably with *health foods*, especially in the plural. For instance, what Australians would call a health-food shop might, in the United States, be called a natural-foods store or wholefoods store. These usages are not common in Australian English. In both American and Australian usage, there is less definitional overlap when the words natural and whole are used adjectivally with reference to specific foods, rather than as part of compound nouns or modifiers. This also obviates the slippage between the terms natural food and health food, since *health* cannot be used as a stand-alone adjective in relation to specific items of food. (We might describe an apple as natural, for example, but we cannot substitute ‘health’ as an adjective here.) Adjectival rather than compound usage is common in the low-carbohydrate diet literature: references to ‘whole unprocessed grains’ and ‘natural unrefined sugars’ are typical.²¹ In subsequent discussion of the category *natural (food)* in low-carbohydrate discourse, I stress that I have its broader descriptive significance in mind, not its more specific, chiefly American usage as a synonym for health food.

Natural is thus an attribute which may be bestowed on a broad, loosely-defined category of foods (as I argue, neither man-made nor modified by human intervention), which are preferred by a majority of consumers across numerous (Western) countries. *Health food*, on the other hand, is a term with a very specific cultural history, beginning with dietary reformer Sylvester Graham and the Popular Health movement of the 1830s, and rising to mass prominence with the counterculture in the 1960s and 1970s.²² Far from being loosely-defined, the category *health food* has designated quite specific foods at different periods in its history, from the well-known Graham cracker to the ‘[b]rown rice, wheat germ, honey, nuts, sprouts, [...] yogurt, hummus, falafel, [and] tofu’ of the ‘countercuisine’ (as Warren Belasco dubs it).²³ Of course, the designation of certain foods as natural is crucial to health-food discourse. But the health-food classificatory scheme represents only one possible way of deciding which foods are natural and which are not. Naturalness is equally fundamental to low-carbohydrate discourse, underpinning dieters’ food choices and thus anchoring, practically and conceptually, the primitivist challenge to modern Western diet.²⁴

Low-carbohydrate diet books (and low-carbohydrate dieters) treat naturalness as, arguably, the most desirable attribute a food can have. Diet books such as *Dr. Atkins’ New Diet Revolution* repeatedly stress that dieters should eat real, natural foods, not synthetic or processed products. Atkins urges dieters to ‘aim for unprocessed natural foods and select the freshest produce you

and fruits’, and ‘plenty of cereals [...], preferably wholegrain’. See National Health & Medical Research Council, *Dietary Guidelines for Australian Adults*, 17, 31.

²¹ Steward et al., *Sugar Busters*, 118.

²² On Graham and the Popular Health Movement, see Sabrina H. B. Hardenbergh and Hea-Ran L. Ashraf, “Health Foods,” in *Encyclopedia of Food and Culture*, ed. Solomon H. Katz and William Woys Weaver (New York: Charles Scribner’s Sons, 2003), 178. On the counterculture, see Warren J. Belasco, *Appetite for Change: How the Counterculture Took on the Food Industry*, revised ed. (Ithaca and London: Cornell University Press, 1993).

²³ The quotation is from Hardenbergh and Ashraf, “Health Foods,” 179. On the countercuisine, see Belasco, *Appetite for Change*.

²⁴ Health-food discourse also displays certain primitivist tendencies, although my general impression is that explicit evolutionist reasoning is less common in the health-food movement today than it is in the low-carbohydrate diet movement (as discussed in Chapters 6-8). A detailed analysis of health-food discourse is unfortunately outside the scope of this thesis.

can find'.²⁵ He recommends buying organic, and encourages dieters to seek out cured meats and fish free of carcinogenic nitrates.²⁶ Other low-carbohydrate diet books proffer similar advice. *The South Beach Diet* promotes its plan as a 'real food' regime, in contrast to the implied synthetic, flavourless horrors of low-fat dieting. In testimonials included in the book, dieters celebrate the fact that they can eat 'real olive oil', 'real dressing' and 'real butter'.²⁷ *Protein Power* recommends that dieters choose foods 'in their natural state', and 'eat as few unnatural products as possible'.²⁸ Arguably, the exclusion of processed foods is what defines low-carbohydrate dieting. The essential taboo on refined carbohydrate (processed sugars and starches) eliminates virtually all pre-packaged foods, proscribing staples such as bread and pasta as well as 'junk foods' such as soft drinks, chips, biscuits and sweets.²⁹ In the three remaining sections of this chapter, I examine in detail the rules by which foods are classified as either natural or unnatural in the low-carbohydrate dietary schema, and explore the symbolic function of refined carbohydrate as the defining product of the modern Western food system.

Whole food / refined carbohydrate: a defining dichotomy

The Atkins Diet, which I examine first here, proceeds logically via a basic binaristic opposition between 'refined *carbohydrates*' (unnatural, unhealthy) and 'whole, unrefined *food*' (natural, healthy).³⁰ The implication of this stated and essential distinction is that (refined) carbohydrates are not really food at all, a conclusion confirmed as the *Atkins* text proceeds. Atkins claims expressly that sugary low-fat products such as soft drink, packaged desserts and even white bread are 'not real food' but 'invented, fake food' (25). Further, although the vocabulary is inconsistent, descriptions of refined-carbohydrate products intended for human consumption frequently avoid using the word food. Instead, the text refers to '[t]hat packaged refined carbohydrate stuff' and 'those boxes filled with sugar, white flour and salt' (221, 329), the emphasis on (plastic) packaging and (cardboard) boxes suggesting the synthetic and inedible nature of the products they contain. Throughout *Dr. Atkins' New Diet Revolution*, the phrase 'refined carbohydrates' is used repeatedly and without qualification to refer to an array of substances which we might otherwise deem food, especially white flour and refined sugar.³¹ Such tropes are common to other low-carbohydrate diet books too: *Sugar Busters*, for example, refers to grain 'products' rather than grain-*foods* (or simply *grains*).³² This discursive strategy reinforces the idea that the so-called foods which are based on refined carbohydrates are man-made rather than natural, a tactic paralleled by Atkins: 'To make a low-fat *product* taste good, *manufacturers* add lots of sugar' (25).

²⁵ Atkins, *New Diet Revolution*, 130.

²⁶ *Ibid.*, 124.

²⁷ Agatston, *South Beach*, 3, 14, 15.

²⁸ Eades and Eades, *Protein Power*, 110, 151.

²⁹ During the recent low-carbohydrate trend, American food manufacturers developed and launched thousands of specific low-carbohydrate diet foods, as discussed in Chapter 2. These clearly constitute an exception to the rule that low-carbohydrate diets exclude processed foods. I discuss this issue further at various points later in this chapter.

³⁰ Atkins, *New Diet Revolution*, 10-11. Further page references are cited in parentheses in the text, except where this would be overly complicated. All italics in citations from primary texts are my own unless otherwise indicated, and are used for critical emphasis.

³¹ Eg Atkins, *New Diet Revolution*, 10, 11, 13, 25, 314, 319, 359.

³² Steward et al., *Sugar Busters*, 84, 114.

Equally, the contrast between refined carbohydrates and unrefined food implies that all refined products are (by definition) carbohydrates, while all low-carbohydrate foods are (by definition) unrefined. The (whole) food / (refined) carbohydrate dichotomy produces intriguing slippages and contradictions in the Atkins dietary schema. Unrefined carbohydrate-rich foods, such as fruit, starchy vegetables and whole grains, become an unclassifiable anomaly. Their place on the Atkins Diet is not at all clear: one list of Atkins-approved foods includes fruit and whole grains (48), a second refers to ‘*occasional* fruits and starches’ (221), and a third omits grains and starches entirely and allows berries (which are low in carbohydrate) but not other fruit (329). In another example of schematic slippage, although Atkins asserts that refined and processed products ‘simply aren’t good for you – ever’ (22), certain refined or processed foods (notably cheese, processed meats and vegetable oils) escape stigma. Atkins urges dieters to ‘[e]at liberally of [...] pure, *natural* fat in the form of butter, mayonnaise, olive oil, safflower, sunflower and other vegetable oils’ (123). A subsequent list of ‘natural’ fats also includes cream and cheese (138). In simple weight-loss terms, the fact that these foods are low in carbohydrate would logically trump the fact that they are processed. The slippage occurs because Atkins also treats these foods (by definition) as *natural*: in other words, he overlooks the fact that cheeses and vegetable oils are processed, because they are low in carbohydrate.

Although Atkins does not (dare) go so far as to claim that Atkins-brand (and other reduced-carbohydrate) shakes and snack bars are natural, these products still manage to skip ranks into the column of healthy (because low-carbohydrate) foods, this time through a vocabulary of consumer choice:

Today, a person *choosing* to follow a controlled carbohydrate nutritional approach has almost as many packaged and prepared food *options* as people who are, unwittingly, following a low-fat diet. Visit your local natural food store, drug store, supermarket or even mass market store and you will see the wide *variety* of food products *available* [...]. Advances in scientific understanding have paved the way for *alternatives* to foods that are high in carbohydrates [...]. (26)

In a later passage, it is convenience that is stressed, presenting reduced-carbohydrate products as a useful back-up for dieters when time (or unprocessed low-carbohydrate food) is short:

Although it is important that you eat primarily unprocessed foods, some controlled carb food products can come in handy when you are unable to find appropriate food, can’t take time for a meal or need a quick snack. (129)

Known in life for his showmanship, Atkins generally favours more colourful prose. The vocabulary of both these passages is unusually neutral and euphemistic, especially given Atkins’s denunciations elsewhere of commercial processed food, which ‘puts money in somebody’s pocket [and] garbage into your stomach’ (221). In the passages above, low-carbohydrate products are described as ‘packaged’ and ‘prepared’ rather than manufactured or processed, again emphasising convenience. Further, the word *food* appears repeatedly in allusions to ‘prepared *food* options’ and ‘controlled carb *food* products’, in contrast to Atkins’s avoidance of the word in relation to high-carbohydrate products, as discussed earlier. The effect of this vocabulary is to manoeuvre low-carbohydrate diet products into the category of acceptable (real) food, distancing them from the starchy and sugary processed foods Atkins so deplors.³³

³³ For further recommendations of reduced-carbohydrate diet products, see Atkins, *New Diet Revolution*, 104, 116, 173, 239–40. Information on Atkins-brand products is available at www.atkins.com/products. In his

Nutritional supplements are the subject of a similar discursive contrivance, likewise necessitated by Atkins's reliance on a simple binary distinction between refined carbohydrate and natural food. Despite his objections elsewhere to 'chemicals', Atkins presents vitamin and mineral supplements as an indispensable part of his diet.³⁴ (As discussed in Chapter 1, Atkins also published a separate book on 'vitanutrient' supplementation, and until his death used supplementation alongside nutritional intervention in his own clinical practice.)³⁵ Chapter 23 of *Dr. Atkins' New Diet Revolution* is entitled 'Nutritional Supplements: Don't Even Think of Getting Along Without Them!' (301). Atkins's list of essential supplements for dieters includes nutrients such as chromium, pantethine, selenium, vanadium and biotin. Conveniently, these are all available in the Atkins-brand Basic #3 Formula, although Atkins carefully acknowledges his financial interest in Atkins Nutritionals (303). During Induction, dieters are also advised to take L-glutamine for sugar cravings, along with essential fatty acids (135-136). For later phases dieters can add additional chromium and coenzyme Q₁₀ if 'metabolic resistance to weight loss is high' (307). Throughout the text, Atkins recommends extra supplements for specific dieting or health issues as they arise.³⁶

In part, the seemingly contradictory recommendation of a chemical-free natural diet in conjunction with an array of supplementary vitamins and minerals may be explained by the socio-historical context in which the Atkins Diet was conceived.³⁷ Raymond Boisvert argues that the Atkins Diet is inevitably a product of its time ('the good old "greening of America" era'), influenced by the countercultural trends of the 1960s and 1970s.³⁸ In relation to food, this period of United States history saw rapidly increasing consumer demand for pure foods, free of agricultural fertilisers and pesticides as well as preservatives and flavourings added in processing. The mainstream trend for wholefoods and organics was largely motivated by a rash of contemporary food scares, notably that relating to DDT.³⁹ But in addition to the backlash against contaminants in the food supply (and not unrelated to it, as I discuss below), the late 1960s saw what Harvey Levenstein describes as 'a wave of vitamin-mania', backed by high-profile advocates such as Linus Pauling and Adelle Davis. A survey conducted in 1969, Levenstein notes, found that more than half the American population was 'regularly taking vitamin pills or other dietary supplements', and megavitamin therapy was also popular.⁴⁰

master's thesis, Scheiderer also briefly notes the contradiction I explore here between Atkins's diet-product business and his textual appeals to nature and naturalness. See Scheiderer, "Mass Consumption", n. 31.

³⁴ For discussion of chemical additives, see Atkins, *New Diet Revolution*, 25.

³⁵ On vitanutrient supplementation, see Atkins, *Dr. Atkins' Vita-Nutrient Solution*.

³⁶ Not all low-carbohydrate diets recommend vitamin and mineral supplementation, especially not to the extent that Atkins does. *Sugar Busters* is explicitly critical of the supplement industry: '[i]nstead of having to swallow a pill, why not eat a plateful of savory meats and vegetables and lose weight in the process?' See Steward et al., *Sugar Busters*, 10. *The Zone* avoids committing either way, recommending limited supplementation with low-dose vitamin E, while urging readers to achieve optimum nutrition through proper low-carbohydrate eating habits 'instead of reaching for some magic vitamin pill'. See Sears, *The Zone*, 109, 112. *South Beach* suggests a daily multivitamin plus fish oil. See Agatston, *South Beach*, 87.

³⁷ The Atkins Diet was originally published as Atkins, *Dr. Atkins' Diet Revolution*.

³⁸ Raymond D. Boisvert, "Atkins: Who Gets Philosophical Credit? An Imaginary Dialogue," in *The Atkins Diet and Philosophy: Chewing the Fat with Kant and Nietzsche*, ed. Lisa Heldke, Kerri Mommer, and Cynthia Pineo (Chicago and La Salle, Illinois: Open Court, 2005), 72.

³⁹ For discussion of DDT and the pure food trend of the 1960s and 1970s, see Harvey Levenstein, *Paradox of Plenty: A Social History of Eating in Modern America*, revised ed. (Berkeley: University of California Press, 2003), 160-77.

⁴⁰ *Ibid.*, 166.

Vitamin and mineral supplements are highly refined, often synthetic substances. Yet in Atkins's nutritional schema (as well as that of the alternative health movement), supplements slip into the approved-foods list, masquerading as natural, because they supply a deficit which is itself deemed unnatural. Like Adelle Davis before him, Atkins argues that supplements are needed because the intensive agricultural methods of advanced industrial civilisation have irrevocably exhausted our soils, and hence impoverished our diet.⁴¹ 'With the increasing depletion of nutrients in our soil,' Atkins claims, 'there is simply no way we can ensure that we get all we require from food' (135). *Protein Power* alleges a similar unnatural deficit to justify its supplement regime, but locates it elsewhere: not in the agricultural environment, but in the body itself, which is almost certainly deficient in micronutrients after a lifetime of eating the modern Western diet. In order to 'overcome the problems that "civilized" eating has inflicted on you,' the Eadeses explain, 'we ask that you ensure the micronutrient adequacy of your diet by supplementing it with a complete general multiple vitamin and mineral tablet'.⁴² Nutritional supplements thus occupy a blind spot in the logic of certain low-carbohydrate diets, which prevents their being outlawed as 'chemicals'. This blind spot functions as a kind of strategic opening or interstice, via which Atkins and the Eadeses can mount an auxiliary attack on the modern industrial food system: not only are the refined carbohydrate foods this system produces inherently unhealthy, but the system itself progressively drains the earth's capacity to produce nourishing food. In this sense, both natural diet and nutritional supplementation may constitute practical, corporeal expressions of radical discontent with modern industrial civilisation and its foodways.

Blind spots and slippages such as those discussed above are inevitable in nutrition discourses that enlist naturalness as the defining characteristic of healthy foods. For instance, both mainstream nutrition and the health-food movement commonly designate wholemeal bread as a natural food (in contrast to the Atkins Diet). Historically, Santich notes that amongst alternative health practitioners of the 1920s and 1930s, '[t]he naturalness of wholemeal products was generally conceded as indisputable'.⁴³ Belasco describes stone-ground wheat flour as a 'natural foods touchstone' of the 1960s and 1970s 'countercuisine'.⁴⁴ Yet the idea that wholemeal bread is natural is arguably absurd. At the minimum, its manufacture requires that wheat be ground into flour, mixed with water (and often yeast), and baked at high temperature. The end product of this process in no way resembles the harvested grain. Similar arguments might be made regarding many other contemporary health-food staples, including tofu, soy milk, puffed grains, rice syrup and fruit juice concentrates. The designation *natural* may thus reflect very little about the way a food is produced and what its ingredients are. Instead, naturalness follows from beliefs about a food's healthiness or acceptability in a given dietary schema. For low-carbohydrate diets such as Atkins, this means the discursive attribution of authenticity and wholeness to low-carbohydrate foods, while high-carbohydrate products are automatically deemed artificial and overly processed.

⁴¹ Adelle Davis, *Let's Eat Right to Keep Fit*, revised ed. (New York: Harcourt, Brace, Jovanovich, 1970), 203. For a summary of Davis's argument, see Levenstein, *Paradox of Plenty*, 164.

⁴² Eades and Eades, *Protein Power*, 171. Atkins parallels this claim elsewhere: 'the real reason you'll need vitanutrients is because of the way you've likely been eating for years, or because of the low-fat diet that you may be following even as you read this'. See Atkins, *New Diet Revolution*, 133.

⁴³ Santich, *What the Doctors Ordered*, 86.

⁴⁴ Belasco, *Appetite for Change*, 222.

Dr. Atkins' New Diet Revolution continually associates refined carbohydrates with unnatural extremes and excess, employing a vocabulary of gross overabundance. Individual foodstuffs, the consuming body, and the national diet and economy are all said to be hypersaturated with refined starches and sugars. Atkins stresses that refined carbohydrates make up a '*whopping* proportion of the American diet' (13): 'the modern American diet is *grossly* tipped toward refined carbohydrates' (319). Supermarket aisles are described as 'crammed' with processed, carbohydrate-rich products, all '*filled* with sugar and [...] chemical additives' (25).⁴⁵ The phrase 'filled with sugar' recurs on the same page, and appears again later in the text (329). Concentrated foodstuffs (fruit juices, for example) are deemed inherently bad and unhealthy (22). The *supermarket*, where consumers buy all of these products, functions as a concrete as well as discursive emblem for the hypersaturation of the American food system: Atkins describes the supermarket aisles as 'sugar-saturated' (115). He exhorts dieters to throw these refined carbohydrate products into the garbage 'where they belong' (189). But even the garbage can, in Atkins's vision, is already overflowing (presumably with more of the same): the dieter must be urged to '[p]ry open the lid' and 'stuff them in' (189).

The surfeit of refined carbohydrate produces bodies which are both unnaturally excessive (obese) and sugar-saturated (diabetic). This logic and its associated imagery appear across the popular low-carbohydrate literature. *Sugar Busters*, for instance, describes how processed sugars and starches 'are almost immediately absorbed [by the body] in a very *concentrated* fashion', flooding the bloodstream with glucose and stimulating a corresponding rush of insulin.⁴⁶ Atkins explains how the diabetic body is ultimately overcome by an excess of refined carbohydrates, and begins quite literally to overflow with sugar: 'Blood sugar that cannot be transported by insulin into your cells (and liver) now *spills over* into your urine' (321). The general claim that (refined) carbohydrates cause overweight and disease is, of course, low-carbohydrate dogma. Atkins describes refined carbohydrates as 'slow poison' to the human body (13), especially for those who are insulin resistant, causing degeneration and disease that may take many years to manifest.⁴⁷ He subsequently describes sugar as 'a metabolic poison' and 'the most dangerous food additive on the planet' (24, 253). Atkins effectively claims that those who eat refined carbohydrates are the walking dead, since '[o]nce they abandon the catastrophic American diet of refined carbohydrates for whole, unrefined food, they start to *live* again' (10-11).⁴⁸ Similar connections between refined carbohydrates (especially sugar) and disease are drawn in all the low-carbohydrate texts I examine.

Consistent with the patterns discussed so far, the whole food / refined carbohydrate dichotomy functions in the low-carbohydrate dietary schema to divide the flavoursome from the flavourless, just as it divides healthy from unhealthy. The Atkins Diet, especially, takes up ideals of taste, flavour and pleasure central to the project of movements such as Slow Food.⁴⁹ Shapin astutely

⁴⁵ The italics here are original.

⁴⁶ Steward et al., *Sugar Busters*, 114.

⁴⁷ On the delayed manifestation of carbohydrate-related disease, see Atkins, *New Diet Revolution*, 359. Atkins here draws on the research of T. L. Cleave, who theorised that 'civilised' diseases such as diabetes and heart disease are caused by refined carbohydrate foods, and observed that they consistently appear in any given population twenty years after its members begin consuming refined carbohydrates. See Cleave, *The Saccharine Disease*.

⁴⁸ The italics here are original.

⁴⁹ On the importance of pleasure to the Slow Food ethic, see Kelly Donati, "The Pleasure of Diversity in Slow Food's Ethics of Taste," *Food, Culture & Society* 8, no. 2 (2005).

describes the Atkins Diet as ‘a curious cousin to [...] Slow Food’.⁵⁰ As I noted in Chapter 1, the in-principle difference between the low-carbohydrate diet movement and an institution such as Slow Food is that the former is concerned primarily with the effects of the modern Western diet on health, where the latter laments its impact on gastronomic taste. However, this is not to say that low-carbohydrate authors are insensitive to the gastronomic potential of the regime they recommend. The Atkins Diet famously allows such gourmet luxuries as lobster thermidor, and steak with French-style cream and butter sauces. Atkins describes his diet as ‘the true gourmet’s delight’ (248). As Shapin puts it, ‘[w]eight-loss the low-carb way is said to be wholly compatible with lusty connoisseurship’.⁵¹ According to Atkins, flavour in food is mediated via the inclusion or exclusion of ‘natural fat’, which functions in symbolic opposition to refined carbohydrate in the Atkins nutritional schema, as the archetypal approved real food. Processed low-fat products are said to be as deficient in flavour as they are in nutrients: ‘manufacturers make up for the flavour missing in these foods by adding high-carb fillers and sugar’ (189). The idea that when fat is removed from food, the flavour goes along with it is a familiar concept to any gastronome. Even the lower-fat Zone Diet recognises that ‘[a] truly boring diet is a fat-free diet – ask any French chef’.⁵² Likewise, ‘gourmet dining’ is said to be possible on Atkins because the regime ‘allows an intelligent and reasonable use of high-fat ingredients, including butter’ (131).

The role of fat on Atkins is probably the most notorious feature of the diet, and explains much of its ongoing controversy (as I argued in Chapter 2). Scientific attitudes toward mono- and polyunsaturated fats, especially the omega-3 fatty acids found in oily fish, have shifted markedly in recent years.⁵³ However, saturated fats are still generally a nutritional taboo. In Australia, the national dietary guidelines continue to recommend that Australians ‘limit saturated fat’.⁵⁴ The rise of ‘lipophobia’ since the 1960s has been well documented, most notably by sociologist and anthropologist Claude Fischler, but also by historians such as Levenstein and Santich (writing about the United States and Australia respectively).⁵⁵ In *Food, the Body and the Self*, Lupton summarises the shift in attitudes toward animal fat between the beginning and end of the twentieth century:

Animal fat, which was once considered a valued component of food (and indeed earlier [in the twentieth] century was often eaten as “dripping” spread on bread), is now almost uniformly represented in medical and popular discourses as an evil substance. [...] People routinely describe fat or fatty foods as “unhealthy”, particularly if the fat is visible, either in its solidified form, or as a greasy or oily residue.⁵⁶

By contrast, Atkins urges dieters, especially in the Induction phase, to be ‘unafraid of natural fat’, in which category he includes ‘butter, cream, cheese, olive oil and the fat in meats, poultry and fish’ (138-139). Its embrace of saturated fat distinguishes the Atkins Diet very clearly from the

⁵⁰ Shapin, “The Great Neurotic Art,” para. 16.

⁵¹ *Ibid.*, para. 10. As noted in Chapter 1, I have qualms about the scope of Shapin’s claim here. In relation to the Atkins Diet, I agree wholeheartedly. However, whether *The South Beach Diet* encourages ‘lusty connoisseurship’ is highly debatable, as I discuss in detail later in this chapter.

⁵² Sears, *The Zone*, 85.

⁵³ See generally National Health & Medical Research Council, *Dietary Guidelines for Australian Adults*, 107-32.

⁵⁴ *Ibid.*, 107. For comparison with earlier guidelines, see p. 109.

⁵⁵ Claude Fischler, “From Lipophilia to Lipophobia. Changing Attitudes and Behaviors Towards Fat: A Socio-Historical Approach,” in *Dietary Fats: Determinants of Preference, Selection, and Consumption*, ed. D. J. Mela (London and New York: Elsevier Applied Science, 1992); Levenstein, *Paradox of Plenty*, 202-11; Santich, *What the Doctors Ordered*, 128-216.

⁵⁶ Lupton, *Food, the Body and the Self*, 82.

contemporary health-food movement, as well as from a number of other low-carbohydrate diets (especially South Beach and the Zone) which caution dieters to curtail saturated fat intake.⁵⁷

Rather than classing fats as good or bad depending on whether they are unsaturated or saturated, Atkins distinguishes between natural fats and those that have been ‘chemically altered’ or ‘transformed from their natural state’ (25, 353): that is, trans fats. In the *Dietary Guidelines for Australian Adults*, trans fats (or trans-fatty acids) are defined as:

a form of unsaturated fatty acid that is straight at a double bond rather than bent, as in the usual *cis* form. They are not common in nature but are formed during some manufacturing processes, such as when edible oils are hydrogenated to make hard margarines. Small amounts of trans-fatty acids occur naturally in meats and dairy foods.⁵⁸

David Schleifer outlines the social history of trans fats in his enlightening article ‘Fear of Frying: A Brief History of Trans Fats’. He notes that partially hydrogenated edible oils (which contain a high proportion of trans-fatty acids) were commercialised by the early 1940s. Their benefits were many:

Due to their high smoke-point, partially hydrogenated oils allowed restaurants and factories to deep-fry large batches of food without changing the oil in the fryers too frequently. Partially hydrogenated oils do not turn rancid quickly, so snacks made with those oils could stay perky for months in a warehouse, vending machine, or convenience store. And partially hydrogenated oils were cheap, because by 1930 they were typically made from the oil left over after crushing heavily subsidized soybeans to make animal feed.⁵⁹

Schleifer explains that partially hydrogenated oils became especially popular from the 1960s on because they were free of saturated fats, which had then been implicated as a cause of heart disease. Until very recently, trans fats were therefore common in ‘heart-healthy’ margarine, as well as in many processed foods made with partially hydrogenated oils. However, by the early 1990s, clinical and epidemiological research reliably associated trans-fat intake with an adverse blood lipid profile and hence with increased risk of cardiovascular disease.⁶⁰ Partially hydrogenated oils have since been ‘virtually eliminated’ from Australian margarines.⁶¹ As Schleifer discusses, since 2002 many American manufacturers have voluntarily eliminated trans fats from processed food products, and several jurisdictions in the United States, including New York City, have recently banned artificial trans-fatty acids in food.

As this review indicates, low-carbohydrate authors such as Atkins are certainly not alone in considering trans fats unhealthy. But Atkins regards trans fats with what might justly be described as a veritable moral hysteria, which reflects not just health concerns but a deep distrust of trans fats as an unnatural, man-made substance. In part, the heightened rhetoric should remind us that, as discussed above, industry and government have made rapid progress with regard to trans fats in the five years since *Dr. Atkins’ New Diet Revolution* was last revised. Now, ‘with trans fats leaving the building’ (as Schleifer puts it), one might expect moral hysteria gradually to diminish,

⁵⁷ Agatston, *South Beach*, 10, 20, 29; Sears, *The Zone*, 87.

⁵⁸ National Health & Medical Research Council, *Dietary Guidelines for Australian Adults*, 108.

⁵⁹ David Schleifer, *Fear of Frying: A Brief History of Trans Fats* [online magazine article] (n+1, 21 May 2007 [accessed 17 October 2007]); available from www.nplusonemag.com/transfats.html.

⁶⁰ For an overview, see National Health & Medical Research Council, *Dietary Guidelines for Australian Adults*, 114.

⁶¹ *Ibid.*

if not disappear. However, even accounting for socio-historical context, Atkins's rhetoric is extreme, sometimes explicitly apocalyptic. A dedicated section in *Dr. Atkins' New Diet Revolution* on 'The Dangers of Trans Fats' begins by stating that 'hydrogenated and partially hydrogenated oils [...] contain fats never found in Nature' (353). As the definition I cited in the previous paragraph indicates, this is not quite true: meats and dairy products contain small amounts of trans-fatty acids. By choosing the word 'never' rather than 'rarely', and capitalising the word 'Nature', Atkins establishes a vocabulary of moral absolutes, which gathers weight as the passage proceeds. The molecular structure of trans fats is portrayed as (morally) perverted: 'twisted' and 'unnatural' (354). (Compare the definition cited above, which describes the molecular structure of trans fats as 'straight at a double bond rather than bent'.) Earlier, Atkins even describes trans fats as 'evil', in contrast to the 'natural' fats found in dairy products, olive oil, meat and fish (138-139). Atkins's subsequent explanation of the process by which trans fats are created repeatedly evokes biblical references to hell and divine punishment. Trans fats are manufactured, Atkins explains, by 'heating vegetable oils at *high temperature* and *bombarding* them with hydrogen gas' (353-354), recalling images of fire and brimstone.⁶² An express mention of divine justice and damnation appears later in the same passage: 'Unlike butter, olive oil or other *natural* fats, trans fats have a shelf life from now to *Doomsday*' (354). Viewed through Atkins's eyes, trans fats thus appear to be something akin to nuclear waste: a sign of the apocalypse which refuses to break down.

Not all low-carbohydrate diet books mention trans fats. *Sugar Busters*, for instance, does not do so. Other texts, such as *South Beach* and *The Zone*, caution readers about the adverse health impact of trans fats, but without the extreme moral rhetoric of *Dr. Atkins' New Diet Revolution*.⁶³ *Protein Power*, however, shares with *Atkins* a rhetorical emphasis on the unnaturalness of the trans fat 'hybrid', which tends to eclipse consideration of its health effects.⁶⁴ The Eadeses describe trans fats as '*artificially* saturated', '*artificially* hydrogenat[ed]', and possessed of an '*unnatural* [molecular] configuration'.⁶⁵ They note that it is '*artificial* flavoring' that is combined with partially hydrogenated oils to produce margarine.⁶⁶ In *Dr. Atkins' New Diet Revolution*, part of the moral stigma attached to trans fats seems to derive intrinsically from their economic advantages for manufacturers, to which Atkins refers scathingly: '[t]he food industry stick these hydrogenated and partially hydrogenated oils into virtually all baked goods and other junk food. The reasons are economic ones' (354). By contrast, *Protein Power* describes the industrial benefits of trans fats using a neutral vocabulary, shifting the site of the consumer's betrayal to processed foods themselves. In the Eadeses' terms, foods which contain trans fats, such as margarine made from partially hydrogenated oil, conceal their potentially lethal chemical structure behind a bland, even health-promoting, exterior: 'margarine – that very substance Americans have been eating to save themselves from heart disease – can *increase* the risk for heart disease [and] cancer'.⁶⁷ In such representations, unnatural products such as trans fats are not just unhealthy, but potentially treacherous.

⁶² Interestingly, it is with a rain of fire and brimstone that God is said to have punished Sodom and Gomorrah for their 'unnatural' sexual perversion (Genesis 19:24).

⁶³ Agatston, *South Beach*, 29; Sears, *The Zone*, 123-24.

⁶⁴ Eades and Eades, *Protein Power*, 341.

⁶⁵ *Ibid.*, 341, 358.

⁶⁶ *Ibid.*, 341.

⁶⁷ *Ibid.*, 342-43 (original italics).

In the Atkins dietary schema, naturally occurring fats and oils are distinguished from supposedly ‘unnatural’ trans fats. As I argued above, fats and oils, with the exception of partially hydrogenated oils (which contain high levels of trans-fatty acids), represent as a class the archetypal natural food in low-carbohydrate discourse: the antithesis of manufactured refined-carbohydrate products, which are low in fat and correspondingly low in flavour. The distinction which Atkins and the Eadeses draw between ‘natural’ fats and trans-fatty acids suggests that trans fat functions in the low-carbohydrate schema analogously with refined carbohydrate. That is, trans fat serves as a secondary symbol for the modern industrial food system, which is diametrically opposed to real, nutritious, natural food. Low-carbohydrate discourse consistently associates refined carbohydrate with the unnatural excess of the modern American diet and the excessive bodies it feeds. Authors such as Atkins attribute the obesity and diabetes epidemics directly to (over)consumption of refined sugars and starches. In my discussion here of trans fats in low-carbohydrate discourse, especially in relation to *Dr. Atkins’ New Diet Revolution*, I have highlighted the very strong moral hierarchy of the natural / unnatural binary. Atkins describes natural fats as ‘pure’, while unnatural trans fats are ‘evil’ and ‘twisted’. In the next section, I explore the moral overtones of the natural / unnatural binary in relation to the pre-eminent symbol of the modern Western diet, refined carbohydrate – this time with reference to *Atkins’* main competitor, *South Beach*.

Unrefined food and moral virtue

The moral rhetoric of Atkins, though sometimes startling, pales in comparison with the Protestant ethic of Arthur Agatston, author of *The South Beach Diet*. Atkins’s moral logic is tied to a Rousseauian concept of nature, with the effect that Atkins automatically deems anything ‘natural’ (including natural pleasures) to be both healthy and morally good. *South Beach* affirms the association of unprocessed food, moral virtue and health, but ties all three to a Calvinist ethic of austerity, sobriety and hard work. The Atkins Diet, I have argued, is the product of the radical counterculture of the 1960s and 1970s. By contrast, *South Beach* was conceived in a very different socio-historical climate, published in 2003 amidst rising cultural anxiety about obesity, and also about war and global terrorism. This may well seem unrelated to diet, but *South Beach* specifically describes how the September 11 bombings in the United States produced widespread ‘anxiety and insecurity’ – ‘the kind [...] that seeks comfort in a sweet mouthful or a brimming dinner plate’ – and urges dieters to maintain the regime during stressful times, personal or international.⁶⁸ In this respect, *South Beach* offers a moral tale for the new millenium, a time of alarming threats to global stability in which self-discipline and self-denial become all the more important. In contrast to Steven Shapin (as noted in Chapter 1), I suggest that *South Beach* replaces the ‘lusty connoisseurship’ of the Atkins Diet with just enough limited indulgence to keep the dieter on the straight and narrow.⁶⁹ ‘[D]on’t be too hard on yourself’ when eating out, *The South Beach Diet* allows. Have three bites of chocolate cake or three teaspoons of ice cream. ‘Then send the rest away with the first passing waiter’ (81).

According to Agatston, refined and processed foods (especially white flour and refined sugar) are a moral and nutritional evil because they make us lazy. In part this is because processed foods

⁶⁸ Agatston, *South Beach*, 95. Further page references to *South Beach* are cited parenthetically in the text.

⁶⁹ The citation is from Shapin, “The Great Neurotic Art,” para. 10.

require little further preparation by the consumer. But more important, in Agatston's view, is that processed foods are too easy to digest. The two go hand in hand: 'As we delegate more and more of our food preparation to fast-food restaurants and food manufacturers', we also delegate the work of digestion, since '[i]n a sense, food manufacturers have begun the digestion process for us' (73). Refined grains, the text suggests, have effectively been predigested, since the separation of husk from grain, and the fine-milling of grain into flour, parallel the work our bodies would otherwise do. Thus, *South Beach* explains, the 'digestion' of processed foods 'starts long before the food hits the supermarket shelf' (47-48). In this regard, *South Beach* displays a horror of what we might term, after Mary Douglas, bodily processes 'out of place'.⁷⁰ The predigestion metaphor produces a nightmarish vision of a body turned inside out, grotesquely relocating digestion outside the body, where it is taken over by food-processing machines.⁷¹ By contrast, 'real food' (which on *South Beach* includes whole grains as well as raw fruits and vegetables) maintains digestive function in its proper place inside the body. Unlike lazy processed food, real food sets the body to work: 'real, old-fashioned bread – the coarse, chewy kind with a thick crust and visible pieces of grain – *puts your stomach to work*' (48). Similarly, uncooked broccoli is described as 'crunchy, hard, cold, and covered with a layer of nutritious fibre [...] *your stomach has really got to work* in order to get at the carbs' (47). Oranges, too, are hard work for you and your stomach, especially compared to orange juice: '*Your stomach [has] to work* to separate the sugar from everything else in the course of digestion [...] peeling an orange is *work*, and eating one takes time' (51-52).

Nutrition in the *South Beach* mode is, or should be, an ongoing struggle between the body and its nourishment. In Chapters 5 and 6 of this thesis I explore nostalgia in low-carbohydrate discourse for periods of human history when subsistence *was* generally more of a struggle, alongside the idealisation of less industrialised food systems today which also rely on hard manual labour in the field and the kitchen. The vast majority of *South Beach's* readers, of course, are not 'engaged in a constant, everyday battle with their potential dinner' (to quote *The Zone*), with the attendant risk of trading places with one's anticipated meal.⁷² But according to Agatston, real food should still resist us physically every (remaining) step of the way, digestive labour standing in for the agricultural and culinary labour most readers do not perform. Shapin argues that 'Atkins articulates a secular version of the biblical story about agriculture, and consuming the crops raised in the sweat of our brows, as punishments for original sin'.⁷³ I would suggest that this Calvinist ethic is actually far more evident in *South Beach*, which continually deplures comfort and convenience in favour of hard work, temperance and domesticity: the keys to moral and physical health. Foods that are quick and easy to prepare are nutritionally (and morally) deficient because someone else has done the hard work for us. Refined white rice, for instance, is nutritionally bankrupt and devoid of (moral) fibre:

⁷⁰ Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London, Boston and Henley: ARK, 1966).

⁷¹ An analogy here is with in vitro fertilisation (IVF), which relocates conception outside the (female) body, displacing it to the laboratory. I am, of course, not suggesting that this process is genuinely grotesque, but rather that it has the potential to be constructed discursively as such.

⁷² Sears, *The Zone*, 101. Of Neo-Paleolithic life, Sears writes: '[s]ometimes, of course, humans *became* the dinner' (original italics).

⁷³ Shapin, "The Great Neurotic Art," para. 14.

Processing removes the fibre (and hence, the nutrients) in order to make that rice easier and faster to cook. But as a result, all we get is the starch, and the calories – *empty of the necessary fibre and nutrients*. (18)

Following this moral logic, lazy processed food produces fat bodies: ‘The more food is preprocessed, the more fattening it will be’ (48). Most to blame are the refined carbohydrates contained in quick, easy and pleasurable convenience foods: ‘Much of our excess weight comes from the carbohydrates we eat, especially the highly processed ones found in baked goods, breads, snacks, and other *convenient favourites*’ (9).

As I pointed out earlier, in *Dr. Atkins’ New Diet Revolution* whole grains are something of an anomaly: Atkins never quite clarifies where exactly they fit on (or off) the dieter’s menu. By contrast, *South Beach* distinguishes much more clearly between good, unprocessed whole grains and bad, fibre-stripped white flour and rice. In the Atkins dietary schema, as I have argued, natural fat functions as the symbolic opposite of refined carbohydrate, and the archetypal approved ‘real food’. The South Beach Diet, on the other hand, accords symbolic pride of place to whole grains and other fibre-rich unrefined carbohydrates, which again function in opposition to refined carbohydrate. Agatston mentions dietary fibre continually, even obsessively, though rarely for its celebrated role in keeping one’s bowels regular.⁷⁴ Rather, he stresses that the importance of dietary fibre is in slowing the passage of food through the stomach, preventing the rapid rise and fall of blood sugar caused by white flour and refined sugar. (This slow-release quality defines a food with a low Glycemic Index.)⁷⁵ The emotive and violent vocabulary Agatston uses to describe the industrial processing of grains recalls Atkins’s description of trans-fat manufacture: wheat is ‘stripped’ of its fibre and ‘pulverized’ into flour until it is ‘processed to death’ (48). Like trans fats, refined grains are associated with a sense of doom, and also verge on the mutant, so radically are they altered from their natural state: ‘once [the fibre]’s gone *their very nature* – and how we metabolize them – *changes significantly, and for the worse*’ (9).

Because refined carbohydrates cause a rapid blood-sugar spike, *South Beach* frequently describes white bread and refined sugar in terms which might equally refer to alcohol or other intoxicating and addictive drugs, and which bear all the moral censure this parallel suggests. Eating white bread, Agatston preaches, is ‘like drinking on an empty stomach’ (61), perhaps unwise but also immoderate and vaguely uncivilised. The result:

Our stomachs can get at the starches without having to first separate them from the fibre [...] the bread is quickly turned into glucose – blood sugar – and causes an equally sharp rise in insulin, which brings about the dreaded acute rise and fall of blood sugar level, thereby creating more cravings later on. (61)

In contrast to the addictive cycle promoted by white bread, ‘eating whole grain bread is like eating with your cocktail’ (61): that is, pleasure tempered with propriety and restraint. The class associations here (note that the reader is drinking a cocktail, not a beer) are particularly interesting because they run counter to the general tendency of *South Beach* toward reverse snobbery. In this more prevalent mode, moral decline (and refined carbohydrate consumption) is associated with

⁷⁴ For references to fibre, see eg Agatston, *South Beach*, 9, 18, 47, 48, 49-50, 58, 61, 73, 74. On constipation, see Agatston, *South Beach*, 61. For discussion of the ‘obsession’ with fibre and regularity in twentieth-century dietary advice in Australia, see Santich, *What the Doctors Ordered*, 87, 151-52.

⁷⁵ As noted in Chapter 2, the Glycemic Index (GI) is a measure of how much and how rapidly a given food raises blood sugar. For further information, see www.glycemicindex.com. The concept appears extensively in the popular low-carbohydrate literature: see eg Agatston, *South Beach*, 60-67; Atkins, *New Diet Revolution*, 78-84.

the frivolous, leisured upper classes, while moral rectitude belongs to the hard-working lower classes. A number of other low-carbohydrate diet books treat refined carbohydrate consumption and its insidious effects on health as a kind of moral contagion passed down historically from the European aristocracy to the masses. *Sugar Busters*, for example, argues that refined carbohydrate consumption 'has done to our entire population exactly what it did to the royalty of the last few centuries. Refined breads for the privileged [...] and consumption of large quantities of sugar and honey rapidly took their toll on the royalty'.⁷⁶ 'The moral opprobrium directed at the aristocrats' consumption of sugar is intensified because *Sugar Busters* specifically notes that the sugar trade was historically dependent on slavery.⁷⁷

These class associations, as well as the implicit parallel between white bread and illicit drugs, manifest in an earlier passage in which Agatston describes the manufacture and subsequent effects on the body of packaged white bread:

Consider that loaf of sliced white bread. First the wheat is stripped of the bran and fibre. Then it's pulverized into the finest white flour. The baking process puffs it up into light, airy slices of bread. No wonder your stomach makes such quick work of it. A slice of white bread hits your bloodstream with the same jolt you'd get by eating a tablespoon of table sugar right from the bowl! Marie Antoinette would have a hard time telling it from cake, and the truth is that there's not much difference. (48)

The choice of sliced white bread in this passage is symbolically loaded. 'Sliced white' is the very emblem of the modern mechanised food system, rivalled only, if at all, by the fast-food burger. In the phrase 'the best thing since sliced bread', sliced white represents modern industrial convenience and sets the benchmark for subsequent technological wizardry. But the phrase 'white bread' has also come to describe that which is 'bland, unadventurous, or representing or reinforcing white middle-class values'.⁷⁸ As Belasco points out, white bread is 'a longtime symbol of all that seem[s] banal and mass in Western culture'.⁷⁹ Further, the passage cited above repeatedly notes that factory-made white bread is sold *sliced*. It is a *slice* of white bread that Agatston compares to a tablespoon of sugar, and the baking process is said to produce 'airy *slices* of bread'. Of course, even with the latest industrial production methods, bread does not slice itself as it bakes. But an emphasis on 'loaves' would augment white bread's moral seriousness considerably, not least by way of biblical allusion.

In the passage cited above, white bread's lack of physical substance (it is described as 'puffed up', 'light' and 'airy') translates to a lack of moral substance, associated with the impropriety of eating straight from the sugar bowl. Moral censure also flows from white bread's association with the notorious frivolity of Marie Antoinette, and the implication that today's staple white bread is as sugary and fluffy as the cakes which were once available only to the aristocracy. Worse, the 'jolt' to the bloodstream caused by white bread is the same as that from taking in fine white powder off a spoon! *South Beach* subsequently notes the contemporary dependency on 'large infusions of sugar in every meal' (73), the word 'infusion' (like *transfusion*) suggesting again a direct line to the bloodstream. Agatston also claims that Phase 1 of *South Beach* will eliminate 'your sugar

⁷⁶ Steward et al., *Sugar Busters*, 24. See also Kenton, *The X Factor Diet*, 25.

⁷⁷ Steward et al., *Sugar Busters*, 21. For a full social history of sugar (though unfortunately now more than twenty years out of date), see Sidney W. Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin, 1985).

⁷⁸ This definition is taken from the *Oxford English Dictionary*.

⁷⁹ Belasco, *Appetite for Change*, 49.

addiction' (37). The comparison of sugar and refined starches to addictive drugs is by no means unique to *South Beach*. *Sugar Busters* compares the addictive qualities of refined sugar explicitly to alcohol and implicitly to opiates.⁸⁰ In the same text, breakfast cereals, baked goods and salad dressings are all described as 'laced with sugar', identifying sugar with both poison and drugs (two categories, of course, which are distinct from food).⁸¹ *Dr. Atkins' New Diet Revolution* refers continually to carbohydrate and sugar addictions, as well as food addictions more generally.⁸² Nor is the sugar-as-drug metaphor unique to low-carbohydrate discourse. Both Fischler and Levenstein trace the widespread intensification of 'saccharophobia' in the 1960s and 1970s, including the emergence of what Fischler calls the 'addiction model'.⁸³ Many contemporary low-carbohydrate diet books discuss and cite popular anti-sugar texts of the 1960s and 1970s, including *The Saccharine Disease*, by T. L. Cleave, and *Sugar Blues*, by William Dufty.⁸⁴ Although *South Beach* appears reluctant to refer directly to this literature, which might perhaps be perceived as extreme or cranky, the discursive genealogy is nonetheless clear.

As I noted earlier, Atkins treats pleasure as a good, healthy and natural part of life, and associates the pleasures of the table with what he classes as healthy, natural foods, especially natural fat. In *South Beach*, pleasure occupies a much more ambivalent position. As a general rule, Agatston frowns upon pleasure, and associates it frequently with unhealthy, fattening foods. These should either be steadfastly resisted or consumed only in miniscule quantities just sufficient to stop the dieter sinning further. Low-fat biscuits and cakes, for instance, are 'delicious' but nutritionally bankrupt, a 'source of "empty calories"' (17). On the other hand, Agatston gives the chronically deprived dieter permission to eat small quantities of certain pleasurable 'real foods' which are disallowed on low-fat diets. Although *South Beach* is a 'good fats' diet, and (as I have noted) strongly criticises the liberal saturated fat intake allowed on Atkins, 'real food' is generally real fat: 'real olive oil', real salad dressing and 'real butter' (3, 14, 15).⁸⁵ Like Atkins, Agatston reviles low-fat diet products as fake and flavourless. In one of numerous testimonials included in *South Beach*, dieter 'Karen G.' celebrates the fact that on this diet she can have '[r]eal dressing' on her salad, instead of 'some crappy stuff that tastes horrible' (14).⁸⁶ Yet the text always carefully associates these real fats with steamed vegetables or salad, on which the butter, olive oil or dressing is to be deposited. By association, the message is that 'real food' is salad and fresh vegetables, topped with 'real fat' in limited quantities. 'I don't overdo it,' Karen G. makes clear, 'but it's real butter' (15).

In the *South Beach* dietary schema, fat thus occupies an anomalous no-man's-land between acceptable (whole) and unacceptable (refined) foods, similar to the position of whole grains in relation to Atkins's dietary dichotomy. The exact place of fats on the *South Beach Diet* is never

⁸⁰ Steward et al., *Sugar Busters*, 20, 22.

⁸¹ *Ibid.*, 134, 140.

⁸² For references to carbohydrate addiction, see Atkins, *New Diet Revolution*, 15, 16, 33, 41, 42, 43, 44, 122, 178, 219, 246, 339. On sugar addiction, see pp. 19, 103, 122, 339. For references to other specific food addictions, see pp. 32, 40, 41, 122, 141, 200, 208, 222, 224, 239, 283, 284, 339, 340.

⁸³ Claude Fischler, "Attitudes Towards Sugar and Sweetness in Historical and Social Perspective," in *Sweetness*, ed. John Dobbing (London: Springer-Verlag, 1987), 89. See also Levenstein, *Paradox of Plenty*, 190-93.

⁸⁴ Cleave, *The Saccharine Disease*; Dufty, *Sugar Blues*. These are cited respectively in *Dr. Atkins' New Diet Revolution* and *Sugar Busters*. Another popular anti-sugar text of the 1970s was Yudkin, *Sweet and Dangerous*.

⁸⁵ For criticism of the Atkins Diet's approach to saturated fat, see Agatston, *South Beach*, 10, 20. Fat-free salad dressing and cholesterol-lowering margarine are standard diet fare, but I do wonder whether artificial olive oil substitutes have really entered the market just yet – I-can't-believe-it's-not-olive-oil?

⁸⁶ The italics in 'Real dressing' are original.

quite clear. Full-fat dairy products, for example, are definitely considered ‘real food’, but the dilemma revolves around their perceived dangers to health. As I have noted, Agatston stresses the association of saturated fat with cardiovascular disease, partly in an attempt to distance the South Beach Diet from Atkins. But stereotypical Atkins-style meals such as bacon and eggs, and salad with blue-cheese dressing, are still on the menu.⁸⁷ Although Amy Bentley suggests that ‘[b]acon and butter are not staples [...] on South Beach, as they are on Atkins’, a dieter following the meal plans in *South Beach* would eat bacon and eggs for breakfast three times in the first week, and lean bacon is listed as a ‘food to enjoy’ on all three phases of the diet.⁸⁸ Moreover, Agatston specifically identifies lean bacon and low-fat dairy products as sources of ‘good’ fats (23, 25). He also highlights the power of full-fat foods to satisfy the appetite. By contrast, low-fat impostors fail to quell hunger because they substitute sugar for natural fat: in ‘low-fat ice-cream or frozen yogurt [...] the fat has been replaced with sugar, so [...] it won’t be as satisfying as the real thing’ (43). Low-fat processed foods seem to be particularly offensive to Agatston because they represent an inappropriate substitution: instead of replacing x with x (fat with fat), x has been replaced with y (fat with sugar). In this sense, their insidious corruption parallels that of the partially hydrogenated oils discussed earlier: both products masquerade as healthy, but have been perverted in ways that the eye cannot detect and which make them potentially lethal.

Agatston’s use of the word ‘real’ to refer to butter, olive oil and salad dressing maps neatly onto the natural / synthetic binary discussed in the introduction to this chapter. *South Beach* explicitly contrasts these ‘real foods’ with their artificial low-fat substitutes. But in the case of ice-cream, which Agatston also classifies as either ‘the real thing’ (full-fat) or a pale imitation (low-fat), the natural / synthetic binary does not apply particularly well. Ice-cream, whether made at home or in a factory, is composed of a number of individual ingredients of varying degrees of ‘naturalness’, not least of which is refined sugar (in both full-fat and low-fat versions). In Agatston’s use of the phrase ‘the real thing’, there is a sense instead that ice-cream has a kind of inherent integrity which is destroyed by the substitution of fat for sugar. This may seem illogical, since it ignores the actual process by which low-fat ice-cream is manufactured: despite what Agatston implies, manufacturers do not literally remove the fat from regular ice-cream to make it low-fat. But the concept of inherent integrity or wholeness in foods is crucial to low-carbohydrate discourse and its essential natural / unnatural dichotomy. In her study of the alternative health movement, *The Whole Truth*, Rosalind Coward describes a similar concern with preserving a substance (in this case, a herb or other plant) in its original or naturally occurring state, arguing that this reflects a belief in the inherent synergy of nutrients or active components in a plant.⁸⁹ She suggests that human intervention with the ‘natural whole’ is considered, in alternative health discourse, to be actively harmful:

According to this philosophy, anything which seeks to isolate elements of what grows and occurs naturally will destroy the capacity of the plant and nature to do good. Indeed, by interfering, the components of plants and minerals are converted into something with the capacity to do harm [...].⁹⁰

⁸⁷ See Agatston, *South Beach*, 15, 40-41.

⁸⁸ Bentley, “The Other Atkins Revolution,” 37. For Phase 1 meal plans and lists of acceptable and unacceptable foods, see Agatston, *South Beach*, 101-18. Phases 2 and 3 reintroduce higher-carbohydrate foods but do not change the status of any of the foods allowed on Phase 1.

⁸⁹ Coward, *The Whole Truth*, 28.

⁹⁰ *Ibid.*, 21.

Coward's discussion relates specifically to the alternative health movement and its approach to herbal medicines. But I would suggest that her argument is equally applicable to low-carbohydrate diets and their approach to food. *South Beach* invokes a similar notion of organic synergy in describing unprocessed foods as 'packages' of nutrients: 'in whole foods, the sugars and starches are bound up with the fibre and nutrients, so when we eat whole grain rice, say, we get the *entire package*' (17-18). Similarly, by eating a whole orange rather than drinking the juice, Agatston explains that we 'get juice, flesh, fibre, nutrients, vitamin C – *the whole package as nature intended it*' (42). He constructs a hierarchy of food preparation techniques, placing whole foods at the top and juices at the bottom: 'Whole and intact is better than chopped or sliced, which is better than diced, which is better than mashed or puréed. All of which is better than juiced' (49). Exactly as Coward suggests, once fruits are juiced or grains refined, their nutritional 'components' (that is, their sugars and starches) are 'converted into something with the capacity to do harm', causing obesity, diabetes, heart disease and death. Coward points out that the preference for natural therapies, as well as 'expressing a criticism of the modern and the technological' (a criticism I consider essentially primitivist), 'also recirculate[es] a religious opposition, between the degenerate or corrupt and the regenerative and healthy, in which mankind has destroyed an original wholeness'.⁹¹ What this suggests is that the primitivist paradigm may be overlaid, as it is in *South Beach*, with the moral associations of the doctrine of original sin.

In its ultimate moral implications *South Beach* is thus a very different diet book from *Atkins*, which posits an uncomplicated return to an innocent state of nature as the remedy for civilised ill-health. *South Beach*, instead, proposes hard work and self-denial as a form of penance for mankind's corrupting influence on the food supply. However, the dietary recommendations of the two texts, I stress, depend on the same binary distinction between natural and unnatural foods, in which refined carbohydrate functions as the pre-eminent symbol of the modern Western diet. Although the moral overtones of *South Beach* are much more intense, the association of natural foods with moral good, and unnatural foods with evil, is common to both diet books. (Recall Atkins's vocabulary in relation to trans fats.) Low-carbohydrate discourse consistently names refined carbohydrates and other processed or manufactured foods as the cause of ill-health, obesity and disease. *South Beach* represents simply the most extreme end of a spectrum of morally loaded logic. In the final section of this chapter, I examine low-carbohydrate dieters' deployment of the natural / unnatural binary in their day-to-day food choices. I argue that dieters affirm the connections that the low-carbohydrate literature draws between refined carbohydrates and ill-health, although they avoid the intense moral vocabulary of diet books such as *South Beach*. However, in deciding which foods are natural and which foods are not, low-carbohydrate dieters may actually be *more* stringent than the published literature requires, and on occasion even use the natural / unnatural dichotomy to trump (as it were) the diet literature's recommendations.

⁹¹ *Ibid.*, 23.

Low-carbohydrate dieters and the natural / unnatural binary

Amongst the dieters whom I interviewed for this research project, nearly all considered a low-carbohydrate diet a healthy way to eat.⁹² Further, at least seven participants in my study were long-term ‘low-carbers’ who were committed to a more-or-less lifelong low-carbohydrate lifestyle for their ongoing health and wellbeing, based on their often extensive independent research on diet and nutrition. These people clearly considered a low-carbohydrate diet not just a healthy option, but the *healthiest possible* way to eat.⁹³ Across the participant group as a whole, the most commonly expressed justification for deeming low-carbohydrate diets healthy was the exclusion of processed foods, especially refined sugar and flour, in line with my reading of the popular low-carbohydrate literature. Dieters whom I interviewed generally agreed that low-carbohydrate diets represent a more natural approach to eating, one which forces adherents to eliminate (most) prepackaged and processed foods. Nearly all the participants in my study did eat processed foods to a certain extent, the most popular choice being artificially sweetened soft drinks. I explore this anomaly further below, with reference to individual cases. However, all but two dieters voiced concerns about refined and manufactured food products, linking these to the obesity epidemic and long-term health problems such as diabetes. In general, interviewees’ deployment of the categories natural and unnatural corresponded to their use in the low-carbohydrate diet books discussed in previous sections of this chapter. The foods which dieters designated natural closely reflected the basic nutritional schema I identified in *Dr. Atkins’ New Diet Revolution* and *South Beach*, although dieters placed somewhat more emphasis on ‘chemicals’ and additives in processed foods, rather than focussing concern exclusively on the refining of grains and sugars. As argued in my introduction to this chapter, anxieties toward the refining of food, and toward the contamination of food with ‘chemicals’, both ultimately privilege foods that are whole or ‘natural’. In other words, both concerns reflect distrust of the intervention of human beings in the food supply.

Tracey, an Atkins dieter, drew an implicit parallel between processed grains and ‘junk food’, both of which she set up in opposition to ‘whole foods’:

Tracey: [... A] lot of the human body *isn’t meant to have processed grains* and that kind of thing anyway so probably *the more simple the food is the better* in terms of sustainability and that kind of thing. People eat what they want, and there’s such a choice today, but yeah *you shouldn’t be having junk food* either.

CK: When you say sustainability, what do you mean by that?

Tracey: Just *whole foods, there shouldn’t be a lot of processed foods in our diets* anyway and just for longer-term health *it’s better to have foods with less amount of production* as possible [*sic*]. And

⁹² Amongst the fifteen dieters I interviewed, only two felt that low-carbohydrate diets were not healthy.

⁹³ I use the term ‘low-carber’ to distinguish in my research between short-term (weight-loss) dieters and those who might be termed ‘true believers’. In the lives of long-term low-carbers, diet and nutrition play a central role. As noted above, all the low-carbers in my study had undertaken considerable independent research using some combination of diet books, the alternative health literature, medical journals, television documentaries and the internet. People in this group were less likely to have begun a low-carbohydrate diet purely for weight-loss, and nearly all were of stable weight at the time of their interview. A number were on what might be described as an ongoing ‘quest’ for health, some in the face of serious and debilitating illness. Many were part of a like-minded network of some kind, whether virtual or face-to-face. I do not suggest that the high proportion of long-term low-carbers in my interview cohort is representative; it seems likely that committed low-carbers would be more inclined to volunteer to speak about their experiences than short-term dieters.

you could also factor that into the environment and things like that. [...] I try to make sure that foods are *as whole as possible*.⁹⁴ (Tracey, 20s)

Tracey gestures here toward individual preference and choice in relation to diet: ‘People eat what they *want*, and there’s such a *choice* today’. But she shifts tack somewhat abruptly to cast nutritional and moral judgement on ‘junk food’. Like Atkins, who (as I argued earlier) contrasts refined *carbohydrates* with unrefined *food*, Tracey links food processing and ‘production’ specifically to starchy carbohydrates (‘processed grains’), comparing these to ‘whole foods’ subject to as little human intervention as possible. The notion of whole food forms the lynch-pin in this passage for a cluster of related ideals: sustainability, simplicity and naturalness. Tracey’s use of the word *production* is unusual: it most obviously suggests the *processing* of hitherto natural or whole foods. But the word *production* also hints at a further category of entirely manufactured or synthetic food products, the ultimate in unnaturalness.

Tracey explains her use of the term *sustainability* primarily in relation to health concerns: her interest is in ‘longer-term health’ rather than weight *per se*. Although Tracey was young and in good health herself, early in her interview she expressed specific concern about type 2 diabetes, from which her grandmother suffered. Her reference to long-term health in the passage cited above parallels the close interest of the popular low-carbohydrate literature in chronic and degenerative diseases which traditionally appear in middle age, as noted in Chapter 1. Additionally, Tracey links her use of the term *sustainability* to environmentalism, since there is ‘less [...] production’ involved in whole, unprocessed foods. The implication is that low-carbohydrate diets may be more environmentally friendly than others because they exclude processed foods, which consume more energy and resources in their production than the same foods eaten whole. This suggestion is interesting because it is at odds with environmental critiques of low-carbohydrate dieting, which focus on the resource costs of meat production.⁹⁵ However, Tracey’s comments are consistent with the low-carbohydrate literature’s concern with the environmental degradation caused by modern industrial food production, as discussed earlier in relation to nutritional supplementation. But Tracey’s approach to processed foods is also ambivalent. Her vocabulary repeatedly betrays an unwillingness to define exactly how much processed carbohydrate is *too* much. We should avoid having *a lot* of processed foods, she says; it’s *better* to have foods that are as whole *as possible*; she herself *tries* to eat foods that are as whole *as possible*. Compare Tracey’s language here with Atkins’s insistence that refined carbohydrate is *always* excessive, *always* too much (as discussed earlier). Arguably, Tracey’s position reflects the lived experience of low-carbohydrate dieting, which in practice requires the dieter to negotiate between his or her preference for natural foods and the constraints of the contemporary food system.

Luke, a long-term low-carber, expressed similar concerns with processed foods, especially (in his case) refined sugar and processed fats. In the following passage, Luke implies that a return to whole, unrefined foods may be the solution to the obesity epidemic:

⁹⁴ All italics in interview transcriptions are my own, and are used for critical emphasis. They do not indicate that the participant gave the italicised words vocal stress.

⁹⁵ Eg Cox and Bender, “Warning – This Diet Is Not for Everyone.” Although environmental sustainability is not the primary focus of this thesis, I respect the environmental concerns raised by critics such as Cox and Bender, as well as by food scholars who have commented on my work-in-progress at conferences. However, I would argue that environmental impact assessment to date has not been based on careful research about what low-carbohydrate dieters eat. In particular, further research should accurately measure red meat intake amongst low-carbohydrate dieters, and also take into account the possibility that dieters significantly reduce their consumption of processed foods.

[O]besity has only become a big deal, really big deal in the last ten, twenty years, [...] and the things that are happening in the last ten or twenty years is that we are [...] eating a lot more stuff that has grain sugar and yeah processed sugar and yeah processed fats and oils and stuff that's extracted rather than just naturally in, in what we are eating. (Luke, 20s)

Where Tracey's concern is with long-term health in general, Luke links processed foods specifically to the obesity epidemic, implicitly defining a healthy diet against the highly refined contemporary products which seem to have caused widespread weight-gain. Like Tracey (and the low-carbohydrate authors discussed earlier in this chapter), Luke associates food processing in particular with refined carbohydrates such as sugar and processed grains (*grain sugar* / *processed sugar*). The meaning of the phrase 'grain sugar' here is not clear. It might relate to processed sugars which derive from grains, such as rice syrup and (notably) high-fructose corn syrup. Alternatively, 'grain sugar' might describe sugar in granulated form: that is, white table sugar. Both possibilities emphasise the commonality of grains and sugars as they occur in contemporary Western diets. Rice and corn syrups share their origins with grains, while granulated table sugars are visually similar to refined white flour.

In addition to refined grains and sugars, Luke identifies a further category of processed foods which are equally implicated in the obesity epidemic: 'processed fats and oils'. Nearly all pure fats and oils, including pressed vegetable and seed oils, might be regarded as processed, but Luke frames his argument here in relation to the very recent past, strongly implying reference to newer, trans-fat-rich, partially-hydrogenated oils. Refined carbohydrate and trans fats are, of course, the two food categories I read as emblematic of the modern Western diet in low-carbohydrate discourse. In fact, Luke goes further than the popular low-carbohydrate diet books I have discussed in theorising a link between processed fats and obesity (as well as refined carbohydrate and obesity): both Atkins and the Eadeses stress the association between trans fats and heart disease, rather than overweight.⁹⁶ Concern with trans fats might seem peripheral to the practice of low-carbohydrate dieting, since all fats are, by definition, free of dietary carbohydrate. Luke's interest in processed fats, which echoes that of the low-carbohydrate literature, is therefore significant, suggesting that the natural / unnatural binary likewise drives dieters' own nutritional beliefs and food choices. (Two other dieters in my study also spontaneously expressed concern with trans fats.) Luke classes both refined carbohydrates and processed fats as substances that are '*extracted* rather than just *naturally in* [...] what we are eating', reflecting the notion of natural wholeness or integrity that I discussed in relation to *South Beach*. Like Rosalind Coward, Luke suggests that consuming substances that have been 'extracted and combined' may be actively harmful, arguing that the shift toward extracted products instead of whole foods has been associated with the recent marked increase in obesity levels.⁹⁷

Luke refers somewhat disparagingly to processed foods as 'stuff', recalling Atkins's claim that processed foods are 'not real food' at all. Elsewhere, Luke describes how low-carbohydrate dieting has meant 'buying a lot more *fresh*, and eating a lot less *plastic packeted stuff*'. Here, the plastic packaging of processed foods becomes associated with the products themselves, just as Atkins associates cardboard boxes with the highly processed products they contain (as noted earlier).⁹⁸ Implicitly, Luke suggests that processed foods are 'plastic': man-made, flavourless,

⁹⁶ Atkins, *New Diet Revolution*, 353-55; Eades and Eades, *Protein Power*, 341-43.

⁹⁷ The quotation in this sentence is from Coward, *The Whole Truth*, 21.

⁹⁸ Atkins, *New Diet Revolution*, 329.

rubbery and unfit for human consumption. Other dieters also noted that in practice, following a low-carbohydrate diet had forced them to eliminate or drastically reduce processed and pre-prepared foods, and to focus instead on fresher, simpler meals and ingredients. Judith, who was following the Ultra Lite diet, described how Ultra Lite required her to cut out most ready-to-eat foods, including staples such as bread:

We're just buying less bread and buying less of those *prepared* foods. I think Ultra Lite's really aiming at getting rid of a lot of *prepared* stuff.⁹⁹ (Judith, 50s)

Similarly, Alison, who had designed her own program reducing carbohydrate intake to 60 grams per day, mentioned that her diet no longer allowed her to purchase ready-to-eat convenience foods:

I have found that when like going lower-carb or low-carb I have to cook for myself, or like I have to *prepare for myself*. [...] I have to *prepare for myself* more than you know being able to stop on the way home and pick up a packet of chips or something [...]. (Alison, 40s)

Both Judith's and Alison's experiences are consistent with Agatston's emphasis, in *South Beach*, on cooking from scratch at home. Alison's testimony, in particular, suggests that low-carbohydrate dieting requires more culinary labour than her former diet. But the moral import so striking in *South Beach* is absent here. Although Judith and Alison both experienced and viewed their new diet overwhelmingly positively, and had both lost a great deal of weight (22 kilograms and 35 kilograms respectively), there was little sense in their interviews that processed foods might be 'lazy' or otherwise less virtuous than fresh. Rather, a shift to preparing food for oneself is simply one consequence of choosing a low-carbohydrate diet.

As well as connecting refined foods with weight-gain, obesity and ill-health, the dieters whom I interviewed emphasised their distrust of 'chemicals' and additives in processed foods. Both concerns, as I argued earlier, reflect a suspicion toward human intervention in the food supply. The addition of 'chemical' preservatives and flavourings to food is the flipside of refining: the former is superfluous to an original wholeness, the latter detracts from it. A concern with chemical additives is by no means absent from the popular low-carbohydrate diet literature, although it tends to be overwhelmed by condemnation of refined carbohydrate. For instance, according to Atkins, one of the reasons low-fat processed foods are not 'natural' is that they have been adulterated by synthetic or refined substances. Atkins groups together refined carbohydrates, trans fats and general food additives as potential contaminants:

This is not real food; it's invented, fake food. It's filled with sugar and highly refined carbohydrates and with chemically altered trans fats [...] not to mention plenty of other chemical additives. (25).

As Coward points out in *The Whole Truth*, "[c]hemical" is one of those terms within the alternative health movement which has become loaded with negative implications. Anything chemical must be bad.¹⁰⁰ Outside the specific context of alternative health, the strongly negative shift in the moral associations of the word *chemical* over the last century is illustrated by two recent compound usages, *chemical weapon* and *chemical dependency*.¹⁰¹ As noted in this chapter, both toxicity and addiction are strongly associated with refined carbohydrates in the low-carbohydrate literature, suggesting that the term *chemical* functions as a point of slippage between refined

⁹⁹ For information on the Ultra Lite program, see www.ultralite.com.au.

¹⁰⁰ Coward, *The Whole Truth*, 21.

¹⁰¹ As listed in the *Oxford English Dictionary* definition of *chemical*.

carbohydrates and food additives (preservatives, flavours and colourings) in popular low-carbohydrate diet books.

Amongst dieters who participated in my study, references to ‘chemicals’ most commonly related to artificial sweeteners, regardless of whether the participant concerned chose to eat artificially sweetened food and drink. For instance, in the following passages, both Tracey and Phil describe artificial sweeteners negatively as ‘chemicals’, although Tracey drinks diet soft drinks while Phil does not:

[T]here are a lot of chemicals and things in foods these days and I have diet soda and that but I try to make sure that foods are as whole as possible. (Tracey, 20s)

CK: Have you ever had any of the [...] low-carb processed foods [...] or anything you’ve had artificially sweetened? [...]

Phil: No, no [...] I simply refuse to eat that stuff.

CK: [...] For what reason?

Phil: Oh, I don’t choose to eat some kind of chemical if I can avoid it. (Phil, 50s)

The vocabulary used by both Phil and Tracey in relation to ‘chemicals’ is strikingly vague. Tracey refers to ‘chemicals and things’, Phil to ‘some kind of chemical’. This trope recurs in participants’ discussions of artificial sweeteners and other chemical additives, suggesting that food additives and their biochemical effects are inherently unknown and unidentifiable, and that this comprises a major portion of their associated threat.

Michelle, a long-term low-carber and a mother, generally included the artificial sweetener sucralose in her diet, but chose to avoid it during the first trimester of her pregnancy. Like Tracey and Phil, Michelle referred negatively to the ‘chemical-ness’ of sucralose (which she refers to by its trade name, Splenda), expressing concern about its potential unknown effects on the developing foetus:

CK: [...] Did you stay on the diet then while you were pregnant?

Michelle: [...] I didn’t want to have Splenda so for the first three months I didn’t have any Splenda so if I wanted something sweet I’d have a bit of sugar or a bit of honey or...

CK: Why was that? Why did you not want to have Splenda?

Michelle: Because I was just a bit worried [be]cause of the chemical-ness of the Splenda [...] so I thought “Nup, nothing like that, just in case” [...]. (Michelle, 30s)

Michelle’s vocabulary (‘just in case’) indicates that her concerns about the ‘chemical-ness’ of sucralose are not specifically identifiable, consistent with the vague references to ‘chemicals and things’ and their effects in the passages I cited above from Tracey and Phil. Michelle makes light of her concerns here, saying ‘I was just a bit worried’. But the phrase ‘just in case’ reveals that she took a no-risk approach to eating during her pregnancy, choosing to avoid artificial sweeteners as well as other similarly ‘chemical’ substances (‘nothing like that’). The expression ‘just in case’ covers a wide range of possible problems for her baby, from miscarriage to subsequent developmental disorders.

Michelle’s neologism ‘chemical-ness’ is an interesting choice in relation to Splenda because sucralose is made from sugar, by changing its molecular structure so that it does not raise blood glucose levels. Unlike Atkins, who classes sugar and ‘chemical additives’ together as equally unnatural substances, Michelle implicitly categorises sugar and honey as natural, defined in

opposition to ‘chemicals’ such as sucralose. If one considers Splenda to be unnatural, as Michelle does, its ‘chemical-ness’ must derive from the human intervention which converts sugar into sucralose. Sucralose may thus be understood as cognate with trans fats: both are substances which begin as (more) natural foods (sugar and vegetable oils respectively), but are modified at the molecular level by human intervention. What is interesting is that Michelle turns the naturalness imperative of low-carbohydrate diet books back on itself, applying the same criteria to a low-carbohydrate product which most diet authors actively recommend. During her pregnancy, at least, Michelle places the natural / unnatural binary ahead of the (refined) carbohydrate taboo in her own nutritional choices, preferring carbohydrate-rich natural sweeteners such as sugar and honey over artificial ‘chemicals’ such as sucralose.

Lisa expressed similar distrust of the preservatives, colours and other ‘chemical’ ingredients in processed foods. She suspected that these might have been responsible for a chronic skin condition from which she had suffered before trying a low-carbohydrate diet, and which cleared up when she began avoiding processed foods:

CK: Do you think there’s any other reason why the diet might have been helpful for [the skin condition from which Lisa suffered]?

Lisa: I think because I was eating natural foods. They weren’t processed. You know if you were sitting down to a meal of an egg, it’s like an egg. It’s nothing else. You know you sit down to a salad and it’s just a salad. There’s no processing in that.

CK: What do you see about the processing that might cause...

Lisa: Chemicals, definitely chemicals.

CK: So something that’s actually added to those foods.

Lisa: Well we don’t mind what’s in it do we, I mean you look on a packet whatever, could be a packet of biscuits, could be a packet of cereal, could be anything, you know. You don’t know what some of these things are! You don’t know what they’re doing to your body. [...] I would say that a lot of us are allergic to some of the preservatives and the additives and colours and god knows what they put in. (Lisa, 40s)

Lisa constructs a clear opposition here between ‘natural foods’ (low-carbohydrate) and processed foods (high-carbohydrate), defining food processing in terms of the addition of ‘chemicals’ to packaged foods. Natural foods, on the other hand, are whole and additive-free. Lisa describes low-carbohydrate foods such as egg and salad as inherently natural, simple and pure. Her vocabulary recalls Coward’s notion of original wholeness (as discussed in relation to *South Beach*), a sort of organic integrity. An egg is just ‘an egg [...] nothing else’. By contrast, Lisa represents high-carbohydrate processed foods, from ostensibly healthy cereal to sweet biscuits (cookies), as a cocktail of unidentifiable preservatives, additives, colours and other chemicals, thrown together by faceless, unnamed food manufacturers. Her account demonstrates a strong sense that consumers lack control over the production and content of food. Nonetheless, Lisa ultimately returns responsibility for vigilance and restraint to individual consumers, who are said to be careless and indiscriminate in their food choices: ‘we don’t mind what’s in it do we’. Above all, Lisa’s comments highlight the unknown and insidious quality of chemical food additives and their effects. ‘You don’t know what some of these things are! You don’t know what they’re doing to your body’, she argues. The expansiveness of Lisa’s phrasing (‘a packet *whatever* [...] *could be anything*’) portrays chemicals and additives as invisible threats which may turn up anywhere in the (processed) food system.

Likewise, Michelle expressed particularly strong concerns about specific chemicals and additives in the food supply, including soy derivatives as well as artificial sweeteners. Unlike Atkins, who manoeuvres low-carbohydrate diet products into the category of acceptable foods (as discussed earlier), Michelle subjected both low- and high-carbohydrate convenience foods to the same rigorous standard:

Michelle: [...] I don't like the, the processed stuff, the low-carb stuff – I don't think they're any better than the high-carb stuff. That's one thing I don't like.

[...]

CK: What, why don't you think they're any better?

Michelle: Because there's a lot of *junk* in them. [...] So umm, a lot of *artificial* stuff, some sweeteners like aspartame I don't like, I don't think it's healthy. Things like soya I don't like. (Michelle, 30s)

Michelle criticises low-carbohydrate convenience foods specifically on the grounds of unnaturalness, taking issue especially with their artificial, 'junk' ingredients. She later explained that her concerns with soy products relate to their alleged effects on hormonal regulation and fertility, as well as their association with cancer. In the passage cited here, Michelle refers to low-carbohydrate diet products pejoratively as 'stuff', echoing other dieters' descriptions of high-carbohydrate processed foods. Again, Michelle turns the natural / unnatural dichotomy evident in the low-carbohydrate literature back on itself, applying the same criteria to the low-carbohydrate products manufactured by companies such as Atkins Nutritionals.

As I noted in my introduction to this chapter, the contamination of hitherto natural foods may occur either in primary production or secondary processing. My discussion of dieters' comments up to this point has related solely to secondary processing, especially the use of artificial sweeteners, as well as other 'chemical' additives. Michelle's concern with 'chemicals' extended further, to the use of synthetic fertilisers and pesticides in the primary production of vegetables, meat and eggs:

[Y]ou think about our, the vegetables we eat and they're covered in chemicals and pesticides and god knows what that does to us. [...] And you got meat and you've got to think about what the cows eat. [...] And then [...] you think about what chickens eat, so I get [...] special eggs [...] they're a free-range and they're chemical-free and no antibiotics, pesticides and all of that [...]. (Michelle, 30s)

Here, Michelle echoes the 'pure food' concerns of the 1960s which I discussed earlier, and which have in part evolved into the contemporary organics movement. Interestingly, Michelle's concern with the use of chemicals in primary production expands the scope of anxiety well beyond high-carbohydrate processed foods. Healthy low-carbohydrate foods such as vegetables and eggs are not immune to contamination in primary production, even though they may avoid the subsequent addition of flavours, colourings and preservatives by skipping the secondary processing step altogether. Compare Michelle's comments here with those of Lisa cited above: Lisa associates 'chemicals' exclusively with high-carbohydrate processed foods such as cereal and biscuits, which she specifically contrasts with the naturalness and purity of an egg. Unlike Michelle, Lisa appears unconcerned with 'what chickens eat', and its potential to contaminate the eggs they lay. To avoid such contaminants Michelle is forced to step out of the mainstream food chain by buying 'special' eggs and organic milk, although she cannot afford to buy all organic produce. Pam, who was following the Dinosaur Diet as part of a regimen for chronic fatigue, responded to similar worries about contaminants in primary production by washing all her fruit

and vegetables in vinegar and water before eating them, '[t]o take off the chemicals and sprays that may have been used'.¹⁰²

Nearly all the low-carbohydrate dieters whom I interviewed for this project voiced concerns about processed foods, sometimes very strongly, reflecting the natural / unnatural binary I have identified and explored in the popular low-carbohydrate literature. Although the preference for natural foods, as I pointed out in my introduction to this chapter, is certainly not unique to the low-carbohydrate diet movement, the nutritional schema to which the categories *natural* and *unnatural* relate varies markedly across different dietary regimes. The distinguishing logic of low-carbohydrate discourse is its attention to refined carbohydrate as the defining feature of the modern Western diet and the cause of the obesity and diabetes epidemics, against which a low-carbohydrate diet is constructed in opposition as the natural and healthy alternative. Like low-carbohydrate diet books, the dieters whom I interviewed associated food processing primarily with carbohydrate-rich foods such as grains and sugars, with trans fats representing a secondary focus of concern. However, dieters also applied the natural / unnatural binary in ways that disrupted the discursive manoeuvres of authors such as Atkins, distrusting artificial sweeteners and other 'chemicals' in the food supply, including their appearance in processed low-carbohydrate diet foods. In this chapter I have suggested that the natural / unnatural dichotomy functions as both a symbolic foundation for nutritional primitivism in low-carbohydrate discourse, and a practical guide for low-carbohydrate dieters in day-to-day questions of food choice. In the chapters that follow, I turn to aspects of nutritional primitivist logic which are both more abstract and more fractured: firstly, the idea that a low-carbohydrate diet represents a more authentic, traditional, and hence healthier way of eating.

¹⁰² The Dinosaur Diet is outlined in Pam Mitchell and David Mitchell, *Taming the Dinosaur Gene: For Optimum Lifetime Performance* (Unley, South Australia: Davam, 1999).

Chapter 5. Nostalgia, authenticity and tradition in low-carbohydrate discourse

In Chapter 1, and again in my introduction to Chapter 4, I noted that nutritional primitivism incorporates discontent with both modernity and the West, as the intersecting socio-historical contexts which produce the modern Western diet. Movements such as low-carbohydrate dieting seek an antithetical way of eating, one that is *not* modern and *not* Western.¹ As I argued in Chapter 4, this quest may find its object in natural, unrefined foods, classified in opposition to the processed carbohydrates staple to post-industrial Western diets. Alternatively, the turn away from the modern Western diet may lead to the foodways and cuisines of other times and other places, of pre-industrial and non-Western cultures. In this chapter I examine this latter dual ideal, with a particular focus on *The South Beach Diet* and its quest for food traditions which ostensibly reflect an authentic sense of connection between body, labour, land and food. Firstly, I consider Agatston's nostalgia for less mechanised Western lifestyles of decades past. Secondly, I analyse his idealised representations of contemporary Asian and Mediterranean foodways. Together, these tropes privilege a generalised notion of tradition as the antithesis of Western nutritional modernity. As conceived in low-carbohydrate discourse, tradition in food and cuisine might be specifically opposed to industrialisation, which both destroys the natural wholeness of foods (as discussed in Chapter 4), and ruptures supposedly authentic, cohesive food cultures which depend on a slower pace of life and often constant manual and culinary labour.

The dual turn to other times and other places in low-carbohydrate discourse, which I consider in this chapter under the 'umbrella' of nutritional primitivism, maps neatly onto Laudan's model of Culinary Luddism discussed in Chapter 1. Ideals such as authenticity and tradition inhabit a discursive region which is shared by what I dub nutritional primitivism, and the overlapping philosophy that Laudan terms Culinary Luddism. Consequently, Laudan identifies in Culinary Luddism precisely the same dual quest (other times / other places) that I explore in this chapter. Culinary Luddites, Laudan notes, 'seek out pre-industrial foods, either by digging into the history of food or by exploring ethnic byways'.² (I stress that these quests are concurrent and compatible, not mutually exclusive.) In subsequent chapters of this thesis I explore nutritional primitivist tropes which are *not* shared by Culinary Luddism: in particular, the obsession of low-carbohydrate texts with human evolutionary origins, and their special interest in the health and diet of 'primitive' hunter-gatherer peoples. Thus although nutritional primitivism and Culinary Luddism share territory, they are not the same philosophy. Unlike Culinary Luddism, nutritional primitivism incorporates a radical critique of civilisation itself as a process of historical decline. Further, although primitivism prefers even the recent past to the present, as discussed in this chapter, its ultimate goal is prehistoric origins. This persistent concern with origins is etymologically enshrined: as Torgovnick points out, 'the earliest meanings of the word *primitive* [were] as the original state of something – biological tissue, church organization, social organization. [...] In fact, the word *primitive* has been criticized and, sometimes, rejected because it connotes origins and evolutionist beliefs'.³

¹ See Bonnett, *White Identities*, 80.

² Laudan, "A World of Inauthentic Cuisine," para 1.

³ Torgovnick, *Gone Primitive*, 185.

Nutritional nostalgia

As cited in the opening paragraphs of this thesis, Bell describes primitivism as '[t]he nostalgia of civilized man for a return to a primitive or pre-civilized condition'.⁴ Primitivism may thus be seen as a specific form of nostalgia, and nutritional primitivism as a specific form of 'nutritional nostalgia'.⁵ In this section, I explore nostalgia in low-carbohydrate discourse as a more general phenomenon, and the broader manifestation of the specifically primitivist turn to prehistory that I cover in later chapters. As Bell notes, 'the overt fascination with the primitive exemplified in [the novels of] Lawrence or Conrad is the top of an iceberg of less definite or obvious tendencies of feeling and intellectual disposition'.⁶ In taking a broader purview in this chapter, I nonetheless reject an all-encompassing definition of nostalgia as 'the universal catchword for looking back', as David Lowenthal proposes.⁷ Rather, following Daniel Marcus, I regard the essential quality of nostalgia as 'a sense of loss regarding the past'. Tracing the history of the word *nostalgia*, Marcus notes:

Nostalgia originally referred to memories of a specific home, a geographic location that could not be left without danger of emotional or physical collapse. In a society marked by geographic mobility, nostalgia has shifted in its meaning to connote a sense of loss regarding the past, beyond the appeal of just one location. This past can be remembered as a collection of intensely personal memories, but more often also contains elements of group or public memories, representations and notions circulating in broader social circles.⁸

Importantly, this definition highlights the role of memory (whether individual, group, or public) in producing and perpetuating nostalgia. The sustaining function of memory in nostalgia indicates several related features of the nostalgic mode. Firstly, nostalgia operates on a relatively short historical time-frame, measured in decades or (characteristically) generations. Unlike primitivism, nostalgia is not millennial in scale. Secondly, nostalgia privileges memories of childhood, as well as family ties formed in childhood, especially intergenerational relationships between mother / child and grandparent / child. Finally, as a sense of longing for what has been lost, nostalgia relies on emotion or affect for its power in a way that primitivism does not (or need not). All these tropes are evident in *South Beach*, which demonstrates a profound sense of loss in relation to Western culture, and a strong tendency to project certain ostensibly lost qualities (such as vitality, authenticity and simplicity) onto an earlier time.

The following passage from *South Beach* forms part of an explanation for the rising incidence today of type 2 diabetes, especially in adolescents and young people, which Agatston claims is a function of relatively recent, post-industrial changes in diet and lifestyle:

Once, the carbs we ate were less processed than they are today. More of our bread was baked at home or in local bakeries, not factories, and was made with whole grains, not flour that had been overly processed and stripped of all fibre. Back then, convenience and speedy preparation weren't the highest ideals food aspired to – we were in less of a rush,

⁴ Bell, *Primitivism*, 1.

⁵ I borrow this phrase from the title of Beardsworth, "Nutritional Nostalgia and the Erosion of Eating Skills".

⁶ Bell, *Primitivism*, 77.

⁷ David Lowenthal, *The Past Is a Foreign Country* (Cambridge: Cambridge University Press, 1985), 4.

⁸ Daniel Marcus, *Happy Days and Wonder Years: The Fifties and the Sixties in Contemporary Cultural Politics* (New Brunswick, New Jersey and London: Rutgers University Press, 2004), 26.

and home cooking meant starting with raw ingredients. Rice had more of its fibre intact, and had to be cooked slowly. Potatoes weren't sliced and frozen or powdered and bought in a box. Children's after-school snacks weren't limited to what could be microwaved.

(73)

Interestingly, the focus here is on starchy comfort foods such as bread, rice and potatoes, all foods which are banned or severely restricted on the South Beach Diet. Paradoxically, this perhaps heightens the sense of nostalgic longing they evoke in readers, while alerting the critic to a potentially extreme disjuncture between textual discourse and low-carbohydrate dieting practice, a schism I discuss later in this chapter in relation to my interviews with dieters. The references in this passage to childhood, home baking and slow cooking all strengthen the nostalgic mood. The very structure of the passage is nostalgic, constructed according to a temporal opposition between *once* or *back then*, and *today*. *Back then* represents local production, whole foods and a slower pace of life. *Today*, on the other hand, means industrial production, instant food and parents who are too busy to cook for their children, if they are home at all. Yet the picture of today is entirely implicit. Although the passage purports to depict an unnamed earlier period, virtually every phrase is constructed either comparatively or negatively. Carbs were *less* processed, *more* bread was home-baked, we were *less* rushed, and rice had *more* fibre. Bread was *not* baked in factories, flour was *not* fibre-stripped, speed and convenience *weren't* our highest ideals, potatoes *weren't* powdered, snacks *weren't* microwaved. In fact, the only two positive statements about the past in this passage are that 'home cooking meant starting with raw ingredients' and that rice 'had to be cooked slowly'.

The grammatical structure of the passage indicates that *South Beach's* nostalgia is self-reflexive, as I term it in this thesis. In other words, Agatston invokes nostalgia to stress what contemporary Western life might lack, rather than painting an accurate picture of any given historical period. It is not at all clear from the passage exactly which era it is that Agatston might like to recreate, even if we assume that his historical vision is limited to the United States, because the passage is factually inconsistent. For instance, white bread began to be commonly consumed in the second half of the nineteenth century, with the introduction of high-speed steel-roller milling. But factory-based industrial bread production did not take over from domestic and local baking until much later, around the middle of the twentieth century.⁹ Further, compulsory elementary schooling only gradually became a reality for many American children in the late 1800s, especially for the lower classes. Even more confusingly, rice consumption in the United States only took off in the 1980s, with the push towards low-fat eating and the growing popularity of Asian-style food. The tone of the passage suggests a domestic ideal popularly centred on the 1950s.¹⁰ But it is not possible to identify any single period in which the children Agatston mentions might have been eating those healthy after-school snacks. Clearly, historical accuracy is not Agatston's primary concern. His nostalgic vision functions to identify what is lacking in Western society today: a sense of local community, the home as a source of nourishment and a symbolic centre in our lives, and (of course) an invisible but hard-working female presence in the kitchen. Thus in order to attach moral censure to today's eating habits, especially their ease and convenience, *South Beach* idealises a mythic earlier era in which sobriety was valued, people worked hard, and Mum was home when the kids came back from school.

⁹ Harvey A. Levenstein, *Revolution at the Table: The Transformation of the American Diet* (Berkeley: University of California Press, 2003), 22.

¹⁰ See generally Marcus, *Happy Days and Wonder Years*.

The positioning of woman behind the scenes as home-maker is integral to this nostalgic paradigm, which depends upon a conservative set of gender relations structured around the heterosexual nuclear family. Agatston's nostalgia slips easily over the question of who is doing the work entailed by his rose-tinted vision: baking bread, boiling rice, peeling potatoes, feeding hungry children. Of course, the iconic (but absent) figure here is the mother and housewife. In an earlier era, the invisible woman in the kitchen might equally have been a paid servant or even a slave, a woman whose erasure from historical visions such as Agatston's is even more complete than that of the housewife. In an article on nostalgia in rural Australian tourism writing, Jean Duruz notes the omnipresence of 'Mother' in representations of country, home, and food:

[M]eanings of "home" are condensed into its pivotal figure – the "mother" of shelled peas, baked scones and freshly brewed tea. Of course, this is the mother who is *always* there, shelling, baking, brewing, and ensuring food is fresh, hot and ever ready.¹¹

Duruz places 'Mother' in a 'beguiling ensemble of identities (country woman/"grandma"/"Mum") [which] await our nostalgic investment', noting slyly that though the tourist 'certainly does not want to *be* "grandma" in any substantial way, I suspect she [or he] wants to *have* a "grandma" (and don't we all?)'.¹² As Duruz implies, the lofty 'ideals' (and I mimic Agatston's term deliberately) of home baking, from-scratch cooking and ever-ready hot food and drink are all very well when all one has to do is turn up and be served. Agatston is on dangerous ground here: it is but a small step from *South Beach*-style nostalgia to the hard-line conservative position that feminism has caused childhood obesity by taking mothers out of the home, leading to a generation of TV-watching, junk-food-eating children.¹³ This position might well alienate the thousands, if not millions, of working mothers (not to mention single parents) amongst *South Beach*'s readers.

South Beach's dietary nostalgia is matched by an equally nostalgic approach to physical activity and exercise across the generations. Here, Agatston laments what he argues are decreasing rates of physical activity in adults and children alike:

[T]he truth is that we perform less physical activity than our parents and grandparents did. Maybe their jobs required more exertion, or they enjoyed fewer labour-saving devices. Perhaps they just walked a lot more than we do. / This lack of exercise extends even to the youngest among us. I am distressed by the levels of physical playtime children now get. The selling of school playing-fields for development and cutting PE in favour of more classroom instruction are disasters in the making. (73)

Like the previous passage I discussed, notice that the first half of this quotation is entirely comparative: we are *less* physically active, our forebears' jobs involved *more* exertion, they had *fewer* labour-saving devices, and they walked *more* than we do. The grammatical structure enables Agatston to say nothing at all concrete about either today or yesterday, while criticising the presumed ease and comfort of modern life in favour of good old-fashioned hard work (which, as I argued in Chapter 4, is the South Beach panacea and moral imperative). This British version of the text also taps into the emotional political issue of school playing-field sales to raise funds, as

¹¹ Jean Duruz, "Cuisine Nostalgie? Tourism's Romance with 'the Rural'," *Communal/Plural* 7, no. 1 (1999): 102 (original italics).

¹² *Ibid.*, 101, 103.

¹³ For an example of the anti-feminist explanation for childhood obesity, see M. Eberstadt, "The Child-Fat Problem," *Policy Review* (2003). Eberstadt's essay is the subject of detailed critique in Gard and Wright, *The Obesity Epidemic*, 131-36.

well as alleged cuts in school physical education hours, both of which have been linked to childhood obesity in the British press.¹⁴ Such views have broad political appeal: it is difficult to maintain an argument that the sale of school sports grounds is a good thing in principle, even if it may be necessary in practice.

The focus on small children, the reference to intergenerational family relationships (parents, grandparents), and Agatston's expression of emotional distress at declining levels of physical playtime all press memory, affect and nostalgia into service to support what are actually quite dubious claims. In their review of the literature on changes in physical activity levels in Australia, Britain and the United States, Michael Gard and Jan Wright find the data to be 'fragmented', with much available evidence suggesting that activity levels have been stable, or even increased, over the last few decades.¹⁵ Gard and Wright report an almost total lack of data on changes in 'incidental physical activity': that is, physical activity which takes place incidentally as part of daily living, rather than as deliberate or organised 'exercise'. All three activities that Agatston mentions in the passage above fall into the 'incidental' category: manual labour, housework, and walking for self-transport. Agatston himself slips uneasily between certainty and hesitation in his argument. Initially, he attempts discursively to cement unsubstantiated assertion as fact ('the truth is'), but he then shifts to acknowledge uncertainty ('[m]aybe' / '[p]erhaps'). Even if we assume an American frame of reference, Agatston's generalised references to *us* (today) and *them* (yesterday) conceal differences in levels of physical activity within the contemporary population, as well as historically. Gard and Wright make the important point that levels of physical activity in general, and manual labour in particular, differ significantly according to socioeconomic status and ethnicity.¹⁶ In other words, the disadvantaged groups most at risk of obesity may well be those whose jobs continue to demand exhausting physical labour, belying any simplistic association between weight-gain and an ostensible decrease in incidental physical activity.

South Beach is certainly not the only text to make such unsubstantiated claims about declining levels of physical activity and exercise. *Dr. Atkins' New Diet Revolution* expresses discontent with a generalised notion of modern life which is presumed to be more sedentary than lifestyles in the past. Atkins claims that 'Mother Nature did not design us for our sedentary modern lifestyle' (293). Rather, the human body is 'designed' to be physically active:

Contrary to the messages our society generally sends us, your body was meant to move. Sitting around is unnatural. Working in an office is unnatural. A whole lot of modern life is unnatural. (191)

The office functions in this passage as a symbol of post-industrial alienation from the body, physical labour and the outdoors (or 'nature'). Implicit is a nostalgic image of a more natural, active and holistic way of life, in which mind, body and the environment are connected. For Atkins, physical activity is thus part of the low-carbohydrate prescription: 'If you're not getting regular exercise, you aren't following the Atkins Nutritional Approach' (286). Several dieters in my interview study spontaneously agreed that '[w]e're far more sedentary than we used to be' (Judith, 50s). But in a twist that might well have dismayed Atkins, dieters tended to view a low-carbohydrate diet as particularly suited to a sedentary lifestyle, in contrast with higher-carbohydrate diets suitable for athletes and active children:

¹⁴ See Gard and Wright, *The Obesity Epidemic*, 28-30.

¹⁵ *Ibid.*, 118-25.

¹⁶ *Ibid.*, 124-25.

[T]here are a lot of diets based on that pyramid where you've got to have a lot of cereals and grains which I don't think are relevant to the modern person that works in an office or the kids that aren't active in the playground anymore. (Tracey, 20s)

In this view, the Atkins Diet, rather than forming part of a radical re-examination of modern lifestyle, becomes a 'bandaid' solution which masks how far we have departed from what nature intended.

In similar vein, *Sugar Busters* presents a low-carbohydrate diet as a coping mechanism for modern living, rather than a radical cure. Leighton Steward and his coauthors construct the modern world as a mental and physical assault on the individual, who may best protect him- or herself via proper diet.¹⁷ 'Modern American life', they contend, is frenetic, violent and (implicitly) unhealthy:

Is a diet really needed to enhance everybody's health and performance? A large percentage of our population is faced with the daily decisions and stress levels that were afforded only to some of the country's top leaders just a few decades ago. In our lives today, at home and work and in between, we are faced with constant demands: phone calls, faxes, computer problems and opportunities, high speed, close-quarter traffic situations, and dawn-to-dawn media bombardments of local and worldwide murders, pestilence, catastrophes, and wars. So, we all need to be ready to best handle the mental and physical demands each day presents.¹⁸

This passage invites readers to identify with the American presidents of the Cold War era, and to compare our daily decisions with theirs. At the same time, it suggests nostalgia for the simpler times of the 1950s in particular, when stress levels were supposedly lower and daily decisions less weighty, at least for the general populace. Marcus suggests that such nostalgic representations of the Fifties as a time of perceived social innocence reflect the experiences of those who were 'white, middle-class teenagers' at the time, whose 'retrospective sense of personal innocence of the larger world in the 1950s becomes conflated ultimately with a sense that the nation as a whole lost its social innocence in the 1960s'.¹⁹ Such representations admit that the political issues of the day (McCarthyism and the Cold War, for example) existed, but place them 'in a hazy adult world [...] far removed from the immediate concerns of teenagers and children'.²⁰ The replication of this discursive schism allows readers of *Sugar Busters* simultaneously to identify with the heavy responsibilities which faced 1950s political leaders, while yearning for the perceived innocence of the populace they governed. Diet becomes a way of arming the self against the daily assault of modern American life now that innocence is gone.

Unlike *Atkins*, *Sugar Busters* thus treats diet as entirely separable from other aspects of how we live. Proper (low-carbohydrate) diet may ameliorate the detrimental effects of modern life on the

¹⁷ Similarly, *Protein Power* constructs the modern world as a relentless assault on the body in the form of 'chemicals' and environmental pollution. 'All day, every day, this modern world assaults us with harmful substances – air pollution in the form of smog and industrial toxins, secondhand cigarette smoke, additives and other chemicals in our food and water, pharmaceuticals, radiation'. Like *Sugar Busters*, *Protein Power* also presents 'stress' as an inevitable feature of modern living: 'something most of us must endure as part of the fast-paced American way of life'. See Eades and Eades, *Protein Power*, 173, 240. For a critique of the 'fast pace of modern life' as one of the key narratives of popular self-help literature on stress, see Steven D. Brown, "Stress as Regimen: Critical Readings of Self-Help Literature," in *Applied Discourse Analysis: Social and Psychological Interventions*, ed. Carla Willig (Buckingham: Open University Press, 1999), 28-29.

¹⁸ Steward et al., *Sugar Busters*, xiv.

¹⁹ Marcus, *Happy Days and Wonder Years*, 19.

²⁰ *Ibid.*

individual. Improper diet, on the other hand, may hold us back at the societal level from performing at our best, despite improvements in other areas such as healthcare:

Middle-aged American men [...] only live eighteen months longer than they did in 1900, despite the availability of flu shots, penicillin for pneumonia, antibiotics, and general surgical technology, including early detection technology, transplant capability, and multiple life-support systems. / We also have refrigeration and improved packaging technology, which allows us to eat all varieties of food and minerals all year. And you can't go into any food store or drugstore without finding shelves and shelves of vitamins, minerals, and other supplements. / Why doesn't all this preventive medicine, year-round "balanced" diet availability, and life-support technology [...] result in more than an eighteen-month extension to a middle-aged man's life expectancy? / We believe the main culprit is the major change to refined foods and especially refined sugar.²¹

The passage opens with an apparently conventional primitivist critique of modern medicine, but abruptly switches tack for a surprise conclusion: modern medicine, food storage methods and nutritional supplements are indeed miraculous – but modern diet is *so* bad that it effectively cancels out all these benefits. If it were not for the marvels of preventive medicine and life-support technology, life expectancy might actually have deteriorated much more. This passage is an excellent example of *strategic* nostalgia: the exclusion of medicine, food storage technology, and vitamin supplementation from the nostalgic sentiment actually serves to amplify *Sugar Busters'* critique of modern refined diets, which logically must be proportionally worse the more advances have been made in healthcare and medicine.

In this section I have discussed a number of strategic inconsistencies and inaccuracies in the 'nutritional nostalgia' of low-carbohydrate discourse. These anomalies indicate, as Marcus notes, that nostalgic representations are 'often based [...] on present-day needs and desires', rather than being directly interested in an accurate representation of history.²² In low-carbohydrate diet books such as *South Beach*, nostalgia functions to apportion responsibility for the so-called epidemic in diabetes and obesity; via a comparison with an idealised past, Agatston identifies the convenience, speed and sedentariness of contemporary life as the public-health culprits. The differences I have highlighted between different diet books derive largely from divergent views on whether or not current lifestyles are susceptible to remediation. On the one hand, *South Beach* seems to seek a 'return' to domestic stability and healthy hard work. Atkins, likewise, treats the 'unnatural' sedentariness of 'modern life' as remediable via physical activity. *Sugar Busters*, on the other hand, seems resigned to a palliative approach to the 'pathological present' (as Shapin terms it).²³ Steven Brown summarises this position in his reading of self-help literature on stress. Popular self-help books, Brown suggests, accept that '[w]e moderns [...] make our worlds stressful through our misplaced commitment to "progress", a mistake that is now historically irreversible'.²⁴ This historical 'mistake' must therefore be managed by the individual as best he or she can, arguably via a palliative low-carbohydrate diet.

²¹ Steward et al., *Sugar Busters*, 23-24.

²² Marcus, *Happy Days and Wonder Years*, 17.

²³ Shapin, "The Great Neurotic Art," para 14.

²⁴ Brown, "Stress as Regimen," 29.

The authentic ethnic

Nostalgic renderings of historical Western food traditions produce meaning, I have argued, via a strategic and constructed comparison between today and yesterday. Likewise, romantic representations of what Laudan calls the ‘ethnic byways’ of contemporary global food culture produce meaning via a strategic comparison between the West and its Other.²⁵ Laudan makes this same point regarding the comparative or binaristic structure of Culinary Luddism:

The Luddite’s fable of disaster [...] gains credence not from scholarship but from evocative dichotomies: fresh and natural versus processed and preserved; local versus global; slow versus fast; artisanal and traditional versus urban and industrial; healthful versus contaminated and fatty.²⁶

The binaristic structure of this discourse tends to generate images of other times and other places that are not only romanticised, but also highly generalised. In *Gone Primitive*, Torgovnick describes the generalising tendency of primitivist discourse in memorable terms, arguing that it produces what she calls a ‘grab-bag primitive’ which indiscriminately mixes cultural forms from around the globe:

In the deflationary era of postmodernism, the primitive often frankly loses any particular identity and even its sense of being “out there”; it merges into a generalized, marketable thing – a grab-bag primitive in which urban and rural, modern and traditional Africa and South America and Asia and the Middle East merge into a common locale called the third world which exports garments and accessories, music, ideologies, and styles for Western, and especially urban Western, consumption.²⁷

As Torgovnick emphasises, the blend of cultural forms known as the primitive is not only generalised, but also a highly marketable commodity; I think especially here of the current fair-trade movement. In the context of this thesis, I would stress that exotic global foods and even entire national and ‘ethnic’ cuisines belong to the ‘grab-bag primitive’ that Torgovnick describes: third-world culinary exports destined (quite literally) for Western consumption.

As noted earlier, this chapter covers tendencies in low-carbohydrate discourse which range outside the boundaries of primitivism proper, but which relate to it closely. In his book *Primitivism*, Bell points out that twentieth-century novelists such as E. M. Forster and Joyce Cary have employed a range of ‘foreign’ societies as a literary device by which to represent a psyche and way of life ‘radically different from that of their own countrymen’. Bell argues that such literary deployments of Italian or Indian culture, for example, share their point of departure with literary primitivism:

[T]he fictional use of the national culture and psychology does stem from a very similar impulse to the primitivist. Cary’s Africa and Forster’s Italy clearly represent something of the spontaneity for which, mistakenly or not, primitive man has so often been prized.

Such uses of foreign cultures have a ready affinity with primitivism [...].²⁸

In the context of food studies, and low-carbohydrate discourse in particular, I would suggest that a similar affinity exists between nutritional primitivism and the tendency to romanticise and

²⁵ The phrase cited here is from Laudan, “A World of Inauthentic Cuisine,” para 1.

²⁶ Laudan, “A Plea for Culinary Modernism,” 36. As I discussed in Chapter 4, dietary fat does not have the same valence in low-carbohydrate discourse as it does, according to Laudan, in Culinary Luddism.

²⁷ Torgovnick, *Gone Primitive*, 37.

²⁸ Bell, *Primitivism*, 79.

idealise ‘ethnic’ cuisines. In countries like Australia and the United States, the word ‘ethnic’ refers broadly to cultures and cuisines deemed somehow exotic or ‘foreign’ (to use Bell’s term). At its most inclusive (or exclusive, depending on one’s point of view), the word ‘ethnic’ encompasses all non-Anglo-Saxon food cultures. Lisa Heldke writes that ‘German food is ethnic, but Italian food is more ethnic, and Greek food more ethnic still’.²⁹ As Heldke’s comment indicates, the traditional foodways of Mediterranean Europe, including Greece, Italy, southern France, and Spain, function as exotic and ‘Other’ in relation to the contemporary diet of Americans and other English-speaking Westerners, although these nations and regions do not generally appear in discussions of primitivism proper.

I pointed out in Chapter 1 that questions of nutrition and health do not enter into Heldke’s critique, in *Exotic Appetites*, of the American penchant for ethnic food. Heldke focuses instead on ‘food adventuring’ as a gastronomic practice, and a means by which the food adventurer may accrue cultural capital.³⁰ However, ethnic foodways are frequently also the subject of health claims in contemporary nutrition discourse. Health-conscious Americans and Australians eat sushi, stir-fry, or pasta, shunning the roast beef, mashed potato and suet puddings of Anglo-Saxon culinary tradition. To paraphrase Heldke, we might think of these health-conscious consumers as ‘diet adventurers’: those of us who eat the food of the Other because we believe it to be healthier than our own. Foremost amongst the ethnic foodways sought out by diet adventurers are those of the Mediterranean region. Over the last fifty years, the so-called ‘Med Diet’ has been translated into a health regime for Americans, Australians, northern Europeans and others outside the Mediterranean countries themselves. It has its own ever-expanding academic and popular literature, its own diet pyramid, and even its own packaging symbol, the Med Mark.³¹ The nutritional privilege accorded the Mediterranean diet derives directly from epidemiological research on heart disease led by Dr Ancel Keys in the decades following World War II, in particular the well-known Seven Countries Study.³² Walter Willett points out that Keys’s work ‘had profound effects upon dietary recommendations in the 1960s and 1970s’ and (I would add) beyond.³³ The Seven Countries Study found that saturated fat consumption was strongly associated with heart-disease risk, while Mediterranean populations who consumed other types of fat had very low rates of heart disease. These findings ultimately led to the low-fat guidelines of the 1980s, as well as the higher-fat ‘Med Diet’ alternative.³⁴

Many popular low-carbohydrate diet books, especially those which allow dieters to eat whole grains, endorse the nutritional benefits of traditional Mediterranean eating habits, as well as those of other ethnic food traditions (as I discuss below). *Sugar Busters*, for example, rehearses familiar

²⁹ Heldke, *Exotic Appetites*, 51.

³⁰ *Ibid.*, 16-17. On cultural capital, see Pierre Bourdieu, *Distinction: A Social Critique of the Judgment of Taste*, trans. Richard Nice (Cambridge, Massachusetts: Harvard University Press, 1984).

³¹ The Med Mark is the brainchild of the Oldways Preservation & Exchange Trust. For further information, see <http://mediterraneanmark.org>. On the Mediterranean diet, see eg Patricia Lisaght, ed., *Mediterranean Food: Concepts and Trends* (Zagreb: 2006); Antonio-Leda Matalas et al., *The Mediterranean Diet: Constituents and Health Promotion* (Washington, DC: 2002). The journal *Public Health Nutrition* published a special edition on the Mediterranean diet in February 2006; see esp. Walter C. Willett, “The Mediterranean Diet: Science and Practice,” *Public Health Nutrition* 9, no. 1A (2006).

³² Ancel Keys, *Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease* (Cambridge, Massachusetts: Harvard University Press, 1980).

³³ Willett, “Mediterranean Diet,” 105.

³⁴ On the connection between Keys’s research and official dietary advice, see generally Willett, “Mediterranean Diet”. In relation to the history of dietary advice in Australia, see Santich, *What the Doctors Ordered*, 164.

praise for the Mediterranean diet, focussing (as is usual) on key foodstuffs thought to protect against heart disease, especially olive oil and red wine:

[L]ow rates of coronary artery disease occur in Mediterranean countries where the population consumes a large percentage of their calories as [...] monounsaturated fats, primarily in the form of olive oil.³⁵

[T]he death rate from heart attacks is lowest in countries where wine is habitually consumed, such as France, Italy, and Spain.³⁶

In *South Beach*, Agatston advises readers that Mediterranean cuisine is a healthy choice when eating out:

Go to restaurants serving Mediterranean-style food. [...] I'm thinking of Greek and Middle Eastern food. These are cuisines that employ lots of olive oil, which is always a plus. You can have hummus [...] on pitta bread, which is a big improvement over white bread and butter, and it's more flavoursome, too. You'll find good, whole grains such as tabouleh and couscous, which takes the place of potatoes or rice. And usually, these cuisines rely on spices and condiments rather than sweeteners to make the dishes taste good. (79-80)

In view of Torgovnick's point that representations of the primitive Other tend to be highly generalised, it is worth noting the extreme reductionism of this passage, and of the 'Med Diet' concept itself. 'Mediterranean' functions in this passage as an umbrella-term for a very wide range of regional cuisines, and 'Middle Eastern' as a subsidiary 'umbrella' covering every culinary variation from Turkey to Iran to Egypt.

Agatston seems determined to make these quintessentially ethnic cuisines fit his own preconceived model of healthy diet, even if this means massaging the facts a little. If it's ethnic, so Agatston's logic goes, it simply must be healthy. According to *South Beach*, a healthy diet consists of so-called 'good fats' such as olive oil, limited whole grains, and only minute quantities of sugar (if any at all). It is logically imperative, then, that these features are identified in ethnic cuisines, and certainly not in the obesogenic American diet. Hence Agatston names couscous as a 'good, whole grain', even though it is not a whole grain but is made (like pasta) from semolina, itself a by-product of wheat processing. On the other side of the equation, Agatston places potatoes in opposition to 'good, whole grains', even though (unpeeled) potatoes are a whole food, if not a whole grain. Unfortunately, potatoes have an Anglo-Celtic taint, and also rank high on the Glycemic Index, preventing their being recognised as a whole food. While it makes sense that Agatston should prefer hummus to butter, given that he generally favours vegetable fats over animal fats, why this should extend to a preference for pitta bread over white bread is not clear. Although pitta bread can be made in wholemeal versions, when served in a restaurant in the United States or Britain it is highly likely to be made with refined white flour. In the logic of *South Beach*, pitta bread is healthier by definition because it is ethnic, reflecting Agatston's antipathy toward white bread and all it represents (as discussed in Chapter 4). The idea that hummus with pitta is 'more flavoursome' than white bread and butter betrays a kind of reverse gastronomic snobbery, in which ethnic food is deemed intrinsically tastier, as well as healthier, than Euroamerican meals. Finally, Agatston's claim that Middle Eastern and Greek cuisines do not usually use added sweeteners is belied by the liberal use of honey in many Greek dishes, the sugar

³⁵ Steward et al., *Sugar Busters*, 32.

³⁶ *Ibid.*, 37.

content of certain Middle Eastern condiments (such as pomegranate molasses), and the intense, syrupy sweetness of Greek and Middle Eastern pastries and desserts.

In *Exotic Appetites*, Heldke points out that food adventurers ‘are usually looking for more than a novel or exotic eating experience. Adventurers want those experiences to be authentic’.³⁷

Likewise, the dedicated diet adventurer should assiduously seek out the *authentic* ethnic meal, whether Asian, Middle Eastern, or Italian. Agatston advises:

if you *do* go Italian, try to structure the meal the way they do in Italy – in courses, with a modest serving of *al dente* pasta topped with a healthy tomato sauce, followed by a main course of meat or fish and fresh vegetables [...] In Italy, you don’t sit down in front of a huge dish of pasta with a bottomless bread basket and call it dinner. That’s why Italians can eat pasta twice a day and not suffer the obesity rates we see in the United States.³⁸ (80)

In this passage, authenticity derives from serving the same food, in the same order, combination, and portion size, as it would (ostensibly) be served in its country of origin. Similarly, *Sugar Busters* advises dieters to follow a traditional French meal structure of an appetiser, main course, and salad in place of dessert.³⁹ This ‘authentic’ French meal pattern should result in a slender French waistline and healthy heart.⁴⁰ In the passage cited above, Agatston makes clear that the *inauthentic* ethnic, which couples grossly distorted portion size with a garbled meal structure, has been instrumental to the health crisis which the United States now faces. Agatston also alerts dieters to the insidious corruption of authentic ethnic foods via invisible pre-processing. For example, the rice served in Asian restaurants in the West is more processed than it would have been traditionally, he claims:

Asians have always used the whole grain, meaning the fibre is there, too, and your digestive system has to work to get at the starch. In this country, and even increasingly in Asian cities, a more processed variety of white rice is used. (80)

Readers by now know that more processing means less fibre, less nutrients, a higher Glycemic Index and an unhealthy rush of blood sugar and insulin.

I noted above the many inaccuracies in Agatston’s representation of Greek and Middle Eastern foods; similar inaccuracies occur in his depiction of Italian and Asian foods. For instance, the idea that Asians have ‘always’ used whole-grain rice is not correct. Just as white bread has historically been preferred in Western countries where bread is the staple food, white rice has historically been favoured in Asia and has therefore functioned as a mark of social status, with brown rice the lot of the lower classes.⁴¹ The idea that brown rice (or brown bread, for that matter) is ‘authentic’ or traditional reflects contemporary Western beliefs about the health benefits of fibre, not the historical record. In other words, both the authentic ethnic and the inauthentic ethnic in the passages I have cited from *South Beach* are Agatston’s own constructions as an outsider. Drawing on the work of Trinh Minh-ha, Heldke points out that:

The Other (the oriental, the native, the primitive) regarded by Westerners as authentic is in fact an Other of Western design. The authenticity of this Other (indeed, the very

³⁷ Heldke, *Exotic Appetites*, 23.

³⁸ The italics here are original.

³⁹ Steward et al., *Sugar Busters*, 196. Note the omission here of either cheese or dessert, which might follow the salad in a full French meal.

⁴⁰ This is also the premise of another recent diet bestseller. See Guiliano, *French Women Don’t Get Fat*.

⁴¹ On the historical preference for white bread, see Laudan, “A Plea for Culinary Modernism,” 41.

project of authenticating) is established against a standard constructed outside the Other's own culture, in the West, and for Western purposes.⁴²

The standard against which Agatston defines the authentic Other is his own very definite beliefs about nutrition. Thus, for example, an authentic Italian meal according to Agatston is pasta with a tomato sauce followed by meat and vegetables. This formula obscures regional variation in Italian cuisine and effectively excludes as inauthentic, because supposedly unhealthy, the creamy pasta sauces and other dairy-based dishes of northern Italy. Agatston's Italian menu also revolves around a meat-based central dish, reflecting wealthier urban Italian traditions rather than those of poorer rural areas. Janet Chrzan notes, for example, that in Tuscany, the traditional diet consisted almost exclusively of salt cod, beans and greens; meat was a luxury food.⁴³ Agatston peremptorily dictates the authentic ethnic even in its place of origin: authentic Asian food is said to be under threat from industrialisation even in Asia itself. (Similarly, Atkins suggests that the traditional French diet and, consequently, the health of French men and women are now under threat from American-style fast food.)⁴⁴ The effect of such claims is to imply that authentic ethnic diets should be preserved intact for Western diet adventurers, lest they disappear forever as a mine of nutritional evidence. Such a preservationist agenda denies the people who live (on) these cuisines day-in and day-out the agency to define and recreate them daily in their culinary practice.

The suggestion that the authentic ethnic is under threat even in its places of origin also renders authenticity, and therefore health, doubly distant from the modern West, in time as well as in space. Despite Agatston's repeated exhortations that dieters seek out the authentic ethnic meal, he ultimately implies that ethnic cuisine on Western tables can never be authentic. Western dieters may seek to become Other, health-wise, by eating the Other's food. But their own greed (in Agatston's eyes), and the food industry which panders to it, continually subvert this desire. Agatston explains that when the United States government first recommended that Americans reduce dietary fat, 'it was thought that the new low-fat American diet would mimic the low-fat, high-carb regime of countries like China and Japan, which had very low heart attack rates.' But this was not to be:

[T]he US food industry stepped in to provide us with low-fat foods that tasted good. It created delicious, highly processed foods including biscuits and baked goods prominently (and accurately) advertised as low fat, no cholesterol. (17)

It is notable that the final chapter of Part I of Agatston's text is entitled 'Why Do People Fail on the South Beach Diet?' – an admission which makes the meal plans and recipes which follow in Part II seem somewhat redundant. One of the major reasons that Agatston cites for failure is the stress of modern American life, with its high-speed travel and heavy work demands, which disrupt the best-laid diet plans.⁴⁵ Despite itself, *South Beach* thus ends by implying that the West can never be healthy because it can never be authentic. In keeping with the binaristic structure of

⁴² Heldke, *Exotic Appetites*, 44 (footnotes omitted). See Trinh T. Minh-ha, *Woman Native Other: Writing Postcoloniality and Feminism* (Bloomington: Indiana University Press, 1989), 88.

⁴³ Janet Chrzan, "Why Tuscany is the New Provence: Rituals of Sacred Self-Transformation through Food Tourism, Imagined Traditions, and Performance of Class Identity" (paper presented at the Joint Annual Meetings of the Association for the Study of Food and Society and the Agriculture, Food and Human Values Society, Boston University, 2006).

⁴⁴ Atkins, *New Diet Revolution*, 25. The anxiety that Western industrialised foods may 'engulf [...] traditional ethnic foods' is one of the driving forces behind Culinary Luddist movements such as Slow Food. See Laudan, "A World of Inauthentic Cuisine," para 1.

⁴⁵ Agatston, *South Beach*, 94-95. The second major reason for failure is said to be choosing to stay on the strict Phase 1 of the program indefinitely in order to lose weight faster, and therefore being tempted to cheat. For long-term sustainability Agatston urges dieters to move on to Phases 2 and 3 with their more liberal food lists.

low-carbohydrate discourse, authenticity resides, by Agatston's own definition, in other places and other times.

Dieters' accounts: family traditions and ethnic food

Thus far in this chapter I have argued that low-carbohydrate diet books such as *South Beach* evince both nostalgia for Western foodways of decades past, and a romantic view of 'authentic' ethnic foodways today. Healthy, authentic and traditional ways of eating are defined historically and geographically in opposition to the obesogenic diet of the contemporary English-speaking West. This reading contrasts with Amy Bentley's interpretation of the Atkins Diet. In 'The Other Atkins Revolution: Atkins and the Shifting Culture of Dieting', Bentley argues that Atkins might actually be regarded as an 'antiethnic' diet, because it seemingly excludes less affluent 'peasant' meals (such as stir-fry, casserole and stroganoff) which stretch a small amount of meat protein by combining it with carbohydrates. Bentley suggests instead that 'the cuisine formula of the Atkins diet has a 1950s American gestalt': meat plus two vegetables, 'but minus the starch'.⁴⁶ She concludes:

[T]he current popularity of Atkins is due in part to its Americanness – built on large chunks of animal flesh, particularly red meat – the same high-status food that has traditionally stood for abundance, wealth, and power.⁴⁷

At first glance, Bentley's conclusion might seem to support my own argument that low-carbohydrate diet books such as *South Beach* lament the loss of healthy pre-industrial Western foodways. However, it is worth looking carefully at the precise foods that are identified with the 'traditional' American diet in each interpretation. On the one hand, Bentley suggests that the quintessential American diet revolves around 'seemingly unlimited portions of animal flesh', and that this is replicated in the Atkins Diet.⁴⁸ By contrast, my own reading of *South Beach* notes Agatston's nostalgia for starchy comfort foods such as bread, rice and potatoes.

Bentley's conclusion depends in large part on her exclusive focus on Atkins, as well as her assumption that heavy consumption of red meat is the hallmark of Atkins dieting. As I argued in Chapters 1 and 2 of this thesis, the Atkins Diet is by no means representative of popular low-carbohydrate diets in general, either in its nutritional recommendations or in its textual discourse. Bentley does not purport to extend her analysis beyond Atkins, but her limited focus is nonetheless misleading. In particular, as I detailed in Chapter 2, every low-carbohydrate diet differs in its approach to protein, both in terms of preferred dietary sources and recommended quantity. Some diet books, such as *The Zone*, actively discourage the consumption of red meat, and it is quite possible to follow the Atkins Diet to the letter without eating any red meat at all. Moreover, Atkins does not set any particular benchmark for daily protein intake. The assumption that dieters necessarily err towards the 'unlimited' end of the spectrum with regard to red meat consumption is not substantiated.

The most serious flaw in Bentley's logic, from my point of view, is that the enormous popularity of the Atkins Diet has not been restricted to the United States. Other English-speaking Western

⁴⁶ Bentley, "The Other Atkins Revolution," 40.

⁴⁷ *Ibid.*, 44.

⁴⁸ *Ibid.*, 40.

countries such as Britain and Australia have also felt the full force of the low-carbohydrate trend, as noted in Chapter 2. Without denying that the Atkins Diet's 'Americanness' might have strengthened its popularity in the United States, it is unlikely that Australian, British, Canadian, or South African dieters would be attracted to Atkins because of its 'Americanness'. Indeed, one dieter in my study, Ursula, cited the Americanness of both Atkins and Protein Power as serious disincentives to continuing the diets. She associated this Americanness with exclusivity and inaccessibility:

[M]y sole concern for most of these things is how American they are. [...] So they talk about a stick of this, a stick of butter or they'll talk about, you know, you can have plenty of lox and I think "Excellent" [...] have your bagels with this sort of particular type of cheese that you can only find in sort of a New York Jewish bakery. (Ursula, 30s)

Ursula later stated: 'they were just too New York [...] and I would suggest a very wealthy New York person as well because they were very sort of exclusive [...] they weren't sort of universal'. Based on her comments, Ursula might well agree with Bentley that Americanness represents 'abundance, wealth, and power'. But American affluence and might are not necessarily happy associations for dieters viewing Americanness from the other side.

It would certainly be arguable, although Bentley does not consider this possibility, that the popularity of the Atkins Diet in countries like Britain and Australia derives in part from the association of red meat with parallel British and Australian histories of 'abundance, wealth, and power'. Australian economic and cultural history is inseparable from cattle- and sheep-grazing, and Australian colonial settlers ate quantities of meat which would strike fear in the heart of even the staunchest low-carbohydrate dieter today. Santich cites a late-nineteenth-century report of Australian sheep-shearers who consumed 'over 2½ pounds of meat per day; even allowing for bone and waste, this is a lot of meat!', she points out.⁴⁹ Such associations were not entirely absent from my interviews with South Australian dieters. One interviewee, who lived on a farm outside Adelaide, mentioned that she found a low-carbohydrate diet easy to follow because it exploited her family's direct supply of meat:

You see with us, we have our own meat, and so [...] to have a protein meal, protein at every meal, is a much cheaper option [...] we start all our meals by getting the meat first and then you put round the rest of it [...]. (Judith, 50s)

However, Judith's farming experience was the exception rather than the rule. Younger dieters in particular, including Atkins dieters, tended to name their most usual dieting dinner as curry or stir-fry, belying Bentley's claim that the Atkins Diet necessarily excludes so-called ethnic meals which combine small pieces of meat with vegetables. Tracey, for example, an Atkins Dieter, said:

I knew most vegetables you could have so for dinner I'd have stir-fries. I just sort of varied, you know I'd have a bit of protein, then I'd have vegetables so you can do a lot with those combinations. (Tracey, 20s)

Moreover, when interviewees referred to the 'Australian diet' (Tracey, 20s) or the 'stock-standard Australian dinner' (Sarah, 30s), meat was by no means central, displaced by ethnic foods such as pasta, rice, noodles and the ubiquitous curry.

The key feature of the low-carbohydrate dieting experience, predictably, was the absence of starchy foods and grains, the factor Bentley encapsulates in the phrase 'minus the starch'.⁵⁰ No

⁴⁹ Santich, *What the Doctors Ordered*, 13.

⁵⁰ Bentley, "The Other Atkins Revolution," 40.

matter whether dieters ate grilled meat plus vegetables, or Asian- or Italian-style food, the subtraction of starch ruptured the traditional meal pattern. For some dieters, this rupture was a source of creativity to be embraced. For others the removal of starch was experienced as a traumatic incursion into family food traditions, although this did not necessarily deter dieters from their new eating plan. But in either case, the absence of starch mitigated against any experience of low-carbohydrate dieting as a reclamation of culinary tradition, whether one's own or that of an ethnic Other. As foreshadowed earlier in this chapter, there thus appears to be a radical disjuncture between diet-book authors' attempts to position their regimes as a means to reconnect with the 'authentic' food traditions of other times and other places, and the lived experience or practice of low-carbohydrate dieting. Interviewees' experiences primarily reflected, instead, Elspeth Probyn's suggestion that low-carbohydrate dieters must 'divorce' themselves from millennia-old traditions of global sustenance based on staple starches like bread, rice and corn.⁵¹ In other words, although many low-carbohydrate dieters with whom I spoke generally ate ethnic-style meals (*contra* Bentley), and some on the other hand ate 'traditional' Western-style meals with a protein centre, in neither case could these meal patterns be regarded as 'authentic' according to any pre-existing culinary tradition.

Dieters whom I interviewed repeatedly described adjusting certain traditional meal combinations to suit the low-carbohydrate prescription, either by simply removing the starch component, or by substituting the starch with a low-carbohydrate alternative, such as a lower-carbohydrate grain or pulse or a non-starchy vegetable:

I would cook the same thing [for myself and the rest of the family] but I wouldn't eat the carbohydrates. [...] So for example [...] if I cooked curry I would serve up rice for everyone else but I wouldn't eat it. (Sarah, 30s)

[I]t's not as simple as saying I'm not eating bread and pasta anymore because when you eat curry you have rice. We grew up with it. And so if you're not allowed to have rice, what do you have with your curry? You can't have a pappadam, you know, so what do you have? So [...] I do dhal [...]. (Karen, 30s)

[S]ay if I made, I might make a spaghetti bolognese, but I'll have, like, cabbage or something with my meat [...] and [my husband] and my son will have pasta [...]. (Michelle, 30s)

Where say previously I would have, if I was cooking Italian and I might have done pasta sauce, I now substitute the green beans for what might have been penne, pasta. Where I might have [...] served rice with an Indian curry I don't serve rice or naan with it [...]. (Jessica, 30s)

Of course, both curry and spaghetti bolognese are notoriously 'inauthentic' or bastardised versions of traditional Indian and Italian dishes respectively. But my point here is that the combinations of 'curry' with rice, and *ragù* with spaghetti, have acquired an authenticity of their own in Anglo-Saxon food culture.⁵² Low-carbohydrate dieting forcibly ruptures these established pairings and destroys any accrued sense of culinary tradition. It is worth comparing the strategies these dieters describe with the eating-out advice from *South Beach* that I discussed earlier. A sense

⁵¹ Probyn, "Trick Question Delivers Goods," para 14.

⁵² For a critical discussion of curry and culinary authenticity, see Heldke, *Exotic Appetites*, 33-39.

of culinary authenticity does influence Karen and Jessica on some level: Karen matches curry with dhal, both Indian foods; Jessica matches tomato sauce with green beans, a plausibly Italian combination. (Compare Michelle's combination of bolognese sauce and cabbage, which does not follow such 'rules'.) But in preparing their meals, Sarah, Karen, Michelle and Jessica do not seek the kind of ethnic authenticity that Agatston recommends, in which authenticity derives from serving foods in the order, combination and portion size in which they might be served in their native country.

As I noted above, for some dieters, like Jessica, this culinary rupture was experienced as a stimulus to creativity and something to be embraced. Jessica suggested that her 'creativity in the kitchen' had been a valuable asset in her long-term adherence to a low-carbohydrate diet, which she had been following for two and a half years at the time of her interview:

[I]t's been a lot easier for me than it has for other people because I have a reasonable amount [...] of creativity in the kitchen, such that I can look at what's available and say "Ah, okay, we'll do that" or if I'm, say, picking up a recipe and it's got too many carbs in it I can interpret it. (Jessica, 30s)

John (50s), another long-term low-carber of three years' duration, reported that he took over all the household cooking when he began the diet, and now spends time on weekends looking for new recipes which he will adapt to suit his own requirements.

By contrast, other dieters experienced the culinary rupture of low-carbohydrate dieting as a traumatic incursion into long-established family meal traditions, whether English, Irish, Dutch, or Italian.⁵³ For instance, Pam, who had immigrated to South Australia from Ireland, described traditional Irish soda bread as a staple component of her everyday diet before she switched to a low-carbohydrate regime four years ago. As a long-term 'low-carber', soda bread was now a treat for special occasions only:

A typical [pre-diet] day [was] homemade bread, soda bread, which is an Irish sort of bread; bacon, eggs, sausages, mushrooms, all fried up in their juicy little fats. [...] I eat very, very little [bread now]. At Christmas I had soda bread.⁵⁴ (Pam, 50s)

Gina, a second-generation Italian Australian, also described how before going on a low-carbohydrate diet, foods such as pasta and bread had been taken for granted as daily staples:

I have since [going on the diet] tried to avoid breads, rices [*sic*], potatoes and pastas which is like, being European, it's like, no pasta, no bread, hardly any rice and no potatoes, it's like [...] well, I mean they were my four basic food groups.⁵⁵ (Gina, 40s)

Although pasta, bread, rice and potatoes are also staple foods for many (if not most) Australians, regardless of their background, Gina specifically associated these foods with her Italian heritage, and especially with her mother's cooking. Since switching to a low-carbohydrate diet five years ago, foods such as pasta had become treats which she now only has when her mother cooks something really special:

⁵³ As I noted in Chapter 3, all my interview participants were of Anglo-Celtic or European background.

⁵⁴ Pam was now following the low-carbohydrate Dinosaur Diet, which had also required her to give up red meat and processed meats such as bacon. Her diet breakfast now consisted of six scrambled eggs spread over the course of the morning. For information on the Dinosaur Diet, see Mitchell and Mitchell, *Taming the Dinosaur Gene*. I used Christmas Day in the interviews as a marker of how strict dieters were: some followed their diet to the letter on Christmas Day, others ate a full Christmas lunch or dinner, and others fell somewhere in between.

⁵⁵ Gina frequently used the word 'European' as an apparent euphemism for 'Italian'.

I don't really have pasta, I don't really miss it. But every now and then when, say, Mum makes something like lasagne, home-made stuff which is like "Oh gee, it smells so nice", I'll have it [...]. (Gina, 40s)

This passage is interesting because of its ambivalence. On the one hand, it is striking how easily Gina can say 'I don't really miss [pasta]', given her earlier statement that it was one of her 'four basic food groups'. On the other hand, the passage is dominated by an upsurge of nostalgic longing for 'Mum's lasagne'. Notice that neither Gina nor Pam *completely* excludes pasta or bread, even though Gina, especially, defines her diet negatively via the exclusion of such foods. Rather, both women have renegotiated the place of these foods in their diet, transforming them from daily staples which were simply taken for granted, to 'special occasion' foods to be eaten only 'every now and then'.

Like Gina, Karen expressed a high degree of attachment to the starchy staples she had chosen to give up when she went on a low-carbohydrate diet, and associated this attachment with her cultural heritage. Karen described starchy foods like potatoes as being very important to her because of her Dutch background. This meant that she could not imagine sticking to a strict low-carbohydrate diet indefinitely:

Karen: When you're doing a meal in the evening and you've got, you know, a steak and stuff, and you want your vegies with it, you know, we're Australian, I've got Dutch background, which is "potatoes are our lives", you know, and it is difficult to sit there and sort of say: "Well, I can have the broccoli and I can have the cauliflower, and I can stand that, but I'm not allowed to have the potato."

CK: So [...] you don't see you could live the rest of your life and not have another piece of toast?

Karen: Oh absolutely not. [...] Potatoes are my life.⁵⁶ (Karen, 30s)

As does Gina, Karen associates a food which many Australians might consider unremarkable (the potato) with her personal Dutch heritage, although she slips between identifying herself as Australian and as Dutch. For Karen, potato clearly forms part of a fixed meat-and-three-veg meal pattern (steak / broccoli / cauliflower / potato). The subtraction of the potato from this equation represents a trauma to the pattern of the meal, as well as a rupture in the continuity of lifetime eating habits across generations.

For Gina, a particular difficulty was the function of traditional Italian foods at extended family gatherings and celebrations. Gina described how her choice of diet initially bewildered her family, especially her mother:

You know, my Mum: "how can you not have pasta? I made it". Especially the home-made stuff, it's beautiful, it's like, "oh, sorry Mum, but I can't have any gnocchi that are full of potatoes and flour". [...] She just couldn't understand it; she thought I was nuts, actually [...]. Yeah, at first the extended family thought I was just a bit nuts. (Gina, 40s)

Gina's mother, as Gina reports it, interprets Gina's refusal to eat gnocchi as a personal rejection ('I made it') and a rejection of the time, effort and care that has gone into the food's preparation ('I *made* it'). But Gina's mother is also bewildered by dietary rules which seem to her to be 'nuts': rules which exclude high-quality, tasty, home-made foods, and suggest that starchy foods might make one fat. Gina described how she will occasionally eat home-made pasta at family gatherings

⁵⁶ The conversation here involves a slippage between *potatoes* (to which Karen refers) and *toast* (in my response). In the context of low-carbohydrate dieting these two foods are metaphorically interchangeable.

for the sake of being part of family social activity. However, the standard of the food has to be worth the carbohydrate intake:

Coming from my family where, Europeans [...] you're not sort of like socialising unless you are eating and partaking with everyone else [...]. With me being Italian there's always going to be pasta so if it's really nice I'll join in, but if it's just packet pasta, oh, I can leave that, that's not a problem. But like, you know, if my Mum's made lasagne as I said, you know, I'll have to have some, or a cannelloni, I'll have half, just to either join in but also I mean, you know, it's nice [...]. (Gina, 40s)

Gina describes the shared eating of traditional Italian pasta dishes, home-made by 'Mum', as a group activity which renews and maintains family ties. By 'joining in' (participating in the family meal) she renews and maintains her ties to the family group, and it seems that even a small serving will serve this purpose. On the other hand, 'packet pasta' will not promote family bonding to the same extent. Rather, familial bonds are nourished by her mother's high-quality, home-made pasta dishes, especially those (like lasagne and cannelloni) which are complicated and time-consuming to prepare.

Although dieters like Gina expressed their attachment to traditional high-carbohydrate staple foods, they had also come to perceive these foods as unhealthy within a low-carbohydrate nutritional paradigm. Most of the dieters whom I interviewed were therefore willing to restrict their intake of foods like pasta and potatoes very severely, although their relationship to these foods remained complex and highly ambivalent. For instance, Lisa, whose background was Dutch, indicated her willingness to sacrifice the foods with which she had grown up for the sake of the perceived health benefits of a low-carbohydrate diet:

I come from a European background where it is high-carbohydrate, you know, they sit down and tuck into toast and I think about some of the foods that are traditional in my family, it's so bad! [...] If you go to [the Netherlands], not so much now, they've probably changed their eating patterns now too, but if you sit down they will eat white rusks, and really high[-carbohydrate], really bad food. [...] I do love that old-fashioned, the way I was brought up, I do love that. But [...] I'm very funny about eating something that's not good for you. If I think it's not good for you I probably won't be eating it, only as a treat. (Lisa, 40s)

Lisa suggests here that the traditional or 'old-fashioned' Dutch diet has likely been eroded in the Netherlands itself in favour of more healthful alternatives to the staple toast and white rusks she remembers from childhood. In this, her construction of authentic Dutch foodways as being 'on the way out' mirrors Agatston's claim that authentic Asian foodways are under threat from the industrial processing of rice in Asian cities, and Atkins's concern that the authentic French diet is now threatened by American fast food. However, the crucial difference between Lisa's position and that of authors like Agatston and Atkins is that Lisa most definitely does not perceive the 'old-fashioned', authentic Dutch diet as healthy within the low-carbohydrate paradigm: she describes traditional Dutch foods as 'really high[-carbohydrate], really bad food'. Of course, as Heldke reminds us, Dutch food would be deemed less 'ethnic' than the quintessentially ethnic cuisines of the Mediterranean, Middle East and Asia.⁵⁷ Nonetheless, Lisa's position is fundamentally at odds with the attempts of diet authors to present a low-carbohydrate regime as a way to reclaim and reconnect with cultural tradition, whether Western or Other. Instead, Lisa

⁵⁷ Heldke, *Exotic Appetites*, 51.

represents low-carbohydrate dieting as a radical rejection of her family's Dutch culinary tradition, which she now views as intrinsically unhealthy.

Similarly, Gina described how she has come to associate traditional Italian foods such as pasta with overweight and diabetes via the body of her mother:

I look at my Mum and I see her body shape [...] she's shaped like a barrel, honestly, and that's what I look at and I think: "if I don't be careful and look after myself now [...] I'm going to turn into her". [...] I see her and she's eating her pasta and her bread and [saying] "here, Gina, eat", and it's like, right, this is really good motivation, not to eat.
(Gina, 40s)

Gina's comments here tend to invite a psychological interpretation: Gina fears not looking like her mother but becoming her ('if I don't be careful [...] I'm going to *turn into her*'). The position Gina expresses, like that of Lisa, is seemingly at odds with the representation of healthy Italian and Mediterranean cuisines in *South Beach*, since Gina views Italian foodways as inherently unhealthy (although Agatston might argue that the meal patterns Gina describes are not 'authentic' since they take place outside of Italy). However, Gina's representation here of the nexus mother / home / food also fundamentally challenges Agatston's nostalgia for a lost sense of connection between body, food, family and community. To Gina, the mother / home / food nexus promotes overweight and diabetes, not the healthy diet and lifestyle habits that Agatston envisions as part of his domestic ideal. At the same time, I would be wary of reading Gina's dieting practice as a rejection of her Italian heritage. She continued to cook pasta and other Italian food for her husband and children, and constructed her own eating habits as 'different' even as she noted her family's acceptance of them:

They've got used to it and they don't have any issues with it. Like, you know, now if they sit down to a bowl of pasta and I will have, say, a salad or a quiche or something, it's like they don't even look twice, they don't think twice about that I eat differently [...]. (Gina, 40s)

I would conclude that Gina's relationship with high-carbohydrate Italian foods remained complex and conflicted. On the one hand, Gina was willing largely to disconnect herself from her 'four basic food groups' for the sake of a relatively minor weight-loss (about five kilograms; she had never been much overweight). On the other hand, Gina accepted and perpetuated the importance of traditional Italian foods to her family through her own cooking and her occasional consumption of her mother's food. When I asked whether she would ever stop cooking pasta for her own children, the idea seemed literally inconceivable to her.

My interviews with low-carbohydrate dieters suggest that there is a radical disjuncture between low-carbohydrate textual discourse and dieting practice in relation to culinary nostalgia and tradition. Earlier in this chapter, I outlined and critiqued the romanticisation of traditional, less industrialised foodways in the popular low-carbohydrate diet literature. The dual discursive turn to other times and other places is particularly pronounced in *South Beach*, but is also evident in other low-carbohydrate texts. When authors like Agatston construct a binary opposition between the obesogenic modern American diet, and either the Western diet of decades past or the diet of an ethnic Other, generalisation and strategic idealisation tend to sideline factual and historical accuracy. Any diet or cuisine that is *not* modern and *not* Western must be made to fit the nutritional axioms of low-carbohydrate dieting. However, it requires extreme discursive

manoeuvres to make processed foods whole and ethnic foods uniformly healthy. Dieters' lived experiences of 'low-carbing' reflect the practical demand to eliminate high-carbohydrate foods, which have been globally fundamental to diverse post-agricultural food traditions. The practical necessity of excluding staple starches tended to sever dieters from their own and Other culinary traditions, quite the opposite of what low-carbohydrate authors would like to claim. In the next chapter, I consider whether low-carbohydrate diets are any more successful in their attempts to (re)connect dieters with *pre*-agricultural nutritional traditions: the diet of our prehistoric hunter-gatherer ancestors.

Chapter 6. Neo-Darwinism and genetic determinism in low-carbohydrate theory

The title of this thesis incorporates a phrase which might well be considered the motto of the low-carbohydrate diet movement: ‘the food nature intended you to eat’.¹ References to what ‘nature intended’ and ‘what nature designed us to eat’ recur throughout the popular low-carbohydrate literature.² These formulations reinforce the fundamental distinction between natural and processed foods that I discussed in Chapter 4: foods that occur in ‘nature’ versus foods that have been modified by human intervention. But statements about what nature intended also invoke centuries-old understandings of nature (or Nature) as ‘the inherent force which directs either the world or human beings or both’.³ In *Keywords*, Williams notes that Nature as a guiding or directing force often appears in feminine personification, as the ‘goddess’ or ‘Mother Nature’:

“Nature herself” is at one extreme a literal goddess, a universal directing power, and at another extreme [...] an amorphous but still all-powerful creative and shaping force. The associated “Mother Nature” is at this end of the religious and mythical spectrum.⁴

Mother Nature is certainly not absent from popular low-carbohydrate diet books. Atkins, for instance, holds that low-carbohydrate dieters are ‘in an alliance with Mother Nature’ (29). But in references to natural ‘design’, low-carbohydrate discourse reflects a further nineteenth-century slippage in concepts of Nature, from a deity or quasi-deity directing the world, to ‘nature the selective breeder’.⁵ With the advent of evolutionary theory, Williams explains,

natural selection, and the “ruthless” competition apparently inherent in it, were made the basis for seeing nature as both historical and active. Nature still indeed had laws, but they were the laws of survival and extinction: species rose and flourished, decayed and died. The extraordinary accumulation of knowledge about actual evolutionary processes, and about the highly variable relations between organisms and their environments[,] including other organisms, was again, astonishingly, generalized to a singular name. Nature was doing this and this to species.⁶

The low-carbohydrate literature reflects two distinct neo-Darwinian explanations of health and body-weight, from each of which arises a corresponding set of recommendations for today’s dieters. The first of these models is known as evolutionary nutrition, and is based on the premise that the human body has adapted to function best on the diet eaten in the Paleolithic era. The second model is the thrifty gene theory or thrifty gene hypothesis, and is somewhat more complex. The thrifty gene theory suggests that feast-or-famine conditions during human evolutionary development naturally selected for people whose bodies were efficient in their use of food calories (those who could store excess energy as body fat for later use). Unfortunately, in contemporary conditions of constant dietary abundance, the so-called ‘thrifty gene’ predisposes people to diabetes and obesity. In this chapter I trace the deployment of evolutionary nutrition

¹ This motto is closely paraphrased from Atkins, *New Diet Revolution*, 221.

² See eg Agatston, *South Beach*, 42, 84; Eades and Eades, *Protein Power*, 328.

³ Williams, *Keywords*, 219.

⁴ *Ibid.*, 221.

⁵ *Ibid.*, 223-24.

⁶ *Ibid.*, 224. Williams uses bold font to highlight the word *Nature* in this passage; I have omitted this for the sake of readability.

and the thrifty gene hypothesis in popular low-carbohydrate diet books, with a particular focus on *The Zone* and *Dr. Atkins' New Diet Revolution*. Because evolutionary nutrition and the thrifty gene theory both spotlight the Paleolithic era, these two theories are crucial to the nutritional primitivism of low-carbohydrate discourse. An investment in human evolutionary origins and genetic design as the guiding principles of proper nutrition mandates close attention to 'primitive' diet, which therefore functions as the ultimate blueprint for today's popular low-carbohydrate regimes.

Both evolutionary nutrition and the thrifty gene theory are the subject of intense research and debate outside the context of low-carbohydrate dieting. Each model has its own scholarly and popular literature, its own high-profile advocates, and its own set of critics. Evolutionary nutrition as a specific field of study is generally agreed to have begun with the publication, in 1985, of S. Boyd Eaton and Melvin Konner's article 'Paleolithic Nutrition' in the *New England Journal of Medicine*.⁷ In 1988, Eaton and Konner followed up this paper with the popular diet book *The Paleolithic Prescription*, coauthored with Marjorie Shostak.⁸ Today, the field of evolutionary nutrition is arguably spearheaded by Dr Loren Cordain, Professor of Health and Exercise Science at Colorado State University.⁹ Cordain is the author of the popular *Paleo Diet* as well as numerous peer-reviewed scientific articles.¹⁰ He has coauthored a number of articles with Boyd Eaton, Jennie Brand-Miller (author of *New Glucose Revolution*), and Michael and Mary Dan Eades (authors of *Protein Power*).¹¹ At their most extreme, evolutionary nutritionists advocate a strict 'Paleo' diet, which excludes virtually all post-agricultural foods.¹² Ray Audette's maxim, expounded in *Neanderthin*, is 'could I eat this if I were naked with a sharp stick on the savanna?'. However, evolutionary nutrition also encompasses low-carbohydrate and low-GI diets which take Stone-Age eating patterns as a flexible prototype, either for the types of foods which dieters should eat, or for the appropriate balance of macronutrients (protein, carbohydrate and fat).

The second neo-Darwinian model to appear in the popular low-carbohydrate literature, the thrifty gene theory, was originally proposed by geneticist and human biologist Dr James Neel in 'Diabetes Mellitus: A "Thrifty" Genotype Rendered Detrimental by "Progress"?' (1962).¹³ Neel revised and expanded his thrifty gene hypothesis in two further publications before his death in 2000: 'The Thrifty Genotype Revisited' (1982) and 'The "Thrifty Genotype" in 1998' (published in 1999).¹⁴ The thrifty gene theory has been taken up enthusiastically in scientific and popular

⁷ S. B. Eaton and M. Konner, "Paleolithic Nutrition: A Consideration of Its Nature and Current Implications," *New England Journal of Medicine* 312, no. 5 (1985).

⁸ Eaton, Shostak, and Konner, *The Paleolithic Prescription*.

⁹ For further biographical details, see Cordain's website at www.thepaleodiet.com.

¹⁰ Cordain, *The Paleo Diet: Lose Weight and Get Healthy by Eating the Food You Were Designed to Eat*. Cordain's recent scientific publications include L. Cordain, M. R. Eades, and M. D. Eades, "Hyperinsulinemic Diseases of Civilization: More Than Just Syndrome X," *Comparative Biochemistry and Physiology* 136 (2003); Loren Cordain et al., "Origins and Evolution of the Western Diet: Health Implications for the 21st Century," *American Journal of Clinical Nutrition* 81 (2005); J. H. O'Keefe, Jr and L. Cordain, "Cardiovascular Disease Resulting from a Diet and Lifestyle at Odds with Our Paleolithic Genome: How to Become a 21st-Century Hunter-Gatherer," *Mayo Clinic Proceedings* 79, no. 1 (2004). A full list of papers is available at www.thepaleodiet.com/published_research/index.shtml.

¹¹ For examples, see footnote 10 above.

¹² See eg Audette, *Neanderthin*; Cordain, *The Paleo Diet*.

¹³ James V. Neel, "Diabetes Mellitus: A 'Thrifty' Genotype Rendered Detrimental by 'Progress'?" *American Journal of Human Genetics* 14 (1962).

¹⁴ James V. Neel, "The 'Thrifty Genotype' in 1998," *Nutrition Reviews* 57, no. 5 (1999); James V. Neel, "The Thrifty Genotype Revisited," in *The Genetics of Diabetes Mellitus*, ed. J. Kobberling (London: Academic Press,

explanations for both diabetes and obesity, especially in relation to fourth-world Indigenous groups amongst whom the prevalence of these disorders is disproportionately high. As Yin Paradies, Michael Montoya and Stephanie Fullerton write,

the racialized incarnation of [the thrifty gene] hypothesis continues to outlive its progenitor[,] as it continues to be reiterated and researched in relation to Indigenous Australians, Native Americans, and First Nation Canadians.¹⁵

The racialised version of the thrifty gene theory has recently spawned its own small but rich multidisciplinary critical literature, of which the work of Paradies, Montoya and Fullerton forms a part. Other contributors to this critique include Robyn McDermott, Jennifer Poudrier and Margery Fee, all of whose work I cite in detail later in this chapter.

Evolutionary nutrition

Dr. Atkins' New Diet Revolution, *Sugar Busters*, *The Zone* and *Protein Power* all draw on the evolutionary nutrition model, often in combination with the thrifty gene theory. However, compared with other low-carbohydrate diet books, *The Zone* posits an extremely early date in the history of life on earth as the end-point of human evolutionary adaptation, well before the advent of human beings as such. Sears writes:

*The biochemical effects of food have been constant for the last forty million years. All mammals, including man, have essentially the same responses to food. These responses have been genetically conserved throughout evolution, and are unlikely to change in the near future.*¹⁶

The Zone constantly stresses the similarities between human beings and other forms of life, no matter how distant they might first appear. In the following passage, Sears emphasises (somewhat startlingly) the narrowness of the evolutionary divide separating human beings and sponges:

These superhormones [the eicosanoids] have been around for more than five hundred million years – in fact they were the first hormonal control system developed for living organisms. (Many of the eicosanoids that you and I produce are the same ones a sponge makes.)¹⁷ (33)

In a subsequent and more familiar example, Sears stresses the close genetic relationship between humans and primates:

[G]enetic changes evolve very slowly. For example, the genes of humans and chimpanzees differ by less than 1 percent, even though five million years have passed since the two species diverged. Genetically, there's virtually no difference between you and your ancestors who walked the earth 100,000 years ago. In fact, mankind's genes have not changed substantially for the past one million years. (100)

1982). For detailed biographical information about James Neel, see William J. Schull, "James Van Gunda Neel: 1915-2000," (Washington, DC: National Academy of Sciences, 2002).

¹⁵ Yin C. Paradies, Michael J. Montoya, and Stephanie M. Fullerton, "Racialized Genetics and the Study of Complex Diseases: The Thrifty Genotype Revisited," *Perspectives in Biology and Medicine* 50, no. 2 (2007): 210.

¹⁶ Sears, *The Zone*, 12. The italics in this passage are original. Further italics are my own unless otherwise indicated. Subsequent page references to *The Zone* are cited in parentheses in-text.

¹⁷ Sears describes eicosanoids as short-lived 'superhormones' produced by all human body cells, which regulate insulin and glucagon synthesis as well as 'virtually every vital physiological function' (32). The only other low-carbohydrate diet book I have encountered which mentions eicosanoids is *Protein Power*; the Eadeses acknowledge Sears's contribution to their own work and describe him as a 'close friend' and colleague.

At the crux of Sears's contentions in all three of these passages is an unstated judgement regarding what constitutes 'substantial' or significant genetic change. For example, in the final passage cited above, Sears claims that human genes 'have not changed substantially' over the last one million years. Yet *homo sapiens* as a species did not exist a million years ago, and modern *homo sapiens sapiens* only emerged around 40,000 years ago. It is certainly arguable that genetic changes that are extremely small in percentage terms may be crucial in separating species from species, and in determining physiological characteristics which make the difference between survival and extinction.

Sears treats human evolutionary adaptation as being 'essentially' complete well before the Paleolithic era; in fact, well before the emergence of humankind. He argues that '*by the time man came along*' the hormonal 'control systems' (insulin, glucagon and the eicosanoids) were already 'deeply embedded in his genes' (100). In Sears's logic, Paleolithic diet therefore functions as a kind of 'test case' for human health. According to this line of reasoning, archeological evidence which indicates the state of human health in Paleolithic times can tell us whether or not Paleolithic diet was 'in sync' with humankind's well-established biochemistry. Drawing especially on the work of Boyd Eaton, Sears asserts that 'in Neo-Paleolithic times both men and women had the bone structures of world-class athletes' (101).¹⁸ Moreover, he claims, Paleolithic people grew to a comparable height to people in affluent countries today: 'The average height of Neo-Paleolithic man was about five feet ten, and for Neo-Paleolithic women about five feet six' (103). The apparently exceptional health and fitness of Stone-Age men and women confirms for Sears that the Paleolithic 'menu' of 'lean meat, fruits, and vegetables' was 'in harmony with human genetic makeup' (101). He attributes the health effects of this diet above all to its macronutrient balance:

[A]lmost to the percentage point *Neo-Paleolithic diets had the same protein-to-carbohydrate ratio as a Zone-favorable diet*. So that Neo-Paleolithic diet kept insulin, glucagon, and eicosanoid responses on an even keel.¹⁹ (101)

Sears concludes that since human genes have not changed 'substantially' since well before the Paleolithic era, dieters today can achieve the exceptional health and fitness of our ancestors by mimicking Stone-Age nutrition.

The claim that the macronutrient ratio of a 'Zone-favorable diet' matches that of Neo-Paleolithic diets 'almost to the percentage point' raises a number of issues. Sears attributes this claim directly to Eaton and Konner's article 'Paleolithic Nutrition' (1985). Eaton and Konner suggest that human diets in the late Paleolithic period averaged 34 percent protein and 45 percent carbohydrate, with the remaining 21 percent coming from fat.²⁰ The ratio of protein-to-carbohydrate in this estimate (0.75) certainly does match the ideal ratio proposed by Sears elsewhere in *The Zone*, although the percentage figures are somewhat different. (The Zone Diet contains 30 percent protein, 40 percent carbohydrate and 30 percent fat).²¹ However, Eaton and Konner acknowledge that their figures are averages only: early human beings, they suggest, probably derived anywhere between 20 and 50 percent of their diet from animal foods, with the

¹⁸ Sears cites several of Eaton's publications in his bibliography for the relevant chapter of *The Zone* (Chapter 9). These are S. B. Eaton, "Humans, Lipids and Evolution," *Lipids* 27 (1992); Eaton and Konner, "Paleolithic Nutrition"; Eaton, Shostak, and Konner, *The Paleolithic Prescription*.

¹⁹ The italics here are original.

²⁰ Eaton and Konner, "Paleolithic Nutrition," 288.

²¹ For 'Zone-favorable' macronutrient ratios, see Sears, *The Zone*, 65.

remainder from plant foods.²² When animal foods make up 20 percent of the diet, 24.5 percent of energy comes from protein and 55 percent from carbohydrate, a ratio of about 0.45.²³ This is well outside the ‘Zone-favorable’ range of between 0.6 and 1.²⁴ In order to make Paleolithic diets fit his own model of optimum nutrition, Sears simply discounts differences in diet between geographic regions and historical periods within the Neo-Paleolithic era. He also assumes that macronutrient intakes were the same for men, women, children and adults, and ignores the possibility of seasonal dietary variation. In *The Obesity Epidemic*, Michael Gard and Jan Wright review the research on energy intake and expenditure in prehistoric populations. Based on their appraisal of the literature, Gard and Wright question whether it will ever be possible to estimate the energy intake of prehistoric people with any degree of accuracy, given the length of time that has elapsed between then and now.²⁵ By extension, I would argue that our knowledge of the macronutrient breakdown of prehistoric diets is equally ‘only ever likely to be extremely imprecise’, belying the numerical exactitude Sears claims.²⁶

A further flaw in Sears’s approach lies in his easy assumption that macronutrient ratio may be taken as the defining feature of diet. In their concluding comparison of Paleolithic and modern American diets, Eaton and Koster note that as well as eating more protein than modern Americans, Paleolithic people consumed much more fibre, calcium, iron, folate and vitamins. They also ate much less sodium than modern Americans, and much less total fat. Further, ‘the fat they ate was substantially different from ours [...] the paleolithic diet had [...] more essential fatty acids, and a much higher ratio of polyunsaturated to saturated fats’.²⁷ Sears himself points out that Neo-Paleolithic diets were ‘exceptionally rich in micronutrients’, before passing quickly on to macronutrient composition (101). It is certainly arguable that high micronutrient intake or some other distinguishing feature of the Paleolithic diet was what made Stone-Age people so healthy (assuming, for the moment, that they were). Sears acknowledges that ‘man needs a *modern version* of a Neo-Paleolithic diet’, effectively conceding that we cannot replicate Paleolithic diets exactly (103). Not only is our knowledge of prehistoric eating habits inevitably hazy, but the massive social and ecological changes that have occurred since the Stone Age have irrevocably changed the foods available to us. Perhaps Sears privileges macronutrient ratio because it is relatively easy for today’s dieters to mimic. However, I would suggest that Sears was likely wedded to the macronutrient paradigm before he turned to evolutionary explanations of health and disease: he uses the Neo-Paleolithic data selectively to confirm his pre-existing model.

Having established that Paleolithic diet was ideal because it matched human genetic inheritance, Sears sets out to show that subsequent human diets have diverged from that inheritance, especially in the introduction of grains and dairy products. Pointing out the widely-known fact that the majority of the world’s adult population is lactose-intolerant, Sears argues that this is due to a lack of evolutionary adaptation to dairy consumption:

²² Eaton and Konner, “Paleolithic Nutrition,” 285. Eaton and Konner derive this percentage range from a review of the diets of contemporary hunter-gatherer groups who live ‘in an inland, semitropical habitat’ similar to that of Paleolithic hunter-gatherers. I critique the identification of contemporary hunter-gatherers with Paleolithic people in Chapter 7.

²³ *Ibid.*, 287.

²⁴ See Sears, *The Zone*, 65.

²⁵ Gard and Wright, *The Obesity Epidemic*, 111.

²⁶ *Ibid.*

²⁷ Eaton and Konner, “Paleolithic Nutrition,” 288.

Only with the domestication of cattle some eight thousand years ago did cow's milk [...] become widely available. The only populations which eventually evolved to retain the activity of the lactase enzyme in adulthood were those who were constantly exposed to lactose through relentless consumption of dairy products – primarily Europeans of Scandinavian descent. As a result, these people can still digest lactose as adolescents and adults. / Unfortunately, 80 percent of the world's population has not yet caught up to the Scandinavians. [...] Maybe with another twenty thousand years of evolution, every human will be able to digest dairy products, but that's certainly not the case now. (102)

The genetic basis of lactase persistence is generally accepted in the scientific literature, although the theory that lactase persistence is an evolutionary adaptation to pastoralism remains a hypothesis.²⁸ Further, although Sears does not say so, a growing body of research suggests that lactose tolerance is not solely genetically heritable, but may be built up in 'lactose maldigesters' via regular exposure to dairy foods.²⁹ The vocabulary Sears chooses to frame his evolutionary argument puts him on dangerous ground: his reasoning is tantamount to Aryanism and reflects a hierarchical model of evolutionary development in which the rest of the world's population is 'behind' northern Europeans. Curiously, despite his awareness of lactose intolerance and his recognition that dairy products were not part of the Stone-Age diet, Sears recommends a wide variety of both fermented and non-fermented dairy products as part of the Zone regime, an inconsistency he shares with Atkins.

Crucially, Sears's evolutionary explanation for lactose intolerance (or rather, lactose *tolerance*) directly contradicts his insistence that human evolutionary adaptation was complete well before the Paleolithic era, as discussed earlier. In his discussion of lactose tolerance, Sears concedes that genetic adaptations have occurred in a significant minority of the human population in response to relatively recent changes in diet. He also makes a similar concession in relation to grain-foods. Initially, Sears tries to emphasise the 'sluggishness' of human adaptation to grains over the 10,000 years that have elapsed since the agricultural revolution:

Remember that from an evolutionary point of view ten thousand years is nothing more than the flick of an eyelash. Genomes – a species' total genetic makeup – don't change much in ten thousand years. So human genes have been adapting very reluctantly and very sluggishly to the introduction of these two new food groups [dairy foods and grains] ten thousand years ago. In fact, by and large *humankind has been genetically unable to cope with these foods*.³⁰ (102)

However, as I discussed earlier in this chapter, Sears argues elsewhere in *The Zone* that around one-quarter of the American population *is* genetically equipped to eat large quantities of carbohydrate without ill effect.³¹ He is therefore forced to hypothesise that a significant minority of Americans have adapted to the recent introduction of grain-foods into the human diet:

²⁸ Dallas M. Swallow, "Genetics of Lactase Persistence and Lactose Intolerance," *Annual Review of Genetics* 37 (2003): 213; Tuula H. Vesa, Philippe Marteau, and Riitta Korpela, "Lactose Intolerance," *Journal of the American College of Nutrition* 19, no. 2 (2000): 166S.

²⁹ See eg S. R. Hertzler and D. A. Savaiano, "Colonic Adaptation to Daily Lactose Feeding in Lactose Maldigesters Reduces Lactose Intolerance," *American Journal of Clinical Nutrition* 64, no. 2 (1996); B. A. Pribila et al., "Improved Lactose Digestion and Intolerance among African-American Adolescent Girls Fed a Dairy-Rich Diet," *Journal of the American Dietetic Association* 100, no. 5 (2000). For a review, see Vesa, Marteau, and Korpela, "Lactose Intolerance," 170S-71S.

³⁰ The italics here are original.

³¹ Sears, *The Zone*, 30, 65.

Just as constant exposure to dairy products has allowed most northern Europeans to evolve genetically [to be] able to tolerate milk, I suspect that constant exposure to grain has begun to create a slow evolutionary adaptation toward reducing the typically elevated insulin response to high-density carbohydrates [...]. Maybe in twenty thousand years, all humans will be able to eat high-density carbohydrates without an exaggerated insulin response. (103)

To summarise, then, Sears admits that around 20 percent of the world's people have adapted to tolerate dairy foods, and around 25 percent of Americans have adapted to tolerate grain products, over the mere 'flick of an eyelash' in evolutionary time. In Sears's own terms, this achievement is not 'sluggish' at all. These concessions are by no means negligible. They undermine Sears's entire dietary prescription, which is based on the premise that human evolutionary adaptation ceased millions of years ago, and that we must therefore attend to our prehistoric biochemistry to determine the optimum diet for people today. If, on the other hand, a substantial minority of the world's population has continued to adapt over those millions of years, and has even adapted effectively to dietary changes over much shorter periods of time, it seems unlikely that the rest of the world's population has not adapted at all, perhaps in as-yet-unlooked-for and unknown ways. In *Why Some Like It Hot*, Gary Paul Nabhan critiques the 'Paleolithic prescription' on the basis that different ethnoracial groups today arguably display microevolutionary adaptations to their recent historical environments which have vital consequences for nutrition and health; an important example is thalassemia, which confers resistance to malaria.³² But even if the rest of humanity has somehow stayed the same genetically over the last 10,000 years, the recent adaptations that a substantial minority has undergone should surely influence how *this* group, at least, should eat (presumably by consuming more grains, dairy products, or both). *The Zone* is thus not particularly helpful in telling *me* what *I* should eat, except to imply that I should perhaps identify my own 'genetic code' through genetic testing or dietary experimentation, both of which would seem to render *The Zone's* regime redundant.

In part, the logical inconsistencies present in Sears's version of evolutionary nutrition flow from his penchant for numerical precision. *The Zone* confidently demarcates clear-cut historical periods, finely-balanced macronutrient ratios, and precise population fractions. By contrast, *Dr. Atkins' New Diet Revolution* presents a relatively hazy and romanticised evolutionary account, which nonetheless differs subtly in its details from that of *The Zone*. As I noted above, Sears posits an unusually early end-point to the history of human evolutionary adaptation, arguing that human evolution was essentially complete well before the Paleolithic era. By contrast, Atkins treats the Stone Age as the 'evolutionary window' during which human nutritional adaptation took place. In other words, Atkins suggests that human evolutionary processes hummed along happily until the

³² Gary Paul Nabhan, *Why Some Like It Hot: Food, Genes, and Cultural Diversity* (Washington: Island Press, 2004). For critique of the 'Paleolithic prescription', see pp. 36-62. On thalassemia, see pp. 63-91. Although Nabhan's research offers a helpful counterpoint to low-carbohydrate discourse, I have serious concerns about the implications of his work, which is highly prescriptive and deterministic. While Nabhan acknowledges the 'problem' of hybrid ethnoracial identities that I noted in Chapter 3, *Why Some Like It Hot* fails to provide any practical nutritional advice to the many people who are 'mutts rather than blue bloods' (38). Although Nabhan recognises that race is a social category, not a genetic one (51-54), *Why Some Like It Hot* proceeds on the basis of racial genetic homogeneity, arguing that particular ethnoracial groups should behave in specified ways because of their genetic makeup. I am sympathetic to many of the community-based nutrition interventions Nabhan describes, but would prefer them to be judged on their contribution to individual and community health, rather than the blanket imperative to 'reconnect' with ancestral foodways.

end of the Paleolithic era, but then abruptly stopped. Atkins and Sears agree that a Paleolithic-style low-carbohydrate diet is the eating pattern to which humans are best adapted. However, their reasoning is different. Rather than constituting a ‘test case’, Stone-Age diet is significant to Atkins’s logic because it produced the human body as it is today:

[T]he human body evolved and primitive humans thrived as hunter-gatherers who subsisted primarily on meat, fish, vegetables, fruit, whole grains and seeds and nuts. Candy bars were few and far between. The human body is used to dealing with unrefined foods as they occur in Nature. Consequently, your body’s capacity to deal with an excess of processed foods is pretty poor, which is why our twenty-first-century way of eating so often gets us into trouble. (48)

Unlike Sears, who zooms in on the macronutrient composition of Paleolithic diet (as I have discussed), Atkins focuses here and elsewhere on the types of foods that ‘primitive’ people ate: ‘meat, fish, vegetables, fruit, whole grains and seeds and nuts’. Of course, whole grains were a rare feature of Stone-Age diets, and were never consumed in large quantity. (I have already considered the anomalous and ambiguous status of whole grains on the Atkins Diet in Chapter 4 of this thesis.) Nonetheless, the defining absence in this list is refined carbohydrate of any kind. Atkins reasons that if these are the foods on which humanity evolved, then today’s dieters should also ‘thrive’ on this diet.

Atkins’s evolutionary account poses many of the same difficulties that I discussed above in relation to *The Zone*. In particular, Atkins describes evolution as an event in the past tense, rather than an ongoing process; as noted above, this approach neglects the possible import of more recent evolutionary change.³³ Atkins’s representation of evolution as a finite occurrence also leads, inevitably, to a concept of evolution as homogeneous. Evolution, Atkins-style, is a historical event which happened everywhere and for everyone at the same time and in the same way, producing a human body that does not vary across either time or space. In the passage cited in the previous paragraph, the phrase ‘the human body’ (singular, homogeneous) appears twice. In its third iteration this body becomes ‘*your* body’, which is apparently exactly the same as all other human bodies in its (in)capacity to deal with processed and refined foods. In one sense, the theory of human homogeneity might be applauded, since it avoids the tendency to treat certain ethnoracial groups as evolutionarily ‘backward’. But the drawback of this model is that it cannot recognise that obesity and diabetes rates differ markedly in different parts of the world and also within individual nations. I am certainly not advocating more nuanced evolutionary explanations for global health disparities.³⁴ Rather, I suggest that evolutionary nutrition is an inherently unsatisfactory model no matter how carefully it is deployed. At its most simplistic, evolutionary nutrition obscures stark inequalities in health within and between nations. Where evolutionary nutritionists do acknowledge recent adaptive change, they risk replicating racist hierarchies of evolutionary development. But even in its most politically correct forms, evolutionary nutrition remains inherently deterministic and preservationist, denying self-determination and individual agency in favour of strict genetic prescription.

³³ For a helpful overview of changing concepts of evolution, see Steven Rose, “Evolution,” in *New Keywords: A Revised Vocabulary of Culture and Society*, ed. Tony Bennett, Lawrence Grossberg, and Meaghan Morris (Malden, MA: Blackwell, 2005).

³⁴ For a critique of Nabhan’s more nuanced microevolutionary approach, see footnote 32 above.

The consistent maxim of evolutionary nutrition is that we should eat what our ancestors ate. This may be conceived as a blanket prescription (as on the Atkins Diet), or an ethnoracially differentiated menu (Nabhan claims that ‘we are what our ancestors drank and ate’).³⁵ These two versions of evolutionary nutrition necessarily spotlight different periods of human evolutionary history. According to Atkins, the relevant ancestral period for dieters’ attention is the Paleolithic era, variously described as primitive, Stone-Age, or ‘caveman’:

The food you eat when you do Atkins is surprisingly close to what our primitive ancestors ate. Meat, fish and fowl; nuts, seeds and berries; vegetables and salad greens – Mr. and Mrs. Caveman would have recognized most of those things. They certainly wouldn’t have known what to make of all those boxes filled with sugar, white flour and salt in the middle aisles of the supermarket – and neither does your bewildered body.
(329)

As well as reinforcing the evolutionary underpinnings of Atkins-Diet logic, and the related idea that low-carbohydrate dieting represents a more natural way to eat, this passage also functions as a simple statement of historical precedent. In this guise, passages such as the one above serve to reassure dieters about the healthfulness and safety of low-carbohydrate dieting: if people have eaten this way (and survived) for so long, then low-carbohydrate diets must be healthy and safe. This is Atkins on the defensive against negative press. Doctors and journalists might claim that the Atkins Diet is dangerously unbalanced and its long-term effects unknown (as I discussed in Chapter 2). But assertions of long historical precedent put the shoe on the other foot, positioning the modern Western diet instead as historically divergent and untested.

Statements of historical precedent appear frequently in popular low-carbohydrate diet books, simultaneously bolstering evolutionary arguments, reassuring dieters, and redefining what counts as ‘normal’ in matters of nutrition. In *Sugar Busters*, for instance, Steward and his coauthors reassure readers that ‘the basic principles outlined in [this book] have been field-tested by the human digestive system throughout the eons’ (25). This type of statement constructs humanity’s historical eating habits as a kind of mass experiment which may stand in for the clinical trial and the formal scientific knowledge it produces. The authors of *Sugar Busters* claim that their regime ‘is closer to the way our distant ancestors ate’ than ‘current, faddish diets’ (88), a comparison which marginalises today’s dominant Western eating habits as ‘faddish’, divergent and unhealthy. *Sugar Busters* gives numerous specific foods the seal of approval because they were part of the diet of ‘our ancestors’. ‘Eat a lot of salads’, the authors advise, ‘because they are important to the overall digestive system. *Our ancestors ate a lot of leafy vegetables when they could find them*’ (170). ‘Raw vegetables usually are best for you (*like our distant forefathers ate them*)’ (188). Beef, lamb, pork, dairy foods and eggs are all said to be ‘good for us today *just as they were good for our distant ancestors*’ (145).

Similar assertions of long historical precedent pepper *Dr. Atkins’ New Diet Revolution*. We read, for example, that ‘eating meat, fish and fowl isn’t a health hardship – it’s what humans have eaten for millions of years. People ate much the same way in the nineteenth century’ (22). This sweeping historical generalisation entirely ignores the specifics of *who*, *where* and *when*. Glaring differences in protein consumption arising from class, gender, global geography and historical period all disappear in the space of a single sentence. Never mind, for example, that the diet of the masses

³⁵ Nabhan, *Why Some Like It Hot*, 30. This statement is italicised in the original.

in late nineteenth-century England consisted overwhelmingly of bread, jam, sugar and tea.³⁶ Claims of historical precedent seem to invite such generalisations: a pattern which makes sense given that in low-carbohydrate discourse, representations of the ancestral past function most of all self-reflexively, in constructed contrast with modern Western eating habits. As I have pointed out elsewhere in this thesis, the binaristic structure of nutritional primitivism tends to generate images of the past that are both romanticised and highly generalised. In another example, Atkins claims that '[b]utter, olive oil and lard worked very well for our heart-healthy ancestors' (355). In its references to butter and lard, this statement recalls the farming traditions of nineteenth-century America. But at the same time, this claim privileges the histories of migrants from northern and Mediterranean Europe, while excluding the histories of migrants from regions (such as Asia) where the diet depends on other types of fat. Frequently, Atkins generates rhetorical force via evocations of the grand passage of time, along with expansive global statements which take in the entire human race. 'For *thousands of years*,' he writes, 'human beings were in luck': high-carbohydrate processed food did not exist. 'Now we're stuck with it. [...] But there isn't a *person on this planet* who should be eating it' (25-26). Later, and in the same vein, we read that 'no culture *in world history* has ever consumed *even a fraction* of the sugar we twenty-first-century Westerners do' (53).

Appeals to historical precedent depend logically on an idealised representation of primitive life and times. At this point, Atkins's logic begins to overlap with that of Sears: in statements of historical precedent, the Paleolithic era functions as a 'test case' for optimum human nutrition. If Paleolithic people were well-developed and healthy, then this may be taken as proof that their diet was beneficial. Atkins thus envisions a thriving and abundant hunter-gatherer utopia populated with 'strong and healthy' primitive people:

Even before the onset of agriculture, the human animal was able, for millions of years, to remain strong and healthy in conditions of often savage deprivation by eating the fish and animals that scampered and swam around him, and the fruits and vegetables and berries that grew nearby. Without medicine, without expertise, without insulated housing or reliable heating, our species nonetheless survived. The fact that the dietary side of our primitive lifestyle was enormously healthy undoubtedly helped us. (23)

This is a contradictory representation of pre-agricultural human life which combines aspects of soft and hard primitivism (the former positive, the latter negative). Boas defines the 'soft' primitivist ideal as 'the sort of life that was sometimes depicted as characteristic of the islands of the South Seas[,] where the climate is gentle, the earth spontaneously productive, the animals friendly, the sea full of fish easily caught'. By contrast, 'hard' primitivism holds 'that man is happiest when he is not burdened with arts and sciences, lives with the fewest possible needs, is satisfied with the simplest of lives'.³⁷ By combining features of soft and hard primitivism, Atkins strategically augments his argument: the harder primitive life is said to be, the more this boosts the apparent healthfulness of primitive diet, which must work harder than ever to make up for the difficult conditions in which people lived. Thus 'savage deprivation' is offset by contradictory images of abundant animal and plant life, echoing classical notions of a Golden Age characterised by the natural bounty of the uncultivated earth.³⁸ The passage cited above is strikingly similar to

³⁶ Mintz, *Sweetness and Power*, 126-30.

³⁷ Boas, "Primitivism," 578.

³⁸ See Robert Whelan, *Wild in Woods: The Myth of the Noble Eco-Savage* (London: IEA Environmental Unit, 1999), 4.

one in Ovid's *Metamorphoses*, in which Ovid describes a pre-agricultural utopia where the earth spontaneously and bountifully provides for its inhabitants, who feast on nuts and berries.³⁹

In idealising a state of nature which ostensibly existed in Paleolithic times, Atkins also of course echoes Rousseau, who suggested that man in his original primitive state was not only morally pure and innocent, but physically hardy and robust too. According to Rousseau, the process of civilisation corrupted not just humanity's morals, but also our physical health: 'in following the history of civil society, we shall be telling also that of human sickness'.⁴⁰ Although Atkins's vision focuses on nutrition and health, we can also see in it a more general idealisation of primitive life reminiscent of Marshall Sahlins's now-classic *Stone Age Economics*, in which Sahlins argued that primitive peoples enjoyed 'an enviable lifestyle characterized by tolerance, leisure, radiant health and longevity, communal ownership, abundant food, consumption based on need and [...] good earth-keeping skills'.⁴¹ This quintessential soft primitivist argument identifies humanity's downfall with the introduction of agriculture, which allowed people to produce surplus food and thus build up wealth. From this 'flowed the evils of social hierarchy, slavery, patriarchalism and commerce'.⁴² Similarly, Atkins depicts agriculture as a double blow to human health. First and foremost, he considers high-carbohydrate grain-foods intrinsically unhealthy. But further, Atkins points out that the mass production of grain sowed the seeds for the commercialisation of food production. As I noted in Chapter 4, Atkins holds the commercial food industry responsible for the glut of poisonous convenience foods, replete with refined flours and trans fats, currently burdening our supermarket shelves and our bodies. He writes: 'That packaged refined carbohydrate stuff in the supermarket puts money in somebody's pocket. And it puts garbage into your stomach' (221).

The major problem with appeals to historical precedent in support of low-carbohydrate diets is that such arguments are 'tautological' or circular, as Barrett Brenton has pointed out in his various papers on evolutionary nutrition. In the passage I cited two paragraphs ago, Atkins claims that primitive people were 'strong and healthy'. He attributes this to what he describes as their 'enormously healthy' diet. However, neither the claim that primitive people were healthy, nor the claim that their diet was healthy, is backed by any proof other than the simple and uncontrovertible fact that the human race survived to fight another day. Instead, the two claims are locked in a circular logical loop which fails to engage with historical evidence. Atkins begins confidently enough, claiming that primitive diet kept early humans strong and healthy. But he ends weakly, protesting too much: 'The *fact* that the dietary side of our primitive lifestyle was *enormously healthy undoubtedly* helped us'. This is only one example of a repeated discursive manoeuvre. Atkins encourages readers to 'eat the natural, healthy unrefined animal and vegetable foods that people ate *and grew robust on* in centuries past' (26). The claim that I have highlighted in italics is highly questionable, especially given its broad historical scope. Clearly, many people 'in

³⁹ Ovid, *Metamorphoses*, trans. Samuel Garth, Sir John Dryden et al. (Internet Classics Archive), book 1; available from <http://classics.mit.edu/Ovid/metam.1.first.html>. Lovejoy and Boas discuss Ovid's depiction of the Golden Age in their classic study of primitivism. See Lovejoy and Boas, *Primitivism and Related Ideas in Antiquity*, 43-49.

⁴⁰ Jean-Jacques Rousseau, "A Discourse on the Origin of Inequality" (1755), in *The Social Contract and Discourses* (London: J. M. Dent & Sons, 1973), 51.

⁴¹ Marshall David Sahlins, *Stone Age Economics* (Chicago: Aldine-Atherton, 1972). The quotation is from Peter Coates, *Nature: Western Attitudes since Ancient Times* (Berkeley: University of California Press, 1998), 86.

⁴² Coates, *Nature*, 86. Rousseau identifies metallurgy as a second unfortunate tipping-point in human history.

centuries past' were *not* robust, no matter what they ate.⁴³ Historical robustness slips in here unnoticed as a secondary claim after the slightly less controversial claim that people historically ate unprocessed meats and vegetables. The notion that Paleolithic people were lean, fit and healthy carries the logical burden of the entire text: if this were not true, why would dieters today choose to emulate a Paleolithic diet?

As I have pointed out in previous chapters of this thesis, we may see again here that representations of that which is *not* modern and *not* Western in low-carbohydrate discourse tend to be highly idealised and generalised in order to fit the binary structure of nutritional primitivism. The representations of Stone-Age diet, health and lifestyle that I have discussed in this section are consistently contradictory and unsupported by scientific and historical evidence. It is striking, for example, that Sears's claims about the macronutrient composition of Paleolithic diet are not substantiated even in the specific paper that he himself cites in support of his figures. Instead, authors like Sears and Atkins betray the discursive pressure I have identified consistently in earlier chapters of this thesis, to make the foodways of other times and other places fit low-carbohydrate authors' preconceived notions of healthy diet. In low-carbohydrate discourse healthy diet is defined in opposition to a monolithic modern Western diet, the distinguishing feature of which is large quantities of highly refined carbohydrates. The ostensible 'robustness' of Stone-Age man functions in this discursive system as an expression of discontent with the overweight and diseased bodies that modern Western foodways have arguably caused. This 'radical relativity of meaning', as Bell terms it, means that the logic of evolutionary nutrition is inevitably circular.⁴⁴ Further, evolutionary nutrition presents troubling ideological tendencies: to obscure health disparities within and between nations, perpetuate racist hierarchies of evolutionary development, and deny individual and community self-determination in favour of strict genetic determinism.

The thrifty gene hypothesis

In *Backdoor to Eugenics*, Troy Duster points out the close historical and theoretical links between genetic science and evolutionary theory:

From its very inception in the latter part of the nineteenth century, the science of human genetics germinated in, was nurtured by, and was inextricably entangled with the social and political storm of evolutionary theory.⁴⁵

In his historical overview of the concept of evolution, Steven Rose notes that the 'modern synthesis' of the evolutionary theory of Charles Darwin and the genetic research of Gregor Mendel emerged in the early twentieth century. Based on this synthesis, the biological variation between organisms which allows for natural selection is thought to proceed from genetic mutation or change:

The sources of variation are changes, by mutation or other mechanisms, in genes (understood today as composed of DNA); natural selection provides the "scrutiny" by which some variations are favorable and preserved, others lost.⁴⁶

⁴³ Laudan, "A Plea for Culinary Modernism," 40-41.

⁴⁴ Bell, *Primitivism*, 4.

⁴⁵ Troy Duster, *Backdoor to Eugenics*, 2nd ed. (New York and London: Routledge, 2003), 132.

⁴⁶ Rose, "Evolution," 119.

In the context of the contemporary ‘obesity epidemic’, and the popularity of neo-Darwinian accounts of overweight, Gard and Wright also point out that ‘[a] key intellectual ally of neo-Darwinian explanations of human life has been the science of genetics’.⁴⁷ Genetic models of obesity, diabetes and disease in the popular low-carbohydrate diet literature serve to bolster the evolutionary logic I discussed in the previous section: that a low-carbohydrate diet is the eating pattern on which human beings have adapted to function best. Further, the widespread invocation of genetics in explanations of disease in texts such as *The Zone* paves the way for the introduction of the thrifty gene hypothesis that I explained in the introduction to this chapter.

The Zone displays an extremely strong focus on genetics as the cause of virtually every health or disease state known to humanity. The book opens with, and appears to be born out of, Sears’s personal genetic terror: a familial pattern of early and fatal heart attack. I cite here the very first two paragraphs of the book’s preface:

A sword of Damocles hangs over my head, something I’ve known since my early twenties. You see, I’m a walking genetic time bomb. I’m genetically programmed by nature to die of heart disease within the next ten years. My early death seems all but inevitable: my grandfather, father, and every one of my three uncles were killed by heart attacks before they reached the age of fifty-four. / As I write this, I’m forty-seven. (ix)

Sears goes on to confess that his entire career path as a biochemistry researcher, culminating in the development of the Zone Diet, was driven by his fear of this inherited susceptibility:

I realized that to save my own life I would have to know much more. I needed to know what made the difference between a healthy heart and a heart so genetically flawed it would only last two-thirds of a normal lifetime. (x)

The references to genetics in these two passages are odd and unsubstantiated. They heighten the degree of urgency and inevitability associated with the cardiovascular threat, yet there is no suggestion in Sears’s account that any specific gene has been identified amongst the Sears men which predisposes them to heart attack, nor that they suffer from any recognised genetically transmitted heart condition.⁴⁸ Instead, there is a presumption of genetic implication based on an admittedly very strong family history. All three references to genetics in the passages cited above (‘a walking *genetic* time bomb [...] *genetically* programmed by nature [...] a heart so *genetically* flawed’) are either adjectival or adverbial, and could be excised without damaging Sears’s argument. The very concept of genetics functions here as an optional rhetorical extra, and reappears frequently in *The Zone* in the same guise.

The logic behind the Zone Diet is that (genetic) predisposition to disease and ill-health of all kinds can be mediated, even obviated, by appropriate diet. Sears writes:

Many chronic disease conditions such as obesity, heart disease, cancer, diabetes, depression, and alcoholism have a strong genetic linkage. The potential for their expression lies buried in your genetic code. In the Zone, you dramatically decrease the likelihood that those genes will be expressed. (37)

⁴⁷ Gard and Wright, *The Obesity Epidemic*, 33.

⁴⁸ Hypertrophic cardiomyopathy, long-QT syndrome and Marfan syndrome are ‘the 3 most common familial cardiovascular diseases for which gene defects have been identified’. See Barry J. Maron et al., “Impact of Laboratory Molecular Diagnosis on Contemporary Diagnostic Criteria for Genetically Transmitted Cardiovascular Diseases: Hypertrophic Cardiomyopathy, Long-QT Syndrome, and Marfan Syndrome,” *Circulation* 98 (1998): 1460. These are all non-atherosclerotic conditions. On the genetics of heart attack, see Eric J. Topol, “The Genetics of Heart Attack,” *Heart* 92 (2006).

Sears names so many different ‘disease conditions’ in this passage that it would be impossible to discuss for each and every one of them the scientific basis of his claim that they are strongly genetically linked. Several of the conditions Sears lists would properly be considered a disease *category* rather than a single disease, further expanding the ambit of Sears’s claim. Cancer, in particular, occurs in many different forms in many different sites of the body, with varying degrees of established genetic linkage for each.⁴⁹ Diabetes, too, exists in a variety of forms (including type 1, type 2 and gestational diabetes) of which type 2 is the best-known and most common. Over 85 percent of Australians with diabetes have the type 2 form of the disease.⁵⁰

The possible genetic basis of diabetes has been the subject of extensive research as well as considerable critique, especially in relation to the thrifty gene theory. I discuss the thrifty gene theory specifically in detail later in this section. In relation to Sears’s more general claim that diabetes is strongly genetically linked, I point out here that although people with a family history of type 2 diabetes are certainly at increased risk of developing the disease, this does not by itself establish the ‘strong genetic linkage’ Sears claims. Even scientists who assert positively that ‘[t]ype 2 diabetes is associated with a strong genetic predisposition’ are forced to admit (somewhat lamely) that ‘[i]t has not yet been possible to definitely identify the genes to which this susceptibility is linked’.⁵¹ Critics of the thrifty gene theory have been more forthright. In their review of the evidence for genetic predisposition to type 2 diabetes, Paradies and coauthors found that although ‘twin studies and related analyses [...] support a plausible genetic component’, the hard evidence for a specific genetic link or links is sketchy at best:

There is only very preliminary and ambiguous evidence for specific thrifty genes, and both gene-specific studies and admixture studies fail to sufficiently account for known and possible social and environmental causes of T2DM [type 2 diabetes mellitus]. The fact that over 250 genes have been studied as possible causes of T2DM, but together these genes explain less than 1% of diabetes prevalence worldwide [...], should give researchers – and others – pause.⁵²

Other critics from the health sciences, social sciences and humanities raise similar concerns. Robyn McDermott points out that in spite of more than 30 years of genetic research, ‘the “genes for NIDDM [non-insulin dependent diabetes mellitus, or type 2 diabetes]” have not been found’.⁵³ McDermott examines possible alternative causes of diabetes: these might include micronutrient deprivation due to poverty, or alternatively the impact of elevated glucose and/or insulin levels *in utero* where the expectant mother is herself diabetic.⁵⁴ Ultimately, as Jennifer

⁴⁹ For a recent review of genetic susceptibility to breast cancer, for example, see R. A. Oldenburg et al., “Genetic Susceptibility for Breast Cancer: How Many More Genes to Be Found?” *Critical Reviews in Oncology/Hematology* 63 (2007).

⁵⁰ E. L. M. Barr et al., “AusDiab 2005: The Australian Diabetes, Obesity and Lifestyle Study. Tracking the Accelerating Epidemic: Its Causes and Outcomes,” (Melbourne: International Diabetes Institute, 2006), iii. People with type 1 diabetes make up a further 10 percent (approximately) of diabetes prevalence in Australia.

⁵¹ K. G. M. M. Alberti, P. Zimmet, and J. Shaw, “International Diabetes Federation: A Consensus on Type 2 Diabetes Prevention,” *Diabetic Medicine* 24 (2007): 452.

⁵² Paradies, Montoya, and Fullerton, “Racialized Genetics and the Study of Complex Diseases,” 209, 217.

⁵³ Robyn McDermott, “Ethics, Epidemiology and the Thrifty Gene: Biological Determinism as a Health Hazard,” *Social Science & Medicine* 47, no. 9 (1998): 1190. See also Margery Fee, “Racializing Narratives: Obesity, Diabetes and the ‘Aboriginal’ Thrifty Genotype,” *Social Science & Medicine* 62 (2006): 2992; Jennifer Poudrier, “The Geneticization of Aboriginal Diabetes and Obesity: Adding Another Scene to the Story of the Thrifty Gene,” *Canadian Review of Sociology and Anthropology* 44, no. 2 (2007): 238. I would like to acknowledge Dr Jennifer Poudrier for keeping me abreast of research on the thrifty gene critique, and for her ongoing and stimulating correspondence on this topic.

⁵⁴ McDermott, “Ethics, Epidemiology and the Thrifty Gene,” 1191-92.

Poudrier points out, the causes of diabetes remain obscure, although its association with ‘environmental and lifestyle factors such as age, stress, poor nutrition, sedentary lifestyles, as well as low socio-economic status, and social marginalization’ is clear.⁵⁵

As well as questioning the scientific evidence for a ‘diabetes gene’ or genes, critics express strong concerns with the potentially deleterious effects of genetic thinking on both diabetes prevention initiatives and individual clinical care. Paradies and coauthors argue that the research focus on genetics misdirects ‘the public health gaze [...] onto individual biophysical risk factors and away from social, environmental, and ecological factors’; these last would seem to be ‘far more amenable to modification than genetic ones’.⁵⁶ Other critics agree. McDermott notes that the search for a genetic cause for diabetes ‘almost completely ignore[s] the need to attend to environmental factors, including the socio-economic environment’.⁵⁷ Poudrier, similarly, contends:

[G]eneticism in the context of health care and disease not only distracts from the complexity of gene/environment and gene/gene interactions, but also tends to completely ignore the socio-economic, cultural, and environmental conditions implicated in the etiology of disease.⁵⁸

These are not merely abstract questions. Rather, the primacy of the genetic model diverts limited government and private funds away from public health programs designed to prevent diabetes (including initiatives which address socioeconomic disadvantage) into genetic research of doubtful clinical utility.⁵⁹ Poudrier asks:

In the face of overwhelming evidence showing that diabetes is a consequence of nutrition, obesity, and physical inactivity, which are highly associated with socio-economic status and levels of marginalization, what are the clinical purposes of genetic research?⁶⁰

She points out that diabetes prevention strategies (such as weight-loss, exercise and dietary change) would seem to be the same regardless of whether or not an individual is at increased *genetic* risk.⁶¹ McDermott adds that genetic research may be actively harmful in producing ‘a kind of fatalism and therapeutic nihilism’ amongst both medical practitioners and diabetes patients, which has the potential to compromise clinical care, quality of life, and even life expectancy.⁶²

The Zone slips easily between family history and genetics in relation to diabetes and numerous other health conditions. In the passage from *The Zone* that I cited earlier, all the ‘chronic disease conditions’ Sears names (obesity, heart disease, cancer, diabetes, depression and alcoholism) are in fact multifactorial in origin. That is, they are all associated with environmental and lifestyle

⁵⁵ Poudrier, “The Geneticization of Aboriginal Diabetes and Obesity,” 238; Jennifer Poudrier, “‘Racial’ Categories and Health Risks: Epidemiological Surveillance among Canadian First Nations,” in *Surveillance as Social Sorting: Privacy, Risk, and Digital Discrimination*, ed. David Lyon (London and New York: Routledge, 2003), 126.

⁵⁶ Paradies, Montoya, and Fullerton, “Racialized Genetics and the Study of Complex Diseases,” 206, 220. See also Fee, “Racializing Narratives,” 2995.

⁵⁷ McDermott, “Ethics, Epidemiology and the Thrifty Gene,” 1190.

⁵⁸ Poudrier, “‘Racial’ Categories and Health Risks,” 113.

⁵⁹ Poudrier, “The Geneticization of Aboriginal Diabetes and Obesity,” 256; Poudrier, “‘Racial’ Categories and Health Risks,” 128-29.

⁶⁰ Poudrier, “‘Racial’ Categories and Health Risks,” 128.

⁶¹ Poudrier, “The Geneticization of Aboriginal Diabetes and Obesity,” 256; Poudrier, “‘Racial’ Categories and Health Risks,” 128.

⁶² McDermott, “Ethics, Epidemiology and the Thrifty Gene,” 1190.

factors as well as family history. None is a directly heritable genetic disease in the way that Huntington's chorea, for example, is genetic. The idea that predisposition to obesity or diabetes 'lies buried in your genetic code' is misleading and simplistic. But Sears argues specifically that obesity and diabetes result from a person's genetically determined response to carbohydrate, which varies between individuals and supposedly determines who becomes overweight and who does not:

[P]eople's genetic insulin responses to carbohydrates are diverse. In about 25 percent of a normal population, insulin response to carbohydrates is very blunted. [... These people] can consume large amounts of carbohydrates and not get hungry or fat. [...] / On the other hand, 25 percent of an otherwise normal population has an unlucky genetic draw that dictates an extremely elevated insulin response to carbohydrates. These people simply have to look at a carbohydrate and they begin gaining fat. / Between these two extremes lies the other 50 percent of the American population. [...] These people will always fail on a high-carbohydrate diet. They're accused of being weak-willed gluttons who can't control themselves, when in fact they were just born with unfortunate genes. (30)

Subsequently, in another very similar passage, Sears adds that a person's genetic insulin response to carbohydrate also determines his or her tolerance to variations in macronutrient intake in staying inside the 'Zone', that quasi-mystical state of optimum physical, mental and emotional functioning accessed by consuming protein and carbohydrate in the appropriate ratio (65-66). As the passage cited above indicates, the positive side of genetic explanations for obesity is that they avoid the moral judgements frequently heaped upon people who are overweight, since genes are a matter of luck and are outside one's own control.

However, Sears's references to genetics are again unsubstantiated and logically redundant. As I noted earlier in this section, we could remove every reference to genes or genetics in the passage cited in the previous paragraph without damaging Sears's argument. Whether or not readers choose to accept Sears's assertion that the American population conforms to a spectrum of hormonal responses to carbohydrate has no bearing on whether these responses are *genetically* determined. The reduction of biochemistry and physiology to genes is spurious. I have already noted alternative theories of diabetes causation which might apply here, notably the hypothesis that hyperglycemia and/or hyperinsulinemia *in utero* may impair glucose metabolism in the unborn child.⁶³ Further, as Sears would well know, a person's insulin response to carbohydrate frequently changes over the course of a lifetime. This is, after all, the defining feature of type 1, type 2 and gestational diabetes, all of which reflect either sudden or gradual loss of normal insulin function. The same person who consumes apparently unlimited amounts of starch and sugar in childhood without ill effect may very well become a prediabetic or diabetic adult with severe insulin resistance – but his or her genes have not changed. This critique may seem disingenuous, since it seems likely that Sears intends to highlight genetic *predisposition* to impaired glucose tolerance. But his vocabulary is one of genetic determinism, not lifetime susceptibility. This results, I would argue, from Sears's blinkered focus on genes as the primary cause of disease at the expense of environmental and lifestyle factors, a focus which leads ultimately to a deterministic model.

⁶³ Ibid., 1191.

Reading *The Zone*, I feel that Sears includes the words *gene*, *genetic* and *genetically* for good measure when describing any aspect of the human body and its functioning. The text betrays what I can only describe as an obsession with genes. To a certain extent this simply reflects cultural trends, especially in the mid-1990s when Sears was writing. The Human Genome Project, in particular, situated human genetics at the forefront of the popular scientific imagination.⁶⁴ Sears's insistence on genetic determinism generates a sense of impending doom (recall Sears's reference to the sword of Damocles [ix]), lending further urgency to *The Zone's* dietary strictures. Sears is not alone in this tactic: the Eadeses, too, claim in *Protein Power* that '[t]ype II diabetes is without doubt of genetic origin; if your parents have or had it, then the odds are high that you will inherit the predisposition to the disease'.⁶⁵ The effect of this emphasis on genetics is to create a climate of fear in which readers with a family history of diabetes should gratefully jump on the Protein Power bandwagon, which the Eadeses immediately advance as the (only) means of escape from one's genetic destiny: 'If you follow the proper diet, you can ward off the onset of type II diabetes or even reverse its damaging effects'.⁶⁶ Like Sears, the Eadeses maintain that genetic predisposition to overweight and disease can be mediated or even obviated by following the (low-carbohydrate) diet for which evolution designed us.

The insistence on the genetic origins of obesity and diabetes in texts such as *The Zone* and *Protein Power* paves the way, as I noted earlier, for the interpolation of the thrifty gene theory, which appears in all the diet books I examine in this thesis with the exception of *Sugar Busters*. I begin here by quoting Agatston's description of the purported thrifty gene mechanism in *South Beach*, as it is particularly clearly stated (although Agatston does not name the thrifty gene as such):

We've been genetically conditioned to store fat since the dawn of *homo sapiens*, as a survival strategy to see us through times of famine. / The problem now, of course, is that we never experience the famine end of that equation, only the feast. (9)

Later, Agatston explains:

Our bodies are designed to store excess energy (which we call calories) for a very good reason: For most of humanity's existence, securing a steady and sufficient supply of food has been our biggest, most important challenge. Feast or famine prevailed and, to adapt, our bodies would save the energy from today's feast, knowing that tomorrow it [*sic*] would need to burn saved fuel in order to survive. That's why this particular brand of obesity concentrates the fat in the mid-section – it leaves the extremities lithe and muscular, for ease of manual labour and, especially, flight. Advanced civilization has done a great deal to eradicate famine, but at the expense of our waistlines and our cardiovascular systems, which now suffer from the fact that we store fat we no longer need. (70)

As these passages from *South Beach* make clear, the thrifty gene hypothesis theorises obesity and diabetes as the result of a mismatch between an evolutionary genotype favouring energy efficiency and fat storage, and the constant abundance of the modern diet. I noted earlier that a racialised version of the thrifty gene theory is often employed today to explain the particularly high rates of diabetes and obesity amongst fourth-world Indigenous peoples. However, Neel's

⁶⁴ On the Human Genome Project, see K. Davies, *The Sequence: Inside the Race for the Human Genome* (London: Weidenfeld and Nicolson, 2001).

⁶⁵ Eades and Eades, *Protein Power*, 311.

⁶⁶ *Ibid.*

original hypothesis was that the thrifty gene might confer a predisposition to diabetes and obesity on individuals from any ethnoracial background, including Westerners.⁶⁷ In his final publication on the thrifty gene, Neel explicitly rejects a simple genetic explanation for high rates of diabetes amongst Amerindians.⁶⁸ The two passages from *South Beach* cited in the previous paragraph reflect Neel's broader, species-wide version of the thrifty gene hypothesis. Indeed, *South Beach* perhaps expands the ambit of the thrifty gene theory even further: Agatston seems to suggest here that *all* modern humans possess a thrifty genetic capacity to accumulate body fat. As noted earlier, this homogeneous model of evolutionary adaptation avoids the racist trap of blaming fourth-world obesity and diabetes on Indigenous people's supposed evolutionary backwardness. But the species-wide version of the thrifty gene theory also fails to explain why not everyone in the world, even in affluent Western nations, is obese, thus masking the socioeconomic, environmental and lifestyle factors which might be responsible for disparities in health and weight. As Gard and Wright point out in their critique of the thrifty gene theory, '[w]hat is needed here are clear and specific arguments about concrete events that have caused increasing overweight and obesity in some, but not all, communities'.⁶⁹

It is important to stress that Neel only ever proposed the thrifty gene theory as a hypothesis. As I argued earlier in this section, the evidence for a specific diabetes gene or genes is sketchy at best. Critics also question the feast-or-famine assumption that underpins the thrifty gene theory: that is, the belief that prehistoric hunter-gatherer life was necessarily characterised by alternating conditions of 'feast' or famine, which made the capacity to store body-fat advantageous. Paradies and coauthors point out that certain hunter-gatherer groups, including Pacific Islander peoples who now suffer extremely high rates of diabetes and obesity, historically 'were free of feast-and-famine cycles altogether'.⁷⁰ Similarly, Poudrier questions the evidence for past feast-or-famine cycles amongst Canadian Aboriginal people, concluding that 'perhaps the feast and famine stereotype was just that'.⁷¹ Further, critics point out that the thrifty gene hypothesis is inherently 'unfalsifiable'.⁷² To quote Paradies, Montoya and Fullerton, 'a feature of adaptive scenarios such as the TGH [thrifty gene hypothesis] is that they cannot be explicitly tested'.⁷³ Yet scholarly and popular publications on obesity and diabetes routinely present the thrifty gene theory as fact, as do most low-carbohydrate diet books. Poudrier comments aptly that '[a]lthough its existence has not been confirmed scientifically, the "thrifty gene" theory often appears as an assumed truth seemingly waiting (almost impatiently) for scientific authorization'.⁷⁴

Protein Power provides an excellent example of slippage between hypothesis and fact in its presentation of the thrifty gene theory. Like Agatston, the Eadeses take for granted that famine was an inevitable part of early human existence:

There has been discussion in the scientific community for years about the so-called "thrifty gene." First used with reference to diabetes, this phrase has come to mean the genetic material that has been passed along to us by our prehistoric ancestors that allows us to better survive hunger and privation. Since periodic famines, brought on by game

⁶⁷ Neel, "Diabetes Mellitus."

⁶⁸ Neel, "The 'Thrifty Genotype' in 1998," S2-S3.

⁶⁹ Gard and Wright, *The Obesity Epidemic*, 111.

⁷⁰ Paradies, Montoya, and Fullerton, "Racialized Genetics and the Study of Complex Diseases," 212.

⁷¹ Poudrier, "The Geneticization of Aboriginal Diabetes and Obesity," 247.

⁷² Gard and Wright, *The Obesity Epidemic*, 111.

⁷³ Paradies, Montoya, and Fullerton, "Racialized Genetics and the Study of Complex Diseases," 217.

⁷⁴ Poudrier, "'Racial' Categories and Health Risks," 127.

scarcity, heavy winters, droughts, or other natural disasters, were a part of prehistoric life, it makes sense that the people best suited to these deprivations would live to reproduce. Obviously this happened. Natural selection culled the weak and left a population that had the biochemistry and physiology necessary to squeeze every possible calorie from the food at hand and store it efficiently.⁷⁵

The passage opens cautiously, referring to ‘discussion’ about the thrifty gene, and flagging its hypothetical status with the modifier ‘so-called’. Initially, the Eadeses alternate between present, past and conditional tenses. By arguing that the thrifty gene theory is a logical thesis, they implicitly acknowledge its speculative nature: ‘*it makes sense* that the people best suited to these deprivations *would live* to reproduce.’ (Note the conditional tense used here.) But abruptly, the Eadeses switch tense again and the thrifty gene hypothesis becomes fact: ‘Obviously this happened!’ The passage concludes confidently in the simple past tense.

The flip side of the assumption that famine was an inevitable part of pre-agricultural life is the blithe assertion that human nutrition today is uniformly characterised by ‘feast’ conditions. For instance, in the passages I cited several paragraphs ago from *South Beach*, Agatston’s *we* has a species-wide ambit, implying that all the world’s people now share an abundant and secure supply of food. This is simply not true. Such blanket explanations for obesity and diabetes gloss over the continued existence of famine in the third world, as well as the high rates of food insecurity and malnutrition which affect poor and marginalised groups within the West. For instance, in Australia, 30 percent of Aboriginal adults ‘worry at least occasionally about going without food’.⁷⁶ Further, in Western countries, those groups most likely to experience food insecurity are also those with the highest rates of obesity and diabetes. In 2004-05 the age-standardised rate of diabetes amongst Indigenous Australians was more than three times that amongst non-Indigenous Australians.⁷⁷ The fact that the wealthiest and most privileged people in Western societies are *not* the most overweight belies Agatston’s claim that the ‘problem’ lies with over-abundance and over-availability of food. *South Beach* certainly does not suggest that dieters should starve themselves periodically in order to be thin and healthy. Yet Agatston states quite clearly that our ‘problem’ is that we no longer experience famine (9). In the context of continuing third-world hunger, the effect of this statement is to refigure as desirable the suffering, starvation and death of others.

South Beach is unusual amongst the low-carbohydrate diet books I examine in this thesis in that Agatston presents a conventional caloric version of the thrifty gene theory, in which stored body-fat equates simply to surplus calories consumed. Other low-carbohydrate diet texts modify the thrifty gene hypothesis to reflect the arguably differential effects of dietary macronutrients (protein, carbohydrate and fat). As I noted in Chapter 2, the ‘heresy’ of low-carbohydrate diets is that they reject the conventional caloric paradigm, holding instead that dietary carbohydrate mediates weight gain and loss. The biological mechanism by which diet authors graft macronutrients onto the thrifty gene theory is that of insulin response, as the following passage from *The Zone* demonstrates:

⁷⁵ Eades and Eades, *Protein Power*, 405.

⁷⁶ National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples: An Information Paper* (Canberra: National Health & Medical Research Council, 2000), 54.

⁷⁷ Steering Committee for the Review of Government Service Provision, “Overcoming Indigenous Disadvantage: Key Indicators 2007 Report,” (Canberra: Productivity Commission, 2007), 3.13-14.

Insulin responses evolved to cope with the uncertainty of the food supply under extreme, potentially faminelike conditions. If animals or humans are forced to go long periods between meals (as is often the case when food comes from hunting or gathering), then the ability to store nutrients can make the difference between life and death. / When times are leaner – between meals, for example, or during fasts – declining insulin levels mean a corresponding increase in levels of glucagon. This, in turn, tells the liver to release stored carbohydrates in a controlled, measured way so as to keep the brain fed and maintain adequate mental function. / [...]he release of stored body fat is your safety net during famine. Just as a runner could potentially finish twenty marathons using only stored body fat as fuel, you could live for about forty days without eating, on your stored body fat alone. (100)

Notice the difference between Sears's argument and Agatston's (cited earlier in this section). Sears refers to 'stored *carbohydrates*' and the 'ability to store *nutrients*', whereas Agatston refers to the body's capacity to 'store excess *energy*'. The passage above from *The Zone* does not specifically explain why the evolutionary insulin response might cause people today to gain weight, but previous passages in the book make this connection. Sears earlier explains that 'insulin is essentially a storage hormone, evolved to put aside *excess carbohydrate calories* in the form of fat in case of future famine. So the insulin that's stimulated by *excess carbohydrates* aggressively promotes the accumulation of body fat' (15).

Like *The Zone*, *Protein Power* explains fat-storage in evolutionary terms, though again without naming the thrifty gene as such. Like Sears, the Eadeses identify insulin response as the key biological mechanism in this process: 'Insulin increases the storage of fat, drives the sugar from the blood into the cells, and in general performs all the energy-conserving functions that allowed our ancestors to survive'.⁷⁸ Insulin, the Eadeses explain,

activates a number of metabolic systems that we would just as soon not have activated, at least not on a perpetual basis. They were designed to operate on an intermittent, as-needed basis, but thanks to the aging process and the typical American diet, they tend to operate overtime.⁷⁹

The Eadeses also suggest that a further evolutionary mechanism by which fat-storage is accomplished is via the enzyme lipoprotein lipase, which promotes and regulates appetite:

It turns out that the biological activity of this enzyme increases prodigiously immediately *after* weight loss. [...] Although it no doubt has an evolutionary purpose, this is a sorry state of biological affairs: while working hard to lose weight, you reinforce the biochemical underpinnings of your obesity.⁸⁰

The logic in this passage is that the human body has adapted to prehistoric conditions of periodic famine by developing biochemical mechanisms to encourage greater appetite and food consumption in the aftermath of weight-loss, presumably to replenish fat stores and prepare for the next round of deprivation.

Atkins explains the human capacity to store and then 'burn' body-fat in similar evolutionary terms. Like Sears and the Eadeses, Atkins identifies insulin as the hormonal regulator of these processes:

⁷⁸ Eades and Eades, *Protein Power*, 406.

⁷⁹ *Ibid.*, 34.

⁸⁰ *Ibid.*, 305 (original italics).

Before the invention of agriculture, in the first few hundred thousand years of human life, periods of severe food shortage must have been uncomfortably common. Human beings had to be able to burn their own body fat for fuel on those recurrent occasions when the larder was bare. Naturally, our bodies devised a highly efficient system for doing just that. / Have you ever wondered what sustained bears and other hibernating animals during their long winter sleep? It was the utilization of their fat stores. When you dial down the volume of insulin production, as you do in lipolysis, your body is equipped to burn your own body fat in a similar way. (60)

Importantly, there is a fundamental contradiction between this version of the thrifty gene theory and Atkins's model of evolutionary nutrition (discussed earlier in this chapter). In Atkins's rendering of evolutionary nutrition, discussed in the previous section, Paleolithic diet is held up as the optimal diet for people today. This evolutionary logic depends on the premise that Paleolithic people were exceptionally fit, lean and healthy; Paleolithic health is taken as proof that the Stone-Age diet was, and continues to be, the optimal evolutionary eating pattern for human physical functioning. By contrast, the thrifty gene theory presupposes subsistence conditions in the Paleolithic era, marked by alternating periods of 'feast' and famine. In the modified version of the thrifty gene hypothesis put forward in *The Zone, Protein Power* and *Dr. Atkins' New Diet Revolution*, excess dietary carbohydrate prompts body-fat storage via the mediation of insulin.

In low-carbohydrate logic, evolutionary nutrition and the thrifty gene theory collide, appropriately, over the question of carbohydrate consumption in Paleolithic times. Evolutionary nutrition, Atkins-style, holds that Stone-Age people ate consistently low levels of unrefined carbohydrate, and no refined carbohydrate at all. According to Atkins and authors like him, this is what made Paleolithic diet so healthy. Indeed, the omission of refined carbohydrate and the restriction of unrefined carbohydrate are treated as the defining features of Stone-Age nutrition, and the pattern that dieters should emulate today. On the other hand, the thrifty gene theory (as it is stated in *The Zone, Protein Power* and *Dr. Atkins' New Diet Revolution*) maintains that Paleolithic people stored excess carbohydrate as body-fat; this was the crucial evolutionary adaptation which allowed them to survive times of famine. But the key question here is: *what* excess carbohydrate? According to Sears, the Eadeses and Atkins, early humans ate a healthy, low-carbohydrate, high-protein diet that kept insulin levels consistently low. This is the very diet these authors recommend to readers today, based on the robust health they attribute to Paleolithic men and women. In the absence of high-carbohydrate grains or concentrated sugars in the Stone-Age diet, low-carbohydrate logic suggests that Paleolithic people would simply never have stored body fat. This negates any purported survival advantage in times of famine which might naturally select for the 'thrifty gene'. Low-carbohydrate versions of evolutionary nutrition and the thrifty gene hypothesis are thus mutually contradictory and incompatible.

Despite these logical inconsistencies, evolutionary nutrition and the thrifty gene theory are both fundamental to the low-carbohydrate literature's investment in primitive health and diet. Both of these evolutionary models maintain that the answer to the question 'what should we eat' can only be found by turning to the primitive past. Low-carbohydrate authors therefore follow the logical path mapped out by more radical evolutionary nutritionists such as Eaton and Cordain. As I have argued elsewhere in this thesis, primitivist discontent with the existing human condition finds focus in the low-carbohydrate movement around the so-called obesity and diabetes epidemics. In

this chapter, I have shown how low-carbohydrate texts theorise obesity and diabetes as the inevitable result of a mismatch between the Stone-Age body and modern Western eating habits. In my discussion of *The Zone*, *Dr. Atkins' New Diet Revolution*, *The South Beach Diet* and *Protein Power* I have repeatedly identified generalisations, inconsistencies and unsubstantiated assertions. In particular, low-carbohydrate texts consistently overstate the genetic basis of diabetes and obesity, obscuring social and environmental factors known to be associated with both these disorders. These logical and evidential difficulties result, I suggest, from the self-reflexive use of the primitive as a blank slate onto which to project ideals perceived to be lacking in contemporary Western life. Most troubling of all is that evolutionary and genetic explanations for health and disease tend to replicate racist evolutionary hierarchies and to deny self-determination in favour of genetic and racial determinism. In Chapter 7 I examine these disturbing racist tendencies in the representation of contemporary Indigenous people in *Protein Power*.

Chapter 7. Indigenous nutritional research in *Protein Power*

In “Doing Banting”: High-Protein Diets in the Victorian Period and Now’, Michelle Mouton points out that much of the popular low-carbohydrate literature ‘make[s] nutritional claims based on cross-cultural comparisons or nutritional anthropology’, especially with reference to fourth-world Indigenous peoples.¹ In books such as *Protein Power*, references to Indigenous groups such as the North American Inuit and Aboriginal Australians weave in and out of the evolutionary explanations for diabetes and obesity that I discussed in the previous chapter. Rosy images of prehistoric hunter-gatherers become blurred with stereotyped representations of contemporary Indigenous people. In this chapter I examine the use of anthropological and nutritional research about fourth-world peoples in low-carbohydrate discourse, with a specific focus on *Protein Power*. In line with the binary structure identified in previous chapters, I argue that the Eadeses construct the traditional diets of Indigenous people as a healthy, authentic and evolutionarily appropriate alternative to the modern Western diet. As we have come to expect in tracing the binaries natural / processed, modern / traditional, and Western / Other, the Eadeses’ representations of Indigenous foodways and health tend to be idealised, generalised and often simply inaccurate. On the one hand, *Protein Power*’s depiction of the ‘Eskimos’ ignores twentieth-century colonial history and unconsciously replicates the stereotype of the Noble Savage. On the other, the Eadeses’ account of the health problems confronting Australian ‘aborigines’ today transforms the Aboriginal Australian population into a kind of explanatory microcosm for the degeneration and decline ostensibly threatening Western ‘civilisation’, in the form of the twin obesity and diabetes epidemics.

The North American Inuit

Drawing on the anthropological work carried out by Vilhjalmur Stefánsson in northern Canada and Alaska in the early twentieth century,² the Eadeses wax lyrical over the nutritional habits, longevity and apparently excellent health of the North American Inuit:

Eskimos eat very little carbohydrate, in fact no carbohydrate during the winter, and survive nicely to a ripe old age. Although their traditional diet is composed of a large quantity of protein and an enormous amount of fat, Eskimos suffer very little heart disease, diabetes, obesity (despite the cartoons), high blood pressure, and all the other diseases we associate with a more civilized lifestyle. Furthermore, Eskimos don’t have metabolic systems from an alien planet; they have the exact same biochemistry and physiology that we do. Yes, *you* could eat the same diet and tolerate it nicely.³

The outdated language here (‘Eskimo’ rather than Inuit) is potentially distracting. Although the term Eskimo is ‘still widely used and not considered to be pejorative’ in Alaska, outside the

¹ Mouton, “Doing Banting,” para 20.

² The bibliography for the relevant chapter of *Protein Power* (Chapter 1) lists Stefánsson, *The Fat of the Land*. The bibliography is not included in *Protein Power* itself but is available on the Eadeses’ website at www.proteinpower.com. Stefánsson wrote numerous other books, including an autobiography, for which see Stefánsson, *Discovery*.

³ Eades and Eades, *Protein Power*, 9. The italics here are original. Italics in subsequent citations are my own unless otherwise indicated. Further page references to *Protein Power* are cited in parentheses in the text.

United States the term is generally considered derogatory.⁴ However, this is really the least of my concerns. The idea that ‘we’ are ‘more civilized’ than the Inuit is frankly racist. The ‘we’ constructed here excludes the Inuit (and, by implication, other Indigenous groups) from the Eadeses’ readership, despite the fact that the United States (the Eadeses’ home country and the country of *Protein Power*’s original publication) comprises a significant Inuit population (57,000), as does English-speaking Canada (50,000), where the book has also sold well.⁵ The Eadeses seem to assume that ‘Eskimos’ are somewhere ‘out there’ in the wilderness, cut off from ‘civilisation’ and English-language diet books. The text’s stress on the biochemical and physiological similarity between ‘Eskimos’ and ‘us’ protests too much, paradoxically strengthening the sense of exoticism. Would anyone genuinely think that the Inuit are some kind of ‘alien’ life-form? That the Eadeses find it necessary to insist on our common humanity is revealing, and intensifies the outdated tone of the passage.

I scarcely need to add that the Eadeses are living in primitivist fantasy-land when it comes to Inuit health. Essentially, *Protein Power*’s authors fail to consider the nearly 100 years of history that have elapsed since Stefánsson undertook his research. The entire passage is in the present tense, a grammatical trope which Johannes Fabian dubs the ‘ethnographic present’ and which “‘freezes” a society at the time of observation’.⁶ The Eadeses’ portrayal *is* correct in some respects: for instance, diabetes is less common amongst the Inuit than it is in the United States as a whole, in contrast to the escalating rates of diabetes amongst many other Indigenous groups worldwide.⁷ Deaths from cardiovascular disease, however, are more common amongst the Inuit than North American or European people, and a recent review of overweight and obesity prevalence amongst Inuit in Canada, Greenland and Alaska found rates comparable to North America and Western Europe.⁸ Amongst men, 36.6 percent were overweight and 15.8 percent obese; amongst women, the figures were 32.5 percent and 25.5 percent respectively. Moreover, the idea that the Inuit ‘survive nicely to a ripe old age’ is simply not true. In Canada, for example, Inuit life expectancy in the 1990s was approximately ten years less than the national average, and infant mortality was three times the rate nationwide.⁹ The picture *Protein Power* presents ignores glaring health inequalities between today’s Inuit people and the non-Inuit population of the countries in which they live. Particular health problems amongst the Inuit include high rates of infectious

⁴ Peter Bjerregaard et al., “Indigenous Health in the Arctic: An Overview of the Circumpolar Inuit Population,” *Scandinavian Journal of Public Health* 32 (2004): 390. While I recognise that ‘no single term covers the Inuit/Inupiaq/Yup’ik/Kalaallit entirely satisfactorily’, I follow Young and colleagues in ‘us[ing] the term *Inuit* in place of *Eskimo* as a collective term encompassing various regional groups, including the Central and Siberian Yupik and Inupiat in Alaska, Canadian Inuit, and Greenlanders’. See Bjerregaard et al., “Indigenous Health in the Arctic,” 390; T. Kue Young et al., “Prevalence of Obesity and Its Metabolic Correlates among the Circumpolar Inuit in 3 Countries,” *American Journal of Public Health* 97, no. 4 (2007): 691. See also Lawrence Kaplan, *Inuit or Eskimo: Which Names to Use?* (Alaska Native Language Center, 7 June 2002 [accessed 3 September 2007]); available from www.uaf.edu/anlc/inuitoreskimo.html.

⁵ For Inuit population figures, see Bjerregaard et al., “Indigenous Health in the Arctic,” 390. Information on Canadian sales of *Protein Power* was provided by Michael R. and Mary Dan Eades, personal correspondence, 29 August 2007.

⁶ Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (New York: Columbia University Press, 1983), 81. It is worth noting that Inuit health was by no means perfect in the early twentieth century either. Bjerregaard and coauthors point out that the arrival of Europeans in the Arctic heralded the spread of infectious diseases (notably tuberculosis) which had ‘devastating consequences’ for the Inuit population. See Bjerregaard et al., “Indigenous Health in the Arctic,” 391.

⁷ Bjerregaard et al., “Indigenous Health in the Arctic,” 392.

⁸ *Ibid*; Young et al., “Prevalence of Obesity and Its Metabolic Correlates among the Circumpolar Inuit.”

⁹ Peter Bjerregaard and T. Kue Young, *The Circumpolar Inuit: Health of a Population in Transition* (Copenhagen: Munksgaard, 1998), 64.

diseases (up to ten times the general population in the case of tuberculosis) and tragically high rates of interpersonal violence and youth suicide.¹⁰ The Eadeses' romantic vision obscures serious health inequalities in readers' own back yards.

When reading *Protein Power* (and certain other low-carbohydrate diet books) it comes to seem perfectly natural that Eskimos should appear in any and every explanation relating to diet or health, a discursive peculiarity which indicates the extraordinary influence of Stefánsson's work on contemporary evolutionary nutrition.¹¹ To allay concerns about the possible dangers of a low-carbohydrate diet, the Eadeses reassure readers with cross-cultural precedent: 'traditional Eskimos, living above the Arctic Circle, eat virtually no carbohydrate and do fine' (148). Similarly, *Sugar Busters* includes an apparently random reference to Eskimos in the second paragraph of its preface: low-calorie/low-fat weight-loss dieting, Steward and coauthors assert, 'is unnatural to an affluent society or even the Eskimos of North America'.¹² Why anyone should think that this form of weight-loss dieting might come 'naturally' to North American Eskimos is not clear. Further, in the phrase just quoted, *Sugar Busters* echoes *Protein Power*'s tendency to treat the Inuit as somehow 'out there', distinct from the affluent societies of the United States and Canada in which they actually live. The Arctic (the home of the Eskimo) turns up equally abruptly in *Protein Power* to explain human metabolic adaptation to harsh environmental conditions: 'When you diet – or if you were somehow stranded in the Arctic or suffered a famine – your metabolic computer rapidly decreases your metabolic rate to conserve stored energy' (139). The effect of this statement is to identify the contemporary inhabitants of the Arctic (that is, the Inuit) with Paleolithic people subject to feast-or-famine conditions (as discussed in Chapter 6 in relation to the thrifty gene theory). The consistent discursive slippage between rosy images of Stone-Age life and depictions of contemporary Indigenous groups such as the Inuit posits today's fourth-world peoples as 'remnants' of primitive hunter-gatherer groups from human prehistory.

The identification of the contemporary Inuit with early humans is facilitated by an outdated and racist model of evolutionary development. According to this logic, while Europeans have adapted, evolved and developed over the millennia from their primitive state, Indigenous groups have stayed the same. In *Gone Primitive*, Torgovnick traces the intellectual genealogy of this 'delusion' to the debates between 'monogenesisists' and 'polygenesisists' in the late nineteenth century:

The monogenesisists maintained that all races had a common biological origin – and this became the antiracist position. The polygenesisists maintained that there had been more than one creation and that the nonwhites were created as inferior to whites [...]. This became the assumption of the racist position. In rejecting it, in rightly letting it die out from intellectual history, we have allowed the doctrine of "common origins" to become a mental delusion: primitives originated at the same time as we did, the delusion says, but did not change; studying them can tell us about earlier versions of human society and about "human nature."¹³

The 'doctrine of "common origins"' has the effect of removing Indigenous people from 'linear time' (as Torgovnick describes it). The primitive is conceived as time-less: caught (as it were) in

¹⁰ Bjerregaard et al., "Indigenous Health in the Arctic," 392-93.

¹¹ Brenton, "Evolutionary Nutrition and Paleolithic Proscriptions on Eating: Part I"; Brenton, "Evolutionary Nutrition and Paleolithic Proscriptions on Eating: Part II."

¹² Steward et al., *Sugar Busters*, xiii.

¹³ Torgovnick, *Gone Primitive*, 186.

the space-time continuum. In *The Paleo Diet*, Loren Cordain exemplifies this type of thinking when he claims that the Canadian Inuit ‘literally were transferred from the Stone Age to the Space Age in a single generation during the 1950s and 1960s’.¹⁴ The suggestion that a group of people were ‘literally’ trapped in the Stone Age for hundreds of thousands of years is of course ludicrous, as is the idea that they subsequently travelled through time to get back to the future. Torgovnick points out that the identification of contemporary Indigenous people with our prehistoric forebears ‘depends on denying primitive societies “pasts” of their own, their own original states and development’.¹⁵ Fourth-world peoples are thus denied their own histories, since ‘primitives’ (by definition) are treated as static and unchanging.¹⁶ Further, the idea that Indigenous people today are somehow the same as prehistoric people is a major reason behind ‘stubborn derogatory tropes’ for Indigenous people (and people of colour) as ‘childlike’ and brutish.¹⁷

Aboriginal Australians

Derogatory tropes such as those mentioned in the previous paragraph appear repeatedly in an extended passage from *Protein Power* which describes diabetes research amongst a group of Aboriginal Australians. The research in question was carried out in the early 1980s by well-known Australian nutrition researcher Dr Kerin O’Dea, with Indigenous people from the Kimberley region of Western Australia (specifically, from the Mowanjum Community near Derby).¹⁸ The Eadeses’ portrayal of these Aboriginal Australians contrasts strongly with their idealised representation of the North American Inuit. In the following paragraph (the introduction to the Eadeses’ three-page discussion entitled ‘Better in the Bush’), Aboriginal people are introduced as a research tool to help explain what causes hyperinsulinemia and diabetes in the general (non-Indigenous) population, and how these problems might be improved or cured via diet:

¹⁴ Cordain, *The Paleo Diet*, 81.

¹⁵ Torgovnick, *Gone Primitive*, 187.

¹⁶ I do not mean to suggest here that the evolutionary ‘delusion’ discussed in this paragraph obscures an ‘actual’ Indigenous past which can be recovered unmediated. Rather, Indigenous peoples lose the discursive space to perpetuate their own historical narratives about their (and our) past. On the distinction between the past and history, see Keith Jenkins, *Re-Thinking History* (London and New York: Routledge, 1991), 6-32.

¹⁷ Torgovnick, *Gone Primitive*, 186.

¹⁸ Mowanjum Community residents come from three different language groups: the Worora, Ngarinyin, and Wunumbul (spellings vary). I therefore refer to O’Dea’s study participants collectively as Aboriginal Australians. The Eadeses’ discussion focuses on two of O’Dea’s early studies: K. O’Dea and R. M. Spargo, “Metabolic Adaptation to a Low Carbohydrate-High Protein (‘Traditional’) Diet in Australian Aborigines,” *Diabetologia* 23 (1982); Kerin O’Dea, “Marked Improvement in Carbohydrate and Lipid Metabolism in Diabetic Australian Aborigines after Temporary Reversion to Traditional Lifestyle,” *Diabetes* 33 (1984). The Eadeses also include five other papers by O’Dea in their bibliography but these are not specifically discussed: K. O’Dea, “Glucose and Insulin Responses to Carbohydrate Ingestion: Acute and Long-Term Consequences,” in *Obesity: Dietary Factors and Control*, ed. Romsos, Himms-Hagen, and Suzuki (Tokyo: Japan Scientific Societies Press, 1991); K. O’Dea, R. M. Spargo, and P. J. Nestel, “Impact of Westernization on Carbohydrate and Lipid Metabolism in Australian Aborigines,” *Diabetologia* 22 (1982); Kerin O’Dea, “Westernisation, Insulin Resistance and Diabetes in Australian Aborigines,” *Medical Journal of Australia* 155 (1991); Kerin O’Dea, Randolph M. Spargo, and Kim Akerman, “The Effect of Transition from Traditional to Urban Life-Style on the Insulin Secretory Response in Australian Aborigines,” *Diabetes Care* 3, no. 1 (1980); Kerin O’Dea et al., “Impaired Glucose Tolerance, Hyperinsulinemia, and Hypertriglyceridemia in Australian Aborigines from the Desert,” *Diabetes Care* 11, no. 1 (1988). All these papers are listed in *Protein Power*’s bibliography under Chapter 2, although the discussion of O’Dea’s research appears in Chapter 3. However, the reference list for Chapter 3 does not include any papers by O’Dea. The quotations which appear in Chapter 3 match the two papers by O’Dea named first in this footnote. I discuss further discrepancies in the cross-referencing of *Protein Power* later in this section.

The aborigines are an interesting group in that they develop a high incidence of hyperinsulinemia and type II diabetes when exposed to an urbanized Western diet. Like a huge number of Americans, they are genetically predisposed to the development of these disorders, but they develop them much more quickly. This situation, although unfortunate for the aborigines, makes them ideal candidates for the study of the relationship between diet and hyperinsulinemia. (46)

Again, the outdated language here ('aborigines' rather than Aboriginal or Indigenous Australians) may be distracting; the Eadeses seem to be 'innocently' echoing O'Dea's own early-1980s vocabulary in her published papers. But far more troublingly, this passage constructs the 'aborigines' as the 'ideal' and obvious guinea pigs for the study of insulin-related disorders and nutrition. In the Eadeses' view, Australian Aboriginal people are an 'interesting group' because of their potential to shed light on the causes of hyperinsulinemia and diabetes in the general population. In fact, this is their *bodies'* potential: there is no suggestion here that Indigenous people might possess any kind of intellectual knowledge about nutrition and health which would be of value to a scientific researcher.

I stress here that this is the Eadeses' gloss: O'Dea's original research publications demonstrate far more concern with Aboriginal health *per se* than with the exploitation of Indigenous bodies for general medical research. In the first study described by the Eadeses, O'Dea concludes that a 'traditional' diet high in protein and very low in carbohydrate 'may have an important role in the primary prevention of diabetes in Australian Aborigines'.¹⁹ Similarly, in O'Dea's second study she concludes that the high rates of diabetes in Aboriginal Australians are 'potentially preventable'.²⁰ By contrast, the passage cited above from *Protein Power* clearly implies that any research carried out on these 'unfortunate aborigines' will have only incidental benefits, if any at all, for Aboriginal people themselves. Rather, the Eadeses are interested in the possible benefits this research might have for *Protein Power* readers: that is, for non-Indigenous Westerners at risk of, or worried about, insulin disorders and diabetes. Although I recognise that the Eadeses themselves are not carrying out the studies in question, this is still a troubling approach to research with Indigenous people. I certainly do not suggest that the study the Eadeses go on to describe was in any way detrimental to the Indigenous people involved. However, the passage I cited in the previous paragraph disturbs me because it makes no distinction between research that is beneficial and research that is harmful to Indigenous people. *Protein Power's* construction of Indigenous people as 'ideal' research guinea pigs because of their disproportionate susceptibility to diabetes transforms Indigenous suffering and death into fertile ground for the production of Western scientific knowledge. Diabetes writ large upon the collective Aboriginal Australian body becomes a kind of cautionary tale for the West as a whole, from which the rest of us may learn in order to save ourselves.

This is by no means my only concern with the passage from *Protein Power* cited above. Australian government statistics certainly indicate that the Aboriginal and Torres Strait Islander population experiences disproportionately high rates of hyperinsulinemia and type 2 diabetes, as I noted in Chapter 6. In 2004-05, the most recent data available, the age-standardised rate of diabetes for

¹⁹ O'Dea and Spargo, "Metabolic Adaptation to a Low Carbohydrate-High Protein ('Traditional') Diet in Australian Aborigines," 498.

²⁰ O'Dea, "Marked Improvement in Carbohydrate and Lipid Metabolism in Diabetic Australian Aborigines," 602.

Indigenous Australians was 12.3 percent, 3.4 times the rate amongst non-Indigenous Australians.²¹ However, the implication that this is caused by an ‘urbanized Western diet’ is both misleading and unclear. The phrase ‘urbanized Western diet’ covers an extremely wide range of possible eating patterns, an almost infinite array of different foods in varying combinations and proportions. Importantly, the suggestion that there is a single ‘urbanized Western diet’ obscures the vast disparities in healthfulness and nutritional value between *different* urban Western diets (though how we choose to judge nutritional value is, of course, precisely what is at issue in *Protein Power*). Even if it were possible to isolate a single dietary pattern called the ‘urbanized Western diet’, or (alternatively) if we chose to lump together all urban Western diets in a category called the ‘urbanized Western diet’, the suggestion that diet in itself causes diabetes (in Aboriginal Australians or others) is misleading. As I noted in Chapter 6, type 2 diabetes is known to be multifactorial in etiology, with strong associations with socioeconomic status, obesity and low levels of physical activity as well as poor nutrition. Further, despite what the Eadeses imply, diabetes is actually *more* common amongst Aboriginal Australians living in remote areas than elsewhere.²²

The reduction of Aboriginal diet and lifestyle to binaries such as urban / ‘the bush’, urban / hunter-gatherer, and Western / traditional reinforces stereotype and fails completely to engage with the complicated and heterogeneous reality of Aboriginal life in Australia. A particular problem with the Eadeses’ vocabulary relates to their use of the terms *urban* and *urbanized*, which they lift directly from O’Dea’s own publications. These terms obscure significant differences in health and nutrition between Aboriginal people living in Australian capital cities, regional centres, and remote townships and communities (all of which are deemed ‘urban’ in this context). Mowanjum is a small community just outside Derby, an isolated regional centre in the north of Western Australia. The remoteness of the Kimberley region, with its attendant problems of access to fresh food and a full range of medical and social services (discussed in more detail below), disappear in the Eadeses’ (and O’Dea’s) description of Aboriginal diet as ‘urbanized’. The Eadeses go on to identify the staples eaten by the Aboriginal participants in O’Dea’s study as white flour, sugar and rice, soft drinks and alcohol, powdered milk and high-fat cheap cuts of meat (46). Many ‘urbanized’ Australians consume a diet in which these foods are by no means staples. To describe the Aboriginal participants’ eating pattern simply as an ‘urbanized Western diet’ shifts blame for poor health outcomes onto the processes of urbanisation and Westernisation themselves, and away from the specifics of diet in remote Aboriginal communities, which are known to be associated with isolation and socioeconomic distress. To treat this impoverished dietary pattern as simply an ‘urbanized Western diet’ confounds any attempt to isolate, what, if any, features of Aboriginal diet and lifestyle in Mowanjum might be responsible for disproportionately high rates of hyperinsulinemia and diabetes.

The Eadeses’ account of Aboriginal Australians being (passively) ‘exposed’ to an urbanised diet elides the complex historical circumstances in which Aboriginal diet has changed over the course of Australian history. Since the British colonisation of Australia in 1788, dietary change has

²¹ Steering Committee for the Review of Government Service Provision, “Key Indicators 2007 Report,” 3.13-14. Other estimates put the figure anywhere between 10 and 30 percent. See National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 154.

²² Steering Committee for the Review of Government Service Provision, “Key Indicators 2007 Report,” 17.

frequently been associated with the displacement, dispossession and disempowerment of Aboriginal people, as Cindy Shannon describes:

[T]he removal of [I]ndigenous people onto reserves and missions or decentralizing them to cattle stations [...] meant that they no longer had the same availability or access to traditional foods. [...] They [were] given rations, which included rice, flour, sugar, tea and to a lesser extent, meat and it was often [...] salty and high in fat. The communal feeding led to a breakdown in the pattern of food, security [*sic*], preparation and also a great loss in knowledge and hand over of that through the generations.²³

In *Nutrition in Aboriginal and Torres Strait Islander Peoples* (2000), the National Health & Medical Research Council (NHMRC) stresses that the cessation of communal feeding in Indigenous settlements following the 1967 referendum reforms did not lead to major nutritional changes. Although Aboriginal people could now purchase their own food from community stores, ‘with little money and little choice of foodstuffs, they had no option but to make do with a poor diet consisting mainly of white flour, sugar, tea and meat’.²⁴ Despite efforts to improve the quality, range and affordability of fresh produce in community stores, in many cases the situation remains similar today.²⁵ ‘There is still an extremely limited range of food stocked in remote community foodstores,’ the NHMRC notes, and ‘perishable items such as dairy foods, fruit and vegetables are frequently in short supply’.²⁶ In some instances, government regulations imposing ‘bag limits’ have also constrained Aboriginal people’s ability to hunt or otherwise procure traditional foods, such as magpie geese in the Northern Territory, and abalone (mutton fish) on the New South Wales south coast.²⁷

The passage from *Protein Power* that I cited several paragraphs ago poses still further difficulties. The Eadeses’ assertion that both Aboriginal Australians and ‘huge number[s] of Americans’ are *genetically* predisposed to hyperinsulinemia and diabetes remains unproven, as I argued in Chapter 6. Moreover, the parallel the Eadeses draw between the diabetes problem in the United States and the diabetes problem amongst Indigenous people in Australia would be laughable were it not for the human suffering and death involved. American Diabetes Association figures suggest that just under 5 percent of Americans have been diagnosed with diabetes.²⁸ The age-standardised figure amongst Aboriginal and Torres Strait Islander peoples is 12.3 percent, more than double the US rate.²⁹ The Eadeses retract the parallel very quickly anyway: the short but powerful word ‘but’ preserves Americans from the unfortunate and rapid demise allotted the ‘aborigine’. The claim that Aboriginal Australians develop hyperinsulinemia and diabetes ‘much more quickly’ than genetically-predisposed Americans begs the question, why? With genes out of the equation

²³ Cindy Shannon, “Acculturation: Aboriginal and Torres Strait Islander Nutrition,” *Asia Pacific Journal of Clinical Nutrition* 11 Supplement (2002): S577. For a more detailed overview, see National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 38-40. For a detailed study of the way in which colonisation has affected the food practices of a particular Australian Aboriginal group (the Koori of the New South Wales south coast), see Beryl Cruse, Liddy Stewart, and Sue Norman, *Mutton Fish: The Surviving Culture of Aboriginal People and Abalone on the South Coast of New South Wales* (Canberra: Aboriginal Studies Press, 2005).

²⁴ National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 39.

²⁵ Shannon, “Aboriginal and Torres Strait Islander Nutrition,” S577.

²⁶ National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 59.

²⁷ Cruse, Stewart, and Norman, *Mutton Fish*; National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 66.

²⁸ American Diabetes Association, *Total Prevalence of Diabetes & Pre-Diabetes* [accessed 30 August 2007]; available from www.diabetes.org/diabetes-statistics/prevalence.jsp.

²⁹ Steering Committee for the Review of Government Service Provision, “Key Indicators 2007 Report,” 3.13-14.

(since both groups are said to be genetically predisposed), the only possible answer would seem to be one of the many known environmental, socioeconomic, or lifestyle risk factors for diabetes which distinguish the two groups. But the Eadeses fail to address this issue. Instead, I would argue, the claim that Aboriginal Australians fall ill ‘much more quickly’ than Americans reflects what Spurr describes as an ‘anxiety over the preservation of limit, boundary, and difference’ between Western self and primitive Other.³⁰ The designation of the Other as abject (miserable, filthy, diseased) reinforces ‘a fundamental difference between colonizer and colonized’.³¹ In the cultural context of the diabetes epidemic, the alacrity with which the Eadeses distinguish American from Aboriginal arguably reflects fear not only of disease *per se*, but of the fall of Western civilisation which the diabetes and obesity crisis might spell. Gard and Wright argue convincingly that the cultural narrative of the obesity epidemic ‘conforms to a familiar story about Western decadence and decline’.³² This narrative, they suggest, incorporates both a moral critique of current Western lifestyles, and a set of ‘dire predictions’ about the consequences of the so-called epidemic.³³ These include massive projected reductions in life expectancy, reproductive fertility and economic productivity, and rapidly escalating health costs to the taxpaying community.

The representation of Aboriginal Australians by the Eadeses strongly recalls familiar colonial images of the colonised subject as sick, dying and dying *out*.³⁴ What do we learn of ‘aborigines’ from the Eadeses, apart from their utility for diabetes researchers? ‘Aborigines’ are inherently predisposed to get sick, they get sick in large numbers, and they get sick quickly, with a disease that is ultimately fatal and (though it can be controlled) has no known cure. An ‘unfortunate’ situation indeed, as the Eadeses point out, and an unfortunate group of people, in the Eadeses’ eyes. Textual and visual images of Aboriginal abjection are familiar to any Australian press-watcher: Aboriginal children sniffing petrol, overcrowded community housing, and (most recently) widespread claims of child sexual abuse in Indigenous communities in the Northern Territory.³⁵ I would not wish in any way to play down the seriousness of these problems, nor to make light of their impact on individual lives and the Australian Aboriginal community as a whole. But I would point out, with Spurr, that images of Aboriginal abjection are ‘metaphorically loaded’ even when they are superficially accurate.³⁶ Politically, representations of Aboriginal

³⁰ Spurr, *Rhetoric of Empire*, 87.

³¹ *Ibid.*, 78.

³² Gard and Wright, *The Obesity Epidemic*, 2.

³³ *Ibid.*, 3.

³⁴ On the ‘doomed race theory’ in Australian Aboriginal history, see Russell McGregor, *Imagined Destinies: Aboriginal Australians and the Doomed Race Theory, 1880-1939* (Carlton South, Victoria: Melbourne University Press, 1997). With specific reference to South Australian Aboriginal history, see Judith Raftery, *Not Part of the Public: Non-Indigenous Policies and Practices and the Health of Indigenous South Australians, 1836-1973* (Kent Town, South Australia: Wakefield Press, 2006), 159-61.

³⁵ In April 2007 the Northern Territory Board of Inquiry released an extremely troubling report on child sexual abuse in Aboriginal communities. See Northern Territory Board of Inquiry into the Protection of Aboriginal Children from Sexual Abuse, ‘*Ampe Akelyernemane Meke Mekarle: “Little Children Are Sacred”*’. *Report of the Northern Territory Board of Inquiry into the Protection of Aboriginal Children from Sexual Abuse 2007* [accessed 30 August 2007]; available from http://www.nt.gov.au/dcm/inquiry/saac/pdf/bipacsa_final_report.pdf. The *Little Children Are Sacred* report prompted a controversial ‘emergency response’ from the Australian federal government. For details, see Mal Brough, *National Emergency Response to Protect Aboriginal Children in the NT* (Minister for Families, Community Services and Indigenous Affairs, 21 June 2007 [accessed 3 September 2007]); available from www.atsia.gov.au/Media/media07/210607.aspx.

³⁶ Spurr, *Rhetoric of Empire*, 89.

people as wretched and sick justify paternalistic policies which wrest hard-won self-determination and control (as well as land) from Indigenous hands. As Poudrier puts it,

certain types of medical/health discourse operate as powerful forms of regulatory surveillance, which are based on the representation and reiteration of Aboriginal peoples as sick, disorganized and dependent, and which legitimate paternalistic and regulatory management over Aboriginal health in communities.³⁷

Paradoxically, images of Aboriginal abjection may equally justify a *lack* of intervention or action, both at the political level and ‘on the ground’. Why bother, the logic goes, when the situation is hopeless – Indigenous people are ‘doomed’ anyway (in the case of diabetes, by their genes). As I discussed in Chapter 6, critics like Robyn McDermott point out that genetic explanations for diabetes produce a sense of ‘fatalism and therapeutic nihilism’ amongst healthcare workers and Indigenous patients which ultimately compromises clinical care, quality of life, and mortality risk.³⁸

The Eadeses express little concern at the apparently dire state of Aboriginal health in Australia. The tone of their writing is upbeat, even chirpy. The Aboriginal health ‘situation’ (as the Eadeses term it) is viewed by many Australians, from both sides of politics, as a national shame. The president of the Australian Medical Association, Dr Mukesh Haikerwal, recently stated:

We have called [the state of Aboriginal and Torres Strait Islander health] a national tragedy and a national shame, and I think we are being kind in that assessment. [...] The gap in life expectancy [17.6 years] between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians is a constant reminder of our failings as a community.³⁹

The Eadeses glibly deem this ‘situation’ to be ‘unfortunate for the aborigines’ themselves, and quickly move on. Read uncharitably, their vocabulary could even be interpreted as an attempt at humour. Read sympathetically, I can only conclude that the Eadeses apparently know nothing of the health and nutrition disparities separating Indigenous and non-Indigenous populations in postcolonial settler societies such as Australia and, for that matter, the United States.⁴⁰

As they go on to describe the study carried out by Dr O’Dea with Aboriginal people from the Mowanjum Community, the Eadeses draw parallels between Aboriginal Australians and American teenagers with regard to nutrition and health:

Dr. O’Dea began her studies by looking at the baseline insulin and glucose levels of urbanized aborigine subjects who were consuming a Western diet. She found that both the insulin and the glucose levels were significantly elevated, which should come as no surprise when we consider the diet they were eating: “white flour, white sugar, white rice, carbonated drinks, alcoholic beverages (beer, port), powdered milk and cheap fatty meat.”

³⁷ Poudrier, “The Geneticization of Aboriginal Diabetes and Obesity,” 256.

³⁸ McDermott, “Ethics, Epidemiology and the Thrifty Gene,” 1190.

³⁹ Australian Medical Association, *Australian Medical Association Report Card Series 2007: Aboriginal and Torres Strait Islander Health* (May 2007 [accessed 30 August 2007]); available from [www.ama.com.au/web.nsf/doc/WEEN-73EVX9/\\$file/Reportcard_2007.pdf](http://www.ama.com.au/web.nsf/doc/WEEN-73EVX9/$file/Reportcard_2007.pdf). I wholeheartedly agree with Dr Haikerwal’s opinion.

⁴⁰ Chris Baldick points out that ‘[t]here has been much debate about the scope of the term [postcolonial]: should predominantly white ex-colonies like Ireland, Canada, and Australia be included? why are the United States exempted both from the accepted list of former colonies and from the category of colonizing powers?’. See Baldick, *Dictionary of Literary Terms*, 200. I use the term here to highlight the common history of Australia and the United States as former British settler colonies, where the Indigenous population today remains a disempowered minority within the nation-state.

This sounds a lot like the diet of the majority of teenagers in America today. When we look at the composition of this diet in terms of the three nutrient types, we find that it is “high in refined carbohydrate (40-50%) and fat (40-50%) and relatively low in protein (< or = 10%)” or almost precisely the same composition as the typical American diet.⁴¹ (46)

The Eadeses’ claim that the macronutrient composition of the Aboriginal participants’ diet was ‘almost precisely the same [...] as the typical American diet’ is stretching the limits of comparison at the very least. The US National Health and Nutrition Examination Survey 1999-2000 showed that Americans consume much less fat as a proportion of total energy intake than O’Dea’s participants (32.8 percent), and also consume at least half as much protein again (15.5 percent for men and 15.1 percent for women).⁴² This is not the only error in the passage cited above. In fact, the participants in O’Dea’s 1982 study were of normal weight and non-diabetic, and did not demonstrate elevated fasting insulin or glucose levels at baseline as the Eadeses claim. I suspect the Eadeses have confused O’Dea’s 1982 study with the subsequent study (1984) that they later go on to describe. In this second study the main participant group was diabetic and therefore *did* show elevated fasting insulin and glucose levels at baseline. These errors cannot be excused due to lack of familiarity with medical terminology: the Eadeses are both qualified physicians.⁴³

Of further concern in the passage I cited in the previous paragraph is the misleading parallel the Eadeses draw between Aboriginal Australians and American teenagers. Notice that the Eadeses compare the adult participants in O’Dea’s study with American children and adolescents, recalling racist evolutionary models of development which posit Indigenous people as childlike and immature. *Protein Power* suggests that the Eadeses have a generally poor, though tolerant, view of teenagers as a group. Later in the book, the Eadeses invite the hard-working, self-depriving adult dieter to compare him- or herself favourably with a lazy, self-indulgent teenager, who ‘lies around all day, gets up only to eat, [and] eats three times the calories you do’, primarily in the form of pizza, soft drink, and ‘candy’ (189). In this context, the parallel drawn between adult Aboriginal Australians and American teenagers implies that Indigenous people are lazy, immature and continually stuffing their faces with junk food. The analogy displays a total disregard for the historical, geographic and socioeconomic circumstances shaping contemporary Aboriginal Australian nutrition and health. I have already detailed the effects of Australian colonial policy on Aboriginal diet and health. I do wonder what the Eadeses make of the presence of foods such as powdered milk in the ‘urbanized’ Aboriginal diet described by O’Dea. Powdered milk hardly plays a staple role in the American teen diet, but is historically marked as a ration food for Aboriginal Australians living on reserves or missions up until the 1960s, as noted above.

Poverty, systemic disadvantage and geographic isolation all affect the food choices open to Indigenous people. In Australia, over half of Aboriginal and Torres Strait Islander people obtain the majority of their income from government welfare payments. Median household income for

⁴¹ The italics in this passage are original. The phrases in quotation marks within this cited passage are from O’Dea and Spargo, “Metabolic Adaptation to a Low Carbohydrate-High Protein (‘Traditional’) Diet in Australian Aborigines,” 495.

⁴² J. D. Wright et al., “Trends in Intake of Energy and Macronutrients – United States, 1971-2000,” *Journal of the American Medical Association* 291, no. 10 (2004): 1194.

⁴³ The Eadeses make a further error in their subsequent discussion of O’Dea’s second study. They claim that O’Dea found ‘that the aborigines were [...] *less* active in the bush than in the city’ (48). (The italics are original.) In fact, O’Dea reports precisely the opposite finding. See O’Dea, “Marked Improvement in Carbohydrate and Lipid Metabolism in Diabetic Australian Aborigines,” 602.

Indigenous Australians is only 55 percent of the non-Indigenous median.⁴⁴ As I noted in Chapter 6, 30 percent of adult Aboriginal Australians experience food insecurity (that is, ‘worry at least occasionally about going without food’).⁴⁵ For Indigenous people living in remote areas, the problem is compounded by the high cost of food, due to increased transport, storage and wastage costs outside of major cities.⁴⁶ Data from Western Australia suggest that grocery prices are 56 percent higher in the Kimberley region (where O’Dea carried out her research) than in Perth, the state capital.⁴⁷ The Australian government’s Remote Area Allowance is designed to address the higher cost of food and services in ‘the bush’. But a study in the Kimberley found that the allowance ‘fall[s] well short of the differential in food costs between that region and metropolitan areas’.⁴⁸ In 1997-98, that differential was estimated at over \$150 per fortnight for a family of five.⁴⁹ Even today, the Remote Area Allowance payable to a family of two adults and three children is only \$53.10 per fortnight (\$15.60 per adult and \$7.30 per dependant child).⁵⁰ I have already pointed out that geographic isolation affects not just the cost of food but the available range. Fresh fruit and vegetables are often understocked in remote community foodstores.⁵¹ High rates of smoking and substance abuse compound the problem further, by diverting limited income which might otherwise be spent on food.⁵² The Eadeses mistake a dietary pattern shaped by socioeconomic distress, historical subjection and discrimination, and geographic isolation for the stereotypical junk-food-filled diet of affluent American teen culture. *Protein Power* simply does not attend to the social, economic and political matrix in which food is produced, processed, distributed and consumed. As Brenton points out in his critique of evolutionary nutrition, ‘cave-diets’ such as Protein Power ‘essentially ignore the political economy of food’.⁵³

The Eadeses proceed to describe the experimental methods O’Dea employed in her 1982 study, and in the subsequent study (1984) in which a group of Aboriginal people from Mowanjum agreed to spend seven weeks on their traditional lands north of Derby, hunting, fishing and foraging for food:

Dr. O’Dea then started these people on her experimental diet, which she designed to approximate the original native diet they would consume were they back in the bush [...] / [Their] success [on the experimental diet] inspired Dr. O’Dea to undertake what turned out to be a prolonged and exceptionally enlightening study. She gathered a group of middle-aged, hyperinsulinemic, diabetic, mildly overweight aborigine subjects who had been living on a Western diet much like the one just detailed. These subjects agreed to

⁴⁴ Steering Committee for the Review of Government Service Provision, “Overcoming Indigenous Disadvantage: Key Indicators 2007 Overview,” (Canberra: Productivity Commission, 2007), 18.

⁴⁵ National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 54.

⁴⁶ *Ibid.*, 56-57.

⁴⁷ E. Zakrevsky, C. Binns, and M. Gracey, “Aboriginal Community Foodstores Project: Assessment of Nutritional Status,” (Perth: Health Department of Western Australia, 1996).

⁴⁸ H. Sullivan, M. Gracey, and V. Hevron, “Food Costs and Nutrition of Aborigines in Remote Areas of Northern Australia,” *Medical Journal of Australia* 147 (1987). The quotation here is from National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 55.

⁴⁹ National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 58.

⁵⁰ Centrelink, *Remote Area Allowance Payment Rates: 1 July-19 September 2007* (Australian Government, 2007 [accessed 3 September 2007]); available from [www.centrelink.gov.au/internet/internet.nsf/filestores/co040_0707/\\$file/co040_0707en.pdf](http://www.centrelink.gov.au/internet/internet.nsf/filestores/co040_0707/$file/co040_0707en.pdf).

⁵¹ National Health & Medical Research Council, *Nutrition in Aboriginal and Torres Strait Islander Peoples*, 59.

⁵² *Ibid.*, 64; Steering Committee for the Review of Government Service Provision, “Key Indicators 2007 Overview,” 38.

⁵³ Brenton, “From ‘Ape-Man’ to the Atkins Plan”.

return to “their traditional country in an isolated location” in western Australia [sic] for seven weeks, during which they would live the lives of hunter-gatherers.⁵⁴ (46-47)

As an aside, one wonders for whom this study was ‘exceptionally enlightening’: the Aboriginal research participants or the anxious readers of *Protein Power*? First and foremost, I reiterate here the point I made above: the Eadeses’ description of the Aboriginal participants’ diet as simply a ‘Western diet’ ignores the fact that the specific dietary pattern described is indissociable from poverty and systemic disadvantage closely related to colonial history, and strongly reflects problems of food security and access to fresh, nutritious foods in remote areas of Australia. In addition, the construction of O’Dea’s research protocol as a ‘return’ to ‘original native diet’ by going ‘back [to] the bush’ betrays naïve and unrealistic stereotype. The Eadeses’ description of O’Dea’s follow-up study resembles nothing so much as the advertising blurb for a new reality television show. Note especially the mysterious and remote setting, the seven-week duration of the ‘challenge’, and the element of role-play or historical re-enactment suggested by the turn of phrase. In the Eadeses’ construction, the Aboriginal participants in O’Dea’s study agreed to ‘live the lives of hunter-gatherers’, rather than simply to obtain their food by hunting and gathering.

By comparing the participants’ seven-week ‘return’ to ‘the bush’ with reality television I mean deliberately to highlight the fact that this is *not* ‘real life’ but a constructed version thereof, brought into being by the social, cultural and economic apparatus of scientific experiment. The funding of medical research in Australia, and the existence of cultural norms regarding the value and validity of such research, have enabled a white researcher to recruit a group of Indigenous people, relocate them for a relatively short period of time, and thus artificially create a set of food and eating practices which would not otherwise have been carried out by these people, at that time, in that place. These practices are observed, recorded, interpreted and reported by the researcher, and then recounted by the Eadeses as a ‘return’ to ‘traditional’ diet and lifestyle. Unlike many clinical trials, O’Dea’s experimental design does not involve a minor tweak to participants’ established modes of living. Rather, it involves major disruption and dislocation which interfere with family life, employment, social and community activities, and access to health and other facilities concentrated in urban areas. In a recent review on low-carbohydrate dieting, Westman and coauthors pointed out that ‘[w]hen [O’Dea’s] study subjects returned to their previous urban lifestyle, the weight and diabetes returned’.⁵⁵ O’Dea herself stresses that ‘it is not necessary [for Aboriginal people] to revert totally to traditional lifestyle in order to prevent or attempt to reverse diabetes.’ Rather, she argues, ‘certain characteristics of that lifestyle must be incorporated into any future public health programs: high physical activity, low-fat diets, and control of body weight’.⁵⁶ I agree with O’Dea’s sentiments here, but in this case, what does her research on ‘traditional lifestyle’ achieve except to reinforce pre-existing nutritional dogma on the value of exercise, weight-loss and reduced fat intake? The focus on ‘traditional lifestyle’ appears entirely redundant, reflecting a quasi-anthropological anxiety to study ‘vanishing’ ways of life while they are still available to us.⁵⁷

⁵⁴ The passage in quotation marks within this quotation is from O’Dea, “Marked Improvement in Carbohydrate and Lipid Metabolism in Diabetic Australian Aborigines,” 597. This study included four non-diabetic participants as well as ten with diabetes. O’Dea’s paper separates the results for the two groups and focuses on the results in participants with diabetes. The Eadeses discuss only the results for diabetic participants.

⁵⁵ Eric C. Westman et al., “Low-Carbohydrate Nutrition and Metabolism,” *American Journal of Clinical Nutrition* 86 (2007): 281.

⁵⁶ O’Dea, “Marked Improvement in Carbohydrate and Lipid Metabolism in Diabetic Australian Aborigines,” 603.

⁵⁷ On the cultural ‘need for the primitive to be eternally present’, see Torgovnick, *Gone Primitive*, 187.

My argument here is supported by O’Dea’s own introduction to an earlier, similar study with Mowanjum residents, in which she writes:

It is still possible to find groups of Aborigines in outback regions of Australia who, despite living in an urban setting for most of the time, retain the knowledge and ability to survive in their traditional environment as hunters and gatherers. We felt that we had a unique and apparently disappearing opportunity to compare traditional and urban metabolic responses in [an Aboriginal] population [...].⁵⁸

O’Dea implicitly recognises here that not all Indigenous people ‘retain’ the skills to hunt and gather their food. Today, 38 percent of Aboriginal and Torres Strait Islander adults living outside remote areas do not identify any area as their ‘homelands’.⁵⁹ In many cases, European settlement of Australia and its colonial aftermath have irreparably damaged Indigenous cultural traditions, connections with land, and the land itself and its ecology. But O’Dea also betrays troubling presumptions: that ‘traditional’ Aboriginal life is inevitably disappearing, and that Aboriginal people who do live traditionally are the natural prey of the white Australian researcher to seek out and study. In her conclusion to the 1982 study discussed in *Protein Power*, O’Dea suggests that ‘[a]dopting elements of the traditional lifestyle periodically would provide a practical and acceptable approach to the problem’ of type 2 diabetes in urban Aboriginal communities.⁶⁰ I would not deny that periodic visits to traditional lands are an integral part of life for many Aboriginal people in Australia who have access to their ‘homelands’. My concern here is with the prescriptiveness of O’Dea’s approach, its construction as a ‘reversion’ to a former way of life, and the presumption that this is a uniquely appropriate public health solution for Indigenous people. It is unimaginable that a nutrition researcher would propose a similar diabetes prescription for non-Indigenous Australians, let alone carry out a study in which non-Indigenous people were transported hundreds (if not thousands) of kilometres from their home town and asked to ‘revert’ to their ancestral or traditional way of life. Even radical evolutionary nutritionists (as I discussed in Chapter 6) do not advise a practical ‘reversion’ to a Paleolithic lifestyle, whether temporary or permanent. Instead, they posit macronutrient composition, the range of foods eaten, or both as the features of ancestral diet that should be emulated.

After outlining O’Dea’s experimental methods in the second study (1984) that they describe, the Eadeses summarise the participants’ blood chemistry results, which amounted to improvement in all measures of diabetes control. The Eadeses then conclude:

Dr. O’Dea discovered by actual experimentation with a group of people afflicted with one of the diseases of civilization the same thing that anthropologists learned by examining the mummy and skeletal data: the carbohydrate-restricted, high-protein diet confers optimal health on its followers. (48)

I begin by noting that the Eadeses’ conclusion in this passage draws rather a long bow. O’Dea’s research demonstrated normalisation of plasma lipids in her participants, as well as ‘greatly improved’ glucose tolerance and insulin response to glucose.⁶¹ However, to describe this as

⁵⁸ O’Dea, Spargo, and Akerman, “The Effect of Transition from Traditional to Urban Life-Style on the Insulin Secretory Response in Australian Aborigines,” 31-32.

⁵⁹ Steering Committee for the Review of Government Service Provision, “Key Indicators 2007 Overview,” 43.

⁶⁰ O’Dea and Spargo, “Metabolic Adaptation to a Low Carbohydrate-High Protein (‘Traditional’) Diet in Australian Aborigines,” 498.

⁶¹ O’Dea, “Marked Improvement in Carbohydrate and Lipid Metabolism in Diabetic Australian Aborigines,” 602.

‘optimal health’ seems exaggerated, given that the participants in the study continued to suffer from abnormalities in glucose metabolism, and most remained overweight.⁶² O’Dea herself notes that the participants’ insulin response to glucose ‘remained clearly defective’ at the conclusion of the study.⁶³ Perhaps the Eadeses mean to imply that this is the best possible health these particular people could hope to attain, given their pre-existing history of diabetes. I would suggest, though, that what the passage cited in the previous paragraph attempts to do is to impose conclusions that the Eadeses have drawn from the ‘mummy and skeletal data’ onto O’Dea’s research with Aboriginal Australians, whether or not these conclusions actually fit. The ‘mummy and skeletal data’ are the subject of *Protein Power’s* Epilogue (394-408), which examines paleopathological and anthropological evidence for the diet and health of various historical populations, including the ancient Egyptians. There are various inconsistencies in *Protein Power* and its online bibliography which suggest that the Epilogue material was originally intended to be placed much earlier in the book, as Chapter 2.⁶⁴ The Eadeses’ discussion of O’Dea’s research with Aboriginal Australians appears in Chapter 3. Had the original textual order been preserved, *Protein Power’s* readers would have been familiar with the ‘mummy and skeletal data’ by the time they read the Eadeses’ commentary on Australian Aboriginal health.

Because of their interest in low-carbohydrate diets and evolutionary nutrition, the Eadeses have a particular investment in comparing the health of hunter-gatherer and agricultural peoples; the ancient Egyptians belong to this latter category. The Eadeses describe in some detail the research techniques which enable the production of modern medical knowledge about the ancient Egyptians, via the examination and dissection of their mummified bodies:

Through the science of paleopathology – the application of modern techniques of pathology and other scientific disciplines to the remains of early man, from bone fragments to entire preserved bodies – scientists can determine not only the state of health at the time of death but also the most indiscernible responses of the flesh to the rigors of primitive life. [... W]hen scientists can study many fairly intact remains, such as the enormous number of Egyptian mummies available, all from a particular time and place, they can spot disease trends and can speculate with a good deal of certainty about the health status of the population. (396-397)

To the lay reader, the analytic techniques which produce such knowledge hold a powerful fascination, an effect the Eadeses promote by emphasising paleopathologists’ microscopic attention to detail and their ability to detect health and disease states from seemingly imperceptible evidence:

Medical scientists have analyzed many of these mummified remains in such detail that they have been able to determine not only blood type and body size and shape but the presence of specific bacterial or parasitic infections and other diseases and the cause of death. (394-395)

⁶² Ibid., 599.

⁶³ Ibid., 601.

⁶⁴ Chapter 1 of *Protein Power* concludes: ‘First let’s look at the most extensive study of the low-fat, high-complex-carbohydrate nutritional approach ever undertaken – the civilization of ancient Egypt. You can draw your own conclusions from the pages of history’ (18). However, the expected discussion of Egyptian diet does not follow. Nonetheless, the Eadeses’ bibliography for Chapter 2 includes numerous research works on paleopathology, nutritional anthropology and Egyptology. There is no section in the bibliography for the Epilogue. The bibliography for *Protein Power* is not included in the text itself but is available on the Eadeses’ website at www.proteinpower.com.

The paleopathological examination of Egyptian mummies unites, beguilingly, two avenues of the human quest for knowledge which maintain a peculiar mystique in contemporary Western culture: forensic science and Egyptology. In ‘Consuming Bodies: Cultural Fantasies of Ancient Egypt’, Lynn Meskell argues convincingly that the Egyptian body ‘is part of a well developed and long sustained Western fantasy linking sexuality, carnality, ritual and death’.⁶⁵ Meskell is interested primarily in the fetishisation of the Egyptian body as the site and signifier of queer sexuality in contemporary popular culture. However, she also points out that ‘the mummified body has enjoyed fetish status for almost 500 years, though it has been substantially domesticated via museum taxonomies, institutional discourses and mass consumerism’.⁶⁶ As Philip Schwyzer explains, in early modern Europe, powdered mummy was quite literally ‘a coveted pharmaceutical’, prescribed ‘as a cure for a variety of ailments, notably excessive bleeding and internal bruising caused by falls’.⁶⁷ Meskell traces the changing cultural deployment of Egyptian mummies and the Egyptian body into the nineteenth century. She describes the phenomenon of mummy-stripping: ‘an elite form of entertainment, in which Egyptian mummies were purchased and transported to England to be opened at special social occasions’.⁶⁸ More prosaically, Meskell also notes the prevalence in nineteenth-century European art of ‘paintings exploring themes of Egyptian decadence and sexuality’, as well as the upsurge of ‘mummy narratives’ in English literature around the *fin de siècle*.⁶⁹

In *Protein Power*, the ancient Egyptian body maintains its cultural association with decadence, death and ritual unveiling, but its aesthetic allure and sexual mystique is radically stripped away. Instead, the ancient Egyptian body becomes a symbol for the degeneration and decline of Egyptian civilisation. The Eadeses review paleopathological studies of ancient Egyptian mummies and conclude that the ancient Egyptians were obese, suffered appalling dental and gum disease, and had high rates of coronary artery mortality.⁷⁰

[A] picture begins to emerge of an Egyptian populace rife with disabling dental problems, fat bellies, and crippling heart disease. From the evidence, we know atherosclerotic cholesterol plaque and the effects of high blood pressure narrowed their arteries at a young age. (399-400)

The Eadeses argue that the high-carbohydrate Egyptian diet, rich in whole grains, fruit and vegetables, must have caused these health problems. At the very least, this diet failed to protect the Egyptians from overweight and disease:

Modern nutritional wisdom would predict that the diet of the ancient Egyptians – high in complex carbohydrates, low in fat, no refined sugar, almost no red meat – should have brought health, fitness, and longevity to the Egyptians of old. But it didn’t. (407)

Based on this evidence, the Eadeses conclude that modern dietary guidelines emphasising high levels of carbohydrate must be wrong.

⁶⁵ Lynn Meskell, “Consuming Bodies: Cultural Fantasies of Ancient Egypt,” *Body & Society* 4, no. 1 (1998): 75.

⁶⁶ *Ibid.*, 66.

⁶⁷ Philip Schwyzer, “Mummy Is Become Merchandise: Literature and the Anglo-Egyptian Mummy Trade in the Seventeenth Century,” in *Re-Orienting the Renaissance: Cultural Exchanges with the East*, ed. Gerald MacLean (New York: Palgrave MacMillan, 2005), 69.

⁶⁸ Meskell, “Consuming Bodies,” 65.

⁶⁹ *Ibid.*, 63, 65.

⁷⁰ The Eadeses’ references for these claims include A. Cockburn and E. Cockburn, eds., *Mummies, Disease, and Ancient Cultures* (Cambridge: Cambridge University Press, 1980); R. A. Davis, ed., *Science in Egyptology* (Manchester: Manchester University Press, 1986).

In *Protein Power's* logic, the obese and diseased bodies of the Egyptians prefigure the obese and diseased bodies of modern Westerners; the decline of ancient Egyptian civilisation functions as an ominous sign of the potential effect of the obesity epidemic on the West, should the high-carbohydrate tide not be stemmed. To return to the Eadeses' discussion of Aboriginal Australians and diabetes, the analogy the Eadeses draw between Aboriginal Australians and the ancient Egyptians brings Aboriginal bodies and society into this cautionary narrative as a further example of degeneration and decline. Recall the parallel the Eadeses construct between the Aboriginal participants in O'Dea's study and the 'mummy and skeletal data':

Dr. O'Dea discovered by actual experimentation with a group of people afflicted with one of the diseases of civilization the same thing that anthropologists learned by examining the mummy and skeletal data [...]. (48)

The analogy drawn here between the participants in O'Dea's study and mummified or skeletal remains – *the remains of dead people* – is startling, to say the least. Like the nineteenth-century 'doomed race theory', the analogy treats Aboriginal Australians as metaphorically dead (or as good as dead), their inevitable demise as a race only a matter of time.⁷¹ The comparison makes breathtakingly clear the totalising force of treating the Other as a research resource and only a research resource. When Aboriginal people are equivalent to mummies and skeletons, there is no room left to see the people who participated in O'Dea's study as living human beings with lives of their own. The parallel also confirms the evolutionary position of Aboriginal Australians as 'remnants' of earlier human groups, the logic I critiqued earlier in relation to the Eadeses' representation of the Inuit. The construction of Aboriginal people as evolutionary 'remnants' cements their status as a research resource: recall O'Dea's anxiety to study traditional Aboriginal foodways before they disappear. In this logic, Indigenous people function (like mummies and other archeological remains) as a site of access to primitive origins in the contemporary world.⁷²

Throughout their three-page discussion of O'Dea's research with the Mowanjum residents, the Eadeses repeatedly stereotype, and (on occasion) poke fun at, Aboriginal Australians. The very concept of 'the bush', to which the Eadeses refer in the title of their section on O'Dea's research, is the stereotypical exotic Australian locale, peopled by the equally exotic and stereotyped 'aborigines'. A further example of the stereotyping of Aboriginal people arises in the Eadeses' description of the study participants' travel during the seven weeks that they lived on their traditional lands. The Eadeses recount that the study participants 'wandered from area to area' apparently aimlessly (47), constructing the Aboriginal people concerned as childlike, irrational and dreamy – quite literally lacking direction. Deborah Bird Rose points out that the concept of what constitutes 'wasteful' behaviour varies between Indigenous and non-Indigenous cultures. Rose discusses the example of slaughtering an animal and leaving the meat that is not eaten on the ground, which non-Indigenous eyes would generally view as wasteful. She contrasts this perspective with her own experience and understanding of Australian Aboriginal practice:

In my view, and in my experience with Aboriginal people, leaving food on the ground does not constitute waste. Food not consumed by humans will be consumed by others, and it is not wasteful to leave food for them. It is most common indeed for people to take the best parts of the meat for themselves and to leave the remainder for the dogs.

⁷¹ On the 'doomed race theory', see footnote 34 above.

⁷² Torgovnick, *Gone Primitive*, 187.

Other meat-eaters such as dingoes and raptors also benefit, as do the ever present meat ants.⁷³

I would extend Rose's argument here to the Eadeses' view of the Aboriginal study participants' behaviour as unmotivated and purposeless ('wasteful'). In fact, O'Dea's original research paper makes clear that the participants in her study deliberately chose to seek a new location based on food choice and availability, shifting from the coast inland because of the dearth of available plant food.⁷⁴

The final paragraph of the Eadeses' section on Aboriginal Australians brings these racist stereotypes into sharp focus:

You are probably wondering if you need to start subsisting on snails, turtles, kangaroo, crocodiles, crickets, and other diverse beasts to get your cholesterol down. That would work, but you don't have to go to those lengths. Our regimen provides all the benefits of the hunter-gatherer diet but uses foods that you capture at the grocery store and even in the wilds of the nearest fast-food outlet. All we need do to gain the benefits of the hunter-gatherer diet is to consume a diet that approximates it in nutritional composition, which we can do easily. (48)

As I noted earlier in this section, there is no question that the readers of *Protein Power* should be prescribed a 'reversion to traditional lifestyle' as the remedy for civilised ill-health. Instead, as I pointed out in Chapter 6, it is sufficient for non-Indigenous people to mimic the macronutrient breakdown of the hunter-gatherer diet in order to achieve the same benefits. The passage above constructs a familiar division between us (Western, non-Indigenous) and an implicit them (exotic, Indigenous). The Eadeses begin by humorously listing what are clearly supposed to be the more weird and wonderful elements of traditional Aboriginal Australian diet. In the process, they construct a rather nervous Western reader who is relieved to be reassured that he need not go to such extremes to improve his cholesterol reading.⁷⁵ In *Protein Power's* view, we (the civilised readers of diet books) eat domesticated mammals and birds. They (the uncivilised Other) eat wild insects, reptiles and 'other diverse beasts' that repel the civilised eater. Of course, the distinction between edible and inedible is a cultural construction.⁷⁶ Snails remain popular in French cuisine, and Australian readers may well resist the construction of kangaroo and crocodile as exotic and repugnant. Kangaroo meat, in particular, is widely sold in Australian supermarkets and butchers' shops, and is considered a lean and low-cost alternative to other red meats.

In my introduction to this chapter, I cited Michelle Mouton, who points out that the 'cross-cultural comparisons' made by many low-carbohydrate authors 'appeal to Americans' sense of cultural superiority' in matters of dietary choice. Mouton argues that this sense of superiority is unfounded:

⁷³ Deborah Bird Rose, "Decolonising the Discourse of Environmental Knowledge in Settler Societies," *UTS Review* 7, no. 2 (2001): 50.

⁷⁴ O'Dea, "Marked Improvement in Carbohydrate and Lipid Metabolism in Diabetic Australian Aborigines," 597.

⁷⁵ I use the masculine pronoun here deliberately and strategically, to disrupt the cultural association of weight-loss dieting with women. On the gendering of low-carbohydrate dieting, see Chapter 1.

⁷⁶ Colin Spencer points out that many of the animals deemed 'unclean' in the Jewish dietary laws 'remained taboo in Christian countries', including carnivorous animals and birds of prey. See Colin Spencer, *The Heretic's Feast: A History of Vegetarianism* (Hanover and London: University Press of New England, 1995), 127. For the Mosaic dietary laws, see Leviticus 11:2-42 and Deuteronomy 14:3-20.

Underlying these comparisons is a false assumption that all Americans, by contrast with more homogenous and “primitive” peoples, have ultimate diversity in, access to, and choice over the foods they eat.⁷⁷

In theory, Americans need not eat snails, turtles and crickets because they have the choice to eat otherwise: to shop at the grocery store or pick up a meal at a fast-food outlet. But the ‘false assumption’ of ultimate choice cuts both ways. On the one hand, this assumption ignores the factors that limit people’s food choices within Western societies such as the United States. In particular, low-carbohydrate diets, with their liberal servings of seafood, steak and nutrient-dense vegetables, are not within everyone’s food budget.⁷⁸ Western social structures impose further constraints on our eating habits that are often forgotten. Private land ownership, for example, makes it very difficult for many Westerners, especially those living in urban areas, to forage or hunt for food. Our almost total dependence on the agrifood economy severely restricts the range of animals and plants available to us as food, by contrast with populations elsewhere who regularly consume wild plants and animals. On the other hand, the ‘false assumption of choice’ obscures the fact that Indigenous people possess the agency to make choices about how they wish to eat, notwithstanding the historical, geographic and socioeconomic constraints I have acknowledged in this chapter. By the conclusion of the Eadeses’ section on Aboriginal Australians, Indigenous people have become the primitive and static Other ‘subsisting’ on a traditional diet out there in the bush. This stereotyped ‘aborigine’ is out of reach of civilisation, diet books and grocery stores. In this context, it is unthinkable that an Indigenous person might choose to follow a low-carbohydrate diet by shopping at the supermarket like any other Australian.

The representation of Aboriginal Australians and North American Inuit in *Protein Power* is striking in its naiveté and frequent outright racism. The Eadeses betray an apparent ignorance of Australian and North American colonial history and its legacy of disempowerment and disadvantage. The stereotyping of Indigenous people as exotic and childlike, and the parallels drawn between Indigenous people and the archeological remains of earlier humans, are disturbing, especially in a bestseller first published only a decade ago. These tropes depend in large part on an outdated model of evolutionary development which posits contemporary Indigenous groups as remnants of ‘our primitive ancestors’. As I have discussed, the Eadeses present two distinct images of contemporary Indigenous people. The Inuit, on the one hand, are represented as culturally pristine and hence exceptionally healthy. Aboriginal Australians, on the other hand, are represented as abject and diseased because of their ‘exposure’ to Western diet and lifestyle. Deborah Bird Rose argues that the twin stereotypes of ‘Noble Savage’ and ‘dismal savage’ are both ‘dead ends’.⁷⁹ Both are ‘metaphorically loaded’, and neither can reflect the complexity of local conditions.⁸⁰ The reduction of contemporary Indigenous foodways to yet another binary (‘urbanized Western diet’ / traditional Indigenous diet) cannot possibly account for the cultural and historical context in which food practices take place, nor for the social and environmental factors implicated in the development of diabetes and other nutrition-related disorders. Rather, the urban Western / traditional Indigenous dichotomy functions within

⁷⁷ Mouton, “Doing Banting,” para. 20.

⁷⁸ Bentley, “The Other Atkins Revolution,” 41; Phil Lempert, *The High Cost of Low-Carb Diets* (Today, 10 May 2004 [accessed 31 August 2007]); available from www.msnbc.msn.com/id/4901047.

⁷⁹ Rose, “Decolonising the Discourse of Environmental Knowledge,” 44.

⁸⁰ Spurr, *Rhetoric of Empire*, 89.

nutritional primitivism to construct the West and Westernisation as inherently 'bad' and unhealthy, especially in their impact on so-called primitive people. Within this narrative, Indigenous health problems are transformed into a microcosm of the potential nutritional disaster facing the West. For Indigenous people, the Eadeses imply, a 'reversion to tradition' will be the uniquely appropriate solution. Westerners, by contrast, need only mimic the macronutrient breakdown of the hunter-gatherer diet to restore the health Nature intended them to enjoy.

Chapter 8. Low-carbohydrate dieters and nutritional primitivism

In the previous two chapters of this thesis I have examined topics and tropes in low-carbohydrate diet books which lie at the conceptual heart of nutritional primitivism. In Chapter 6, I traced the ultimate dependence of low-carbohydrate logic on two superficially similar, but in fact distinct, neo-Darwinian models of body-weight and health: evolutionary nutrition and the thrifty gene theory. In Chapter 7, I critiqued the deployment of anthropological and nutritional research relating to Indigenous peoples in the low-carbohydrate bestseller *Protein Power*. Earlier in this thesis, in the concluding sections of Chapters 4 and 5, I took the opportunity to compare my own readings of the popular low-carbohydrate literature against the opinions, practices and discourse of the dieters I interviewed as part of this research project. In Chapter 4, I concluded that dieters echo the natural / processed binary that structures the nutritional schema of low-carbohydrate diet books, although I also found that dieters on occasion (re)apply the natural imperative in ways that disrupt low-carbohydrate authors' categorisations of particular foods. In Chapter 5, by contrast, I concluded that there is an extreme disjuncture between the discourse of popular low-carbohydrate diet books and the practice of low-carbohydrate dieters in relation to culinary nostalgia and tradition: the practical necessity of excluding staple starches tends to sever dieters from their own and Other culinary traditions, quite the opposite of what low-carbohydrate authors would like to claim.

In this final substantive chapter before my conclusions in Chapter 9, I discuss my interview participants' responses to the topics and tropes covered in Chapters 6 and 7: evolutionary nutrition, the thrifty gene hypothesis and nutritional anthropology. Nearly all the dieters whom I interviewed were well aware of the evolutionary, genetic and anthropological theories expressed by popular low-carbohydrate authors. The exceptions – those dieters who were not aware of the evolutionary and genetic theories associated with low-carbohydrate dieting – I note and discuss individually later in this chapter. But most interviewees were clearly familiar with these ideas, could explain them in a relatively detailed fashion, and (in many cases) engaged enthusiastically in debating their validity and significance. At least four dieters broached evolutionary, genetic and anthropological themes spontaneously during the course of their interviews. As explained in Chapter 3, I chose semi-structured interviewing for this study in order to strike a balance between covering the particular questions of interest to me and locating these in the context of dieters' own experiences and concerns. The semi-structured design left open the possibility that if dieters did not raise nutritional primitivist concepts spontaneously, I could ask about these specifically. For example: had the participant encountered the idea that a low-carbohydrate diet is what people are 'meant' to eat? What did he or she think of this idea?

'I sat down and read it and it all made sense'

In Chapter 3 of this thesis I noted that research on the practice of self-help book reading suggests that readers do not 'swallow' the self-help text whole, as it were. Instead, readers are *active*, *selective* and *interpretive* in their reading; they 'pick and choose' ideas from diverse sources.¹ In

¹ Coyle and Grodin, "Self-Help Books and the Construction of Reading," 62, 63, 74; Grodin, "The Interpreting Audience," 410; Lichterman, "Self-Help Reading as a Thin Culture," 430.

the majority of cases, these observations were borne out in my interviews with low-carbohydrate dieters, and I return to the reader-response literature later in this chapter. However, several dieters whom I interviewed *did* appear to have accepted in their entirety the evolutionary, genetic and anthropological models presented in popular low-carbohydrate diet books, especially *Protein Power*. For example, Phil (50s) had been ‘converted’ to low-carbohydrate dieting in 2000 (six years before his interview with me), when he was diagnosed with high cholesterol and subsequently came across a copy of *Protein Power*. At the very beginning of his interview, Phil described to me how when he first read *Protein Power*, ‘it all made sense’ to him.² At several points during our discussion, Phil spontaneously echoed primitivist concepts and passages from the book, sometimes close to verbatim. For instance, when asked to explain the ‘take-home message’ of *Protein Power*, Phil spontaneously recounted the thrifty gene theory, though without naming it as such. In the following extract, he links insulin function and diabetes today to prehistoric evolutionary adaptation to ‘feast-or-famine’ cycles:

CK: When you initially read *Protein Power* [...] what was it about it that made sense to you? What’s the sort of take-home message that you took away?

Phil: [...] Basically that we’re a carnivore and that our insulin response is there to fatten us up over the [plentiful] period of [...] our natural year of you know, flush amounts of fruit and whatever might be around, to pack it away in our fat cells ready for the [...] lean time which, you know, in Europe would be under snow and then in Africa would have been a [...] drought, I guess, but [...] by eating [...] carbs all the time you’re driving that insulin all day every day and the body’s ability to handle it collapses in [...] a high percentage of people, quite big percentage of people and they all come down with type 2 diabetes. (Phil, 50s)

Phil’s account of the thrifty gene theory draws closely on key passages from *Protein Power*, such that it is even possible to identify specific page references from the book which correspond to the ideas he expresses. The argument that humans are naturally carnivorous appears in *Protein Power* at page 401, the notion that insulin response was only ‘designed to operate on an intermittent [...] basis’ at page 34, and reference to prehistoric ‘heavy winters’ and ‘droughts’ in the Eadeses’ explanation of the thrifty gene hypothesis at pages 405-6. Interestingly, Phil attempts to resolve here (apparently unconsciously) the conceptual contradiction that I identified in low-carbohydrate logic in Chapter 6, which arises from the collision of evolutionary nutrition, the thrifty gene theory and low-carbohydrate axioms about the effects of carbohydrate and protein on insulin response: why would prehistoric people have stored fat if they were not eating any high-carbohydrate foods, in order to prompt natural selection for the thrifty gene? In the extract cited in the previous paragraph, Phil suggests that early humans ate ‘flush amounts of fruit’ in summer in order ‘to fatten us up’ for winter. Note, however, that this by no means resolves the theoretical dilemma for low-carbohydrate authors, who minimise the role of fruit in the Paleolithic diet. Leslie Kenton, amongst others, points out that prehistoric people ‘ate little fruit’. Those fruits they did consume were ‘very small and wild fruits’ that were high in fibre and low in carbohydrate, and ‘looked more like rosehips than those [fruits] on our supermarket shelves’.³

² The subheading I use for this section is a longer version of this same quotation from Phil’s interview transcript.

³ Kenton, *The X Factor Diet*, 50.

Later in his interview, Phil again spontaneously echoed specific primitivist concepts and passages from *Protein Power* when explaining his views on the health and safety of low-carbohydrate diets:

CK: [...] Do you think that the diet [...] would be healthy for everyone?

Phil: Should be, yes, we're all carnivores so whether we've come from Taiwan or Alaska, we're all the same gene pool really. We all deal with food the same way.

CK: [...] What about safety [...] do you think there are any valid safety concerns on a low-carb diet?

Phil: No, we don't need carbs. There's Eskimos that get snowed [in] for six months of the year and eat nothing but really high-fat meat and come out perfectly healthy [...]. (Phil, 50s)

Phil's claim that 'we're all carnivores' is clearly not true in any literal sense; not everyone eats meat. Rather, what Phil intends is that we are all carnivores *physiologically*, based on our prehistoric genetic inheritance. In this extract Phil replicates an Atkins-style model of human evolutionary and genetic homogeneity (as discussed in Chapter 6), as least so far as physiological responses to food are concerned. The emphasis is on humanity's common ancestral and evolutionary origins, and hence the universal suitability of a high-protein 'Paleo' diet. Because, in Phil's eyes, human beings are all the same in our responses to food, the cross-cultural example of the 'Eskimos' functions as proof that a high-protein diet is a healthy option for all. The references to Alaska and Eskimos clearly echo *Protein Power*, and (as I argued in Chapter 7) may ultimately be traced to the extraordinarily influential research of Vilhjalmur Stefánsson, whose work has passed conceptually and historically through the literature to reach Phil. Just as they do in *Protein Power*, Stefánsson's Eskimos live on in Phil's comments in perpetually present stereotype, with no reference to the cultural and nutritional changes of the last hundred years.

Phil's comments about the health and safety of low-carbohydrate diets, cited above, contrast with those of other participants. Phil expresses the view that a high-protein diet should be healthy for everyone, since we all have the same carnivorous genetic inheritance. In answer to similar questions, other interviewees tended to demur. Many suggested specific groups for whom they felt a low-carbohydrate diet might not be appropriate: children, nursing mothers and sportspeople, for example. When asked whether they regarded a low-carbohydrate diet as healthy and safe, many interviewees named health risks which might potentially be caused by the perceived high fat content of low-carbohydrate diets, especially the risk of cardiovascular disease. A common discursive manoeuvre was to distinguish an 'unhealthy' version of low-carbohydrate dieting (often said to be high in saturated fat) from the 'healthy' variant the participant him- or herself was following (generally said to be high in fruit and vegetables). Phil was unusual in explicitly defending a very-low-carbohydrate, high-fat, high-protein diet as healthy (in this case, the purported winter diet of the 'Eskimos'). Further, Phil was the only interviewee in my study who responded to questions about the safety of low-carbohydrate dieting with reference to evolution, genetics, or anthropology.

Lisa (40s) was another participant in my study who agreed enthusiastically that Atkins was 'dead right'. She argued that our divergence from the diet nature intended us to eat has caused the current obesity crisis:

[I]f you would look at say perhaps a tribe living out there without [...] factories creating grains and rices [*siz*] and pastas and that sort of thing, they have to go out and pick their food and they have to grow it [...]. And look at their weight, they're completely different

to what we are [...] and why, because they're eating the foods that nature intended for them to eat. They do eat high protein too, lots of meat, because they hunt. (Lisa, 40s)

In this extract Lisa constructs an imaginary example of the primitive Other 'out there' in the wilderness (like the Eadeses' representations of Indigenous people as discussed in Chapter 7). 'Out there', in Lisa's vision, means out of reach of industrial civilisation, here represented by the factory. Like so many of the characters in low-carbohydrate drama, the 'tribe' of Lisa's imagination is locked in a circular logical loop. Lisa first defines an imaginary group which is isolated from industrial civilisation and which subsists by means of foraging and small-scale agriculture. So far, this tribe might be entirely hypothetical. But when Lisa urges the listener to 'look at their weight, they're completely different to what we are', the tribe becomes embodied, real. Yet this tribe has been imagined and defined in simple binary opposition to industrial civilisation and the overweight bodies it feeds ('our' bodies). 'The foods that nature intended for them to eat' are simply those that are *not* industrial and *not* civilised (not refined carbohydrates, in other words). Lisa's afterthought regarding protein, meat and hunting further reflects the discursive need to make primitive diet fit a preconceived low-carbohydrate model of healthy eating.

The conspicuous romanticism of Lisa's vision and vocabulary in the extract cited in the previous paragraph conceals a definitively primitivist discontent with contemporary Western culture, nutrition and health. Elsewhere in her interview, Lisa expressed intense criticism of Western dietary abundance, which she associates (like Atkins, as discussed in Chapter 4) with processed starches and sugars:

[Y]ou grab a donut or grab a cake [...] and *it's too readily available. We live in a very abundant society* [...]. I watch a lot of those medical programs and [...] they had a chap on there who was, oh he was a ton, humungous, and then why? Because he just sat there and ate all day. [...] I couldn't believe what this man could put in his mouth. Rubbish, just totally rubbish. And *that's because it's so available. You go to the third world and you wouldn't get that.*⁴

(Lisa, 40s)

Lisa's comments here are undeniably outspoken. First, she condemns an obese hospital patient for his perceived gluttony, and then refigures third-world scarcity as a desirable alternative to Western food culture (a trope I critiqued in Chapter 6 in relation to *South Beach*). But Lisa's comments also indicate an awareness that the West could be other than it currently is, and she looks to non-Western regions and cultures for alternatives:

[I]f you don't have cereal what do you eat? I mean I think we get so indoctrinated with that sort of thing, you know and it's a lifestyle pattern that you develop since [you are] a child [...] especially in the Western diet. You [...] go over to Asia and they don't eat that sort of stuff for breakfast, they eat rice [...] so everything's completely different. So yeah [...] my initial reaction was "I can't do that". And the determination kicked in and said "yes you can, you can do anything you put your mind to". (Lisa, 40s)

In the extract cited above, Lisa's cross-cultural comparison of Australian and Asian foodways highlights the constructedness of cultural (food) practices, and hence their openness to change. In the context of her discontent with Western foodways, Lisa's acknowledgement of global cultural difference opens a strategic space for nutritional transformation.

⁴ As I noted in Chapter 4, all italics in extracts cited from participants' interview transcripts are my own, and are used for critical emphasis. They do not indicate that the interviewee gave the italicised words vocal stress.

'I can see that all of this is an hypothesis'

As I noted above, amongst the low-carbohydrate dieters whom I interviewed those who unproblematically accepted the evolutionary and anthropological models presented in the popular diet literature represented a minority. Most participants in my study approached nutritional primitivism critically and sceptically. This applied even where dieters were generally sympathetic to evolutionary, genetic and anthropological justifications for low-carbohydrate dieting. For example, John expressed his sympathy toward evolutionary nutrition in terms that acknowledged the hypothetical status of this logic:

Insulin gets a big amount of attention mostly from people becoming diabetic and [...] progressing through the states of diabetes. *It's interesting to sort of conjecture* some of the people who write about the protein power, making a point that it's really only in the last thousand years that we've moved away from being hunters and gatherers as a human race (relying on a lot more protein and vegetable in the diet) and moved to processed foods that are predominantly carbohydrate. And when you sit down and think about it, and when you look at everything that happens, and you look at the types of fats that are around, *I think that's probably right. It strikes a chord* in terms of thinking about what it is that is actually happening and why it is happening. (John, 50s)

John's reasoning in this extract is somewhat vague, but in context I think we may safely assume that he is suggesting a possible link between the increasing prevalence of diabetes and insulin resistance syndrome, and the shift from a hunter-gatherer diet to a diet high in processed carbohydrates.⁵ The historical time-frame to which John refers is of course rather short: the agricultural revolution is generally agreed to have begun about 10,000 years ago, as I discussed in Chapter 6 in relation to *The Zone*. But the point I wish to highlight here is that John's vocabulary presents his argument as plausible or logical, not necessarily 'true'. The evolutionary and historical explanation for diabetes 'strikes a chord'; it makes sense of the evidence. But ultimately this is 'conjecture': it can only (ever) be '*probably right*'. As cited in the subheading to this section, John subsequently stated spontaneously that 'I can see that all of this is an hypothesis'. Pam used similar vocabulary to express her sympathy with the genetic and evolutionary arguments put forward by Pam and David Mitchell in *Taming the Dinosaur Gene*. (She was following the Mitchell's Dinosaur Diet.) When I asked Pam about the logic behind the Dinosaur Diet, Pam explained:

[T]hey [the Mitchells] talk about the genes and how you can have a gene that has gone on from time immemorial. That's why it's called the Dinosaur Diet, because we're doing the things that our ancestors did. (Pam, 50s)

When I asked Pam whether she agreed with this explanation, she replied that she found it 'very plausible', a choice of vocabulary which emphasises the unproven (perhaps unprovable) status of the Mitchells' evolutionary claims.

Other dieters whom I interviewed deployed alternative discursive strategies to maintain a safe distance from evolutionary, genetic and anthropological explanations for low-carbohydrate dieting. For example, when I asked Alison whether she had come across the theory that a low-carbohydrate diet is 'what people are meant to eat', she was careful to reserve judgement because she had not encountered the idea in those terms before:

⁵ On insulin resistance and the insulin resistance syndrome, see Chapter 1, footnotes 88 and 92.

I probably haven't heard it put in that sense but it makes [...] a lot of sense like [...] back in caveman days [...] they didn't have all the refined sugars and things that we [...] are pumping in[to] our bodies. [...] I can imagine it being like how we're meant to eat but [...] I'd have to think about it before just accepting it. (Alison, 40s)

Alison's response is interesting because even though she cannot recall encountering the theory that a low-carbohydrate diet is 'what people are meant to eat', she is clearly familiar with the discourse of evolutionary nutrition; hence her spontaneous reference to 'caveman days'. Alison had not in fact read any low-carbohydrate diet books in full. When she was first diagnosed with type 2 diabetes, prompting her change of diet, she had started reading *The Zone*, but found it long on explanation and short on practical advice. Presumably, her exposure to evolutionary nutrition has come from the medical and nutrition websites from which she garnered most of her dieting information.

Several dieters distanced themselves discursively from evolutionary explanations of body-weight and health by attributing these theories to other people. For example, Gina repeatedly attributed the notion that a low-carbohydrate diet is 'what nature intended' to the naturopath who recommended the Ultra Lite diet to her:

That's what the Ultra Lite lady told me [...] their theory is that you are supposed to avoid a lot of processed foods like breads [...] I think she was [...] saying that the hunter-gatherers tended to eat meats and vegetables [...] and that's the way they ate before I suppose we tended to farm a lot of stuff [...] I did hear it from them [...] the naturopath said that that's how people used to eat not that many years ago really [...] and people weren't big back then [...]. (Gina, 40s)

Ultra Lite's website claims that the 'program will assist you to make the transition from the modern high refined carbohydrate diet to the healthier way of eating that our ancestor's [*sic*] experienced 150 years ago'.⁶ When I asked Gina whether she agreed with these ideas, her response was hesitant: 'Oh, I suppose in a way I do [...] I suppose I can see the connection there'.

Luke and Sarah deployed the further discursive strategy of presenting both sides of evolutionary nutrition debates side by side, highlighting the contested nature of knowledge in this area. Luke mused about the possibility that a low-carbohydrate diet might confer an evolutionary advantage today by protecting those who follow it from obesity, disease and premature mortality. But he expressed these thoughts in the conditional tense, and followed them with the other side of the argument:

[T]he evolution way would say that more people will die off and the low carbs would see more people fitter for longer [...] but at the same time, no, it's not really killing anyone before they would have children normally anyway [...]. (Luke, 20s)

In fact, it is arguable that the increasing prevalence of type 2 diabetes in children and adolescents does have the potential to decimate the population prior to reproductive age. But my point here is that Luke distances himself from both sides of this debate by means of his vocabulary and the way he chooses to structure his comments. Similarly, Sarah presented both sides of the debate about red meat and evolution without attaching herself to either position. She said that on the one hand, she had encountered arguments 'saying you shouldn't eat that much meat [...] we're

⁶ See www.ultralite.com/theprogram.php [accessed 8 November 2007].

not evolved to [...] eat that much meat'. On the other hand, she reported hearing 'responses from the other side saying that [...] we've eaten meat for this [many] years and it's good for you' (Sarah, 30s). Statements such as these strategically construct the speaker as sceptical and impartial in the midst of a very noisy debate.

The construction of the speaking subject as sceptical and impartial was a discursive manoeuvre common to many of the dieters I interviewed. Participants noted frequently that nutrition recommendations are constantly in flux, and commented often on the highly visible controversies between different nutrition camps. Pam, for instance, pointed out:

[O]ne day they come [...] out and tell you bread's good for you and then they tell you it's not. The recent controversy [about] vegetables and how they're stored [...] I think it's the same [...] eventually the circle will come round again and we might find that these pesticides they're putting on are very good for you! (Pam, 50s)

Such comments position the speaker outside and above the controversy. Another speaker might express cynicism here; Pam portrays herself instead as amused and patient. Many dieters seemed to feel that they would be better off making up their own minds about healthy eating rather than trying to follow the seemingly endless to-and-fro of nutrition scientists. As one participant put it, 'it's just nutritionists who seem to fight wars at each other all the time' (Tracey, 20s). Recognition of the 'nutrition wars' inflected dieters' responses to the popular low-carbohydrate literature, which inevitably engages closely with scientific controversy. For example, Tracey described reading *Dr. Atkins' New Diet Revolution* with a degree of scepticism, knowing that Atkins was financially and professionally committed to low-carbohydrate dieting. She referred to this as his 'agenda':

CK: [...] Atkins talks about the whole idea that low-carb is what people are meant to eat; what do you think about those kinds of ideas?

Tracey: I think of course that *they're going to have their own agendas to write the book*, but a lot of the human body isn't meant to have processed grains and that kind of thing anyway [...]. (Tracey, 20s)

Note that Tracey actually sympathises with Atkins's primitivist logic. But she carefully prefaces her agreement with an indication that she has recognised, and taken into account, Atkins's 'agenda' in reaching her own decision. In other words, Tracey self-consciously constructs herself as an 'active' and 'selective' reader, lest the listener think that because she is an Atkins dieter, she must have 'swallowed' the Atkins text whole.

As I noted earlier, empirical research with readers has consistently found that they are, in Janice Radway's words, 'active, producing cultural worker[s] who fashion [...] narratives, stories, objects, and practices from myriad bits and pieces of prior cultural production'.⁷ As Jonathan Rose cautions in relation to popular fiction, 'the world view of the novel does not necessarily equal the beliefs of the reader, no matter how popular the work may be'.⁸ The same caveat must be applied to the study of popular works of non-fiction, including diet books. Rose points out that 'one possible reader response is to toss the text in the garbage bin'.⁹ Indeed, one low-carbohydrate dieter whom I interviewed, Emma (30s), did exactly that with *Dr. Atkins' New Diet*

⁷ Janice Radway, "Reception Study: Ethnography and the Problems of Dispersed Audiences and Nomadic Subjects," *Cultural Studies* 2, no. 3 (1988): 362.

⁸ Jonathan Rose, "Rereading the English Common Reader: A Preface to a History of Audiences," *Journal of the History of Ideas* 53, no. 1 (1992): 59.

⁹ *Ibid.*, 60.

Revolution after she failed to lose any weight on the diet. Participants in my study certainly demonstrated a highly critical and sceptical approach to the evolutionary, genetic and anthropological models presented in the low-carbohydrate literature, challenging their evidence base, relevance and explanatory power (as I describe in the next section). But further, some dieters (including Tracey) actively *sought* to present themselves as critical, sceptical, or even cynical in their reading and thinking about nutrition. This tendency derives, I would suggest, from dieters' awareness that their choice of diet is highly controversial, and from their recognition that some may see them as medically naïve and 'desperate', to paraphrase feminist critic Carole Spitzack.¹⁰ By demonstrating that they have not simply 'swallowed' the low-carbohydrate text whole, dieters can effectively resist their portrayal as 'cultural dupes'.

'We can't go back a hundred million years'

Like Tracey, Ursula (30s) self-consciously performed in her interview a critical and sceptical perspective toward low-carbohydrate discourse, including evolutionary nutrition and other primitivist tropes. Unlike Tracey, Ursula had been extremely unhappy with her experience on both Protein Power and the Atkins Diet. Over the seven months that she followed the two diets, she lost very little weight and in addition felt quite unwell. In the following extract from her interview, Ursula declares her cynicism toward the Eadeses' use of ancient Egyptian health as 'evidence' for a high-protein regime (as I discussed in Chapter 7):

CK: [D]o you remember coming across the idea at all that [...] a higher protein diet's kind of more natural or more what we're meant to eat?

Ursula: It was more like [...] as you would have eaten if you were a caveman, yes [...] it was mentioned extensively in *Protein Power*. There was a whole [...] story about how the Egyptians suffered obesity; there was some bizarre story about the Egyptians suffering obesity or bad teeth because even though they were exercising, they were eating so much refined... [Participant unsure]

CK: Sugar, was that it?

Ursula: I can't think but it was a very bizarre story [...] I remember that quite well.

CK: [...] What did you think of it at the time and what do you think of it now?

Ursula: Bizarre. [Laughter] I think there are so many things that we don't do anymore in terms of cavemen that to sort of suggest we should hearken back to that is a bit mystical and romantic and we need to move on. (Ursula, 30s)

As expressed in this extract, Ursula's reaction to *Protein Power's* Egyptian 'evidence' is actually ambivalent. Notice that she does not explicitly *disagree* with the Eadeses representation of ancient Egyptian health, nor the connection the Eadeses draw between the Egyptians' diet and their health problems. Certainly her repeated description of the Eadeses' narrative as a 'bizarre story' communicates a high level of scepticism. But ultimately, Ursula questions the narrative's *relevance*, not its 'truth'. In her final sentence in the extract cited, she argues that human society has changed so much since 'caveman' times that historical comparison is pointless: 'we need to move on' to solutions appropriate to contemporary life and times. In this respect Ursula's 'para-critique' of evolutionary nutrition echoes Michael Gard and Jan Wright's comments on the thrifty gene theory:

¹⁰ Spitzack, *Confessing Excess*, 22.

Does anyone actually doubt that we live rather different kinds of lives to our pre-*Homo sapiens* ancestors? What exactly are we to do with this knowledge? Adopt prehistoric lifestyles?¹¹

Ursula, like Gard and Wright, has clearly grasped that a reversion to prehistoric life is not what evolutionary nutritionists recommend in practice. In this context, discussion of earlier periods of human life would seem entirely redundant.

Nutritional primitivism seems to hold a peculiar appeal for certain people, to whom it immediately ‘makes sense’. Phil and Lisa belong in this group. By contrast, others (like Ursula) find nutritional primitivism frankly ‘bizarre’ and illogical. For example, Karen (30s) found the ‘caveman’ diet a useful model for distinguishing between acceptable and unacceptable foods on Atkins. However, she had ‘no idea’ what the logic behind this model might be. For Karen, the rule ‘eat how they would have eaten as cavemen’ placed a helpful but completely arbitrary limit on her food intake:

I do remember something about the Neanderthal kind of thing that you eat [...] how they would have eaten as cavemen. They couldn’t grow things because they were transient so they need to be transient foods. Potatoes wasn’t [*sic*] a transient food. Killing a dinosaur and eating it was a transient food. [...] They couldn’t sow those crops and stay in one place and watch those crops grow [...] so you didn’t eat the cropped food [...] it made sense to me and it was a lot easier actually to work out what you could and couldn’t eat. Because you would have a look at something and go: “now would I have to wait six months for this?” [...]

CK: How do you think that relates to weight loss?

Karen: I have no idea! [...] You know, if you’re really struggling [...] Weight Watchers tells you [...] a piece of meat has to be the size of your palm, so you have these visuals. You know you’re allowed to have a piece of cheese but it’s only the size of a matchbox. [...] I had big-arse matchboxes by the way. They didn’t stipulate [...] and when you’re [...] looking at “can I walk along the ground and just pick up a green leafy vegetable? well yes I can” [...] it’s got that same kind of concept to it [...] you can get a little silly with it [...]. You need some rules and some boundaries, or else all of a sudden [...] you manage to plant a harvest of potatoes and you’re transient and you come back to it and yes, you can pull it out of the ground – this is weird. You need some rules and stuff. (Karen, 30s)

Karen’s notion of ‘transient’ or nomadic foods constitutes a novel linguistic and conceptual take on the evolutionary prescription to ‘eat what your ancestors ate’. Consistent with evolutionary nutrition, Karen constructs a crucial distinction between hunter-gatherers and agriculturalists. In Karen’s logic, whether a food is ‘transient’ (that is, whether it could be hunted or gathered en route from place to place) becomes the key criterion for acceptability, excluding domesticated plants and animals. Karen treats the ‘transient food’ rule as equivalent to Weight Watchers’ visual portion size cues: both are simply an arbitrary means by which to restrict the dieter’s food intake. Like portion size cues, Karen points out that the ‘transient’ criterion is almost infinitely flexible. Inadvertently, Karen thus reveals the constructedness of the boundary between wild and domestic, natural and man-made: in other words, the fact that these binaries are discursive, not ‘real’. As we have seen in previous chapters, we can see here that what counts as ‘transient’ food,

¹¹ Gard and Wright, *The Obesity Epidemic*, 111.

wild food, or natural food is defined according to a set of preconceived nutritional axioms in which leafy greens and animal flesh are healthy, while potatoes and grain crops are not.

The issue of where to draw the line is an anxious and recurring problem in low-carbohydrate logic. How much human intervention in food is *too* much? How far back in history must we go to find the optimum nutritional model? In their interviews, long-term ‘low-carbers’ Luke and Michelle both distanced themselves from strict ‘Paleo’ diets (as discussed in Chapter 6), questioning the need to draw the nutritional line at such an early point in human history. Luke pointed out that obesity has only emerged as a major public health problem in the last few decades. He highlighted the need to identify specific *recent* dietary and lifestyle changes which might be responsible for the so-called obesity epidemic:

I know the people who go the next step to [...] the Paleo diet [...] basically meats and nuts and no really fruit [...] I kind of figured there’s a lot of fruit around people have been eating for a long time, and [...] obesity has only become a [...] really big deal in the last ten, twenty years [...] and the things that are happening in the last ten or twenty years is that we are frying, deep-frying a lot more of our food, eating a lot more stuff that has grain sugar and [...] processed sugar and [...] processed fats and oils and stuff that’s extracted rather than just naturally [...] in what we are eating. (Luke, 20s)

Luke’s approach in this extract parallels that of Gard and Wright in *The Obesity Epidemic*. Gard and Wright point out that ‘[t]he scientific literature generally claims that overweight and obesity have exploded over the last twenty or thirty years’. Yet ‘scientists rarely look closely at Western life during the 1950s or any other period from the relatively recent past’ in order to find explanations for the recent epidemic of obesity, instead preferring to seek clues in the Stone Age.¹²

Unlike these evolutionary sleuths, Luke identifies four components of the (Western) diet that have increased markedly in recent years, and which might be implicated in current obesity rates: deep-fried foods, processed fats and oils, processed sugars and highly refined ‘extracts’ in general. Luke’s comments cited in the previous paragraph implicitly reject the strict evolutionary logic expounded by many low-carbohydrate authors. To paraphrase Gard and Wright, evolutionary explanations for the obesity epidemic logically demand that during the hundreds of thousands of years that separate the establishment of the human genome and the widespread emergence of obesity today, human diet remained consonant with our Paleolithic ‘design’. In other words, ‘the “obesity epidemic” must represent a tipping point when Western societies, *en masse*, suddenly crossed over a threshold, which had remained uncrossed for millennia’.¹³ As Gard and Wright imply, such a scenario seems highly unlikely. Instead, ‘[w]hat is needed [...] are clear and specific arguments about concrete events that have caused increasing overweight and obesity in some, but not all, communities’.¹⁴

While Luke implicitly rejected an evolutionary explanation for obesity, Michelle questioned the logic of strict ‘Paleo’ diets from *within* the evolutionary model. Unlike Luke, Michelle was concerned not solely with obesity but with optimal health. (The concern with optimal health is a hallmark of the low-carbohydrate movement, as I argued in Chapter 1.) I noted in Chapter 6 that evolutionary nutrition may rest on one or both of two key premises: firstly, that Stone-Age men

¹² *Ibid.*, 108.

¹³ *Ibid.*, 111.

¹⁴ *Ibid.*

and women were exceptionally fit and healthy; and secondly, that the Paleolithic era represents the ‘evolutionary window’ during which human nutritional adaptation took place. Michelle disagreed with both of these principles. She points out that Paleolithic people have been far surpassed by subsequent generations in intelligence and technological development. Further, she argues, these subsequent achievements indicate that human evolutionary development did not stop with the end of the Stone Age. Michelle concludes that Paleolithic diet may not have been ‘optimal’ after all:

[S]ome people go to the extreme, like with the Paleo diet [...] they think [...] we should only just be eating meats and pretty much nothing else [...] because that’s [...] what they pretty much did so many thousands of years ago. [...] But [...] that doesn’t really sit right with me because I think about where we’ve evolved somewhat from that point in time, like, we weren’t the smartest people back then [...] our brains are a lot bigger and [...] technology and all these advances we’ve made as in intelligence-wise [...] just because we ate [like] that I just don’t know if that means it was optimal. (Michelle, 30s)

Later in her interview, Michelle offered a second ‘para-critique’ of Paleo diets, reiterating the arguments I cited above. In the final lines of the extract cited below, she shifts tack and begins to question the practical relevance of the evolutionary nutrition paradigm itself:

Paleo [dieters] some of them are usually from the school of [...] if it’s white it’s evil, if it’s a carb it’s evil, like never potatoes [...] be]cause that was born in [...] agriculture[. But] it was there in the first place, we probably weren’t supposed to eat so much of it but [...] I can’t believe that we never ate some of those things. [...] I think when agriculture come in [*sic*], it probably [...] was bad in a way but at the same time I think it must have helped us because in some things [...] we’ve advanced. [...] We’ll probably live a lot longer and probably a lot more people survive [...] less starvation I guess but [...] back then who says how regular food was, or, it’s hard to imagine how healthy [...] they would have necessarily been. They might have gone for a week before they found anything to eat [...]. (Michelle, 30s)

Initially, Michelle questions the need to exclude agricultural products completely from one’s diet. She points out that starchy foods like potatoes were originally wild foods, and were therefore consumed before the development of agriculture, albeit in small quantities compared to today. Michelle acknowledges that the boundary between wild and domesticated foods is a fluid and constructed one; the distinction between the two may be of degree rather than kind, as I argued earlier. In effect, Michelle criticises the black-and-white nature of strict low-carbohydrate logic. Like other dieters whom I interviewed, she seemed much more willing to tolerate complexity and uncertainty than low-carbohydrate authors themselves.

Michelle then reiterates her argument that subsequent human generations have surpassed our Paleolithic ancestors: famine and mortality, she suggests, have both declined since the Stone Age. Interestingly, Michelle again takes a familiar notion from the low-carbohydrate literature (that of ‘feast-or-famine’ cycles) and reapplies it in a way that disrupts low-carbohydrate authors’ intentions. Recall that in Chapter 4, I argued that Michelle applied the binary natural / processed in ways that derailed low-carbohydrate authors’ attempts to categorise low-carbohydrate processed foods as healthy. Here, instead of invoking prehistoric feast-or-famine cycles as evidence for the thrifty gene theory, Michelle uses the occurrence of famine in prehistoric times to question whether human health during the Paleolithic era really was optimal. In other words,

she uses the thrifty gene theory to attack evolutionary nutrition. Ultimately, Michelle stresses the inevitable uncertainty of our knowledge of prehistoric life. We will never have a definitive picture of Paleolithic health, nor can we know for certain how regular the food supply was during the period. As Michelle stated earlier in her interview, ‘I see both sides of it [...] I just think of it as maybes’. But we cannot possibly reason on this basis to produce clear guidelines for contemporary nutrition.

Michelle highlighted similar uncertainty in nutritional anthropology, the basis of low-carbohydrate authors’ cross-cultural claims (including the comparisons with Indigenous people that I discussed in Chapter 7). In the following complex extract, Michelle questions the reliability of the research about the Inuit and the Masai that supports key low-carbohydrate diet claims:

CK: [...] What do you think of the idea [...] that [...] supposedly people were healthier [thousands of years ago], so that’s why we should be eating what they ate?

Michelle: [...] The thing [is] we had shorter life spans back then. How do we know that they didn’t get this or that? [...] It’s like [...] they bring up the Eskimos and therefore fish oil. [...] Now I do like fish oil but [...] Eskimos they mainly eat seal and seal is a mammal [...] [By] the same token [...] apparently they have the highest [rates of] infant deaths [...] and miscarriages and [...] stillborns. [...] This is another reason why I don’t do keto[genic dieting] because I don’t know why they [have] that. [...] But at the same time you’ve got to think about the mercury content especially because they eat seals which probably might have a lot of mercury in them. [...] In a documentary I saw] they’d talk about Stefánsson and all of that group and they were saying back then that [...] there’s a lot of things we don’t know [...] no-one really documented them that much. It’s just [Stefánsson] then pretty much so no-one knows for sure how [the Eskimos] were health-wise long-term [...] we know oh they were pretty much in ketosis all the time. [...] But we don’t really know how healthy that is from an infant point of view. [...] I’ve done some more reading [...] recently and they were talking about [...] Masai. [...] Well they have a [...] similar [issue] [...] but then I was also reading what they used to do [be]cause they’d put the pregnant women on a [...] restricted diet towards the end [...] like calorie-restricted diet and [there were] a lot of deaths [...] it’s just some traditional thing. [...] So people might say they’re healthy but I just don’t see how they can be healthy when they do that to their pregnant women. [...] So [...] with the Eskimos it could just be the mercury that would [cause high rates of miscarriage and stillbirth]. [...] They have these higher rates in the world today, do you know what I mean? They don’t really know back then [...] how many miscarriages they had, no-one documented it [...]. (Michelle, 30s)

This is a difficult extract to follow but a very important one in Michelle’s ‘para-critique’ of low-carbohydrate logic. Initially, Michelle briefly stresses again the uncertainty of our knowledge about Paleolithic health: the shorter life spans of early humans make it impossible to speculate about the prevalence of chronic diseases which today generally occur in middle age (including obesity, diabetes and cardiovascular disease). Following this comment, Michelle shifts from discussion of the Paleolithic era to more recent times. In the remainder of the extract cited above, she emphasises slippage and uncertainty in cross-cultural comparisons between the Inuit, the Masai and the rest of the world. Firstly, she notes that ‘Eskimo’ health and diet are often used as evidence on the basis of which to recommend fish oil. However, marine oil in the Inuit diet derives primarily from seal blubber, Michelle points out, which is not the same as fish oil. Secondly, Michelle turns to the issues of miscarriage and stillbirth, which take up the remainder

of the passage cited. Michelle argues that it is dangerous to recommend the high-protein traditional Inuit or Masai diet as a healthy prototype for Western dieters given that both groups have very high rates of miscarriage and stillbirth. The limited historical evidence available makes it impossible to know whether these problems existed in the past and might be associated with some aspect of traditional diet or lifestyle, or whether they are due to more recent nutritional and cultural changes (for example, the level of mercury in seal blubber today due to pollution).

It is worth comparing Michelle's representation of the 'Eskimos' with the depiction of the same group in *Protein Power*. In Chapter 7 of this thesis I argued that the Eadeses' portrayal of the North American Inuit perpetuates Stefánsson's century-old research in an instance of the 'ethnographic present', ignoring the cultural and nutritional changes of the past hundred years. The Eadeses depict the Inuit as an exceptionally healthy and pristine population, unconsciously replicating the stereotype of the Noble Savage. In the Eadeses' imagination, the Inuit are somewhere 'out there' in the Arctic wilderness, entirely removed from Western civilisation. By contrast, Michelle's comments situate the Inuit firmly in the modern world. The 'Eskimos' Michelle describes are not romantically pristine, nor are they blessed with unrealistically perfect health. Michelle acknowledges the problems of miscarriage and stillbirth, as well as the serious issue of contamination of the Arctic food chain with environmental pollutants.¹⁵ Undeniably, Michelle treats the 'Eskimos' and the Masai as research resources via which Westerners may learn more about nutrition. Her perspective is Eurocentric and implicitly hierarchical. Stefánsson's research is considered to be 'it' in terms of historical knowledge about Inuit health; there is no question that the Inuit themselves might have oral or written records regarding miscarriage and stillbirth rates in the early twentieth century. But Michelle questions the romantic representation of Indigenous peoples such as the Inuit and the Masai as exceptionally healthy. In an implicitly feminist move, she suggests that traditional Masai culture may be inherently hazardous to infant and maternal health: 'I just don't see how they can be healthy when they do that to their pregnant women'. Notwithstanding its residual Eurocentrism, Michelle's approach disrupts the idealisation of so-called primitive people and their diet which underpins so much of low-carbohydrate logic.

Like Michelle, Jessica highlighted the vexed issue of uncertainty in our knowledge of the prehistoric past. As cited in the subheading to this section, Jessica pointed out that 'we can't go back a hundred million years'. Consequently, our knowledge of the prehistoric past will always, by definition, be partial and provisional. This uncertainty confounds irremediably any attempt to define an 'evolutionarily appropriate diet'. In the extract that I cite below, Jessica criticises the reliance of the low-carbohydrate literature on 'just-so stories'. As Gard and Wright explain,

A "just-so" story is a story about the past that is invented in order to explain the present. Rather than being a story based on evidence, it is a story wheeled in "after the fact" to support an existing hypothesis; a hypothesis about a hypothesis as it were.¹⁶

Taking her argument a step further than Michelle, Jessica questions the relevance of appealing to evolutionary history when our real concern is nutrition:

[I]t comes back to the argument of evolution [...] we can't go back a hundred million years; we're attaching an explanation after the fact of, what do you call them, just-so stories. [...] I'd be wary of wanting to use a just-so story to advance purely for political

¹⁵ On the problem of environmental contaminants in traditional Inuit foods, see Bjerregaard et al., "Indigenous Health in the Arctic," 393-94.

¹⁶ Gard and Wright, *The Obesity Epidemic*, 109.

reasons to try and [...] appeal to the deep past that somehow “Look, Stone-Age man was like this so therefore it must be where it’s at”. I’d want to [...] stick I think with saying “[...] if we’ve evolved then there will be human nutritional constraints there – let’s find out what they are” [...] but talk about them in terms of human nutrition constraints rather than historical narratives [...]. (Jessica, 30s)

Instead of evolutionary ‘just-so stories’, Jessica appeals to science as the apolitical arbiter of nutritional knowledge:

I think it’s crucial that when looking at something like low carb that we depoliticise it and look at it in terms of more studies [...] it’s not about point-scoring as if we’re in high school still, trying to [...] win some argument as if it were a debating team, it’s [...] science and science has got to win out in the end [... If] low-carb ends up being proved to be, look it sounded like a great idea but then after ten years you [...] drop dead [...] and there’s a scientific explanation for [why] that will happen, well I’m not holding the sacred cow if that turns out to be right [...]. (Jessica, 30s)

I would question Jessica’s assumption that a depoliticised science is possible, as will be clear from my critique of the thrifty gene theory in Chapter 6 and of O’Dea’s research with Aboriginal Australians in Chapter 7. However, I share Jessica’s scepticism regarding both the validity and the relevance of evolutionary appeals on matters of nutrition. Amongst the low-carbohydrate dieters whom I interviewed, Sarah also shared this scepticism. Like Jessica, Sarah appealed to science by way of reference to the ‘nutritional qualities’ and ‘nutritious’ components of food:

[M]y view is that there are things that I’m not sure if we’re supposed to eat them but surely [...] we have eaten certain food groups for a long time. [...] We’re obviously getting something nutritious out of it or else we wouldn’t eat it, or we wouldn’t have survived, so [...] there are aspects that we should be eating, I’m not sure that it’s necessarily natural or we have to do it or we can’t get those same nutritional qualities in other things. [...] B]ut it’s something that appeals to my taste, which is clearly something that’s evolved over many millions of years. (Sarah, 30s)

While appealing to nutrition science, Sarah displays scepticism toward the discourse of Nature and naturalness associated with evolutionary nutrition thinking. Sarah also criticises the determinism or prescriptiveness of evolutionary logic in relation to food choice: as she points out, a nutritious diet may come in many different forms. Many different foods may supply the same nutritional qualities as one another. In Sarah’s view, there is no inherent reason to prefer a food that has a long tradition of consumption over another that has equivalent nutritional value. The joke that Sarah makes in the final sentence cited here – that even her own taste has ‘evolved over many millions of years’ – humorously underscores the point that *any* feature of human physiology or behaviour may today be considered ‘evolutionary’, to the point that the concept has ceased to be helpful or explanatory.

The low-carbohydrate dieters whom I interviewed for this project engaged thoughtfully and critically in debating the validity and relevance of evolutionary nutrition, the thrifty gene theory and nutritional anthropology as bases for dietary choice. A few participants did appear to have ‘swallowed whole’ the nutritional primitivism of the popular low-carbohydrate literature; for these people, nutritional primitivism seemed to hold a peculiar appeal and logic. But in most cases the dieters in my study performed what might be called ‘para-critical’ work on low-

carbohydrate discourse, approaching nutritional primitivism critically and sceptically. In many cases, interviewees echoed the points made in the interdisciplinary critical literature on the obesity epidemic and evolutionary nutrition, especially the work of Michael Gard and Jan Wright. This is not to deny that dieters replicated some of the troubling primitivist stereotypes and racist tropes I identified in Chapters 6 and 7. But participants also disrupted the romanticisation of the primitive and the unquestioning reinforcement of evolutionary and genetic determinism that I have critiqued in popular texts such as *The Zone* and *Protein Power*. Across the interviews I conducted, dieters muddied discursively the black-and-white binaries of low-carbohydrate logic. Instead, participants highlighted (explicitly and implicitly) the complexity, uncertainty and conjecture that characterises our understanding of the prehistoric past, human evolutionary development, and cross-cultural disparities in health and weight.

Chapter 9. Summary and conclusions

To the best of my knowledge, this thesis represents the first book-length critical study of the recent low-carbohydrate diet trend, which began in the early 1990s and peaked around 2004. This period coincided with rising public health concern about a perceived ‘epidemic’ of obesity and diabetes in English-speaking Western countries. During this time a number of bestselling low-carbohydrate diet books appeared in the United States and Australia, including the five that I have analysed in this thesis: *Dr. Atkins’ New Diet Revolution*, *The South Beach Diet*, *The Zone*, *Protein Power* and *Sugar Busters*. I have supplemented this textual analysis with in-depth interviews with low-carbohydrate dieters in an effort to generate multiple perspectives on low-carbohydrate dieting. My focus has been the set of interconnected ideas which together I dub nutritional primitivism: the pursuit of ostensibly simpler, more natural and more authentic ways of eating as part of a quest for health through diet. I have argued that nutritional primitivism is one of the hallmarks of low-carbohydrate discourse, and have traced its contours as a backlash against modern Western industrial eating habits. This backlash, I have argued, nostalgically invokes that which is *not* modern, *not* Western, or both, bringing together appeals to Nature, culinary tradition, Stone-Age prehistory and global Indigenous foodways.

This thesis diverges methodologically and theoretically from previous (feminist) studies of dieting. In Chapter 1 I argued that the perceived obesity and diabetes crisis has made a feminist approach to the study of dieting inadequate, and my subsequent analysis of diet books and interview study with dieters has reinforced that conclusion. Instead, I have sought to extend the critical concept of primitivism from the literature in cultural studies, anthropology and the history of ideas to the emerging field of food studies, and have examined the applicability and significance of nutritional primitivism in specific relation to the low-carbohydrate diet trend. Each of the analytical chapters in this thesis (Chapters 4 to 8) has examined some feature of nutritional primitivism in low-carbohydrate discourse. The various themes and tropes that I have examined represent, I argue, multiple facets of a single phenomenon, and function together as a coherent discursive whole which is immediately recognisable to the reader of the popular low-carbohydrate literature. Throughout this thesis I have stressed the binary structure of nutritional primitivism and hence its intrinsic circularity. In low-carbohydrate discourse, diverse historical periods, societies, cultures, cuisines and even specific foods stand interchangeably as ideals whose primary discursive purpose is to provide a contrast to modern Western eating habits and their association with degenerative disease.

Chapter 4 of this thesis considered the function of the natural / processed binary in low-carbohydrate diet discourse and practice. I suggested that refined carbohydrate operates in the low-carbohydrate dietary schema as the pre-eminent symbol of modern industrial diet, against which sanctioned diet foods must be defined in opposition. I demonstrated that the natural / processed binary recurs across the popular low-carbohydrate literature as well as in the discourse of dieters whom I interviewed, nearly all of whom expressed concern about processed food, and sometimes very strongly. Although the preference for natural is by no means unique to low-carbohydrate dieters, the distinguishing logic of low-carbohydrate discourse is its negative attention to refined carbohydrate as the defining feature of the modern Western diet and the cause of the obesity and diabetes epidemics. In *Dr. Atkins New Diet Revolution* and *Protein Power*,

trans fats feature as a secondary focus of concern. Against the backdrop of these key industrial foods, a low-carbohydrate diet is constructed as the natural and healthy alternative. Low-carbohydrate diet discourse thus takes the dichotomy natural / unnatural and reapplies it to its own marginal dietary pattern. This dichotomy functions as both a symbolic foundation for nutritional primitivism in the context of low-carbohydrate discourse, and a practical guide for low-carbohydrate dieters in day-to-day questions of food choice.

In Chapter 5 I examined the powerful discursive combination of nostalgia for pre-industrial Western foodways, and the pursuit of the ‘authentic ethnic’ culinary traditions of exotic regions elsewhere. In the low-carbohydrate literature, I argued, these tropes together privilege a generalised notion of tradition which contrasts with Western nutritional modernity. The turn to other times and other places is particularly pronounced in *South Beach*, but is also evident in other popular low-carbohydrate diet books, including *Sugar Busters*. I noted in Chapter 5 that the binary opposition between the modern Western diet and a traditional ideal tends to lead to generalisations and factual inaccuracies, an observation which was repeated in subsequent chapters. Any diet or cuisine that is *not* modern and *not* Western must be adjusted strategically to fit the low-carbohydrate ideal. Importantly, I found that in my interview study, dieters’ descriptions of their experiences did not match *South Beach*’s rhetoric. Instead, I identified a radical disjuncture between low-carbohydrate textual discourse and dieting practice in relation to culinary nostalgia and tradition. Although tradition functions as a romantic ideal in the low-carbohydrate literature, the practical requirement that dieters eliminate staple starches severs them from their own and Other culinary traditions both symbolically and practically.

Chapter 6 traced the deployment of the two neo-Darwinian explanations of health and body-weight which underpin primitivist logic in the popular low-carbohydrate literature: evolutionary nutrition and the thrifty gene hypothesis. I showed that both these theories treat obesity and diabetes as the inevitable result of a mismatch between the Stone-Age body and modern Western eating habits. Hence, these two evolutionary models maintain that a blueprint for healthy eating can only be found by the search for human origins in the primitive past, which is constructed as an idealised ‘state of nature’. As in Chapter 5, my analysis of evolutionary nutrition and the thrifty gene theory across a range of popular diet books repeatedly identified generalisations, inconsistencies and inaccuracies. Low-carbohydrate texts consistently overstate the genetic basis of diabetes and obesity, obscuring the social and environmental factors known to be associated with these conditions. These problems result directly from the binary structure of nutritional primitivism: in this case, the use of the Stone Age as a blank slate onto which to project ideals perceived to be lacking in contemporary Western life. Most disturbing is the tendency of the low-carbohydrate literature to draw on racist hierarchies of evolutionary development, and to favour racial and genetic determinism over individual and community self-determination.

In Chapter 7 I considered the way in which *Protein Power* treats nutritional and anthropological research about Indigenous people. Consistent with the binary structure identified in previous chapters, I argued that the Eadeses represent the traditional diets of the North American Inuit and Aboriginal Australians as healthy, authentic and evolutionarily appropriate alternatives to the modern Western diet. However, I also noted (again) that the Eadeses’ representations of Indigenous health and diet tend to be idealised, generalised and often simply inaccurate. On the one hand, *Protein Power*’s depiction of the ‘Eskimos’ imagines the Inuit to be culturally pristine

and exceptionally healthy, unconsciously replicating the stereotype of the Noble Savage. By contrast, the Eadeses depict Aboriginal Australians as abject and diseased because of their 'exposure' to Western diet and lifestyle. The representation of Indigenous people in *Protein Power* is striking for its naiveté and frequent outright racism. The Eadeses betray an almost total ignorance of the history of colonisation and its legacy in Australia and the United States. Their account of the health problems confronting Australian 'aborigines' transforms the Aboriginal Australian population into a kind of explanatory microcosm for the degeneration and decline ostensibly threatening the West in the form of the twin obesity and diabetes epidemics. The stereotyping of Indigenous people as exotic and childlike is troubling. As I point out, these tropes depend ultimately on an outdated model of evolutionary development which blurs equally stereotyped images of prehistoric hunter-gatherers and contemporary Indigenous people.

Finally, Chapter 8 covered the responses of low-carbohydrate dieters in my interview study to evolutionary nutrition, the thrifty gene hypothesis and nutritional anthropology. Most dieters whom I interviewed were clearly familiar with this material and many engaged enthusiastically in debating its validity and significance. While a few participants seemed to have accepted fully the nutritional primitivism evident in the popular low-carbohydrate literature, in most cases the dieters whom I interviewed performed what might be termed a 'para-critical' evaluation of low-carbohydrate discourse, approaching the literature critically and sceptically. Certainly, nutritional primitivism seemed to offer a peculiar appeal and logic for a minority of my participants. Further, dieters echoed some of the troubling primitivist stereotypes and racist tropes that I identified in Chapters 6 and 7. But, I argued, participants also challenged and disrupted key tenets of nutritional primitivism in their 'para-critique', including its strict evolutionary determinism and its simple idealisation of the primitive. Across the interviews I conducted, participants highlighted the complex, uncertain and hypothetical nature of knowledge about human evolutionary origins and the prehistoric past.

In each chapter of analysis, I have sought to distinguish between different diet texts with reference both to their practical recommendations and their discursive features. For example, in Chapter 4 I noted that *Dr. Atkins' New Diet Revolution* and *The South Beach Diet* differ in their practical and symbolic approaches to two key food groups: fats and whole grains. While Atkins treats unprocessed fats as the ultimate natural food, Agatston is wary of their association with heart disease; on the other hand, Atkins betrays ambivalence toward whole grains, which Agatston embraces for their 'moral fibre'. In Chapter 5, I distinguished between those diet books that seek a return on some level to pre-industrial tradition (*South Beach*, *Atkins*) and those that aim merely to palliate the unhealthy effects of 'modern life' (*Sugar Busters*). In Chapter 6, I noted that *Atkins*, *Sugar Busters*, *The Zone* and *Protein Power* all draw on evolutionary nutrition concepts, while *Atkins*, *South Beach*, *The Zone* and *Protein Power* all present versions of the thrifty gene theory. Finally, in Chapter 7, I singled out *Protein Power's* discursive investment in Indigenous people as particularly troubling. Across the diet literature, the various discursive facets of nutritional primitivism thus appear in a range of configurations. Some books, such as *Dr. Atkins' New Diet Revolution* and *Protein Power*, engage actively in all the tropes I have identified. *The Zone*, on the other hand, takes up only the crucial evolutionary and genetic logic of nutritional primitivism. *South Beach* displays a strong Calvinist moral logic which distinguishes it from other low-carbohydrate texts.

Notwithstanding the significant differences between the various diet texts I have examined, one of the key findings of this thesis has been the extreme disjuncture between the popular low-carbohydrate literature and the experiences and views of low-carbohydrate dieters whom I interviewed. In this thesis I have developed an ideological critique of low-carbohydrate textual discourse. However, I found that dieters engaged critically and sceptically with the most troubling aspects of this discourse, seemingly bypassing my critique. As theorists of reception have been insisting for over twenty years, no-one studying cultural texts, least of all texts that specifically aim to inspire radical transformation in readers' behaviour, can afford to assume that the text is 'it'. As Radway points out, readers are not passive vessels who uncomplicatedly receive the text's 'message'. Rather, readers are 'active individuals who productively articulate together bits and pieces of cultural material scavenged from a multitude of sites and [...] take up many different subject positions with respect to the dominant cultural apparatuses'.¹ Readers' responses to the cultural text are inevitably unpredictable. In my case, I found that many low-carbohydrate dieters enacted a kind of 'para-criticism' upon low-carbohydrate discourse that in many cases approached the critique emerging from the academy.

This finding has clear implications for further research on low-carbohydrate dieting and other food and nutrition movements. In Chapter 1, I noted with some frustration the methodological limitations of the existing critical literature on low-carbohydrate dieting. My findings in this thesis make it all the more imperative that future research seeks out and engages with the testimony of low-carbohydrate dieters themselves. This need not be in the form of face-to-face interviews. Online low-carbohydrate discussion boards and support groups constitute especially rich sources of publicly available testimony, which may be particularly valuable now that the popularity of low-carbohydrate dieting in the current cycle has peaked. Further, the results of this research project suggest a similar imperative in the study of other food movements which have produced an extensive, highly visible and accessible body of published literature; I think, for example, of Slow Food. Where a substantial published literature exists, the methodological temptation may be to avoid a complex ethnography or time-consuming set of interviews. A similar methodological temptation may arise in the study of culinary texts such as recipe books, which are bound up in a dispersed network of readers who double as cooks. But Jonathan Rose cautions that '[w]e may not treat any text as representative of any reader without that reader's authorization'.² My findings in this thesis suggest that researchers ignore this caveat at their peril.

This is not to suggest that ideological critique becomes unnecessary or redundant. As I noted in Chapter 8, although the majority of the dieters whom I interviewed approached nutritional primitivism critically and sceptically, not all did. Some readers evidently find certain problematic or troublesome cultural discourses peculiarly beguiling. I would by no means displace critical responsibility entirely onto the reader. As I have shown, even those dieters who engaged critically with the low-carbohydrate text in my interview cohort retained residual ideological traces, in the form of key concepts and vocabulary. This thesis makes clear that further research or critique of low-carbohydrate dieting must take into account its underlying primitivist ideology. In Chapter 1 I emphasised the imbrication of the low-carbohydrate movement with the alternative health economy, an entanglement that deserves further investigation. Most importantly, my research demonstrates that 'low carb' is not 'just' a fad weight-loss trend. It is a movement with a highly

¹ Radway, "Reception Study," 368.

² Rose, "Rereading the English Common Reader," 60.

distinctive ideological base whose genealogy may be traced through at least a century's research in nutritional anthropology and evolutionary nutrition.

This project has made clear that the underlying primitivist ideology of low-carbohydrate dieting is highly problematic in its logic, evidence, and ethico-political implications. As I suggested in Chapter 1 and have emphasised throughout this thesis, the binary structure of nutritional primitivist discourse lends itself to the romanticisation of the Other and the generalisation and simplification of both modern Western culture and whatever is defined in opposition. The circular logic of nutritional primitivism prevents any kind of local or situated thinking about the precise causes of obesity and disease in particular people and communities at precise points in time. The significance of nutritional primitivism for Indigenous people is particularly worrying. As explored especially in Chapter 7, the depiction of fourth-world peoples in diet books such as *Protein Power* is strikingly outdated, stereotypical and often frankly racist. In the context of rising rates of diabetes and obesity in most Indigenous populations globally, this is not merely an abstract question of representation. As Marianna Torgovnick argues, 'ideas about primitive societies and [...] the persistent Western tendency to process the third world as "primitive" have made things happen in the political world'.³ Texts such as *Protein Power* contribute to the perpetuation of evolutionary and genetic explanations for ill-health in Indigenous people (and others). The socioeconomic legacy of colonialism, including its specific impacts on food security and access, is simply invisible to the primitivist eye and therefore unable to be addressed. Lest the reader be tempted to discount the potential influence of an admittedly eccentric diet book, recall that *Protein Power* spent 118 weeks on the United States bestseller charts between 1996 and 2000. Recall too that at least some low-carbohydrate dieters faithfully echo *Protein Power's* rosy view of 'Eskimos' when asked to explain the connections between diet and health. And consider that the Eadeses recently published a peer-reviewed scientific paper on the 'diseases of civilization' coauthored with Professor Loren Cordain. Although *Protein Power* is a pop-cultural product, both evolutionary nutrition and the thrifty gene theory have their own high-profile proponents whose research work circulates in the scientific literature and even finds its way into official dietary guidelines. I would conclude that low-carbohydrate diets are entwined in a discursive critique of modern Western society that is 'immensely powerful and seductive' but by no means innocent.⁴

³ Torgovnick, *Gone Primitive*, 13.

⁴ *Ibid.*, 3.

Appendix. Ethics submission

PROJECT NO: H/147-2005 [CSIRO Human Nutrition Ref: 05/30]

THE UNIVERSITY OF ADELAIDE HUMAN RESEARCH ETHICS COMMITTEE

Applications will be considered according to requirements of the National Statement on Ethical Conduct in Research Involving Humans (1999).

An application should include: (1) this **cover sheet**; (2) the proposal addressing the **list of headings**; (3) participant **information sheet**; (4) participant **consent form**, and (5) **independent complaints procedure statement** (please access these online under 'Application Papers and Guidelines').

Submit **ELEVEN** copies of the application to the Secretary, Human Research Ethics Committee, Research Ethics and Compliance Unit, Room 661 Wills Building, The University of Adelaide Ph. (08) 8303 6028, Fax (08) 8303 7325, email sabine.schreiber@adelaide.edu.au.

APPLICATION FOR ETHICAL APPROVAL OF PROJECT INVOLVING HUMAN PARTICIPANTS - COVER SHEET - SUMMARISING PROTOCOL & INCLUDING INVESTIGATORS' SIGNATURES Please attach this to the front of the application

<p>APPLICANT Name include title Professor/Dr/Ms/Mr and Position</p> <p>Dr Heather Kerr [principal supervisor] Senior Lecturer & Head of Discipline <i>Please contact Christine Knight (below) as primary investigator</i></p>
<p>DEPARTMENT including campus/institution contact address</p> <p>Discipline of English Level 6, Napier Building University of Adelaide SA 5005</p>
<p>Phone No and email address</p> <p>Christine Knight: (08) 8303 8852 christine.knight@csiro.au</p>
<p>OTHERS INVOLVED</p> <p>Miss Christine Knight – primary investigator PhD candidate: Discipline of English, University of Adelaide, and CSIRO Human Nutrition</p> <p>Dr Carlene Wilson, Senior Research Scientist & Psychologist, CSIRO Human Nutrition [external co-supervisor]</p>
<p>PROJECT TITLE</p> <p>Understanding low-carbohydrate and low-GI dieters' attitudes and beliefs about food, nutrition and health</p>
<p>LOCATION OF RESEARCH</p> <p>Adelaide, South Australia Interviews will take place either at CSIRO Human Nutrition, Kintore Avenue, or at a mutually agreed public location, depending on participant preference.</p>
<p>DATE PROJECT TO BEGIN</p> <p>January 2006</p>
<p>ESTIMATED DURATION OF PROJECT</p> <p>6 months</p>
<p>SOURCE OF FUNDING</p> <p>Study costs: CSIRO Human Nutrition PhD candidate operating allowance PhD candidate stipend: Australian Postgraduate Award & CSIRO Human Nutrition top-up scholarship</p>

AIMS OF PROJECT please give concise description in lay terms

To investigate low- and controlled-carbohydrate (LCC) dieters' attitudes and beliefs about food, nutrition and health

To compare LCC dieters' attitudes and beliefs about food, nutrition and health with ideas disseminated in the popular LCC diet literature

To investigate how, if at all, concepts of food, nutrition and health previously identified in the popular LCC diet literature are taken up by LCC dieters

To elicit information from LCC dieters about their dieting practices and eating habits in general

To elicit information from LCC dieters about their experience(s) of using a LCC diet

To investigate from what sources LCC dieters obtain information regarding LCC diets and food, nutrition and health in general

To elicit information from LCC dieters about how, if at all, they use the popular LCC diet literature

To investigate how, if at all, LCC dieters' attitudes and beliefs about food, nutrition and health affect their dieting practices and eating habits in general

ETHICAL IMPLICATIONS OF PROJECT

The proposed project involves minimal risk to participants. Approximately one hour of participants' time will be required to take part in an interview, for which participants will receive a \$20 shopping voucher.

Other potential ethical issues addressed in this submission are: (a) consent; (b) confidentiality; (c) risk to participants of embarrassment/emotional distress; and (d) conflict of interest.

PLAN/DESIGN OF PROJECT brief description in lay terms

A minimum of 10 and maximum of 20 participants will be sought who either currently use, or have in the past used, a low-carbohydrate or low-Glycemic Index (low-GI) diet.

Semi-structured individual interviews of around 1 hour's duration will take place either at CSIRO Human Nutrition or at a mutually agreed public place (eg. café) over a period of weeks.

Volunteers will be supplied with an information sheet and consent form to consider at the time of contacting the researcher about the study.

Prior written consent will be required from each participant to tape-record the interview (audio only) for subsequent transcription and analysis.

Pilot interviews will be carried out prior to commencing recruitment with consenting colleagues, friends and/or family members who use or have used a low-carbohydrate or low-GI diet.

DRUGS

Will drugs be administered to participants? NO

- If so give name of drug(s)
- Dosage
- Method of administration

Is the administration for therapeutic purposes? N/A

Will the project be conducted under the

- Clinical Trials Notification (CTN) Scheme? NO
- Clinical Trials Exemption (CTX) Scheme? NO

Is Commonwealth Department of Health permission required? NO

If so, has permission been obtained?N/A

PARTICIPANTS

- Source: General public recruited by media release to local, South Australian and national media.
- Age range: 18 years and over.
- Selection criteria: Participants must either currently be using, or have in the past used, a low-carbohydrate or low-GI diet.
- Exclusion criteria: Anyone who has previously participated in, or is currently participating in, another CSIRO Human Nutrition study.

SIGNATURE OF ALL INVESTIGATORS NAMED IN THE PROTOCOL

Date

Human Research Ethics Committee submission



1. TITLE

Understanding low-carbohydrate and low-GI dieters' attitudes and beliefs about food, nutrition and health.

2. INVESTIGATORS & QUALIFICATIONS

Miss Christine Knight, BA(Hons)

PhD candidate, Discipline of English, University of Adelaide & CSIRO Human Nutrition

Dr Heather Kerr BA(Hons) PhD [principal supervisor]

Senior Lecturer & Head of Discipline, Discipline of English, University of Adelaide

Dr Carlene Wilson PhD MBA [external co-supervisor]

Senior Research Scientist & Psychologist, CSIRO Human Nutrition

3. PURPOSE OF STUDY

- To investigate low- and controlled-carbohydrate (LCC) dieters' attitudes and beliefs about food, nutrition and health
- To compare LCC dieters' attitudes and beliefs about food, nutrition and health with ideas disseminated in the popular LCC diet literature
- To elicit information from LCC dieters about their dieting practices and eating habits in general
- To elicit information from LCC dieters about their experience(s) of using a LCC diet
- To investigate from what sources LCC dieters obtain information regarding LCC diets and food, nutrition and health in general
- To elicit information from LCC dieters about how, if at all, they use the popular LCC diet literature
- To investigate how, if at all, concepts of food, nutrition and health previously identified in the popular LCC diet literature are taken up by LCC dieters
- To investigate how, if at all, LCC dieters' attitudes and beliefs about food, nutrition and health affect their dieting practices and eating habits in general

4. BACKGROUND

Low-carbohydrate diets have experienced a surge in popularity and publicity in the English-speaking West, including Australia, over the past decade. In the United States, low-carbohydrate manuals *Dr. Atkins' New Diet Revolution* [1] and *The South Beach Diet* [2] both sold over 2 million copies in 2003 alone [3]. 2004 market research by the Valen Group found that 59 million people in the United States were 'controlling carbohydrates' [4] – approximately one-fifth of the total US population.

Strict low-carbohydrate regimes such as Atkins have also sold well in Australia [5-8]. However, local 'controlled-carbohydrate'¹ programs such as *New Glucose Revolution* [9] have proved extremely popular, a feature distinguishing Australian dieting practices from those of the United States and other English-speaking Western nations. Multiple titles from the *New Glucose Revolution* series consistently appear on bestseller lists [5-8].

A growing body of clinical research suggests that low-carbohydrate diets may well have considerable weight-loss and health benefits [10-19]. The benefits appear to be particularly marked for individuals

¹ In addition to low-carbohydrate diets, controlled-carbohydrate diets include low-Glycemic Index (low-GI) approaches such as *New Glucose Revolution*, which distinguish between different sources of carbohydrate depending upon their impact on blood-sugar levels.

with, or at risk of, obesity, diabetes, cardiovascular disease, and/or Syndrome X (metabolic syndrome), disorders now affecting a large and rapidly increasing proportion of the Western population.

Although disagreement remains within the medical profession, given the popularity of low-carbohydrate and low-GI diets and the considerable medical attention they have attracted, it is important at this point to attend to the experiences and opinions of those members of the public who use, or have used, these diets. Sociological and cultural analyses of the low- and controlled-carbohydrate diet movement have lagged somewhat behind the trend itself. However, there is now a growing body of critical literature on the cultural, philosophical and ideological significance of low-carbohydrate dieting, particularly that of the Atkins Diet [20-25]. This critical literature suggests that the ideological significance of the current low- and controlled-carbohydrate dieting trend is very different from that of other recent weight-loss dieting practices [20, 23, 26].

While at least one critical analysis [23] draws on anecdotal evidence from low-carbohydrate dieters, the vast majority of the critical literature to date relies entirely on critical textual analysis of popular low-carbohydrate diet books. There has so far been no systematic study of low- or 'controlled'-carbohydrate dieters' own dieting experiences, practices, beliefs and attitudes, nor how these might compare or relate to the ideological implications of the trend as identified from a critical analysis of the popular diet books.² The proposed study aims to redress this deficit.

5. PARTICIPANTS

- Source: Invitation to general public by media release to local, South Australian and national media. This is a qualitative study and the sample therefore need not be strictly 'representative'. However, in order to recruit a sample of participants which reflects the broadest possible range of experiences and opinions, I will only be publicising the study to newspapers, radio stations, and/or television stations which have a general (rather than a specific) audience. In particular, university publications such as *The Adelaidean* will be excluded to avoid a sample dominated by students/young people.
- Age range: 18 years and over.
- Recruitment material: *Media release* – attached in draft form. The final media release for recruiting participants will be drafted by the University of Adelaide media office. This draft release is provided to give some idea of content to the committee, and will also be supplied to the media office for guidance as to content on the final media release.
- Payment: Following his or her interview each participant will receive a \$20 shopping voucher in compensation for his or her time.

6. PRELIMINARY STUDY None

7. SELECTION AND EXCLUSION CRITERIA

- Selection: Participants must either currently be using, or have in the past used, a low-carbohydrate or low-Glycemic Index (low-GI) diet. Whether a volunteer has been using such a diet will be based on their own identification.
- Exclusion: Anyone who has participated in, or is currently participating in, another CSIRO Human Nutrition clinical trial or study.

8. PLAN & DESIGN

This study is a qualitative study based on semi-structured interviews with men and women who either currently use, or have in the past used, a low-carbohydrate or low-GI diet. I will seek up to 20 participants for this study, with a minimum number of 10 participants. Each interview will cover the participant's experiences in using a low-carbohydrate or low-GI diet, as well as his or her beliefs and

² A significant body of marketing data relating to low-carbohydrate dieting practices does exist. However, the most detailed (quantitative and qualitative) studies have been carried out specifically for the US market, with only minimal examination of the trend in Australia. In any event, this marketing literature is available only at considerable expense and is of course tailored to the needs of the food industry rather than public health.

attitudes about food, nutrition and health in general and in specific relation to his or her dieting practices. More detail about topics to be covered in the interviews is included in the attached *Provisional List of Interview Topics*. Prior to commencing recruitment, pilot interviews to test the method will be carried out with consenting colleagues, friends and/or family members who use or have used a low- carbohydrate or low-GI diet.

Each interview will last around 1 hour, and will take place either at CSIRO Human Nutrition or at a mutually agreed public place (eg. café), depending on participant preference. Interviewing will begin in January 2006 and continue over a period of weeks until a sufficient number of interviews has been carried out. Interview times will be arranged individually to suit both parties. Should volunteers from country areas and/or interstate express interest in the study, telephone interviews are an option, depending upon overall numbers of participants recruited.

Once volunteers make contact with the researcher, Christine Knight, they will be supplied by post with the *Participant Information Sheet*, *Consent Form*, *Questionnaire* and *Complaints Procedure Information Sheet*, as well as a reply-paid envelope. The *Participant Information Sheet* explains the nature and purpose of the study and details the topics which the interview may cover. Should volunteers choose to go ahead and participate in the study, they will be asked to return the signed *Consent Form* and completed *Questionnaire* to me by post prior to their interview, using the reply-paid envelope. I will witness the *Consent Form* and supply the participant at the time of the interview with a photocopy of both documents to keep.

Specific written consent is required from each participant to tape-record the interview (audio only) for subsequent transcription and analysis. As described in the *Participant Information Sheet* and *Consent Form*, all interviews in this study will be tape-recorded. If a volunteer would prefer not to be tape-recorded, he or she will not be eligible to participate. I will advise volunteers of this aspect of the study when they first make contact either by phone or email to ensure that they are aware of this as early as possible.

I will also check with volunteers when they first make contact that they are not currently participating in another CSIRO Human Nutrition study, and have not participated in one in the past (as per exclusion criteria detailed at Question 7). This is to ensure that anyone who is not eligible to participate suffers minimal inconvenience.

On the *Consent Form* participants are offered the chance to view and make alterations to the transcript of their interview. They may also elect to be sent information about the study results if they so wish. To ensure confidentiality, interview transcripts will be kept separate from participant identifying details and will be dealt with only by the three investigators named in this submission.

9. DRUGS N/A

10. EFFICACY N/A

11. ETHICAL CONSIDERATIONS

The proposed project is low risk. Approximately one hour of participants' time will be required to take part in an interview; however, each participant will receive a \$20 shopping voucher in compensation for their time. In addition, the following ethical issues have been addressed in this submission:

(a) Consent

Participants will be advised when they initially contact the researcher that all interviews in this study will be tape-recorded, and that their written consent will be required prior to the interview. All participants will be advised in addition that if they would prefer not to be taped they will not be eligible to participate in the study.

After this initial contact volunteers will then be supplied with the *Participant Information Sheet*, *Consent Form*, *Complaints Procedure Information Sheet* and *Questionnaire* (as well as a reply-paid envelope) by post to consider before participating in an interview. The *Participant Information Sheet* explains the nature and purpose of the study and details the topics which the interview may cover.

Should the volunteer then agree to go ahead with an interview, he or she will be asked to return the completed *Questionnaire* and signed *Consent Form* via reply-paid mail prior to his or her interview. Two copies of the *Questionnaire* and *Consent Form* will be supplied and volunteers will be advised to retain a copy of these documents.

Participants may also elect on the *Consent Form* to check the copy of their transcript following their interview, and/or to be supplied with information about the results of the study. Should he or she so choose, the transcript of the interview will be sent promptly to the relevant participant by post for approval. As detailed in the *Consent Form*, it will then be the participant's responsibility to advise the researcher if he or she would like to withdraw any part of the data, correct any errors, or provide any additional information.

(b) Confidentiality

To ensure confidentiality, interview transcripts will be kept separate from participant identifying details and will be dealt with only by the three investigators named in this submission. Interview tapes will be erased as soon as the researcher has transcribed each interview. The researcher(s) will use pseudonyms to refer to participants in Christine Knight's PhD thesis and in any publications and/or presentations that draw upon this study. Any other details which might potentially identify a participant will not be referred to in Christine Knight's thesis or in any publications/presentations.

(c) Risk to participants of embarrassment/emotional distress

The researcher conducting the interviews, Christine Knight, is aware that overweight, dieting and related health issues are sensitive topics for discussion and will take care in handling these issues in interviews to minimise any potential for embarrassment or emotional distress for the participant. In addition, the *Participant Information Sheet* and *Consent Form* stress the fact that the participant is under no obligation to answer questions or to discuss any matter he or she does not wish to discuss, and is free to withdraw from the study at any time.

(d) Conflict of interest

This study will be funded out of Christine Knight's PhD student operating allowance supplied by CSIRO Human Nutrition, where Christine Knight is based and by whom Carlene Wilson is employed. CSIRO Human Nutrition has recently developed and released in book form a high-protein, moderate-carbohydrate weight-loss diet, *The CSIRO Total Wellbeing Diet* [27].

The Total Wellbeing Diet is a high-protein, moderate-carbohydrate diet and therefore not technically within the ambit of the proposed study. However, because of the association of low-carbohydrate diets with high-protein diets (many low-carbohydrate diets are also high-protein diets), there is the potential for confusion and a perceived conflict of interest.

This issue has been addressed in the following ways in the design of this study:

- The researchers' institutional affiliations and the sources of funding for this study are clearly explained in the *Participant Information Sheet*.
- Anyone who has participated in another CSIRO Human Nutrition clinical trial or study, including those relating to the Total Wellbeing Diet or its development, is excluded from the current study.
- Users of the Total Wellbeing Diet will not be sought for this study. Accordingly, the Total Wellbeing Diet will not be mentioned in the recruitment media release, *Participant Information Sheet*, or participant *Questionnaire*. This does not, however, exclude dieters who may have used

the Total Wellbeing Diet in addition to low-carbohydrate and/or low-GI diets from participating in this study.

Should any participant enquire about the relationship of this study to the CSIRO Total Wellbeing Diet, the researcher will fully and clearly explain all the above points.

12. SAFETY & ECOLOGICAL CONSIDERATIONS None

13. OTHER RELEVANT INFORMATION None

14. ANALYSIS AND REPORTING OF RESULTS

This is a qualitative study. The researcher, Christine Knight, will carry out a discourse analysis and critical analysis of the interview transcript text.

The results will be reported in the first instance as part of the candidate's PhD thesis. Oral presentation of results as part of the Discipline of English seminar program and/or the CSIRO Human Nutrition seminar program is also highly likely.

Provided that suitable opportunities are available, the student's intention is to submit the results for publication and/or conference presentation. Opportunities to publish or discuss the results in non-academic (popular) publications and fora will also be sought.

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16. OTHER ETHICS COMMITTEES TO WHICH PROTOCOL HAS BEEN SUBMITTED

Pending approval from the University of Adelaide HREC, ethics approval will be sought from the CSIRO Human Nutrition HREC.

17. DATE OF PROPOSED COMMENCEMENT

January 2006

18. PROPOSED FUNDING SOURCE

CSIRO Human Nutrition PhD candidate operating allowance



Participant Information Sheet



Understanding low-carbohydrate and low-GI dieters' attitudes and beliefs about food, nutrition and health

University of Adelaide Human Research Ethics Committee approval number:

My name is Christine Knight. I am currently undertaking PhD research on social and cultural aspects of the current 'controlled-carbohydrate' diet trend, including low-carbohydrate diets and low-GI (low-Glycemic Index) diets.

I am enrolled through the Discipline of English at the University of Adelaide but based at CSIRO Human Nutrition. This research is jointly supervised by staff from both institutions, and I receive PhD funding from both institutions. The funding for this particular interview study comes specifically from CSIRO Human Nutrition.

As part of my PhD research I am hoping to interview between 10 and 20 men or women who are either currently on a low-carbohydrate or low-GI diet, or have been on one in the past. People use low-carbohydrate and low-GI diets for a variety of reasons not limited to weight loss. You are eligible to participate in this study no matter what reason led you to try a low-carbohydrate or low-GI diet. In fact, this is part of what I would like to find out about. I am also interested in discussing your experiences of using a low-carbohydrate or low-GI diet, as well as your ideas about diet and health more generally.

Please note that if you have previously participated in another CSIRO Human Nutrition study, or are participating in one at the moment, you are not eligible to participate in this study.

If you choose to participate in this study, I will arrange a time to meet with you for an informal interview, which will last around 1 hour. Depending upon what suits you best, the interview can take place at CSIRO Human Nutrition on Kintore Avenue, Adelaide, or at another public place which we can arrange (such as a café). Please feel free to bring along any diet books, special foods, supplements, or any other products that you have used in relation to your diet and that you think might add to our discussion.

I am particularly interested in the language that people use to talk about their dieting experiences and their ideas about food, nutrition and health. Because of this, it is a requirement of participating in this study that your interview will be tape-recorded. If you are happy for this to be done, please complete and sign the attached consent form, and return it to me in the reply-paid envelope along with your completed questionnaire. (I have included two copies of each of these forms so that you can retain copies for your records.) Unfortunately, if you would prefer not to be tape-recorded, you will not be eligible to participate in this study. In order to protect your confidentiality, your real name will not be connected or stored with the tape. The tape will be erased as soon as I have transcribed the conversation. If you would like to check a copy of the transcript before I write up my results, please indicate this on the consent form.

Following your interview, you will receive a \$20 shopping voucher to compensate you for your time. Beyond this, you may not benefit directly from participating in this study. However, you will be contributing to sociological and scientific understanding of low-carbohydrate and low-GI dieters' experiences and their beliefs about diet and health.

Please turn over ⇒

This study is completely confidential, so nothing that you say will be reported in a way that will identify you. I will use a pseudonym to attach to your interview tape, transcript, and participant questionnaire, as well as to refer to you in my PhD thesis and any publications or presentations arising from this study.

If you decide to participate in the study you are free to change your mind at any time. During the interview, you are not obliged to answer questions or to discuss any issues that you do not wish to discuss. Once you have completed your interview, you are still free to withdraw your interview material up until the time that I have finished all the interviews. You do not have to give me any reason if you decide to withdraw from the study.

Please don't hesitate to contact me if you would like more information about the study. If you have concerns that you do not wish to discuss with me directly, please contact either Dr. Heather Kerr or Dr. Carlene Wilson, the supervisors of my PhD research. Alternatively, please refer to the attached University of Adelaide Human Research Ethics Committee *Complaints Procedure Information Sheet*.

Contact details

Miss Christine Knight
PhD candidate
CSIRO Human Nutrition & Discipline of English, University of Adelaide
Ph. 8303 8852 Fax 8303 8899
Email christine.knight@csiro.au

Dr. Heather Kerr
Senior Lecturer & Head of Discipline
Discipline of English
University of Adelaide
Ph. 8303 5031 Fax 8303 4341
Email heather.kerr@adelaide.edu.au

Dr. Carlene Wilson
Senior Research Scientist & Psychologist
CSIRO Human Nutrition
Ph. 8303 8906 Fax 8303 8899
Email carlene.wilson@csiro.au

Complaints Procedure Information Sheet

**THE UNIVERSITY OF ADELAIDE
HUMAN RESEARCH ETHICS COMMITTEE**



The Human Research Ethics Committee is obliged to monitor approved research projects. In conjunction with other forms of monitoring it is necessary to provide an independent and confidential reporting mechanism to assure quality assurance of the institutional ethics committee system. This is done by providing research participants with an additional avenue for raising concerns regarding the conduct of any research in which they are involved.

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

**Understanding low-carbohydrate and low-GI dieters' attitudes and beliefs
about food, nutrition and health**

1. If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator(s):

Dr. Heather Kerr, Discipline of English, University of Adelaide
Dr. Carlene Wilson, CSIRO Human Nutrition

Tel: (08) 8303 5031

Tel: (08) 8303 8906

2. If you wish to discuss with an independent person matters related to:
 - making a complaint, or
 - raising concerns on the conduct of the project, or
 - the University policy on research involving human participants, or
 - your rights as a participant

contact the Human Research Ethics Committee's Secretary, Ms Sabine Schreiber, on (08) 8303 6028.



Consent Form



I (print your name) consent to take part in the study entitled: '*Understanding low-carbohydrate and low-GI dieters' attitudes and beliefs about food, nutrition and health.*'

I acknowledge that I have read the attached *Participant Information Sheet* entitled '*Understanding low-carbohydrate and low-GI dieters' attitudes and beliefs about food, nutrition and health*' which describes the nature and purpose of this study. I confirm that I have had the study, so far as it affects me, fully explained to my satisfaction by the researcher, Christine Knight. My consent to be interviewed for the purposes of the study by Christine Knight is freely given.

Although I understand that the purpose of this study is to gain a deeper understanding of the experiences and beliefs of people who use, or have used, low-carbohydrate and low-GI diets, I understand that my involvement in the study may not benefit me directly beyond a one-off provision of a \$20 shopping voucher in compensation for my time.

I understand that my real name will not be connected with any information that I provide, and that Christine Knight will create a pseudonym to identify my interview tape, questionnaire, and transcript. Christine Knight will also use this pseudonym to refer to me in her PhD thesis and/or any publications or presentations which draw upon this study.

I understand that a requirement of participating in this study is that my interview will be tape-recorded, and that if I do not wish to be tape-recorded, I am not eligible to participate in this study.

I understand that my participation is completely voluntary and that:

- I am free to withdraw the information that I provide at any time during the information-gathering stage of the study;
- I do not have to give any reason for withdrawing the information that I provide;
- I am under no obligation during the interview to divulge information or to discuss issues if I do not wish to do so.

I understand that I can request to check the transcript of the interview before it is used in the study. If you wish to check the transcript, Christine Knight will forward it to you by post for checking as soon as possible after the interview. It will be the participant's responsibility to contact Christine Knight to correct any errors.

I do/do not (circle one) wish to check the transcript of the interview.

I understand that I can be provided with information about the results of the study if I wish.

I do/do not (circle one) wish to be provided with information about the results of the study.

If you answered 'yes' to either of the questions, please provide your contact details.

Address:

Phone: (H) (W) (M)

I am aware that I should retain a copy of this *Consent Form* and the attached *Questionnaire*, when completed, as well as the attached *Participant Information Sheet* and *Complaints Procedure Information Sheet*.

Signature (Participant): Date:



Questionnaire



This short questionnaire is designed to assist with the interview process by ensuring that I don't miss any important points about your dieting experiences. Once you have completed it, please post it back to me in the reply-paid envelope provided, along with your signed consent form. I have included two copies of each of these forms so that you have a copy to keep for your records.

1. Did any of the following health conditions influence you to try a low-carbohydrate or low-GI diet? Please tick as many as apply.

- Diabetes
- Hyperinsulinemia (insulin resistance or 'pre-diabetes')
- Hypoglycemia
- High cholesterol
- Overweight/obesity
- Other (please specify)

.....

2. Did someone recommend a low-carbohydrate or low-GI diet to you? Please tick as many as apply.

- Spouse/partner
- Friend/relative/colleague
- GP
- Nutritionist
- Other medical specialist
- Naturopath
- Diet clinic eg. SureSlim
- Other (please specify)

.....

3. If not, where did you first find out about low-carbohydrate/low-GI dieting?

- Media report
- Magazine
- Diet book
- Internet
- Food products in supermarket/other shop
- Other (please specify)

.....

Please turn over =>

4. Which low-carbohydrate or low-GI diet(s) have you used? Please tick as many as apply. (Even if you make your own changes to a diet so that you're not following it strictly, please still tick the box.)

- | | | | |
|-------------------|--------------------------|---|--------------------------|
| Atkins | <input type="checkbox"/> | Carbohydrate Addict's Diet | <input type="checkbox"/> |
| South Beach | <input type="checkbox"/> | New Glucose Revolution (formerly 'The GI Factor') | <input type="checkbox"/> |
| The Zone | <input type="checkbox"/> | The Paleo Diet | <input type="checkbox"/> |
| Protein Power | <input type="checkbox"/> | Neanderthin | <input type="checkbox"/> |
| The X Factor Diet | <input type="checkbox"/> | Other (please specify) | <input type="checkbox"/> |
-

5. Which low-carbohydrate or low-GI diet book(s) have you read or consulted? Please tick as many as apply. (Even if you've only dipped into a book for information, or just skim-read it, please still tick the box.)

- | | | | |
|-------------------|--------------------------|---|--------------------------|
| Atkins | <input type="checkbox"/> | Carbohydrate Addict's Diet | <input type="checkbox"/> |
| South Beach | <input type="checkbox"/> | New Glucose Revolution (formerly 'The GI Factor') | <input type="checkbox"/> |
| The Zone | <input type="checkbox"/> | The Paleo Diet | <input type="checkbox"/> |
| Protein Power | <input type="checkbox"/> | Neanderthin | <input type="checkbox"/> |
| The X Factor Diet | <input type="checkbox"/> | Other (please specify) | <input type="checkbox"/> |
-

5. Where do (or did) you obtain information on low-carbohydrate or low-GI dieting? Please tick as many as apply.

- | | | | |
|--------------------------|--------------------------|------------------------------------|--------------------------|
| Fellow dieter(s) | <input type="checkbox"/> | Media reports | <input type="checkbox"/> |
| GP | <input type="checkbox"/> | Magazines | <input type="checkbox"/> |
| Nutritionist | <input type="checkbox"/> | Diet book(s) | <input type="checkbox"/> |
| Other medical specialist | <input type="checkbox"/> | Internet diet sites | <input type="checkbox"/> |
| Naturopath | <input type="checkbox"/> | Internet diet newsgroups/chatrooms | <input type="checkbox"/> |
| Diet clinic eg. SureSlim | <input type="checkbox"/> | Other (please specify) | <input type="checkbox"/> |
-

6. Have you ever used any other type of diet (eg. low-fat, low-calorie, high-protein, detox diet)?

- Yes No

Thank you for taking the time to complete this questionnaire.

Proposed recruitment media release for January 2006

The final media release for recruiting participants will be drafted by the University of Adelaide media office. This draft release is provided to give some idea of content.

LOW-CARB AND LOW-GI DIETERS INVITED TO GIVE THEIR VIEWS

After several years of being talked about, low-carbohydrate dieters are at last being asked for their views in a new study.

Christine Knight, a social researcher and a PhD student with the University of Adelaide and CSIRO Human Nutrition, has spent the last 18 months studying the 'controlled-carbohydrate' diet trend.

Her analysis of the philosophy behind low-carbohydrate dieting appeared last year as part of the *Atkins Diet and Philosophy* collection, the first published book to focus on social and cultural aspects of low-carb – not just the science.

'Based on reading diet books like *Dr. Atkins*, researchers now have a range of ideas about the philosophy behind low-carbohydrate dieting,' Ms Knight said. 'But the only real way to find out why people choose these diets, and what their experiences are, is to talk with dieters themselves.'

Ms Knight is seeking volunteers who have been on a low-carbohydrate diet either now or in the past to talk about their experiences in an informal interview. Low-GI dieters are also eligible to take part in the study.

'I've found that low-carbohydrate and low-GI diet books use a lot of the same reasoning to explain their diets,' Ms Knight said. 'The idea that these diets are "what nature intended you to eat" is very common.'

The medical jury is still out on the health effects of low-carbohydrate dieting. But Ms Knight stresses that this study isn't about whether low-carb gets the seal of approval from nutritionists.

'I'm interested in hearing what people who have used these diets actually think of them. Do they agree with everything Dr. Atkins said? Or do dieters just care about what works?'

To register your interest, or to obtain further information about the study, contact Christine Knight on (08) 8303 8852, or by email at christine.knight@csiro.au. Please note that anyone who is currently participating in another CSIRO Human Nutrition study, or has done so in the past, is not eligible to participate in this study.

Provisional list of interview topics

This list of topics is a guide only as interviews will be semi-structured. I refer to 'controlled-carbohydrate diets' here. However, with participants I will use the terms 'low-carbohydrate' or 'low-GI' depending upon their individual dieting history.

Dieting history

Which diet(s), when used, and for how long, including intentions for the future

Reason(s) for choosing a controlled-carbohydrate diet

Eg. weight loss and/or health concerns; recommendation from friend, relative or medical practitioner

Dieting practices

Eg. use of published regime or development of personalised diet plan; eating habits and changes made to them; 'cheating' or strict following of the diet plan and reasons for this; consumption of nutritional supplements and/or special diet foods; changes to exercise habits

Dieting experiences

Effects of the diet(s) (eg. weight loss, health), and comparison with expected effects; attitudes of friends, relatives and/or medical practitioners to the participant's dietary choice

Attitudes and beliefs about food, nutrition & health

Esp. opinions of: the healthiness/safety or otherwise of controlled-carbohydrate diets; medical controversy surrounding controlled-carbohydrate diets; media coverage of controlled-carbohydrate diets; current dietary guidelines

Information sources

Esp. use of diet books and opinion thereof; also other sources of diet and nutrition information

If not covered under the above topics:

- Participant's opinion of the notion that a controlled-carbohydrate diet is 'what human beings are intended to eat'
- Participant's opinion of the low-carbohydrate convenience food and nutritional supplement industry
- Participant's opinion of the idea that controlled-carbohydrate diets have been attacked because of the economic interests of the food industry
- Participant's opinion of the idea that controlled-carbohydrate diets are more 'masculine' than other diets

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