

Exploring the link between obesity and advertising in New Zealand

LYNNE EAGLE, SANDY BULMER AND ANNE DE BRUIN

Department of Commerce, Massey University (Auckland), Private Bag 102 – 904 North Shore Mail Centre, New Zealand

PHILIP J. KITCHEN

Hull Business School, Hull University, Hull HU6 7RX, UK

This paper reviews the debate on the causes and potential solutions to growing obesity and whether there is a proven correlation with advertising, particularly among children. The paper first considers this debate from the context of the burgeoning literature on this topic. The findings from an empirical study with parents of primary-age children in New Zealand are then presented. However, any kind of proposed relationship between obesity and advertising tends to be as much emotive as evidential, with for-and-against camps lined up to defend entrenched positions. However, it does seem fair to argue that, while advertising does present a problem in relation to food selection choice, many other issues, such as peer pressure, quality of life, in-school food services, nearby retail outlets and social class criteria, exacerbate the problem. Thus, easy solutions based on insufficient evidence that have failed to substantiate causal effects between advertising (ostensibly) directed at children and nutrition can be seen as inequitable and, thus, ineffective in their intended aims. Although here the paper considers the problem from a New Zealand perspective, the findings may have implications for research elsewhere in the world.

KEYWORDS: Children; obesity; advertising; policy; marketing communications

INTRODUCTION

With no deliberate pun intended, obesity is a growing and widespread problem. Reports of the exact magnitude of the problem vary, largely due to different reporting methods, but there is no questioning that obesity is now a serious worldwide concern. Danner and Molony (2002) suggested that nearly 55% of the American population are overweight, while Sibbald (2002) quoted the US Surgeon General's figures setting the percentage of the American population who are overweight or obese at 60% of the population and noted that obesity in children had more than doubled between 1981 and 1996. In New Zealand (often considered to be full of healthy, athletic types) Ministry of Health (1999) data indicated that 52% of the population were overweight and 17% were clinically obese. There is of course a huge medical cost worldwide for obesity-related problems. Ahmad (1997), for example, claimed that obesity across adults and

children accounted for \$40 billion of the total treatment costs for heart disease, diabetes, high blood pressure, gallbladder problems and some types of cancers in the USA alone. In relation to children specifically, Cristol (2002) noted that obesity is now indicative of a worldwide epidemic, with 25% of American children, 16% of Russian children and 7% of Chinese children aged 6–18 years either overweight or obese. Cristol (2002) further asserted that obese children are putting themselves in very real danger of heart disease and stroke by the time they are 30 years.

Just as obesity among children is increasing, advertising that targets children has become a high growth area. It is fuelled by the significant buying power of the group and their concomitant influence on a wide range of products and services purchased for the wider household (see, for example, Ahuja *et al.*, 2001). Dobrow (2002) asserted that considerable effort goes into planting the seeds of brand loyalty within children. Hunter (2002) suggested that American children influence as much as 80% of a family's food budget. Some policy makers and influencers have perceived high exposure of children to advertisements for foods high in fat and sugar to be a major contributor to current and, indeed, future obesity problems.

Sprott and Miyazaki (2002) suggested that consumer protection and information provision research has declined rather than increased over the years. However, the perceived negative impact of advertising on children has received a continuing focus since the 1970s (see, for example, Donohue, 1975; Kaufman, 1980; Young and Webley, 1996; Eagle and De Bruin, 2000/2001). The spectre of a potential restriction on advertising to children first appeared over two decades ago (Kaufman, 1980). It continues to haunt marketers worldwide (see Eagle and De Bruin, 2000/2001). A parallel spectre is the threat of an imposition of some sort of 'sin tax' on foods deemed to be unhealthy (see Ahmad, 1997).

This paper reviews the literature particularly relating to children, nutrition and advertising. It initially analyses the evidence put forward to support social engineering remedies, such as restrictions on advertising or punitive taxes proposed by policy makers, for addressing concerns in this area. Admittedly, when rises in obesity and attendant costs are considered together with children's vulnerability in terms of limited emotional and cognitive capacity to make fully rational decisions (see Ahuja *et al.*, 2001), calls to give children special protection from marketing communications are not only understandable, but desirable. However, the existent evidence indicates that suggested remedies, while well intentioned, are potentially misguided and perhaps destined to be ineffectual in dealing with what is a very real and major potential health problem amongst children.

The data provided in this paper are mainly from New Zealand. The issues and research findings discussed do have relevance and generalizability beyond New Zealand because of the global nature of the problem. The paper examines the interventions available to countries grappling with similar problems and, following reportage of a small-scale empirical study in New Zealand, concludes with recommendations for further research.

MARKETING COMMUNICATIONS AND POOR DIETARY HABITS: IS THERE A MISTAKEN CORRELATION?

The main arguments concerning the perceived harmful health effects of advertising have recently centred on the advertising of food and soft drink products and the assumption that this is a major cause of unhealthy dietary habits, obesity and nutritional problems. The underlying assumption is that a range of societal problems will therefore be removed through the imposition of either stringent restrictions or bans on advertising, which is of course the most visible

and accessible form of external influence (see, for example, Higham, 1999). Proponents of restrictions on advertising to children would find correspondence with the following statement.

Eight in ten adults agree that business marketing and advertising exploit children by convincing them to buy things that are bad for them or that they don't need (Heubusch, 1997, p. 55).

The highest concerns are always in relation to food/nutrition issues (see Dibbs, 1993; Marquis, 1994). Governments are ostensibly under pressure to be seen to act on constituents' concerns, but restricting or banning advertising to a group seen as particularly vulnerable to marketing manipulation or imposing punitive taxes as a direct social engineering attempt to change behaviour may seem easy ways of showing that a government takes such issues seriously. However, the factual evidence for and the efficacy of such actions appear dubious, as is now discussed.

In relation to children it is commonly highlighted that the majority of foods advertised to them are 'highly processed', i.e. high in fat and sugar and low in nutrients, such as crisps, sweets, ice creams, fizzy drinks and many other novel, ostensibly 'food', products. The consumption of these foods is seen as not only undermining parents' dietary preferences but also contributing to increasing weight and associated health problems among children (Story and Faulkner, 1990; Hill and Radimer, 1997). The real concern is that more than 80% of obese adolescents sustain their obesity in adulthood (Craypo *et al.*, 2002), primarily because dietary habits that are developed when young persist over time. Assumption of a direct cause-and-effect relationship is usually inherent in these criticisms, i.e. brand advertising is the direct cause of the weight and health problems and this appears to be widely accepted by critics and by some policy makers (McGovern, 2002). However, the causal factors behind these problems may be more complex.

While the obesity problem is very real and needs to be remedied, the causes and, hence, potentially effective solutions are by no means straightforward. The issue is not helped by over-emotive demonizing of fast food as the (sole) cause of obesity and its related health problems (Newth, 2000). For example, McGovern (2002) cited Ralph Nader (high profile American environmentalist and former US presidential candidate) who declared McDonald's double cheeseburgers 'to be a weapon of mass destruction' and Simontacchi's (2000) earlier book titled *The Crazy Makers: How the Food Industry is Destroying Our Brains and Harming Our Children* did nothing to facilitate understanding. Nor does it seem to help when an entire industry moves to demonstrate social responsibility. For example, when the US fast food industry attempted to fund a multi-million dollar advertising campaign to warn of the dangers of eating too much fast food (WARC, 2002) the campaign was either unrecognized and/or derided by critics. In fact, many initiatives and resources developed by members of this industry in community support go well beyond their legal obligations. Their efforts for the benefit of society at large, such as road safety education in schools, go unrecognized (Brønn and Vrioni, 2001). Of course, the fact that such initiatives invariably support the overarching corporate and marketing communications strategy is clearly recognizable (see Kitchen and Schultz, 2001).

Avery *et al.* (1997) alleged that television advertising particularly provides unhealthy messages about food, nutrition and weight and several other studies have confirmed that advertisements during children's programmes promote foods that are high in fat and sugars and relatively low in nutritional value (Kotz and Story, 1994; Taras and Gage, 1995; Brown, 1996). Critics therefore state that television directly influences children's health and dietary behaviours (Byrd-Bredbenner and Grasso, 2000). However, uncritical acceptance of empirical findings from studies with limited generalizability is imprudent. For example, Donohue (1975) reported that children who were heavy television viewers believed that, in order to maintain good health, they should take advertised medicines and vitamins, drink soft drinks and eat fast foods.

However, their sample was limited and unrepresentative and the methodology may have introduced considerable bias in terms of response. Now, nearly three decades later, this study is dated, but it is still frequently cited in support of those claiming direct negative influences of advertising on children.

Young and Webley (1996) undertook a major British study into food products for the Ministry of Agriculture, Fisheries and Food. This study countered many direct advertising/food linkage assumptions and suggested that there was then no evidence that advertising is the principal influence on children's eating behaviour. In addition, that study showed that there was no serious or methodologically sound evidence that showed that food advertising led to an increase in the consumption of whole categories of food (i.e. fast food) by children. This of course does not imply that advertising has no direct impact on obesity, rather that there is no evidence to support this claim.

Proponents of a direct link between exposure to food-related imagery and obesity have distorted the debate by focusing on the impact of advertising without taking into account the impact of the television programme environment. Kaufman (1980) provided a more balanced approach with her content analysis of US television advertising within the programme context. She found that commercial references to fruit and vegetables outweighed programme references to these food types by more than 3:1. Further, she found that 64% of non-nutritious foods were represented in programmes' content rather than in commercials, while 62% of nutritious foods were represented in commercials. In addition, she highlighted that television characters rarely ate balanced meals but rather snacked between meals, portraying both the food choice and eating behaviour associated with problems of weight control and nutrition in real life, yet television characters are rarely depicted as obese. There may well be some validity in this observation as Irving and Berel (2001) suggested that exposure to media that promote a thin ideal of beauty may be associated not with overeating and obesity, but with the opposite extreme: eating disorders. It should be noted that the Kaufman (1980) study is now over two decades old and a replication/extension of the study could prove invaluable. It is worth noting the increasing prevalence of programme sponsorship and in-programme product placement that has taken place since the 1980s (Kitchen, 1999). This is just as much part of marketing as is advertising.

There is a considerable amount of evidence to suggest that a poor diet (14% of children do not eat enough fruit and vegetables) and sedentary lifestyle (50% of children do not exercise regularly or in some cases not at all) together also contribute to potential health problems (Baxter and Thompson, 2002; Cristol, 2002; Ulrich, 2002). Changed and continually changing lifestyles may also contribute to problems. Cowell (2001b) asserted that children now lead more independent lifestyles than did their parents and are no longer shielded from the realities of life. Today children opt for their own preferred food and drink rather than acquiescing to parental preferences. Hunter (2002) reported a 1999 study in which 26% of American 6–17 year olds were involved in meal preparation for the family. An interesting commentary on today's lifestyles is that, when asked where they had learned to cook, many of the children surveyed indicated that they simply followed the package instructions.

However, it cannot be inferred that 'traditional' home-prepared family meals are in fact 'superior'. Lino *et al.* (2002) clearly stressed that the quality of children's diets varies by socio-demographic status. Further, Escobar (1999) noted that the more hours women work outside the home, the fewer hours are spent preparing meals and the more meals their children eat away from home, but noted often with positive effects on the children's overall nutrition intake. It would seem to be crucial to undertake empirical research on the range of variables that influence children's food preferences.

Schools have taken initiatives such as controlling food ranges (Craypo *et al.*, 2002) and running advertising literacy skills, diet procedures, dietary practice and nutrition programmes (Lord, 2000). Lack of awareness of healthy alternatives is not likely to be an issue. Hitchings and Moynihan (1998) asserted that most children know what constitutes a healthy diet, but this knowledge is often not reflected in the foods actually eaten. Martin (2002) stated that

Educators are on record as saying that so-called junk food and soda are often sold on campuses largely to keep students from leaving schools to get the snacks they demand (p. 26).

Johnson (2002) stressed that the 'liking for sweet taste is innate and has been noted even *in utero*' (p. S91).

Mills (2001) posited that children (and perhaps also adults) like unhealthy food because it is unhealthy, perhaps linking to the 'forbidden fruit' hypothesis (Cantor and Nathanson, 1997), which is based on the theory of psychological reactance (Rummel *et al.*, 2000). This theory states that people become motivated for asserting their freedom by performing behaviour when it appears that their freedom might be threatened or restricted. Thus, parental disapproval of particular television shows or foodstuffs can be interpreted by children as threatening their freedom of choice and may therefore motivate them to consume more of the product disapproved of, precisely because of the disapproval.

Further, it has been claimed (Anonymous, 2001) that, when children aged 7–17 years eat in restaurants, they consume an average of 55% more calories than when they eat at home. However, are such statistics meaningful to the current debate on the correlation between obesity and its presumed causes? Therefore it is known that a complex set of factors affects the rising incidence of overweight people. Lifestyles, exercise, stress and factors related to the socialization of children all contribute, i.e. not just advertising. Matorin (2001) observed that

We multi-task, we eat while we work, we power-lunch, we eat while we drive, fly, walk and run. Ergo: we demand convenience . . . we have no idea what we are eating. We inhale our food. Thirty seven percent of all quick service occasions occur at the drive-through, (so) who has time to stop and eat? (p. 50).

It is argued that lifestyle, particularly exercise choices and dietary choices, are likely to be influenced primarily by parents (Lord, 2000). In terms of the latter, maternal influences appear to be the strongest (Anonymous, 2002), with maternal feeding practices, such as pressuring a child to eat everything on their plate, more strongly predict a child's adiposity levels than the child's energy and fat intake. Thus, children can be persuaded not to regulate their energy intakes. Given this, the strongly criticized promotion of large portions by fast food chains (Kucharsky, 2002) would appear to be contributing to an excessive calorie intake in some children. An aspect usually neglected in this debate is the influence of peer pressure on children. Cioletti (2001) pointed to the importance of social interaction and peer approval for children.

Increasing weight reflects an excess of calories taken in over those used by the body. Diet is a factor in this, as is lack of exercise. Daily (2002) stressed that modern society is both sedentary (i.e. getting too little exercise) and highly mobile at the same time, but also highly reliant on cars for mobility. UK Government research (see, for example, Advertising Association, 2000) has in fact shown that children are healthier than ever before in nutritional terms and that obesity is more directly linked to a lack of exercise than to overeating. The report suggested that a dramatic decrease in physical exercise has occurred as children turn to solitary, physically static electronic games/computer-based activity rather than traditional team sports. This was supported by US research (Lord, 2000) indicating that children are far less involved in physical education

and spend considerably more time sitting before cathode ray or computer screens, thus becoming 'couch' or 'mouse' potatoes.

USDA (1998) data have shown that adult Americans lowered their percentage of calorie intake from fat from 45% in 1965 to 34% in 1995, stressing that increases in calories have come primarily from increased carbohydrate consumption. This raises a new controversy: recent medical evidence suggests that, similar to good and bad fats, there are good and bad carbohydrates and overloading on carbohydrates or the wrong ones can contribute to obesity and the risk of heart disease (Eller, 2002).

WHAT DO YOU MEAN, ALL THAT ADVERTISING DOES NOT AFFECT SALES?

At an aggregate level, Bang (1998) showed that advertising has no effect on overall sales levels. In fact, as Cowell (2001a) aptly drew attention to, this is

An interesting point which all those companies who spend millions on advertising and marketing to children might like to consider (p. 474).

The nature of the market has a direct bearing on the impact of advertising. Ambler (1996) highlighted that total advertising does not affect total market size in a mature market (see also Guiltinan *et al.* (1997) who considered this via classical product life cycle theory). The high visibility of efforts at capturing a greater market share from competitors in similar product categories through brand differentiation advertising has however meant that there is little appreciation of the impact of advertising on overall sales. Policy makers and lobbyists who favour more stringent interventions usually meet suggestions that advertising has little or no impact, particularly in mature markets, with derision. Such derisory comments regarding aggregate sales effects miss the point of percentage changes in market share for brands, which may equate to tens of millions in income for a company. Thus, while aggregate sales seem stable, the fight by multinationals continues for mind, heart and market shares (see Kitchen, 2003a,b).

Thus, added restrictions on advertising for products that have entered the maturity phase of the product life cycle, such as the major fast food types, are unlikely to have a significant impact on demand. It is interesting to note that, while A C Nielsen (2003) reported substantial advertising expenditure by major fast food chains (see Table 1), in New Zealand the unadvertised food category of fish and chips accounts for considerably more sales than other categories, such as burgers and fried chicken, that are associated with the heavily advertised fast food products (see Table 2).

TABLE 1. Reported rate card expenditure: 2001 and 2002 calendar years

Advertiser	Reported rate card expenditure ^a (NZ\$ million)	
	2001	2002
KFC	11.7	11.2
McDonalds	21.2	22.3
Pizza Hut	4.6	5.3
Burger King	5.5	5.3

^a Does not incorporate negotiated volume discounts.

Source: A C Nielsen (2003).

TABLE 2. Top selling ready-to-eat foods 2001

Description	Annual purchases (NZ\$ million)	Market share (%)
Combinations of ready-to-eat foods	226.2	20.8
Soups, hot drinks, milk-shakes, etc.	93.3	8.6
Fish: fried, with or without chips	91.7	8.4
Pizza and quiche pieces	69.5	6.3
Chinese food	63.7	5.9
Fried chicken (with or without accompaniments)	62.6	5.6
Pies	59.7	5.5
Sandwiches (fresh)	58.1	5.3
Burgers	50.6	4.7
Biscuits, buns and cakes	48.9	4.5
Other ethnic food	45.5	4.2
Bread rolls (filled, hot, etc.)	37.5	3.5
Fried chips, purchased separately	24.5	2.2
All other ready-to-eat items	154.9	14.3
Total	1086.3	100.0

Source: Statistics New Zealand/Restaurant Association (2002).

Stringent restrictions on advertising in one/some media segment(s) usually leads marketers to reposition advertising to other non-regulated media. Drastic intervention such as bans can have a perverse effect. Illustrative is an interesting study from the 1970s on the impact of cigarette advertising bans. This study implied that a ban on cigarette advertising in the broadcast media had led the tobacco companies to increase their print media advertising sharply, accounting for a real increase in the percentage of smokers over the period of the study (Teel *et al.*, 1979).

Smith (2002) cited recent UK industry research that indicated that price and consumer wealth impact on the overall category sales for fast foods, whereas advertising's primary influence is on market share within the category. He also noted industry warnings that a ban on advertising would result in an investment of the 'savings' in price (i.e. price reductions), which would be likely to drive category volume sales up further.

THE NEW ZEALAND STUDY

With the previous literature review in mind, this paper now reports on an empirical study derived from a survey of parents/primary care givers from a range of primary schools across Metropolitan Auckland, New Zealand's largest centre of population. In New Zealand the discussion of the ill effects of advertising in the context of younger children has chiefly focused on the advertising of food products that lead to unhealthy dietary habits and nutrition problems among children. In line with similar medical forums overseas, such as the National Forum on Coronary Heart Disease (see, for example, Marquis, 1994), in New Zealand the National Heart Foundation (2000) has also expressed concerns about the impact of advertising on heart disease. It was alleged that children were getting fat on the 'wrong' foods due to advertising being a 'powerful promoter of bad eating habits', with a resultant 'lifetime of ill-health' and, therefore, the New Zealand Government should ban advertising for such products (Kedgley, 2000, p. A13).

MOTIVATION FOR THE STUDY

An increased New Zealand focus on the impact of advertising on children was sparked by the governmental review of broadcasting policy and proposed ban on advertising during and around children's television programmes noted above (see Labour Party, 1999, p. 5) and the assumptions implicit in this policy document that advertising was a direct cause of a range of social ill-effects, particularly with regard to unhealthy dietary practices. An initial study, in the interests of informing public debate and policy making, was carried out by Eagle and De Bruin (2000/2001) and provided an overview of the current New Zealand framework of advertising regulation. This earlier paper helped inform and underpin the current research.

OBJECTIVES/METHODOLOGY

A questionnaire was developed drawing initially on material from the government policy document and assumptions underlying the proposed policy with regard to the perceived direct linkages between exposure to advertising messages and negative influences on children (see, for example, Brown and Daniels, 2000; Kedgley, 2000; De Bruin and Eagle, 2002), together with the implicit assumptions that the imposition of the recommended ban would, without further interventions, help eliminate a range of societal problems (see, for example, Higham, 1999). In accordance with the preceding literature review and the above criteria, the specific objectives of this study were to determine the views of parents of primary school-aged children (aged 5–12 years) regarding the following.

- (1) Perceptions of the amount of television viewed by their primary school-aged children.
- (2) Agreement with a range of statements regarding food and nutrition issues.
- (3) Perceptions regarding their children's attitudes towards a balanced diet.
- (4) Perceptions regarding the impact of advertising on their children.

The research instrument was extended and strengthened by the inclusion of items developed from the literature, particularly frequently voiced and often emotionally rather than empirically based criticisms, relating to advertising directed at children. The questionnaire was pre-tested using a convenience sample of parents and then piloted with parents/primary care givers from one school. No problems were found with regard to either the wording or question sequencing and the study was then extended to encompass a representative range of schools.

The survey then undertaken was restricted to Metropolitan Auckland, a geographic region containing 28% of the total New Zealand population (Statistics New Zealand, 2001). Schools were selected from a list provided by the Ministry of Education, which classifies New Zealand schools in deciles 1–10, with decile 1 associated with the lowest socio-economic group and decile 10 the highest (the factors taken into account are based on various criteria such as household income and parental educational qualifications and these ratings determine supplementary funding). A stratified sample of schools representing state, private ('elite') and religious (Catholic) state school sectors was chosen. Where a school declined to participate, a school with a similar socio-economic profile was selected as a replacement. This occurred four times with the lowest decile-level schools. The rationale given by these schools for declining was that they were often portrayed in a negative light in social policy research. With the agreement of each participating school's trust board and the support of each principal, a questionnaire together with a reply paid envelope was enclosed with the regular school newsletter to parents that was routinely taken home by the pupils. A covering letter from the school principal explaining the origin, purpose

TABLE 3. Response rates by type and decile level of school

School type and decile level	Response rate per school (%)
Decile 10 private	28
Decile 10 religious state	23
Decile 10 state	15
Decile 7 state	30
Decile 5 state	18
Decile 3 state	16
Decile 1 state	18
Decile 1 religious state	27

and intention of the survey was also attached. The response rates are shown in Table 3. Thirty-four percent of the respondents were from households with only one primary school-aged child, 40% of households had two primary school-aged children, 20% had three primary school-aged children and 6% had four or more primary school-aged children. Eighty-seven percent of the respondents were female and 13% were male. This level of response was consistent with expectations for such a school-administered questionnaire.

RESEARCH FINDINGS

Generally, the most visible and common form of the communications media, i.e. television advertising directed at children, has been the focus of the 'regulation debate'. However, this study showed that television viewing was moderate and that there was growing exposure to other electronic media, e.g. the Internet, where marketing communication is diverse and where practices are much harder to monitor and regulate. It was claimed that there was particularly low television viewing across all time zones (before 09.00 h, after school to 18.00 h and 18.00–22.00 h on school days and before 12.00 h, 12.00–18.00 h and 18.00–22.00 h at weekends) in the high socio-economic (decile 10) group. Parents from these groups indicated that television viewing was not an everyday event, with unprompted comments such as 'television for the children is a planned event', 'do not believe in television', 'we are very selective with viewing' and 'we hardly watch any television programme except the news'.

The viewing levels in after school hours were relatively higher for the lower decile schools than for the higher decile schools. This reflected a number of factors.

- (1) Higher decile schools had a greater range of after school activities for children and/or higher decile school parents were more able to afford paid 'elective' activities.
- (2) Parents with children at low decile schools were, from several parents' general comments (for which space was allowed on the questionnaire), aware of but not happy with their children's heavy viewing. However, they also indicated that both parents were working out of economic necessity and that they could not afford the fees for desirable sports clubs or other out-of-class activities. Some children therefore watched television until one or both parents came home.
- (3) Families with children at low decile schools were less likely to have computers or electronic games in the home. Television was therefore the major 'entertainment' vehicle for these children.

Viewing of television during prime (18.00–22.00 h) viewing time was heavier for children at low decile schools, again largely reflecting the lack of alternatives such as computers or electronic games in lower decile school homes. The substantial amount of prime time television viewed by children across all decile levels was significant, given the Labour Government's indications in their 1999 broadcasting policy document of a possible ban on advertising within children's television programmes. The parents' responses indicated that children were likely to be exposed to considerable amounts of programming and advertising that was not intended for them.

The parents' perceptions regarding concerns about getting children to eat 'good' foods versus being able to eat what they wanted were assessed in two questions. A statement regarding the perceived importance of the role of schools in discussing nutrition was also included. All statements were rated on a scale of 1–5 by the parents, where 1 = totally disagree, 3 = neutral and 5 = totally agree. A *t*-test with a null hypothesis of 3 (neutral) was conducted and could be rejected at the 0.25 (two-tailed) level of significance for all three statements. The results are shown in Table 4.

Parents from all schools appeared to feel strongly that their children should eat 'good' foods, but that schools had an important educational role in this. The parents appeared totally against the suggestion that children should eat whatever they want. Unsolicited comments from a large number of parents indicated that there were substantial pressures on them and their children for maintaining balanced diets. This clearly impacted on the children in terms of their apparently knowing, at one level, about healthy eating, but then succumbing to external influences that were obvious major elements. For example, the following comments were noted.

They know about the importance of different food groups, iron in the diet, etc., but still refuse to eat meat and vegetables. Seven year old often eats little lunch despite knowing the effects of no food, no energy, then little brain power. (parent, decile 7 school)

My children do not understand the volume of fat and sugar contained in takeaways and convenience snack bars and potato chips. They see some children living off these and think they are deprived when given vegetables and meat at night and fruit sandwiches in their lunch boxes. They think snack bars are food. (parent, decile 3 school)

TABLE 4. Level of agreement regarding food/nutrition issues

Statement	Decile 10 private	Decile 10 religious	Decile 10 state	Decile 7 state	Decile 5 state	Decile 3 state	Decile 1 state	Decile 1 religious
Statement 1 I am concerned about getting my children to eat 'good' foods								
Mean	4.2	4.0	3.7	3.9	3.9	3.8	3.9	4.0
SD	1.2	1.1	1.4	1.1	1.3	1.4	1.4	1.3
Statement 2 Children should be allowed to eat what they want								
Mean	1.3	1.3	1.6	1.5	1.8	1.6	1.7	1.9
SD	0.8	0.8	1.2	0.9	1.2	1.0	1.1	1.2
Statement 3 It is important that schools discuss food and nutrition as part of children's education								
Mean	4.7	4.7	4.4	4.5	4.5	4.4	4.5	4.5
SD	0.6	0.7	1.0	0.7	0.9	1.0	1.2	1.1

Five point scale where 1 = totally disagree, 3 = neutral and 5 = totally agree.

TABLE 5. Mean frequency regarding buying food/drink of little nutritional value

Question	Decile 10 private	Decile 10 religious	Decile 10 state	Decile 7 state	Decile 5 state	Decile 3 state	Decile 1 state	Decile 1 religious
Question 1: When your children ask you to buy food or drink which you believe to have little nutritional value, how often do you give in?								
Mean	2.2	2.3	2.3	2.2	2.5	2.3	2.4	2.5
SD	0.6	0.6	0.8	0.7	0.9	0.6	0.8	1.0

Five point scale where 1 = never, 3 = perhaps half the time and 5 = always.

Advertising was seen as an influence, but it was not the only influence and positive efforts by parents and schools at instilling healthy eating practices could be negated by peer pressure and even by nearby retail locations.

The parents were asked to indicate the frequency with which they allowed the purchase of food and drinks that were perceived to have little or no nutritional value. All of the parents indicated that such purchases were an occasional rather than a regular event, as shown in Table 5. At the extreme ends, a very low percentage 'never' purchased or 'frequently'/'always' bought these products.

They were then asked whether they had concerns regarding food and nutrition and children's attitudes towards a balanced diet and exercise and, if they did have concerns in these areas, to state what these concerns were. The parents did not indicate major concerns regarding their children's attitudes towards a balanced diet. Of those who did report concerns, Table 6 below indicates that the primary concerns reported were that children do not like some healthy foods and that children are hard to keep on the right track. One respondent suggested that children were informed, but 'not good at wise choices', while another conceded that her children were presented with bad role models, as both parents were overweight.

TELEVISION ADVERTISING

A list of opinions/statements regarding the influence of television advertising directed at children was drawn from the literature. As before, a *t*-test with a null hypothesis of 3 (neutral) was conducted and could be rejected at the 0.25 (two-tailed) level of significance for many of the statements tested (Table 7), indicating that the parents' views were unlikely to be neutral on these issues.

Agreement was highest with statements that television encourages children to want products they do not need, that there is too much sugar and fat in food products advertised in television programmes directed at children and there are too many advertisements in television programmes directed at children. Only moderate levels of agreement were obtained for the statement that television advertising is an important cause of pestering, though there tended to be agreement that advertising provided information on available products.

The food and nutrition issue was taken up here again in an attempt to gauge how the parents perceived the specific impact of television advertising on this issue. Critics of television food advertising aimed at children have focused on an imbalance between the types of foods advertised and recommendations in dietary guidelines (see, for example, Hammond *et al.*, 1999).

TABLE 6. Concerns regarding children's attitudes towards a balanced diet

	Decile 10 private	Decile 10 religious	Decile 10 state	Decile 7 state	Decile 5 state	Decile 3 state	Decile 1 state	Decile 1 religious
Concerns expressed ^a								
Yes	23	24	23	28	20	27	45	41
No	77	76	75	72	80	73	55	59
Total	100	100	100	100	100	100	100	100
Specific concerns noted ^b								
Concern 1	26	27	11	47	17	5	18	11
Concern 2	48	37	67	35	34	32	37	27
Concern 3	15	27	11	6	8	37	9	0
Concern 4	0	0	0	6	0	0	0	0
Concern 5	7	9	11	6	33	26	18	31
Concern 6	4	0	0	0	0	0	9	0
Concern 7	0	0	0	0	8	0	0	0
Concern 8	0	0	0	0	0	0	9	31
Total	100	100	100	100	100	100	100	100

^a The values given are percentages.

^b Percentage of the respondents who expressed concerns.

Concern 1, children do not seem to like some healthy foods; concern 2, hard to keep children on track – they want junk food; concern 3, informed, but not good at wise choices; concern 4, parents are bad role models – overweight; concern 5, children do not understand the potential health problems (e.g. obesity); concern 6, children are talking about becoming vegetarian; concern 7, girls seem preoccupied with their body image; concern 8, need to promote healthy eating but healthy foods are costly.

However, Table 7 shows that the parents in this study were relatively neutral on issues such as whether advertised foods on television were an important cause of unhealthy eating habits. Nor did they strongly believe that there was too much sugar and fat and additives in food products advertised in television programmes directed at children. They also did not support the prospect of a ban on television advertising directed at children.

PARENTAL PERCEPTIONS REGARDING THE RELATIVE INFLUENCE OF ADVERTISING COMPARED TO OTHER INFLUENCES

The parents' perceptions of the degree of influence of advertising in children's programmes and other programmes were compared to their perceptions of the degree of influence of other children (school friends, etc.) and siblings. The same five-point scale was used as for previous blocks of questions. The findings indicated that advertising in children's programmes was not seen as being an overwhelming influence on children in terms of their wanting products when compared to the influence of other children (see Table 8).

TOWARDS A CONCLUSION

It is quite inappropriate to assume that a strong positive correlation between television advertising and detrimental social outcomes does exist. The following points were noted in this study.

TABLE 7. Opinions/Statements on television advertising directed at children

Opinion/ Statement	Decile 10 private	Decile 10 religious	Decile 10 state	Decile 7 state	Decile 5 state	Decile 3 state	Decile 1 state	Decile 1 religious
Opinion/Statement 1: Advertised foods on television is an important cause of unhealthy eating habits.								
Mean	3.7*	3.7*	3.6*	3.2	3.5*	3.4*	3.5*	3.5*
SD	1.1	1.1	1.1	1.2	1.1	1.2	1.4	1.4
Opinion/Statement 2: Television advertising encourages my children to want products they do not need.								
Mean	3.9*	4.4*	4.2*	4.3*	3.8*	4.0*	3.9*	3.9*
SD	1.1	0.8	0.8	1.0	1.1	1.2	1.2	1.2
Opinion/Statement 3: There is too much sugar and fat in food products advertised in television programmes directed at children.								
Mean	4.1*	4.2*	4.0	3.9*	3.6*	3.8*	4.4*	3.8*
SD	1.0	0.9	0.9	1.0	1.2	1.1	0.8	1.2
Opinion/Statement 4: There are too many additives in food products advertised in television programmes directed at children.								
Mean	4.1*	4.2*	4.0*	3.7*	3.6*	3.8*	4.2*	3.6*
SD	1.0	0.9	0.9	1.0	1.1	1.1	1.2	1.1
Opinion/Statement 5: Television advertising directed at children should be banned.								
Mean	3.1	3.4*	3.3	3.3	3.3	3.4*	3.6*	3.5*
SD	1.3	1.2	1.1	1.1	1.2	1.3	1.4	1.3

Five-point scale where 1 = totally disagree, 3 = neutral and 5 = totally agree.

* Denotes that the null hypothesis of 3 (neutral) can be rejected at the 0.025 (two-tailed) level of significance.

- (1) Television viewing tended to be moderate and there was increasing evidence of the usage of other electronic media. However, the higher the socio-economic grouping, the lower the claimed amount of television viewing by primary school-aged children. While there is room for validity checks over the 'claimed amount of actual viewing', access to television and other media generally means time spent away from other pursuits more conducive to physical health.
- (2) Lower decile groups (by definition lower socio-economic groups) displayed heavier less-discerning television viewing patterns among primary school-aged children, coupled with a lack of censorship of necessity (i.e. both parents working). The food quality in these groups tended to be lower than in the higher decile group and use of convenience foods tended to be higher too.
- (3) Parents from all groups expressed concern over what their children actually ate and all saw a role for schools in providing educational and nutritional information as part of the curriculum.
- (4) As suspected, the children were neither passive recipients of advertising, nor indeed of parental instruction. In other words, television programming (including product placement) advertising and parents did have an influence, but these influences could have been strengthened or negated by in-school foods, retail distribution and by peer pressure to conform. Attitudes towards 'a balanced diet' varied significantly by school decile type and by social class.
- (5) The overall agreement by the parents was nonetheless negatively skewed against advertising that created and sustained unhealthy eating habits encouraged children to

TABLE 8. Relative influence on children in wanting products

	Not influenced at all	Influenced a little	Influenced moderately	Influenced quite a lot	Influenced considerably
Advertising in children's programmes					
Decile 10 private	2	21	31	29	17
Decile 10 religious	4	18	18	42	18
Decile 10 state	0	21	30	29	20
Decile 7 state	6	27	21	21	25
Decile 5 state	6	25	23	32	14
Decile 3 state	3	14	25	37	21
Decile 1 state	4	31	19	23	25
Decile 1 religious	8	21	21	36	13
Advertising in other (e.g. family and adult 'prime time') programmes					
Decile 10 private	9	31	38	18	4
Decile 10 religious	10	30	29	25	6
Decile 10 state	5	43	23	25	4
Decile 7 state	14	29	35	20	2
Decile 5 state	16	43	23	14	4
Decile 3 state	3	23	41	23	9
Decile 1 state	27	23	23	12	15
Decile 1 religious	18	30	26	21	5
Other children (school friends, etc.)					
Decile 10 private	0	7	18	41	34
Decile 10 religious	0	12	18	37	33
Decile 10 state	0	16	20	42	22
Decile 7 state	8	6	21	40	25
Decile 5 state	6	16	27	38	13
Decile 3 state	6	14	23	35	22
Decile 1 state	4	12	16	32	36
Decile 1 religious	17	24	22	12	25
Their siblings (brothers and sisters), cousins, whanau (Maori extended family), etc.					
Decile 10 private	4	12	25	36	23
Decile 10 religious	2	12	24	34	28
Decile 10 state	5	18	21	33	23
Decile 7 state	14	10	23	38	15
Decile 5 state	13	21	21	30	15
Decile 3 state	9	18	24	29	20
Decile 1 state	4	16	20	28	32
Decile 1 religious	13	28	22	25	12

The values given are percentages.

Five-point scale where 5 = influenced considerably and 1 = not influenced at all.

want unneeded products that contained too much fat and sugar or additives, there was not strong agreement however, that advertising directed at children should be banned.

Thus, the parents appeared to have some concerns about the role of advertising in food and nutrition but did not strongly support advertising bans and did not believe that advertising was

a critical factor influencing children's eating habits. There has been increasing recognition in the literature (see Ebbeling *et al.*, 2002) that the causes of fatness and obesity are many and varied. All the causes cannot be laid neatly at the door of television programming or advertising. The proximity to 'neutral' in Table 7 by no means indicates overall support for a ban on advertising to children by the parents and the findings in Table 8 indicate that advertising did have some influence when compared to other influences.

As indicated earlier in the paper, it may well be time for policy makers to see this subject as of great importance. Eighty percent of fat or obese children become fat or obese adults. In due course, fatness and obesity results in related health problems. Thus, there is a major societal cost, which is now in every nation state. It may now be time for major international comparative studies funded by governments to be undertaken with policy makers, parents and children in order to determine the causes of fatness and obesity among children to a far more sophisticated extent. Perhaps Donohue's (1975) study could be used as a starting point for informing one such study, but with a considerably improved methodology as a prerequisite for a modified replication.

Can advertising escape detailed attention in such a study? It is suspected not. However, as seen here, it is not the only defendant in the dock. Other defendants include programme product placement, peer pressure, parental influence and the distribution and marketing of foods within and in proximity to schools.

Given the emotive nature of this subject area, comments and collaboration by colleagues and practitioners would be welcomed.

REFERENCES

- A C Nielsen (2002) *Estimated Advertising Expenditure, Calendar Year 2001*. Auckland: A C Nielsen.
- Advertising Association (2000) *Food Advertising to Children* (available at <http://www.adassoc.org.uk/position/foodkids.html>)
- Advertising Standards Authority (2001) *Advertising Codes of Practice*. Wellington, New Zealand: Advertising Standards Authority.
- Ahmad, S. (1997) Time for a Twinkie tax? *US News and World Report*, **123**(25), 62–3.
- Ahuja, R.D., Walker, M. and Tadepalli, R. (2001) Paternalism, limited paternalism and the Pontius Pilate plight when researching children. *Journal of Business Ethics* **32**(1), 81–92.
- Ambler, T. (1996) Can alcohol misuse be reduced by banning advertising? *International Journal of Advertising* **15**(2), 167–74.
- Anonymous (2001) Getting a handle on obesity. *The Lancet* **359**, 1955.
- Anonymous (2002) Maternal feeding practices are linked to childhood obesity. *Fitness and Wellness Week* 6 April, 3.
- Avery, R.J., Mathios, A., Shanahan, J. and Bisogni, C. (1997) Food and nutrition messages communicated through prime-time television. *Journal of Public Policy and Marketing* **16**(2), 217–27.
- Bang, H.K. (1998) Analyzing the impact of the liquor industry's lifting of the ban on broadcast advertising. *Journal of Public Policy & Marketing* **17**(1), 132–8.
- Baxter, S.D. and Thompson, W.O. (2002) Fourth grade children's consumption of fruit and vegetable items available as part of school lunches is closely related to preferences. *Journal of Nutrition Education and Behaviour* **34**(3), 166–71.
- Brønn, P.S. and Vrioni, A.B. (2001) Corporate social responsibility and cause-related marketing: an overview. *International Journal of Advertising* **20**(2), 207–22.
- Brown, E.W. (1996) Sex and violence are not the only things kids should avoid on TV. *Medical Update* **19**(8), 4.
- Brown, J.M. and Daniels, C. (2000) TV ads a turnoff for youngsters. *Weekend Herald* 4–5 March, A3.
- Byrd-Bredbenner, C. and Grasso, D. (2000) Health, medicine, and food messages in television commercials during 1992 and 1998. *Journal of School Health* **70**(2), 61–5.

- Cantor, J. and Nathanson, A. (1997) Predictors of children's interest in violent television programmes. *Journal of Broadcasting and Electronic Media* **41**(2), 155–67.
- Cioletti, J. (2001) Kid-venience. *Supermarket Business* **56**(5), 31–2.
- Cowell, P. (2001a) Marketing to children: a guide for students and practitioners – part 1. *The Marketing Review* **1**, 473–85.
- Cowell, P. (2001b) Marketing to children: a guide for students and practitioners – part 2. *The Marketing Review* **2**, 71–87.
- Craypo, L., Purcell, A., Samuels, S., Agron, P., Bell, E. and Takada, E. (2002) Fast food sales on high school campuses: results from the 2000 California High School Fast Food Survey. *Journal of School Health* **72**(2), 78–82.
- Cristol, H. (2002) Trends in global obesity. *The Futurist* **36**(3), 10.
- Daily, P.B. (2002) Weight of blame. *Restaurants and Institutions* **112**(13), 14.
- Danner, V. and Molony, T. (2002) Obesity eclipses smoking, alcohol in health care costs. *The Journal of Dental Hygiene* **76**(II), 111.
- De Bruin, A.M. and Eagle, L.C. (2002) Regulating the medium and the message. Parental perceptions of television advertising directed at children. In *Proceedings of the Seventh International Conference on Marketing and Corporate Communication* (ed.), P. De Pelsmacker, Belgium: Universiteit Antwerpen Management School, pp. 14–27.
- Dibbs, S. (1993) *Children: Advertisers' Dream, Nutrition Nightmare*. London: National Food Alliance.
- Dobrow, L. (2002) How old is enough? *Advertising Age* **73**(5), 4.
- Donohue, T.R. (1975) Effects of commercials on Black children. *Journal of Advertising Research* **15**(6), 41–7.
- Eagle, L.C. and De Bruin, A.M. (2000/2001) Advertising restrictions: protection of the young and the vulnerable? *International Journal of Advertising and Marketing to Children* **2**(4), 259–71.
- Ebbeling, C.B., Pawlak, D.B. and Ludwig, D.S. (2002) Childhood obesity: public health crisis, common sense cure. *The Lancet* **360**, 473–82.
- Eller, D. (2002) The carbohydrate controversy. *Better Nutrition* **64**(2), 8–9.
- Escobar, A. (1999) Factors influencing children's dietary practices: a review. *Family Economics and Nutrition Review* **12**(3/4), 45–55.
- Guiltinan, J.P., Gordon, W.P. and Madden, T.J. (1997) *Marketing Management Strategies and Programs*, 6th edn. New York: McGraw-Hill.
- Hammond, K.M., Wylie, A. and Casswell, S. (1999) The extent and nature of television food advertising to New Zealand children and adolescents. *Australian and New Zealand Journal of Public Health* **23**(1), 49–55.
- Heubusch, K. (1997) Is it OK to sell to kids? *American Demographic* **19**(1), 55.
- Higham, N. (1999) Industry divided over prospect of ban on children's advertising. *Marketing Week* **22**(3), 17.
- Hill, J.M. and Radimer, K.L. (1997) A content analysis of food advertisements in television for Australian children. *Australian Journal of Nutrition & Dietetics* **54**(4), 174–92.
- Hitchings, E. and Moynihan, P.J. (1998) The relationship between television food advertisements recalled and actual foods consumed by children. *Journal of Human Nutrition and Dietetics* **11**(6), 511–17.
- Hunter, B.T. (2002) Marketing foods to kids: using fun to sell. *Consumers' Research Magazine* **85**(3), 16–19.
- Irving, L.M. and Berel, S.R. (2001) Comparison of media-literacy programs to strengthen college women's resistance to media images. *Psychology of Women Quarterly* **25**, 103–11.
- Johnson, S.L. (2002) Children's food acceptance patterns: the interface of ontogeny and nutrition needs. *Nutrition Reviews* **60**(5), S91–4.
- Kaufman, L. (1980) Prime time nutrition. *Journal of Communication* **30**(3), 37–46.
- Kedgley, S. (2000) Food advertising can harm your child's health. *New Zealand Herald* 9 March, 13.
- Kitchen, P.J. (1999) *Marketing Communications: Principles and Practice*. London: International Thomson.
- Kitchen, P.J. (ed.) (2003a) *The Future of Marketing: Critical 21st Century Perspectives*. Basingstoke: Palgrave-Macmillan.

- Kitchen, P.J. (ed.) (2003b) *The Rhetoric and Reality of Marketing: An International Managerial Approach*. Basingstoke: Palgrave-Macmillan.
- Kitchen, P.J. and Schultz, D.E. (2001) *Raising the Corporate Umbrella: Corporate Communications in the 21st Century*. Basingstoke: Palgrave-Macmillan.
- Kotz, K. and Story, M. (1994) Food advertisements during children's Saturday morning television programming. *Journal of the American Dietetic Association* **94**(11), 1296–300.
- Kucharsky, D. (2002) Fast food survives 'media assaults'. *Marketing Magazine* **107**(11), 2.
- Labour Party (1999) *Broadcasting: Its About Us. Broadcasting Policy*. Wellington: New Zealand Labour Party.
- Lino, M., Basiotis, M.P., Gerrior, S.A. and Carlson, A. (2002) The quality of young children's diets. *Family Economics and Nutrition Review* **14**(1), 52–60.
- Lord, M. (2000) Schools fight fat by teaching kids to eat their greens. *US News & World Report* **128**(17), 60–2.
- McGovern, C. (2002) Brave new world. A clear and present danger. *The Report* **29**(14), 56.
- Marquis, S. (1994) The young ones. *Marketing* 10 March, 22–3.
- Martin, R. (2002) Soda pop tax won't quench lawmakers' thirst for levies on sweet, fatty foods. *Nation's Restaurant News* **36**(17), 26.
- Matorin, J. (2001) Obesity awareness campaign needed, but regulators won't curb fast-food appetite. *Nation's Restaurant News* **35**(35), 32–3.
- Mills, L. (2001) The fat of the land. *Marketing* **106**(13), 9.
- Ministry of Health (1999) *NZ Food: NZ People. Key Results of the 1997 National Nutrition Survey*. Wellington: Ministry of Health.
- National Heart Foundation (2000) *Promoting Healthy Foods*. Wellington: National Heart Foundation.
- Newth, K. (2000) Fast food in spotlight: Heart Foundation to investigate ads targetting children. *Sunday Star Times* 26 March, A7.
- Rummel, A., Howard, J., Swinton, J. and Seymour, D.B. (2000) You can't have that! A study of reactance effects & children's consumer behaviour. *Journal of Marketing Theory and Practice* **8**(1), 38–45.
- Sibbald, B. (2002) Obesity may soon be leading cause of preventable deaths in US. *Canadian Medical Association Journal* **166**(5), 642.
- Simontacchi, C. (2000) *The Crazy Makers: How the Food Industry is Destroying Our Brains and Harming Our Children*. New York: Tarcher/Putnam Publishers.
- Smith, C. (2002) Snack attack: the next ad ban? *Marketing UK* July, 13.
- Sprott, D.E. and Miyazaki, A.D. (2002) Two decades of contributions to marketing and public policy: an analysis of research published in *Journal of Public Policy & Marketing*. *Journal of Public Policy & Marketing* **21**(1), 105–25.
- Statistics New Zealand (2001) *Statistics*. Wellington: Official NZ Statistics Agency (available at www.stats.govt.nz)
- Statistics New Zealand/Restaurant Association (2002) *Top Selling Ready-to-eat Foods, 2001*. Wellington: Statistics New Zealand.
- Story, M. and Faulkner, P. (1990) The prime time diet: a content analysis of eating behaviour and food messages in television programmes and commercials. *American Journal of Public Health* **80**(6), 738–40.
- Taras, H.L. and Gage, M. (1995) Advertised foods on children's television. *Archives of Pediatric and Adolescent Medicine* **144**, 649–52.
- Teel, S., Teel, J. and Bearden, W. (1979) Lessons learned from the broadcast cigarette advertising ban. *Journal of Advertising* **13**(1), 333–46.
- Ulrich, M. (2002) Why stop at taxing fat? *The Report* **29**(13), 50.
- USDA (1998) *Is Total Fat Consumption Really Decreasing? Nutrition Insights*. Virginia: USDA Centre for Nutrition Policy and Promotion.
- WARC (2002) America's fast food industry fights back with ad campaign. *WARC Online World Advertising and Marketing News* 18 June (available at <http://www.warc.com>)
- Young, B. and Webley, P. (1996) *The Role of Television Advertising in Children's Food Choice*. London: Ministry of Agriculture, Fisheries and Food (MAFF) UK.

BIOGRAPHIES

Lynne Eagle is an Associate Professor in Marketing at Massey University, Auckland, New Zealand. Her research interests centre on advertising effects and effectiveness, and include integrated marketing communication, the impact of advertising on children and the impact marketing communication has on perceptions and use of medications. She has published in a range of academic journals including *European Journal of Marketing*, *Journal of Marketing Management*, *International Journal of Advertising*, *Corporate Communications International Journal*, *Journal of Marketing Communications*, *International Journal of Advertising and Marketing to Children*, *International Journal of Medical Marketing* and the *Marketing Intelligence and Planning Journal*. She has also contributed chapters to several books on advertising management and other related subjects and has presented research papers at conferences in England, Scotland, Ireland, Belgium, France, USA and Australia as well as her native New Zealand. She has also acted as a judge for a number of advertising effectiveness awards and was convenor of judges for the inaugural New Zealand Advertising Effectiveness Awards (now EFFIES). She also provides consultancy advice for key industry groups regarding the interface between marketing communication and sensitive public policy areas.

Sandy Bulmer is a Lecturer in Marketing at Massey University, Auckland. She has a degree in Food Technology from Massey University (BTech (Hons), 1982) and in Marketing from The University of Auckland (MCom (Hons), 2001). Before becoming an academic Sandy had a career in food marketing / brand management at Nestle and United Dairy Foods. Her current research interests include advertising interpretations and issues of marketing communications directed at children.

Anne de Bruin is a Professor of Economics in the Department of Commerce and Research Development Director of the College of Business, Massey University at Albany, Auckland, New Zealand. She is a strong advocate of the benefits of inter-disciplinary research. Her recent articles include collaboration with colleges in Sociology and Marketing.

Philip J. Kitchen holds the Chair in Strategic Marketing at Hull University Business School. Prior to this he held the Martin Naughton Chair in Business Strategy, specialising in Marketing at the Queen's University Management School, Belfast. At Hull, he teaches and carries out research in marketing management, marketing communications, corporate communications, promotion management, and international communications management. He has contributed to such journals as the *International Journal of Advertising*, *Journal of Advertising Research*, *Journal of Marketing Management*, *European Journal of Marketing*, *Marketing Intelligence and Planning*, *Journal of Marketing Communications*, *ADMAP*, *Journal of Nonprofit and Public Sector Marketing*, *International Journal of Bank Marketing*, *Journal of Corporate Communications*, *Small Business and Enterprise Development*, *Creativity and Innovation Management*, *Journal of Business Ethics*, and, numerous practitioner journals. Dr. Kitchen serves on the Editorial Advisory Board of the *Journal of Marketing Management* and is a Review Board Member for *Marketing Intelligence and Planning* and *Corporate Communications: An International Journal*.

APPENDIX: CODE FOR ADVERTISING TO CHILDREN

The principal provisions of the Advertising Standards Authority's Code for Advertising to Children, which has been in place since 1989 and was revised in 2001, are as follows.

- (1) Separation of advertisements. Advertisements must be clearly recognizable as such by children and separated from editorials or programmes. If there is any likelihood of advertisements being confused with editorial or programme content, they should be clearly labelled advertisement or identified in an equally clear manner.
- (2) Content.
 - (i) Advertising should not clearly portray violence or aggression.
 - (ii) Advertising should not contain menacing or horrific elements likely to disturb children.
 - (iii) Advertisements should not encourage anti-social behaviour or depict children behaving in an anti-social manner. Vindictiveness, bullying and certain facial expressions and body movements can all be defined as anti-social.
 - (iv) Children in advertisements should be reasonably well mannered and well behaved.
 - (v) Children should not be urged to ask their parents to buy particular products for them by advertisements.
 - (vi) No advertisement should suggest to a child that he/she will be in any way inferior through not owning the advertised product (Advertising Standards Authority, 2001, pp. 33–4).

In addition, there are provisions prohibiting the portrayal of unsafe situations and unsafe product use, together with provisions relating to the prevention of ambiguity, including competitions and premium offers and clear disclosure of any assembly, skill needed or additional items needed (e.g. batteries). This code is currently under review and an additional code for advertising food was introduced in 2001.

The principal provisions relating to advertising of food products to children include (from principle 3) the following.

Advertisements directed at children should observe a high standard of social responsibility.

- (1) Advertisements for treat foods directed at children should not actively encourage children to eat or drink them near bedtime, to eat or drink them frequently throughout the day or to replace main meals with them.
- (2) Advertisements for nutritional foods essential for a healthy balanced diet are encouraged to advocate the benefits of such foods, particularly when directed at children. A large and liberal but commonsense interpretation is allowed. However, benefits should not be exaggerated and should not imply that a single food should replace a balanced and varied diet.