

Multimodal Discourse Analysis of Probiotic Web Advertising

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Abstract

The article studies the multimodal discourse of the producers of food and supplements containing probiotics – potentially beneficial bacteria marketed as the means to strengthen the body's 'defence mechanisms' at the time of increased media reporting on food scares and other health risks. The producers of functional food of which probiotics are an example seek to value add health to their products and in this way 're-imbed' consumer trust (Dixon and Banwell, 2004) undermined by the separation of consumers and producers in modern food systems. Using the methodological framework of critical social semiotics we will describe how this re-embedding of trust is being attempted at a micro-level of product and company promoting discourse, what values are being built into the functional food product in this process, and what implications the promotion of the signifiers of 'added value' has for how health and illness are conceptualised and how consumers are positioned.

Keywords: probiotics, trust, functional food, multimodality, critical social semiotics

Introduction

Food and nutrition have become complex issues in modern westernised societies as concern for healthy lifestyles has increased dramatically over the last twenty years in tandem with concerns about food safety. A once routine activity has become entangled in a network of choices, expectations and fears. Issues of diet and disease have become increasingly interlinked, from obesity to food hygiene and dangers to the immune system posed by a modern life style (Temple *et al*, 2006). This has resulted in what Fishler (1980) has called 'gastro-anomie' where there are no longer any rules associated with eating, and people receive conflicting advice about what to eat and why. Trust in expert advice about nutrition has been undermined by various food scandals from salmonella in eggs through 'mad cow disease' to anxieties about genetically modified food.

This ongoing battle between technical rationality and reflexive consumers has put health-related claims made on the packaging of food products into the spotlight. As consumers are questioning the credentials of foods and those who promote them and, simultaneously, seek help from the food system, it is expected that they will pay particular attention to these claims. For food corporations seeking advantage over their rivals, a particular value-adding step has emerged: the 'health-related response'. Hence the 're-embedding of trust in both the food supply as a whole and in food corporations becomes a necessary activity accompanying the physical manufacture, packaging, advertising and distribution of foods' (Dixon and Banwell, 2004:123).

In the light of the conflicting tendencies where consumers put trust into 'scientific claims' and/or into 'natural properties' of food, dairy products containing probiotics - live micro-organisms which are ingested to exert a positive effect on health beyond traditional nutritional effects - present an interesting case study. Probiotic yoghurts and drinks are regarded as a type of 'functional food' with specific health promoting benefits over and above its usual nutritional value (FSA, 2004:111), and therefore have an uncertain status between food and drugs and between 'natural' and 'engineered' foods. Living fermenting cultures are already added to milk to produce yoghurts, but yoghurts which are nowadays

labeled *probiotic* normally contain additional cultures such as *Lactobacillus casei* Shirota, *L. casei* Imunitas or *Bifidobacteria*.

Until now close qualitative analysis of the discursive construction of functional food benefits has been limited to the study of Benecol margarine commercialization (Lehenkari, 2003) and examinations of people's perceptions of functional foods (Bech-Larsen and Grunert, 2003; Niva, 2007). This article takes a discourse analytic approach to texts and images based on the websites promoting functional foods containing probiotics. In our analysis we describe discursive and semiotic means by which probiotics emerge as a credible 'tool' for building the 'inner armor' of immunity and as a locus of inter-linked discourses on biomedicine, science, nutrition, and the body. We draw on the theory of social semiotics to reveal how the text and images placed on these websites 1) construct scientific facts as an exclusive guide for individuals on what foods they should and should not be eating, and 2) formulate different visions of the body's relationship with the environment.

We will study how the producers of probiotics compete for trust, and what implications this promotion has for wider societal visions of health and illness. As corporations seek to value-add 'health' to products to distinguish them those of their competitors, the symbolic value of health, acting as cultural capital, is used to accumulate finance capital. What is open to question, however, is just what values are being built into the products and to what end? More importantly, we also need to investigate what implications the promotion of particular signifiers of "added value" has for how interaction between the body and food intake are defined. After a brief overview of the relationship between probiotics and modern conceptualisations of immunity, this article will explore these questions in detail within the framework of critical social semiotics.

'Boundary work': the body, the environment and the immune system

Despite the fact that benefits for healthy people are still uncertain and messages to consumers conflicting, probiotic drinks have become one of the fastest growing sectors in the dairy market (Redruello, 2004). This increase in sales and popularity coincides with increasing distrust of science (and of global corporations) and reliance on the 'natural' qualities of food, after decades of food scares and the controversy around genetically modified food. It also coincides, perhaps not surprisingly, with a parallel increase in fears of 'unfriendly bacteria' such as MRSA and *Clostridium difficile* in the UK. The modern body seems to be under attack from all sides, especially one part of the modern body, the immune system.

The term 'immune system' has existed in science only since the 1970s (Moulin, 1991). What came to be known as the immune system and its properties were first conceptualised in Elie Metchnikoff's early 20th-century theory of cellular immunity, but the ramifications of Metchnikoff's ideas remained unexplored until the rise of cellular immunology in the 1960s. Metchnikoff was also the first to discuss the concept of creating beneficial health effects through ingestion of living bacteria. The benefits of a 'healthy gut' are recognised in modern medicine which sees a stable microbial population as 'a barrier against the invasion of pathogenic microorganisms' that 'insures stimulation of the immune system' (Goktepe et al, 2005:13).

From the 1960s onwards, the concept of the immune system has been used to provide a tool for 'measuring' 'health' and for giving meaning to all manner of health issues (Martin, 1994: xvii). If, in the 1970s, the immune system provided a trendy title for numerous lectures, articles, books, reviews (Moulin, 1991), in the 1990s, the term moved beyond the world of science and entered a new phase of popularity in the public realm where 'the concept of an enfeebled immune system reflected the widespread sense of fragile individuality' (Fitzpatrick, 2002).

The contours of this metaphor of vulnerability began to change during the last decades of the last century (Martin, 1994). The idea of a clear dichotomy between 'nice' and 'nasty' extends into the concept of boundaries, purity and the body (Douglas, 1966). During the mid 20th century, prevailing western folk models of vulnerability placed the boundary between environment and body on the body's surface; 'germs' and 'chills' penetrated via unprotected body parts such as abrasions, wet hair, and so on (Greenhalgh and Wessely, 2006). As a result, a folk healing industry arose around the rituals of disinfecting the body's surface and its immediate surroundings. Later, the 'boundary' became more internal as it was believed that the body may be weakened from within, for example, by unhealthy diets, bacte-

ria and viruses¹. 'Disinfection' of the external body was therefore replaced by 'detoxification', which included the ingestion of so-called detoxifying food as well as the cleansing of the colon. Instead of strengthening the body's 'external armour' the emphasis shifted to strengthening its 'internal armour'.

In this way, maintaining the immune system's balance, seen as the boundary between the inner body and the outer environment, became a task for individuals increasingly engaged in self-policing this boundary. Below we will explore how the promotion of probiotics functions in this context, as companies seem to market probiotics as one of the means to strengthen the body's 'defence mechanisms'.

Data sources

A number of studies by critical discourse analysts (CDA) and sociologists have shown that linguistic and visual representations of medicine, health, illness and disease are influential in constructing lay knowledge, beliefs and experiences of these phenomena (e.g. Nettleton, 1997; Madden and Chamberlain, 2004). Although many of these representations are derived from 'traditional' media sources such as newspapers, television and magazines, the proportion of health related information in web-based media and advertising websites is also growing and should not be overlooked. The amount of CDA work done on web-based sources has so far been relatively small (LeVine and Scollon 2004; Lemke 2002), as the majority of discourse studies source their data from print newspapers and magazines. This paper aims to fill this gap by applying discourse analytic methods to study the promotional discourse on the websites of functional food producers – a discourse which, at least in part, constitutes and is constituted by our ideas about health and illness.

We chose eight websites of major probiotic products for analysis: four websites of dairy products containing probiotics (Yakult, Danone Activia and Actimel, and Muller websites² and four websites advertising supplements containing probiotics (Multibionta, Protexin, Biocare and Solgar Acidophilus formulas)³. The yoghurt making companies have been listed as market leaders (Redruello, 2004), whereas the producers of supplements featured in the UK media coverage which we analysed separately (Nerlich and Koteyko, in prep.). The webpages (n = 32) accessed in the period from June to July 2007 were saved and stored on a computer. As the companies normally display 1 or 2 advertisements at a time on their website, this presented us with a manageable sample of 9 advertising texts and images.

Methods and conceptual framework

The framework of 'critical social semiotics' (Caldas-Coulthard and van Leeuwen, 2003) was used to study the content of the websites which are corporately rather than individually authored (Warnick, 2007). As defined by Fairclough and Wodak, "social semiotics draws attention to the multi-semiotic character of most texts in contemporary society, and explores ways of analysing visual images and the relationship between language and visual images" (1997: 164). Work by van Leeuwen (2005), Hodge and Kress (1988), and Thibault (1991) has been influential in shaping social semiotics into a methodological framework for the analysis of images and their interplay with language in various genres. The 'critical' in 'critical social semiotics' indicates that it does not stop at description, but analyses

¹ It is interesting to note here the increasing importance of diet in modern conceptualisations of health and illness.

For example, in her comparative study of health beliefs among the UK women Wood (2007) found that whereas in the 1980s the most common reasons for illness were germs, bugs, and infections, the women interviewed in 2006, in contrast, considered diet to be of fundamental importance to avoiding illness.

² The websites of yoghurt producers: www.yakult.co.uk; www.actimel.co.uk;

<http://www.danoneactivia.co.uk>; and www.muller.co.uk.

³ The websites of the producers of probiotic supplements: www.multibionta.co.uk; www.protexin.com;

www.biocare.co.uk/SearchResults.aspx?keyw=probiotic; and www.solgar.co.uk/modules/shop/searchrated.asp.

multimodal texts as playing a vital role in the production, reproduction and transformation of the social practices that constitute the society we live in (Caldas-Coulthard and van Leeuwen, 2003).

Following Kress and van Leeuwen's (2001: 4-8) recommendation any examination of multimodality in contemporary communication should involve an analysis of discourse, design, production and consumption as fundamental issues. We developed the following framework for the analysis of the multimodal nature of the probiotics producers websites:

1. Discourse design

- Representations: which participants and processes are represented in images and language used on the websites of probiotics producers? What are the basic themes?
- Negotiating identities and relations between discourse producers and consumers: What kinds of social relations are constructed between represented participants and readers/viewers in the representation, both visually and linguistically? Also, what attitudes are projected through image (abstraction, precision) and language (possibility, obligations)?

2. Discourse audience and anticipated reception: how are readers/viewers positioned?

3. Discourse as socio-cultural practice: what can images and language use reveal about the social matrix and underlying ideology constructed by the producers of probiotics?

In the next section we first outline our analysis of discourse design, and then proceed to discuss the aspects of audience construction and the underlying ideology.

Websites of probiotic yoghurt producers: aspects of discourse design

Information placed by companies on their websites was analyzed selectively. First, from a wide range of dairy products advertised, we selected only sections that cover yoghurts containing probiotics. Second, to make the analysis more manageable, the selection was further restricted to static images and texts, which resulted in the exclusion of advertising trailers. The latter were used to supplement particular categories that emerged from the analysis of texts and images, but were not analyzed in detail in terms of moving images, aspects of kinesic communication, etc.

The websites of the four main producers of probiotics appear to have a similar structure. The content can be divided into four broad sections: 1) information about the company/company history; 2) information about the brands; 3) information about probiotic bacteria; 4) a section on science and 'healthy eating' advice, which provides scientific reports or links to studies supporting the health benefits of probiotics. Below we analyse image and language choices made in each of these sections, paying particular attention to rhetorical strategies of positive self-representation (Van Dijk 2005) through appeals to shared symbolic values or cultural narratives.

Histories and profiles of the companies

All the companies stress their long history and normally there is a 'grandfather' figure - a figure of trust and wisdom - who pioneered production of dairy products with probiotics. For example, Muller says the company dates back to 1896 'when yoghurt-loving Ludwig Müller first established his little Bavarian village dairy', projecting an image of a pastoral or rural idyll. The Muller website also prioritizes family values by enlisting the company's community initiatives: 'As more and more people seek to combine family healthcare with the ever hectic demands of modern living, Müller is particularly keen to support healthy eating initiatives in the local area.'

Yakult seems to focus more on science and mentions research by the Japanese microbiologist Dr Shirota, who studied Metchnikoff's work and 'became convinced that a positive balance of beneficial bacteria in the gut was the basis of a long and healthy life'. Dr Shirota is said to have succeeded in 'isolating a particular lactic acid bacteria, which had the unique ability to survive the harsh conditions of the stomach' in 1930. In both cases trust is sought to be established through a figure of authority, either a father figure or a scientist, linked to either wisdom or scientific knowledge.

Information about the brands

This is the most colorful and information packed section of the website as it contains the product descriptions and sample print and media adverts. Advertising is essentially a form of 'persuasive communication' (Russell and Lane, 1992; 22) and the purpose of the company websites is to create a favorable image of the company and/or its products, which should have a positive effect on profit figures. In accordance with online forms of advertising, discourse on the companies' websites takes shape through a characteristic combination of language and images. In this section we will pay particular attention to the discursive construction of health-giving properties of probiotics in a multimodal genre where images feature as prominently as language.

The following themes run across the images placed on the companies' websites:

- women of different ages feeling/looking energized, fit, happy; they are sometimes depicted actually eating yoghurts, but normally a yoghurt tub with a spoon simply appears next to a picture of a woman;
- children playing/running/enjoying themselves;
- women's and children's tummies accompanied by statements about the effect of probiotics on the regulation of the digestive system and activation of 'defense mechanisms'. These images of tummies, widely used by all producers of probiotic yoghurts but especially by Activia and Actimel, stand metonymically for the immune system, whereas the whole body is represented as a fortress. In this way, the biomedical view of body as a machine or system is evoked, where the maintenance of one part – the immune system - ensures the overall health;
- adults and children laughing together representing 'happy' family life. The best example is "the whole generation" of people 'aged from 1 to 100' represented as sharing their stories of eating Muller Vitality yoghurt on the company's website. Here we can see acceptance and idealization of traditional values such as settling down and starting a family;
- tubs and bottles of yoghurt (especially on Yakult and Actimel websites) emphasize the product itself, rather than potential consumers in order to draw attention to the brand's establishment and uniqueness in the market. This type of advertising deals with promoting brand loyalty among users and persuading those who are not to switch brands.

The discourse of advertising tends to draw upon forms of deontic modality⁴ on a regular basis, "either for purposes of immediate action or to make us more favourably disposed in general terms to the advertised product or service" (Goddard, 2002: 9) and thus create artificial needs of potential consumers. Probiotics adverts are not an exception. Texts placed on the companies' websites make frequent use of the imperative, which is regarded "as the unmarked member of the deontic system" (Palmer, 1986: 108), as for example, in Muller's call 'lick the lid of life'. Imperatives frequently feature in advertising discourse in the form of "a 'voice' which appears to be speaking personally to the reader" (Goddard, 2002: 24) to persuade them about the value of a product. On the websites of probiotic producers, this direct address is intensified by the use of second person pronouns: 'strenghtens your natural defences' (Actimel), or 'helps to regulate your digestive system' (Activia).

The added value of health is creatively constructed through language and image choices. The websites of probiotic yoghurt producers use lexis that can be grouped under the semantic set of 'energy and vitality': *life* as in the alliterative expression 'lick the lid of life!', *active* as in 'active lifestyle' and *Activia*, Muller *Vitality* yoghurt as in 'I am very lucky, happy lady – and I am full of Vitality!'. These links between health, happiness, 'élan vital' or vital force and probiotics made through lexical choices are intensified and re-created through images of active (playing, exercising, laughing) adults of all ages and children. The synecdochal representation of bodies through the images of tummies serves as another signifier of health in this context. Here the tummy is personified as some sort of homunculus in the body which has to be nurtured in various ways, kept balanced, 'happy' and so on – and if this tummy/digestive system is happy then so is the whole body/the individual.

Web advertising is "based on traditional forms of advertising but develops its own communication strategies in correlation with the new technical and medium-based requirements" (Janoshka, 2004:

⁴ As defined by Crystal (1997: 109), "deontic modality is concerned with the logic of obligation and permission".

17). The register of advertising is essentially that of oral language use rather than written messages, and the websites under study show that producers of probiotics place an emphasis on the interactivity. The style is informal and conversational as evident from the use ellipses in Yakult ('The ingredients? Only what needs to be in. Enough bacteria to keep your belly happy. Enough taste... to taste') and short and punchy 'personal stories' on the Muller website. Attempts to engage with the visitors of the websites are supported through the use of online trailers and animated ads that use motion and sound pictures.

Numerous features of the multimodal design of the advertisements examined in this section echo the image of 'health and vitality' characteristic of functional products that are primarily promoted on the basis of their perceived health benefits. Popular-culture vehicles in Britain such as television, the press and advertising have greatly contributed to the articulation of discourses representing new 'health conscious individuals' in the form of subject positions made available for individuals to negotiate their identities as consumers. Probiotics as typical representatives of functional foods are linked into consumer "healthy lifestyle" expression, as consumers express identity and ideological positions through their consumer choices (Hetherington, 1998).

Further in this article we will continue to study how producers of probiotics employ various linguistic and visual resources to construct particular positions for consumers, but first let us turn the construction of credibility.

The 'science' behind probiotics

This section contains numerous references to microbiology articles and excerpts with figures, and frequent use is made of terms such as 'research shows', 'experts suggest' and 'studies have found', e.g. 'Stress - research shows this can upset your gut' (Danone Actimel), 'One new line of research is investigating the use of probiotics to manage food related allergies' (Yakult).

A closer study of research articles reveals that the effects of Danon Activia are limited to benefits for the gut, as the probiotics in these yoghurts are said to have been proved to survive the trip through the digestive tract and to reduce constipation. Actimel, however, goes further, as the website makes explicit claims that probiotics are scientifically proven to 'modulate your immune system'. In the section titled 'What is the Evidence', several subheadings cite a range of studies on the effect of Actimel on the elderly, sportspeople, and 'active people' which appear to be people undergoing periods of 'intellectual stress'. The results are reported to have shown that daily consumption of Actimel 'significantly increased the presence of some type of immune cells which are vital in maintaining and supporting your body's defences and immune system'. The same section also refers to a BMJ publication (2007) with a commentary: This study supports the fact that Actimel is scientifically proven to help support the body's natural defences. Danone would certainly support the researchers' observation that substantial savings could be made by the routine use of probiotics."

This section conveys assurance that probiotics are products that can be *trusted*, as they have a direct reference to the role of science. As Stacey (1995: 23) argues, the nutritional status of foods has been particularly salient to food producers over the last century in a context where scientific eating is equated with eating 'correctly'. The nutritional qualities and health benefits of probiotic yoghurts are an important ingredient in the fight for competitive advantage, but claims of this nature must be backed by a credible source. As food companies are not believed to be a reliable information source on healthy eating or food safety, they seek endorsement from those with medical or health professional credentials to attract 'conferred expertise' status (Fairclough, 1989).

Information about probiotic bacteria

The websites of all producers include a specific section with information on probiotic bacteria, offering popularized definitions of probiotics with illustrations, guides and interactive demonstrations and tests. This section however, does not simply explain what probiotics *are*, but provides information on why people should *buy* probiotics, therefore shifting the emphasis to the benefit itself. In this way, a crucial link is made to the section on science behind probiotics, as here the viewer of the website can learn what the by now credible probiotics can do *for them*. For example, the Actimel website defines probi-

otics as 'an aide to your body's defense mechanism' and immediately links the definition to the benefits of their products:

Nature has given our body a complex system of barrier and defence mechanisms to help tackle bacteria. [...] 70% of your body's immune system is in your gut and it can be weakened by a hectic lifestyle, lack of sleep and or a poor diet. This is where Actimel can help to support your body's 3 lines of defense [which are, as mentioned in another section, 'the intestinal flora (or good and bad bacteria), the intestinal/gut mucosa (or gut wall), and the immune system'].

The 'helping' role of 'good bacteria' comes to the fore, as probiotics are said to 'supplement', 'aid' or 'balance' digestion: 'Yakult is a probiotic. What is a probiotic? Good bacteria that supplement the natural bacteria in your gut.' Staying as healthy as possible is important but you can also give your body a helping hand by drinking Actimel as 'it's a good way to help support your body's defences'. Here the emphasis on 'long tradition' and 'naturalness' is also brought into the picture in order to counterbalance the 'engineered' side of probiotic yoghurts: e.g. the Activia website talks about a 'natural way of regulating the digestive system', and Actimel emphasizes 'your body's natural defenses'. As a result, probiotics seem to offer consumers an opportunity to shape their immune system in a 'natural way' just like it has become common to shape one's body through diet and exercise. They can thus take charge of their protective 'inner armor' and overall health.

Websites of the producers of the probiotic supplements: discourse design

The websites of Biocare and Solgar are similar in design and represent a version of an 'online' shop where information about the company and brands is followed by a virtual display of prices and products ready to go into the view's 'shopping basket'. Unlike the 'yoghurt websites', these sites rely on texts rather than images to get its messages out. The language is more formal, and the use of interactive features is limited.

From a number of sections available, we focused on 1) sections covering information about the companies and 2) sections on 'product range' on the Biocare and Solgar websites and sections on probiotics and digestive system on the Multibionta and Protexin websites.

Information about the company

Solgar's website emphasizes the long history of the company and the growing trend of caring for the 'inner body', which is part of the general strive towards health and overall well-being encapsulated in the word 'wellness': 'Solgar is advancing wellness since 1947. Solgar's Philosophy - Wellness! People everywhere are embracing the Wellness lifestyle. They're realizing that the inside of their bodies is just as important as the outside.' The companies also use the online space in this section to stress the scientific basis behind their probiotic supplements. Solgar, for example, introduce the history of their research centre:

To produce truly effective nutritional supplements, you need access to the most advanced nutritional information available. That means doing your own research, and that's why in 1978 Solgar founded the Solgar Nutritional Research Center (SNRC). It has become a respected scientific institution, which has contributed to such important research topics as the role of nutrition in diabetes and cancer, and the isolation of unidentified food factors.

Similarly, Biocare's website says that it is 'a science based company founded by natural practitioners with many years experience in nutrition and biological science'. In this statement, just as on the websites of Actimel and Activia yoghurts, a link is made to the perceived 'naturalness' of probiotics, as Biocare draws attention not only to its 'respected' scientific foundation, but also to the fact that it was founded by 'natural practitioners' – who, unlike practitioners of conventional medicine, are known to 'work with nature' when they treat people, and are variously called 'naturopaths', herbalists, or homeopaths.

Multibionta's opening statement mentions probiotics yoghurts as containers of 'natural friendly bacteria' reassuring the readers that they will get the same bacteria in the supplement: 'Multibionta is no

ordinary multivitamin. Instead it contains *natural* friendly bacteria, just like the ones you find in probiotic yoghurt drinks.' In this way, the perceived 'naturalness' of probiotic yoghurts that rests on the long tradition of yoghurt making is projected onto tablets and powders, obscuring the fact that the probiotic yoghurts themselves are an artificial blend of bacterial strains.

Information about probiotics

On the website of Solgar's supplement Acidophilus, probiotics are grouped into a section called 'digestive aids'. Probiotics are represented as a remedy to keep the digestive system in order because a 'disordered' digestion may be a 'major contributor to the development of ill health'.

The Protexin website makes more precise claims as their supplements are represented as 'strengthening the immunity': 'Probiotics have been shown to ensure the optimum microflora balance in order to stimulate and maintain the natural immune system of the host. These enhanced immune effects help to prevent illness when probiotics are used regularly.' The Multibionta website provides an explanatory section on probiotics entitled: 'What do Probiotics do?'. Here the role of probiotics in strengthening the immune system is also underlined: 'The immune system is our body's natural defence against bad bacteria and infections. Probiotics form a line of defence against the bad bacteria that inhabit our bodies. [...] It is important that we have a good level of Probiotics in our bodies at all times for our health and well-being.'

Probiotics are also represented as a means to manage one's physical appearance. Multibionta has a subsection on healthy lifestyle which provides advice on exercise, proper eating and sleeping – so called 'energy tips' (accompanied by Engery Quiz to 'check your energy levels'). The textual part of the advice is accompanied by an image of a young woman jogging (to the left), and an image of a multibionta Activate (at the bottom). As discussed by Kress and van Leeuwen (1996: 193-202), elements placed at the bottom of images are usually associated with the sphere of the real, whereas those situated at the top of images are taken to be linked with ideal worlds; similarly, images on the left stand for given/known and on the right – for new. The frequent placement of Multibionta products at the bottom of the webpage, and to the left from images of active/laughing/smiling individuals on the preview version of the page, positions this product of healthy body care as a new but tangible reality in potential consumers' lives.

The Protexin website lists reasons for eating probiotics (subsection 'Why take probiotics?'), drawing on both discourses where balanced diet and exercise feature prominently as the means to achieve the norms of health, and on the risks and fears common at the age of modernity such as worries about harmful effects of stress and 'chemicals' and dangerous microbes:

If you are eating a perfectly balanced diet without a lot of processed products and have a stress-free life, you may not need probiotics as a supplementary aid to maintain your general health and immunity. However, nowadays in the modern world, we encounter daily stress from our environment and from the foods we eat. In addition, we tend to consume many forms of chemicals such as antacids, antibiotics, food additives, alcohol and other foods and drugs that lead to a disturbance and reduction in the concentration of beneficial bacteria within our gastrointestinal tract.

In this context, Protexin probiotics are posited as a supplement that is 'completely safe and free from dangers of overdose' and 'enhances the natural defense mechanisms and makes it better able to cope with opportunistic infection'. Moreover, the supplements appear to 'have been specially formulated for all the family, from childhood through to old age.'

In a similar way, the Multibionta website emphasises the importance of probiotics for a balanced diet: 'Ideally a balanced diet should provide us with all the nutrients that we need. However, with today's hectic lifestyle we do not always eat what we should', as well as their convenience 'You're busy. You're buzzing. Not enough hours in the day. Not enough days in the week. So you miss a meal.' The text is accompanied by images of men and women wearing active sportswear linking the value of

health to other values such as the importance of appearance and good impressions⁵. Such texts and images, variations of which can be found on all the probiotic websites, frame the immune system and through it the whole body as vulnerable and susceptible to the effects of stress and 'bad nutrition' which are said to be created by modern busy work schedules. The presumed risks inherent in modernity are contrasted with the benefits of tradition and naturalness.

The emphasis on (modern) science is, however, also present in this section, as Solgar's probiotic supplement is called 'a scientific blend of beneficial digestive bacteria'. Another product Advanced 40+ Acidophilus is called 'a non-dairy formulation designed specifically for mature adults, providing specially cultured strains of *L. acidophilus*, *L. bulgaricus*, *L. paracasei*, *B. lactis*, and *S. Thermophilus*'. Similarly, Multibionta's Immune Support is said to contain 'Tribion Harmonis™', 'a unique blend of probiotics exclusive to Multibionta which has been proven in a ground breaking European trial'.

Thus 'supplementation' and 'balance' of our nutritional intake (self-regulatory practices) are framed as being the key means through which to achieve a 'healthy' immune system. Furthermore, the above texts promote the idea that, with the help of scientific understandings of food and the consumption of probiotics, one can regulate safety and wellbeing. In particular, it is suggested that one *should* choose foods that are protective rather than simply avoid foods that create risk. This argumentative strategy is different from common 'healthy eating' tips centered on risk avoidance prevalent in women's magazines a few years ago (Madden and Chamberlain, 2004).

Aspects of audience construction and the underlying ideology

The ever more complex link between nutrition and health/disease reconstructed by the producers of probiotics constitutes part of what Petr Skrabanek refers to as 'lifestylism' - the view that most diseases are the result of unhealthy habits or behaviour, which in turn goes hand in hand with 'healthism' defined as government's coercion to establish norms of health and attempts to impose norms of a "healthy lifestyle" (Skrabanek, 1994). Health has 'become a central plank of contemporary consumer culture as images of youthfulness, vitality, energy and so on have become key articulating principles of a range of contemporary popular discourses' (Burrows et al. 1995: 1). In this section we will explore in more detail how the health of the immune system is employed by the producers of probiotics to forge these definitions of 'fitness' and 'vitality' and which subject positions are created for consumers in this process.

Modern consumers are described in sociological literature as self-advocating, technologically literate, and media-savvy (Klein, 2000). Lupton argues that today's consumers have the 'responsibility to deal with risks, to seek out knowledge about them and deal with them individually by engaging in self-regulation' (Lupton, 1998: 205). It seems to us that the growth of functional food market indicates another emerging trend – the responsibility to seek knowledge about benefits rather than just avoid risks, and thus to seek ways to strengthen the immune system rather than just protect the body from external influences. Unlike the previous emphasis on detoxification at present there is an emphasis on consuming foods which contain a range of, or a maximal level of nutrients. Instead of worrying about what might be nasty in food, the emphasis is shifted towards seeking out the 'well-researched', 'natural', and 'do-good benefits' of certain food substances, such as for example fibre in cereals or omega-3s in fish.

Probiotic products do especially well in this context as their 'immune –boosting' and 'natural' qualities offer the opportunity to construct signifiers that appeal to modern consumers bombarded with messages about 'slim and attractive bodies' on the one hand and about risks of unhealthy lifestyles and chemicals in processed foods on the other. Consumption of probiotic drinks becomes a means

⁵ See also Multibionta's slogan "Everyday energy for today's hectic lifestyles" which moves across images of attractive young man and woman in the form of a running line on the opening webpage.

through which individuals could attain the societal ideal of the healthy body, connoted not only as a well functioning machine but as slender, attractive and 'normal', and symbolizing the privileged characteristics of self-control. Here the self-control however is more about consistent supplementation of one's diet with 'good' (immune enhancing, fighting germs) and 'natural' (chemical free) products rather than self-denial driven by worries about sugar or fat content. The probiotic inclusive diet is therefore just one of many commercial applications of today's culture of healthism, including the weight loss, physical fitness and cosmetic industries.

At first glance, it seems that consumers of probiotics are constructed as experts, as they are offered the means to take the responsibility for their own health and are given information about how to fix their bodies conceptualised as (out of order) machines. However, this expertise is undermined by the information on risk (dangers of modern lifestyles, germs), which positions readers as in need of medical and scientific advice (as demonstrated above, references to science abound). The subject positions offered to the visitors of the probiotics websites through this discourse therefore waver between that of expert and non-expert.

Conclusion

In this paper we investigated how probiotics promotion seeks to engage with the ideologically informed consumer to generate trust for their products, and explored the implications for shaping existing visions of the interaction between the body and food intake. A step by step analysis of the multimodal content of the websites enabled us to show how appeals to shared values (family values, wild nature/rustic imagery and importance of good impressions) together with associations with high-tech science function in generating trust and reinforcing the discourse of healthism where individuals have the responsibility to build inner armors in their attempts to achieve optimal health.

The analysis has shown how corporations seek to value-add 'health' and 'naturalness' to products to distinguish them from competitors' products. In this process of battling for products survival corporate power 'becomes allied with the technical-rational power of science to shape our core understandings of what is 'good for us' (Dixon and Banwell, 2005). Probiotic yoghurts provide a good example of how this symbiosis of science (research on nutritional benefits of certain substances and engineering different combinations of nutrients) and nature ('do-good' benefits inherent in food) is employed in the promotion of functional foods, as they allow placing the emphasis both on 'natural' and 'traditional'/century old' benefits of yoghurt, and on 'well researched' benefits of 'good bacteria'.

'Friendly bacteria' are framed as a personal armour that can be worn in the general struggle for health and well-being in the modern un-friendly 'risk society' (Beck, 1992). Probiotics in yoghurts are represented as part of everyday efforts aimed at maintaining good health through a digestive system, whereas 'friendly bacteria' in supplements appear to be not only a means to strengthening immunity but also 'remedies' to cure various ills of 'modern living' such as allergies, stress and 'fatigue'. At this level then, as Rose (2006) points out, it seems that there is nothing incomprehensible about our vitality, as 'everything appears, in principle, to be intelligible, and hence to be open to calculated interventions in the service of our desires about the kinds of people we want ourselves and our children to be' (2006: 4).

This study has shown how promotion of probiotics employs nutritional messages as a means of enhancing or maintaining one's physical health by 'shaping' or 'balancing' one's immune system through food intake, and positions readers as both expert and inexpert in this process. However, nutritional health messages around functional food are far from simple and afford diverse possibilities for realization. Focus group discussions with members of the public therefore constitute a crucial next phase of our research project, as they may show reception or rejection of meanings projected in the discourses articulated on the websites of probiotics producers.

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