

## Nutritional altruism and functional food: lay discourses on probiotics

Paul Crawford<sup>1</sup>, Brian Brown<sup>2</sup>, Brigitte Nerlich<sup>3</sup> and Nelya Koteyko<sup>3</sup>

<sup>1</sup>*School of Nursing, Midwifery and Physiotherapy, The University of Nottingham*

<sup>2</sup>*School of Applied Social Sciences, De Montfort University, Leicester*

<sup>3</sup>*Institute of Science and Society, The University of Nottingham*

**Abstract** This exploratory study set out to analyse discourse about ‘friendly bacteria’ by scrutinising data from focus groups convened to discuss participants’ reasons for choosing probiotic food products and to set their use of probiotics in context in relation to other food choices. In discussing food choice and dietary patterns, participants in the five focus groups reported here drew on a major interpretive repertoire – that of ‘nutritional altruism’ in which participants described making choices and preparing food which they believed would benefit others. Those caring for children or shopping for a family member with an illness or disability expressed this imperative to make decisions which would benefit the other most acutely. So far, much research has focused upon the sensory qualities and perceived health benefits for individual consumers, but this study begins to explore the discourses drawn upon when people describe why they might buy food for others. The findings have implications for health education, but also reflect a broader socio-political trend in that risks and benefits are devolved and managed at the level of individual citizens and through processes of individual choice and consumption.

**Keywords:** nutritional altruism, healthy eating, probiotics, lay discourse, dietary repertoires

### Introduction

Despite its ubiquity, food has inspired curiously little attention from sociology until relatively recently. However, as Germov and Williams (1999) point out, what we eat, and how and with whom we eat it, are intimately connected with socioeconomic systems, cultures, ideologies and identities. Beardsworth and Keil (1997: 130) described the role of changing conceptions of food and its relationship to health and illness and pointed to the growing incursion of ‘measurement, calculation, prediction and systematic organisation’ in the management of diet and the instrumental use of dietary regimes to enhance health and avoid disease. Bourdieu (1984) has identified the relationship between food preferences, broader questions of ‘taste’, social capital and distinction. Warde (1997) and Warde and Martens (2000) underscore the role of food in social differentiation, consumption and pleasure, and in the creation of a sense of ‘choice’ and freedom. To Mennell (1995) the story of food is the

story of the civilising process itself. As Coveney (2006) reminds us, the discipline of nutrition informs the construction of notions such as responsibility and health.

Moreover, as well as the relationship between culture, food and social identity, there is a growing body of scholarship dealing with food as a site of social action and community activism (Suarez-Balcazar *et al.* 2006, Torjusen *et al.* 2008). Equally, there are a growing number of explorations of how patterns of food acquisition, preparation and consumption in human social life correspond to socioeconomic stratifications, gender roles and divisions of household labour (Batnitzky 2008).

In this paper we shall explore these issues of how foodstuffs are regarded and used and how they intersect with questions of identity, household roles and market change by reference to probiotics. The study of probiotics provides researchers with unique opportunities to explore discourses of individual and collective resilience and vulnerability in relation to food, and provides a link between the sociology and anthropology of foods and the sociology of health and illness. Probiotics appear to be the most commercially successful product among the currently available functional foods (Sloan 2004) and their biovalue seems particularly highly regarded in the consumer marketplace (Watson *et al.* 2009: 223). Food choice and shopping for food, for oneself or for others, have become ever more complex and dilemmatic activities (see Miller 2001), particularly with the advent of novel and functional foods, such as probiotics (Koteyko in press).

Probiotics are defined as 'live microorganisms which when administered in adequate amounts confer a health benefit on the host' (World Health Organization 2001: 8). For the most part, these are at present available as dietary supplements based on fermented milk, usually containing cultures of lactobacillus or bifidobacteria which will, when consumed, colonise the digestive tract and have a potentially beneficial effect on the host (Martin *et al.* 2008). Probiotic yoghurts and drinks comprise a kind of 'functional food' with health benefits over and above their nutritional value (FSA 2004: 111). They have an ambiguous status between foods and drugs, and between 'natural' and 'engineered' foods, with a growing evidence base for beneficial effects (McFarland and Elmer 2006). Nevertheless, the proposed modes of action and nature of any practical benefits to healthy people remain uncertain (Verdu 2009) with consequent difficulty for physicians and patients in making informed choices about benefits and side effects (Sharp *et al.* 2009). Messages to consumers have yet to achieve consistency (Nerlich and Koteyko 2008).

An estimated 3.5 million UK residents consume some form of probiotic product on a daily basis (Senok *et al.* 2005). But who buys them for whom? In many family settings one member may shop for others as well as him- or more usually herself (Fox 2001). So far, much research has focused on individual consumers' perceptions of the sensory qualities and perceived health benefits of functional foods (Ares *et al.* 2008, Niva 2006). Yet to date there has been little exploration of why consumers might buy this kind of foodstuff for others.

The selection and preparation of products which are believed to bring benefits to others is one which we believe deserves further scrutiny. Parents may attempt to ensure beneficial food intakes for children, and in marital contexts wives have been observed taking greater responsibility for food purchasing and preparation (Craig and Truswell 1988, De Vault 1991). Kremmer *et al.* (1998) concluded that 'associations between women, food and nurturing were evident in the efforts women made to improve their husbands' diets, and Schafer *et al.* (1999) point out that wives contribute to husbands' diets more than vice versa. The extent to which action to promote the wellbeing of others in a family context is wholly altruistic is debatable, particularly as it may be performed in the expectation of reciprocity (Mauss 1954) or in the context of assisting the wellbeing of one's immediate family. In an early exploration, Murcott (1982) considered the social significance of administering a

'cooked dinner' to one's family in South Wales, highlighting how the preparation and presentation of food may be overlaid by gender role expectations (De Vault 1991, Oakley 1974) and familialism (Struening 1996). In addition, there is the growing extent to which parents are seen as responsible for their children's weight and nutritional wellbeing (Jeffery *et al.* 2005). Therefore it is timely to explore the meaning of dietary choices made on behalf of others where novel foodstuffs are concerned, and appreciate further the role these play in the cultures surrounding food and family dynamics so as to understand their implications for both the sociology of food and health education.

Until now, qualitative analysis of the discursive construction by consumers of the benefits of probiotics has been limited. An exception is provided by Koteyko (in press) who explored the formulation of probiotics' benefits in consumers' discourse. If we examine studies of functional foods as a whole however, there is work on people's perceptions of these (Niva 2006, 2007) as well as marketing (Heasman and Mellentin 2001, Wansink 2007), and work on the framing of nutritional discourses of parents talking about their children's diet (Coveney 2005) and an account of how representations of natural and artificial qualities inform the acceptability of functional food (Huotilainen *et al.* 2006). In the case of probiotics however, analyses have focused largely on representation and portrayal rather than on consumer discourses. There are studies of media and internet portrayals of probiotics (Nerlich and Koteyko 2008, Koteyko and Nerlich 2007) and a critical study of the 'regimes of hope' built into probiotics (Watson *et al.* 2009). By contrast, the present study explores a key interpretive repertoire in accounts of probiotic foods, in the context of normal food shopping and consumption, extending Koteyko's (in press) attempt to reconnoitre the key discourses deployed by consumers.

## Objectives

This exploratory study set out to analyse nutritional discourses about 'friendly bacteria' by means of a focus group study, drawing participants from particular target markets including young professionals and the affluent middle-aged, plus students, lower income groups and young mothers. It aimed to explore people's reasons for choosing particular food products and to set the use of probiotics in context in relation to other food choices and the family networks in which participants were involved.

In the context of uncertainty and perceived risk concerning food (Milburn 1995), this paper (part of a larger ESRC-funded project) sheds light on what visions of health, science and society are built into discourses about probiotics as a 'new' type of food.

## Methods

We organised and carried out five focus group discussions with members of the British public. Two focus groups were conducted with the target market for probiotics: one involving young professionals and another involving the affluent middle-aged and retired group (Armstrong *et al.* 2005). To establish whether similar features were present in a wider range of discursive communities, following Dwyer and Jackson (2003), we also conducted focus groups with those on lower incomes and in full-time education as well as young mothers. This was prompted by observations that the functionality of food and the body is accounted differently in different income groups (Coveney 2005), by the interest in babies and probiotics (*e.g.* Furrie 2005) and that, not surprisingly, students are apt to

become the young professionals of the future. The discussions were carried out and transcribed in full in December 2007. Participants (up to 7 people representing each community) were recruited with the help of the Nottingham University Survey Unit and conducted in Nottingham, a city which resembles the national median for most socio-demographic, ethnic mix and economic measures. Of the whole group (N = 34), 20 participants were women and 14 were men.

As part of a larger, ESRC funded study described in Koteyko (in press), participants were contacted through advertisements in local newspapers and a university email system. In the recruitment letter, participants were informed that the study would focus on consumers' views of the relationship between health and food, and that no specific knowledge was required to participate. In order to be able to pre-select both those who eat functional foods on a regular basis and those who do not, the potential participants were asked to complete a questionnaire, where, together with general questions about occupation and age group, they had to indicate whether they consumed functional foods such as cholesterol lowering-spreads or probiotics.

The discussions were informal, taking from 45 minutes to an hour and 15 minutes. They were preceded by a brief introduction of our research aims where we used a popularised definition of probiotic bacteria. The discussions were arranged loosely around an agenda concerning product choices, presumed benefits and food preferences to elicit discussion of the consumption of probiotics in the context of participants' other buying and eating practices. The discussions started with elicitation of the participants' ideas on food and health, and proceeded toward more specific themes relating to probiotics. The facilitator let the participants discuss each theme freely, but sometimes asked them to clarify their views. Most accounts of consuming probiotics arose spontaneously during the course of the discussions. In the course of each discussion, however, the moderator posed a few direct questions about the participants' knowledge of and experience of buying probiotics.

### **Ethical considerations**

Participants were recruited by the Nottingham University Survey Unit, adhering to guidelines of the University of Nottingham Ethics Committee. They were briefed about the research, assured that all information would be anonymised and they verbally agreed to be recorded. They signed a receipt for the reimbursement of their costs. The participants were informed of their right to withdraw participation or data and were advised of the confidentiality and anonymity of their responses. Whilst the details of participants' lives are reported as they were given, every effort was made to exclude details which would enable them to be identified. Transcripts were stored securely either on password protected computers or secure filing cabinets when not in use.

### **Analytic strategy**

The focus group data were analysed via constructionist discourse analysis, placing an emphasis 'on discourse as the vehicle through which the self and the world are articulated, and on the way different discourses enable different versions of selves and reality to be built' (Tuominen *et al.* 2002: 273). The approach is premised on the assumption that 'the things we hold as facts are materially, rhetorically, and discursively crafted in institutionalised social practices' (2002: 278).

In Potter and Wetherell's (1987) account of discourse analysis it is presumed that people use discourse flexibly and resourcefully to construct defensible explanations of their actions. Analysis attempts to identify the interpretative repertoires drawn upon by participants. These can be defined as 'a lexicon or register of terms and metaphors drawn upon to characterise and evaluate actions and events' (Potter and Wetherell 1987: 138, Koteyko in press).

Accordingly, once transcribed and anonymised, the participants' accounts were read repeatedly by the research team with a view to detecting ranges of accounts which contained similar, 'relatively internally consistent, bounded language units . . . called . . . interpretative repertoires' (Wetherell and Potter 1988: 171). Discussion between team members and comparison of their respective annotated transcripts provided the first stage in identifying common means by which participants crafted accounts of food choice and their presumed benefits. In line with the discursive approach, in the forthcoming presentation we will be attentive to how formulations of food choice, or one's responsibilities as a family member might, for example, justify actions, secure the speaker's identity as a caring partner or mother or assign blame elsewhere. Thus, rather than transparently reflecting motivation, or participants' thoughts and feelings, in this view, the discourse represents a conversational construction of their lives in relation to food and nutrition in which they are interested parties. Accordingly, analysis proceeded by identifying commonly occurring interpretive repertoires across the different focus groups, on the basis of initial impressions and annotations. Then the transcripts were re-read and coded more formally to gain a picture of the prevalence of the emerging repertoire of interest and potential areas which the repertoires could be constructed to include. Areas of ambiguity were resolved through discussion among team members.

It could be argued that this kind of analysis tends to predispose a focus on similarities between different accounts rather than highlighting diversity. However, we have mentioned important differences between groups where these occurred. Also, inevitably not all the material in a data set will resolve into the predominant interpretive repertoire that emerges. Rather, the purpose was to highlight commonly occurring ways of making sense of purchasing and consumption practices.

## Results

Exploring the role of probiotics in family diets through the medium of focus groups led us to appreciate that dietary decisions often represent a joint or collective process, where purchasing and consumption patterns involve elements of both doing things for others and being the recipient of things done for you. This presentation focuses on the major interpretive repertoire expressed in the focus groups in relation to the research foci of the present study. The repertoire is not intended to be an exhaustive account of the entire data set, but rather to characterise commonly occurring ways of describing purchasing and consumption activities. The repertoire focused on what we have termed 'nutritional altruism' such that food choices for others were foregrounded and participants expressed the importance of choosing wisely to ensure the health of their children, partners and other family members. In addition some participants, particularly in the student group, described favourable experiences of being in receipt of this nutritional altruism from others and foresaw its extension to other fields such as school catering. Let us explore this discursive configuration.

### *Nutritional altruism*

In addition to securing one's own health through 'balanced' dietary choices concerning probiotics and other putatively beneficial foods (Koteyko in press), there was a related



repertoire concerning the issue of food choice for one's family members. This was aligned with previous work concerned with notions of gift and care as regards food (Mauss 1954, Murcott 1982) and attention to the wellbeing of others. Participants expressed concern about the wellbeing of others in the family, which informed their purchasing choices and this extended to getting their partners or other family members to eat it too.

I shop for myself and my partner. I do all of the shopping. Quality and what I buy. Cost comes into it I must admit, I have to say that. Cost is very important so I try to be economical and budget but there are certain things that I think are important to buy – veg, fruit. Trying to force feed my partner these things. Yes, the things that we are taught and we know are good for us, I do like to get that in and to try and as I'm getting older now, try and get healthy things in, porridge and things like that. So yes, I try and shop healthily. Not over the top healthily but, yes, basically that's it. (E, Female, Focus Group 3)

Whilst balanced by considerations of cost and budget, because of their presumed impact on health, there are certain things which are 'important to buy'. The perceived effects on the health of other family members represent a potent imperative. Whilst the references to 'force feeding' are jocular, the idea that nutritional responsibilities extend beyond the boundaries of the self to other family members was an important one. Indeed, there are certain phases in the life cycle, for example in old age and, as we shall see later, in childhood, where the management of other people's dietary regimes was deemed to be particularly crucial:

Because you get older though it's more that you're battling more I think with your body to keep it on track and that's why I personally feel, and I'm getting my partner along to my way of thinking very, very slowly. But I do think you need a little help in the diet and if I can see that lovely tasting Vitality stuff and it's telling me it's got all these millions of good bacteria in it, so I'll drink it. (M, Female, Focus Group 3)

In the case of illness or disability the weight of responsibility for making appropriate dietary choices for a partner could be especially keenly felt:

Yes I do shopping because the wife is disabled and she has frozen meals, because I'm at work obviously, she has the Activia yoghurt, she has lots of bran because she has digestive disorders. (K, Male, Focus Group 1)

Ensuring the beneficent nature of food bought and prepared for a loved one is particularly crucial if they have some kind of illness or disability:

I lost my husband in December and he, I used to buy him Actimel, I used to buy, what's the margarine one?

*Interviewer: Oh Benecol?*

No the other one ((Proactive)) because I don't know why but I thought with it being the most expensive, but I don't think it actually made a difference but I did the best I could.

*Interviewer: So was it for him, particularly for the problem?*

He had a lot of problems but it was just that I thought you know, when you know somebody is ill you try to do the best you can to make, you know cut down on the other things. (L, Female, Focus Group 1)

Here, doing 'one's best' extends from the self to others, who, one hopes, are made 'better' in the process. This is a health as well as moral imperative. These actions also reflect back onto the self because they make the giver, not only the receiver, feel 'better' in the moral sense.

Even when the person for whom one is shopping and preparing food is ostensibly healthy, this sense of being responsible for their wellbeing through food could be acutely felt. Mothers tended to report shopping for others, not least their babies, and this included the supposedly healthy options such as yogurts and formula milks which incorporate probiotics:

Yes, I shop for my three boys. My youngest baby, I tried the baby yoghurts. Some of them he likes, some of them he's not too keen on the taste. (Y, Female, Focus Group 4)

Shopping could incorporate a variety of imperatives for different family members:

I mean I buy the drinks for my 16-year-old son and I buy Benecol for my husband because he has a heart problem. (J, Female, Focus Group 1)

Indeed, the nature of other family members' diets was sometimes a cause for concern:

As concerns yoghurt, the wife seems to survive on a high-fat diet. She won't eat fruit. I'm trying to convert her to fruit, I love all fresh fruit especially grapes. I've got her eating grapes now regularly so I try to push that on her but she seems to like all the things fat. (D, Male, Focus Group 3)

The notion of health somehow lying in nature and natural products, especially where vulnerable people like babies were concerned was pervasive:

I think natural food for baby is much better. (E, Female, Focus Group 4)

Yogurts and organic food featured especially among the various products bought for offspring:

And I try the different types of yoghurt for him, he loves it, all of them, so I don't know which one to choose. (S, Female, Focus Group 4)

As if to underscore the presumed benefits of probiotic foods, one participant said:

Yes. I don't know if the people who are organising the discussion know and probably (inaudible) but the [xx] is now giving people on the wards this stuff, Yakult or whatever, as part of their teatime meal to try and prevent clostridium difficile. They are forcing it on the wards, they're giving it to you as part of your tea now. (D, Male, Focus Group 3)

This corresponded to recent news on the issue. 'Drinking yoghurt can cut hospital sickness' reported *The Times* (29/6/2008: 13). This medical endorsement then, consolidates the

presumed benefits even further. Buying probiotics becomes part of a repertoire of 'caring' for others.

Even when family members were not all residents in the same household, the idea of buying supposedly good things for others was apparent in the discussions. For example:

My university student granddaughter, her mother, my daughter, packs her off when she goes back with all this stuff to put in her fridge at uni, these drinks. She likes them and that's (inaudible) and I think my daughter thinks that she's helping her along the way by giving her something. (M, Female, Focus Group 3)

Across the whole spectrum of foods, the act of shopping for another person, especially a child, was seen by some to require a particular kind of diligence. This was particularly acute in Focus Group 4 comprising mothers:

Sometimes you can feel like you're really paranoid because your shopping can take you ages. You do have to read the labels of everything and people around you are like looking because every jar that you put in, you're looking at the label. [...] But there is this kind of – you do feel that because it's there it must be okay and because it's a baby food and surely it's got to be good to give them [but it's] bad for your baby. (R, Female, Focus Group 4)

The sense in which one is obliged to provide the nutrients which are currently portrayed as being desirable led to dilemmas for some participants:

For me, sometimes I do buy organic stuff but sometime I find it's far too expensive and I think I'll just buy the ordinary stuff because it works the same. I mean it might be true and it might be not. But Omega 3 milk, you said that you buy that, I used to buy that for the older boys. But then again I just stopped buying that and went back to normal semi-skimmed because I give them Omega 3 tablets anyway. (C, Female, Focus Group 4)

This was reminiscent of Fischler's (1986) finding that to mothers the feeding of children was understood in quasi medical terms. The perceived importance of buying particular kinds of nutritionally desirable food for one's offspring could override one's own preferences:

I have bought them [probiotics] in the past but thought they tasted awful plus I don't like yoghurt either. [...] But [xx] loves yoghurts so I buy them for her. (R, Female, Focus Group 4)

The sheer scale of young people's appetites may mean that this process of keeping up with their nutritional demands is sometimes difficult in relation to the size of the bottles:

I'm one of those that will tend to buy those when it's buy one get one free simply because my 17-year-old he wouldn't bat an eyelid at having two or even three of those at one sitting. He'd think nothing of it you know and then other one he'd have three you know. (S, Female, Focus Group 1)

Despite the perceived imperative to buy this nutritionally enhanced food for their children there was nevertheless a reflexive awareness of the process of advertising and how advertisers attempted to influence purchasing decisions and exploit the moral imperative to 'do one's best' for others, especially as a parent (Jeffery *et al.* 2005):



You see that's what they're playing – they're playing on motherly instinct with these products that they put on the market because they know, oh, we feel (inaudible) we don't give our babies the best, we're not giving them the best start in life. (J, Female, Focus Group 4)

Moreover, there was a sense among the members of the mothers' focus group (Group 4) that it was not entirely desirable to follow the edicts of advertisers where these products were concerned. One participant stressed that discussing the issue in the focus group actually opened her eyes to what she had been doing in buying Omega 3 fortified milk:

If I'm a good mother and I want to do the best for my baby I should buy that rather than the milk that hasn't got it in it. Actually that just makes me a complete mug talking about it now. (R, Female, Focus Group 4)

There was some degree of scepticism about the claims made in advertising and packaging:

I don't know what I'm giving to my child when I buy those jars because it says it's organic, no additives, no preservatives. [...] So when you read the label if you will get really impressed like you're giving a very precious thing to your child. But when you think about it actually it's just something to chew on or something sweet. (L, Female, Focus Group 4)

So far, we have discussed the 'nutritional altruism' repertoire in terms of what it means for the donor in this 'gift relationship' (Rapport and Maggs 2002). From the student focus group especially, there are some insights as to what it means for the recipient. Some participants had experience of these kinds of decisions being made for them, for example in the case of probiotic yoghurt drinks:

. . . my dad bought it.

*Interviewer: And your dad bought it to –*

Yes, for the family because it's healthy...Well, again my dad bought it from the supermarket just because like you say they're healthy. I've got two sisters and my dad just bought it for us kids. But then it's nice to have something in the morning, like you say a healthy start to the day. (S, Female, Focus Group 5)

Several of the students remarked on the quality of home food compared to food consumed whilst at university, such that foods like probiotics tended to be too expensive and something that might instead be made available by parents:

At home I think the standard's a bit more, a high budget going on food, and so if [probiotic yoghurt] or something like that is in the fridge, you will probably eat it because you don't mind. When you go to uni you can't afford to have them because they're so expensive. So I think you eat healthy at home but only because it's there already and you don't have to buy it yourself. (Q, Male, Focus Group 5)

Whilst this kind of functional food was a luxury which was out of their usual price range, it was considered suitable as a choice for others. One student went on to suggest that it might be the kind of thing she would buy if she was a parent:

But I think maybe when I grow up, if I have kids I might want (inaudible) bit for them, I don't know. I mean (inaudible) price but I wouldn't buy it for myself but my parents would buy it. (S, Female, Focus Group 5)

This purchasing for children includes a focus on state provision as with milk:

I think it would be like in the future for them to properly bring it into schools, like primary schools, instead of maybe kids having milk time they could have a little Yakult or something probiotic. Especially with the whole thing like Jamie Oliver went into schools and the whole area of obesity and everything like that. They could really play it to the advantage and get on board like the government and things like that. It might be quite a good marketing tool because most parents would pay 20p extra a day or something for their kids to have like a healthy... (S, Female, Focus Group 5)

Thus, the nutritional altruism repertoire involves several facets. It includes the sense of responsibility involved in buying for other people whose nutritional needs can take precedence over one's own preferences. It may involve a degree of diligence in scrutinising manufacturers' claims and it might also involve the experience of having other family members (or even government institutions like schools or hospitals) make apparently 'altruistic' food choices on one's behalf.

## Discussion

With this small sample of UK Midlands residents, we have gathered some clues as to how discussions around probiotics are framed by members of the public in a climate where food choices are often surrounded by scientific uncertainties and personal fears.

The analysis highlights how a particular kind of interpretive repertoire is evident when people described themselves buying and preparing food for others. This is what we have termed the 'nutritional altruism' repertoire and it embraces a variety of facets centred upon doing the right thing for others. This involves making what appear to be the right choices in terms of current lay beliefs about the qualities of food, and incorporates notions of love and the obligation to safeguard the wellbeing of children and vulnerable adults in the family group and beyond. It is also bound up with a particular kind of social relationship (Mauss 1954), reflecting the moral values residing in performing the right role, conforming to the socially approved stipulations of being a caring partner or good mother and doing what is best for others.

Importantly, this 'nutritional altruism' repertoire was at odds with the consumer image projected by the marketing of probiotics (Koteyko and Nerlich 2007) which focuses on the 'self' rather than the 'other'. The extensive utilisation of this repertoire of purchasing 'for' other people suggests new avenues for marketing, awareness-building and nutrition education.

Equally, the patterns of language and interpretation disclosed here are perhaps remarkable also for what they did not say. For example, our initial expectation was that the purchase of probiotics might be informed by preconceptions of 'good' or 'bad' bacteria, yet this was not confirmed (it was only informed by preconceptions of 'good' or 'bad' food). Only a few of our respondents mentioned 'unfriendly bacteria' and the health threat they posed and how this could be counteracted by eating 'friendly

bacteria,' promoted as 'strengthening' one's immune system. This, however, was restricted to isolated examples such as participant 'D' in Focus Group 3. Food scandals and issues of food hygiene and cleanliness also did not feature in participants' accounts, and the scientific aspects of probiotics that received coverage in newspaper articles in the 1980s and 90s, as well as in advertising campaigns running at the same time as the focus groups, were also only touched upon. Instead, the respondents discussed their purchase or avoidance of probiotics in the light of their presumed 'extra' health benefits for themselves or their loved ones.

Overall, the results underscore the centrality of notions of diet to lay understandings of health as other authors have documented (Abbott 1997, Arcury *et al.* 2006, Popay *et al.* 2003). Yet it is clear that these do not necessarily map directly onto more formal scientific notions (Keselman *et al.* 2008). In this sense the notion of interpretive repertoires is a useful one because it directs us to explore the complexity of participants' accounts of their choices rather than seeing them as merely ignorant or scientifically naïve. That is, in the tradition of discourse analysis which gave rise to the notion of interpretive repertoires, talk is about doing things in the social world (Edwards and Potter 1992, Potter and Hepburn 2008). That is, rather than rendering the scientific discourse about nutrition, focus group members may be more concerned with other social business, perhaps showing themselves to be a particular kind of moral being with appropriate concern for the self, one's partner, children and parents.

The emphasis among many participants on the benefit of healthy foods, including probiotics, to others rather than themselves is a key feature in the lay discourse we have presented here. This emphasis, we contend, can be thought of as 'nutritional altruism'. Historically, researchers have noted a tension in families such that men's preferences tend to have a disproportionate influence on family diets but women's views on healthy eating are more closely aligned with current expertise (Roberts 1992). Whilst men in the present study are described as making putatively healthy choices for others as dads or husbands or partners (*cf.* England and Folbre 2001), it still appeared that women are substantially involved in this process, especially when they are mothers. Here, there was some discussion of the role of advertising in playing upon images of the good mother. Yet despite this awareness of possible manipulations, the imperatives of choosing the 'right' foods for one's children was not defused, and was if anything, even stronger as a result, recollecting Mauss's (1954) notions of the 'gift' and building the participants into sets of familial relationships where they undertake a kind of reciprocal nutritional work for and with one another, giving one another 'good' or 'healthy' things (Murcott 1983).

The study design itself may well have contributed to the construction of the results in this way. Whilst the questions were deliberately open ended, the focus on probiotics via the definition supplied at the start of the discussions and the screening questionnaire arguably could have set up a medical frame of reference and predisposed a concern with attending to the diets of others. The moral qualities of food (Coveney 2006, Coveney and Bunton 2003) may well have encouraged a degree of reflection on health which was unusual in the participants. Indeed, of note was the comment from 'R' in Focus Group 4 about having previously been a 'mug' concerning advertising, suggesting that the group offered novel ways of re-evaluating these issues. The dynamics of the groups offered opportunities for ideas to be elaborated on by subsequent contributions, as indicated above by expressions such as 'like you say', to yield an emergent or co-produced consensus. Nevertheless, the readiness with which the repertoire of 'nutritional altruism' fell to hand suggests participants had a level of fluency with the notion of balance, health, nature, buying for others and so on. Moreover, the differences between the

group of mothers (Focus Group 4) and the students (Focus Group 5) suggests that kinds of concerns elicited relate to the participants' everyday activities and experiences, of caring for children or being subject to parenting themselves, respectively. Whilst collectively and dynamically produced, then, the repertoire of 'nutritional altruism' aligned with everyday tasks and experiences.

The present study has implications in the area of public understanding of health and illness and the role of nutrition education in promoting health (Rowe 2001, Rowe and Alexander 2008, Reed and Karpilow 2004). Understanding how lay discourse on foodstuffs incorporates these notions of 'nutritional altruism' can assist those charged with developing public health campaigns. It can also help place in context the feelings which participants claim are generated by advertising – that there is something about the purchase of certain foods which marks one out as a 'good mother'. Whilst advertisers have certainly not been reticent to use this approach, this has yet to be placed on a systematic footing in the social sciences, and the concept of nutritional altruism is a step in that direction. The kind of analysis we have foregrounded in this paper therefore contributes to our understanding of the way in which publics define food qualities in relation to themselves and others and how communities negotiate complex information and uncertainty surrounding the health claims about functional foods to arrive at purchasing decisions. How these issues are discursively negotiated will be of interest to policy makers, nutritionists, consumers and healthcare practitioners. From a health promotion point of view there seems to be no need to further strengthen the norm of responsibility for health – this is already strong. On the other hand, our research has also shown that the notions of 'good diet' and 'good life' are inextricably linked in peoples' accounts of daily eating and shopping.

Also of significance are the points of contact between the repertoire of 'nutritional altruism' displayed here and the broader cultural and political processes at work in the maintenance and promotion of health. Students of public policy discourse have noted that individuals have come to be increasingly seen as citizens and consumers where health and welfare are concerned (Vidler and Clarke 2005, Newman and Vidler 2006). Thus, across a range of activities and services under neoliberalism, people are formulated as responsible, choice-making entities who are charged with sustaining their own health and that of family members through the patterns of consumption in which they engage (Clarke 2006, Clarke *et al.* 2007). As Guthman and Du Puis (2006) argue, under such conditions, those who can manage their calorific intake and achieve thinness are imbued with rationality and self-discipline, and are constructed as being particularly deserving subjects. In a similar way, the management of health risks is devolved to the individual, rather than being borne by the collective as in 20th century welfarist models.

As Coveney (2006: 126) remarks, in monitoring the perceived quality of their, and their, families' food intake, people are 'also inspecting *themselves*'. The achievement of 'nutritional altruism' could be seen as a further facet of what Szasz (2007) calls 'inverted quarantine', a means of separating and distancing oneself and one's family from potentially threatening conditions – of excess, contamination or the putative ill effects of convenience food.

Eating is no longer a matter which merely foregrounds personal preference or taste but is itself a kind of personal management of risk for oneself and one's family. It is, as Germov and Williams (1999) say, managed by a 'social appetite', where the moral, nutritional and health-giving qualities of food are intimately involved in decisions about purchasing and consumption, and we are as Szasz (2007) puts it 'shopping our way to safety' – the safety of self and of others.

Address for correspondence: Paul Crawford, School of Nursing, Midwifery and Physiotherapy, The University of Nottingham, Division of Nursing, Derby Education Centre, London Road Community Hospital, Derby, DE1 2QY  
e-mail: paul.crawford@nottingham.ac.uk

### Acknowledgements

The article was written as part of the ESRC project 'Enlisting the help of friendly bacteria: Probiotics and visions of health, nutrition and science in a modern world'. Grant number: RES000222289.

### References

- Abbott, R. (1997) Food and nutrition information: a study of sources, uses, and understanding, *British Food Journal*, 99, 2, 43–9.
- Alessandrini, M. (2007) Community volunteerism and blood donation: altruism as a lifestyle choice, *Transfusion Medicine Reviews*, 21, 4, 307–16.
- Arcury, T.A., Skelly, A.H., Gesler, W.M. and Dougherty, M.C. (2006) Diabetes beliefs among low-income white residents of a rural North Carolina community, *Journal of Rural Health*, 21, 4, 337–45.
- Ares, G., Gimenez, A. and Gambaro, A. (2008) Does information about the source of functional ingredients influence consumer perception of functional milk desserts? *Journal of the Science of Food and Agriculture*, 88, 2061–8.
- Batnitzky, A. (2008) Obesity and household roles: gender and social class in Morocco, *Sociology of Health & Illness*, 30, 445–62.
- Beardsworth, A. and Keil, T. (1997) *Sociology on the Menu: an Invitation to the Study of Food and Society*. London: Routledge.
- Beck, U. (1992) *Risk Society: towards a New Modernity*. London: Sage.
- Clarke, J. (2006) Consumerism and the remaking of state-citizen relationships. In McDonald, C. and Marston, G. (eds) *Analysing Social Policy: a Governmental Perspective*. Cheltenham: Edward Elgar.
- Clarke, J., Newman, J., Smith, N., Vidler, E. and Westmarland, L. (2007) *Creating Citizen-Consumers: Changing Identities in the Remaking of Public Services*. London: Sage.
- Coveney, J. (2005) A qualitative study exploring socio-economic differences in parental lay knowledge of food and health: implications for public health nutrition, *Public Health Nutrition*, 8, 3, 290–7.
- Coveney, J. (2006) *Food, Morals and Meaning: the Pleasure and Anxiety of Eating*. (2nd Edition). Abingdon: Routledge.
- Coveney, J. and Bunton, R. (2003) In pursuit of the study of pleasure: implications for health research and practice, *Health: an Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 7, 2, 161–79.
- Craig, P.L. and Truswell, A.S. (1988) Dynamics of food habits of newly married couples: food-related activities and attitudes towards food, *Journal of Human Nutrition and Dietetics*, 1, 409–19.
- De Vault, M. (1991) *Feeding the Family: the Social Organisation of Caring as Gendered Work*. Chicago: University of Chicago Press.
- Edwards, D. and Potter, J. (1992) *Discursive Psychology*. London: Sage.
- England, P. and Folbre, N. (2001) Involving dads: parental bargaining and family well-being. In Tamis-LeMonda, C.S. and Cabrera, N. (eds) *Handbook of Father Involvement: Multidisciplinary Perspectives*. New York: Lawrence Erlbaum Associates.



- Fisher, R.A. (2007) Enabling altruism: evaluating the adult living liver donor, *Liver Transplantation*, 13, 4, 478–9.
- Fischler, C. (1986) Learned versus “spontaneous” dietetics: French mothers’ views of what children should eat, *Social Science Information*, 25, 945–65.
- FSA/Food Standards Agency (2004) *Research and Survey Programmes: Annual Report*. London: Food Standards Agency.
- Fox, B.J. (2001) *Family Patterns and Gender Relations*. Oxford: Oxford University Press.
- Furrie, E. (2005) Probiotics and allergy, *Proceedings of the Nutrition Society*, 64, 465–9.
- Germov, J. and Williams, L. (1999) *A Sociology of Food and Nutrition: the Social Appetite*. Melbourne: Oxford University Press.
- Guthman, J. and DuPuis, M. (2006) Embodying neoliberalism: economy, culture, and the politics of fat, *Environment and Planning D: Society and Space*, 24, 3, 427–48.
- Harcourt-Webster, A. (2006) Feeding frenzy: clever foods. BBC Online. <http://news.bbc.co.uk/1/hi/business/6040446.stm> (accessed 29/8/2008).
- Heasman, M. and Mellentin, J. (2001) *The Functional Foods Revolution*. London: Earthscan Ltd.
- Hoad, T.F. (1996) *The Concise Oxford Dictionary of English Etymology*. Oxford: Oxford University Press.
- Huotilainen, A., Seppala, T., Pirttila-Backman, A.M. and Tuorila, H. (2006) Derived attributes as mediators between categorization and acceptance of a new functional drink, *Food Quality and Preference*, 17, 328–36.
- Jeffery, A.N., Voss, L.D., Metcalf, B.S., Alba, S. and Wilkin, T.J. (2005) Parents’ awareness of overweight in themselves and their children: cross sectional study within a cohort, *British Medical Journal*, 330, 23–4.
- Keselman, A., Arnott-Smith, C., Divita, G., Kim, H., Browne, A.C., Leroy, G. and Zeng-Treitler, Q. (2008) Consumer health concepts that do not map to the UMLS: where do they fit? *Journal of the American Medical Informatic Association*, 15, 496–505.
- Koteyko, N. (in press) Balancing the good, the bad and the better: a discursive perspective on probiotics and healthy eating. *Health*.
- Koteyko, N. and Nerlich, B. (2007) Multimodal discourse analysis of probiotic web advertising, *The International Journal of Language, Society and Culture*, 23, 20–31.
- Kremmer, D., Anderson, A.S. and Marshall, D.W. (1998) Living together and eating together: Changes in food choice and eating habits during the transition from single to married/cohabitating, *The Sociological Review*, 46, 48–72.
- Lehenkari, A. (2003) On the borderline of food and drug: constructing credibility and markets for a functional food product, *Science as Culture*, 12, 499–524.
- Mauss, M. (1954) *The Gift: Forms and Functions of Exchange in Archaic Societies*. London: Cohen and West.
- McFarland, L.V. and Elmer, G.W. (2006) Properties of evidence based probiotics for human health. In Gotepe, I., Juneja, V.K. and Ahmeda, M. (eds) *Probiotics in Food Safety and Human Health*. London: Taylor and Francis.
- Martin, F.-P.J., Wang, Y., Sprenger, N., Yap, I.K.S., Lundstedt, T., Lek, P., Rezzi, S., Ramadan, Z., van Bladeren, P., Fay, L.B., Kochhar, S., Lindon, J.C., Holmes, E. and Nicholson, J.K. (2008) Probiotic modulation of symbiotic gut microbial-host metabolic interactions in a humanized microbiome mouse model, *Molecular Systems Biology*, 4, 157–61.
- McGaghie, W.C., Mytko, J.J., Brown, W.N. and Cameron, J.R. (2002) Altruism and compassion in the health professions: a search for clarity and precision, *Medical Teacher*, 24, 374–8.
- Mennell, S. (1995) *All Manners of Food: Eating and Taste in England and France from the Middle Ages to the Present*. Chicago: University of Illinois Press.
- Milburn, K. (1995) Never mind the quality, investigate the depth, *British Food Journal*, 7, 36–8.
- Miller, D. (2001) *The Dialectics of Shopping*. Chicago: Chicago University Press.
- Monroe, K.R. (1996) *The Heart of Altruism: Perceptions of a Common Humanity*. Princeton: Princeton University Press.



- Murcott, A. (1982) On the social significance of the 'cooked dinner' in South Wales, *Anthropology of Food*, 21, 4/5, 677–96.
- Murcott, A. (1983) *The Sociology of Food and Eating*. Aldershot, UK: Gower.
- Nerlich, B. and Koteyko, N. (2008) Balancing food risks and food benefits: the coverage of probiotics in the UK national press, *Sociological Research Online*, 13, 3. <http://www.socresonline.org.uk/13/3/1.html>.
- Newman, J. and Vidler, E. (2006) Discriminating customers, responsible patients, empowered users: consumerism and the modernisation of health care, *Journal of Social Policy*, 35, 193–209.
- Niva, M. (2006) Can we predict who adopts health-promoting foods? Users of functional foods in Finland, *Scandinavian Journal of Food and Nutrition*, 50, 13–24.
- Niva, M. (2007) 'All foods affect health': Understandings of functional foods and healthy eating among health-oriented Finns, *Appetite*, 48, 384–93.
- Norman, G. (2007) Altruism, doctors, and the art of medicine, *Advances in Health Sciences Education*, 12, 261–3.
- Oakley, A. (1974) *The Sociology of Housework*. Oxford: Martin Robertson.
- Pentz, R. (2006) Duty and altruism: alternative analyses of the ethics of sibling bone marrow donation, *Journal of Clinical Ethics*, 17, 227–30.
- Popay, J., Bennett, S., Thomas, C., Williams, G., Gatrell, A. and Bostock, L. (2003) Beyond 'beer, fags, egg and chips'? Exploring lay understandings of social inequalities in health, *Sociology of Health & Illness*, 25, 1, 1–23.
- Potter, J. and Hepburn, A. (2008) Discursive constructionism. In Holstein, J.A. and Gubrium, J.F. (eds) *Handbook of Constructionist Research*. New York: Guildford.
- Potter, J. and Wetherell, M. (1987) *Discourse and Social Psychology: beyond Attitudes and Behaviour*. London: Sage Publications.
- Rapport, F.L. and Maggs, C.J. (2002) Titmuss and the gift relationship: altruism revisited, *Journal of Advanced Nursing*, 40, 5, 495–503.
- Reed, D.F. and Karpilow, K.A. (2004) *Understanding Nutrition: A Primer on Programs and Policies in California*. Berkeley, CA: California Center for Research on Women and Families, Public Health Institute.
- Roberts, H. (1992) *Women's Health Matters*. London: Routledge.
- Roberts, P. (2005) *The End of Food*. Boston: Houghton Mifflin.
- Rowe, S. (2001) Communicating science based food and nutrition information, *Journal of the American Dietetic Association*, 101, 1145–6.
- Rowe, S. and Alexander, N. (2008) Miscommunicating science: nutrition and communications, *Nutrition Today*, 43, 103–06.
- Schafer, R.B., Schafer, E., Dunbar, M. and Keith, P.M. (1999) Marital food interaction and dietary behaviour, *Social Science and Medicine*, 48, 787–96.
- Scott, N. and Seglow, J. (2007) *Altruism: Concepts in the Social Sciences*. Buckingham: Open University Press.
- Senok, A.C., Ismaeel, A.Y. and Botta, G.A. (2005) Probiotics: facts and myths, *Clinical Microbiology and Infection*, 11, 12, 958–66.
- Sharp, R.J., Achkar, J.P., Brinich, M.A. and Farrell, R.M. (2009) Helping patients make informed choices about probiotics: a need for research, *American Journal of Gastroenterology*, 104, 809–13.
- Sloan, A. (2004) Top 10 functional food trends 2004, *Food Technology*, 58, 4, 28–51.
- Struening (1996) Feminist challenges to the new familialism: lifestyle experimentation and the freedom of intimate association, *Hypatia: A Journal of Feminist Philosophy*, 11, 1, 135–54.
- Suarez-Balcazar, Y., Hellwig, M., Kouba, J., Redmond, L., Martinez, L., Block, D., Kohrman, C. and Peterman, W. (2006) The making of an interdisciplinary partnership: the case of the Chicago Food System Collaborative, *American Journal of Community Psychology*, 38, 113–23.
- Szasz, A. (2007) *Shopping our Way to Safety: How We Changed from Protecting the Environment to Protecting Ourselves*. Minneapolis: University of Minnesota Press.

- Torjusen, H., Lieblein, G. and Vittersø, G. (2008) Learning, communicating and eating in local food-systems: the case of organic box schemes in Denmark and Norway, *Local Environment*, 13, 219–34.
- Tuominen, K., Talja, S. and Savolainen, R. (2002) Discourse, cognition, and reality: toward a social constructionist metatheory for library and information science. In Bruce, H., Fidel, R., Ingwersen, P. and Vakkari, P. (eds) *Emerging Frameworks and Methods: Proceedings of the Fourth International Conference on Conceptions of Library and Information Science*. Greenwood, CO: Libraries Unlimited.
- Verdu, E.F. (2009) Probiotics effects on gastrointestinal function: beyond the gut? *Neurogastroenterology and Motility*, 21, 477–80.
- Vidler, E. and Clarke, J. (2005) Creating citizen-consumers: New Labour and the remaking of public services, *Public Policy and Administration*, 20, 19–37.
- Wansink, B. (2007) *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*. Chicago: University of Illinois Press.
- Warde, A. (1997) *Consumption, Food and Taste: Culinary Antinomies and Commodity Culture*. London: Sage Publications.
- Warde, A. and Martens, L. (2000) *Eating Out: Social Differentiation, Consumption and Pleasure*. Cambridge: Cambridge University Press.
- Watson, D.B., Moreira, T. and Murtagh, M. (2009) Little bottles and the promise of probiotics, *Health*, 13, 2, 219–34.
- Wetherell, M. and Potter, J. (1988) Discourse analysis and the identification of interpretive repertoires. In Antaki, C. (ed.) *Analysing Everyday Explanation: a Casebook of Methods*. Newbury Park, CA: Sage.
- World Health Organization (2001) *Joint FAO/WHO Working Group Report on Drafting Guidelines for the Evaluation of Probiotics in Food* London. Ontario, Canada, Geneva: World Health Organization.