

Consumer attitudes to meat eating

N. J. Richardson, H. J. H. MacFie and R. Shepherd

AFRC Institute of Food Research,
Reading Laboratory, Earley Gate, Whiteknights Road, Reading RG6 2EF.

Summary

This study reports on current meat consumption in the UK and the factors that are perceived by the subjects to be influential in their choice of diet. A random sample of individuals from the population (n=1018) were questioned on their consumption and attitudes towards meat by a postal survey. The study revealed that 28.3% of the population considered themselves to be reducing meat consumption; attitudes found to be determinant in changes in the consumption of meat were healthiness, taste and concerns over additives. Hypothetical future events were found to effect peoples' estimated meat-eating. Knowledge of meat-related information was investigated with specific reference to the respondents' trust in the various sources used; food package labels were found to be an influential source of meat-related information.

Introduction

The purpose of this study was to investigate the factors that influence consumers in their decision to either consume or avoid meat. Recent evidence has suggested that an increasing proportion of the population are adopting vegetarian or demi-vegetarian (a diet that borders vegetarian and carnivorous) diets although it is not clear what are the reasons for this trend. There is no clear cut definition of either meat or vegetarianism. In one survey 63% of 'vegetarians' ate no meat or fish, but others were replacing red meat with fish and eggs (Safeway, 1991). Another survey found that half of the adults who classified themselves as vegetarian ate some kind of meat, although younger vegetarians were more rigourous (The Vegetarian Society, 1991). A study of residents in the North of England (Woodward, 1988) found that of the 12% of the sample who stated that they ate neither meat nor meat products only 37% actually ate no animal flesh at all as 29% ate poultry, and 59% ate fish. It has recently been estimated that only half of respondents calling themselves vegetarian avoid red meat on a regular basis, and people are less likely to admit to a preference for a traditional diet that is perceived as unhealthy or unethical than actually to consume such foods (Tabacchi, 1987). Vegetarianism, however defined, is not only a way of eating but a reflection of a philosophy of life. It rarely occurs alone, but comes in conjunction with a complex of other beliefs, attitudes, and parallel movements (Dwyer, 1991; Fiddes, 1991). Concerns about animal suffering are cited by up to 81% of vegetarians, as well as by those considering becoming vegetarian or reducing their meat consumption (British Nutrition Foundation, 1988; The Vegetarian Society, 1991; Woodward, 1988). The attitude of family, friends, and other individuals in positions of power or influence may be important in assisting or resisting changing habits (Freeland-Graves, Greninger & Young, 1986; Kerr & Charles, 1986). Context can also be significant, in that meat may be more likely to be chosen for meals of particular significance such as weekend meals and celebrations (Watson, 1980; Nicod, 1980). In contrast, a trend towards the consumption of lighter, more informal meals may have an effect on meat demand since such meals (pasta, salads, sandwiches, etc) are frequently meat free. Taste ranks highest in terms of self-rated importance in food choice decisions (Schafer, 1978; Schutz, Judge and Gentry, 1986) and in studies of correlations between beliefs, attitudes and food choice (Kronld & Lau, 1982; Shepherd, 1990). Even a few established

Results

There were 1046 completed and returned questionnaires, representing a response rate of 34.9%. Changes in diet calculated from current and retrospective data show that the people are increasing their consumption of fish, chicken, lamb and shellfish but decreasing consumption of beef, meat products, offal and pork (Figure 1).

The incidence of a self-reported reduction in meat-eating was found to be marginally contingent upon socioeconomic categorisation where there is a decrease in those reducing between the categories of II (semi-professional) to IV (partly skilled) (Figure 2). There was a relatively high proportion of "reducers" in the non-employed (i.e. housewife, retired, student and registered unemployed) categories (Figure 2). There was no difference in the response to this question across the UK regions. The foods generally perceived to be meat were beef followed by lamb, pork, bacon, chicken, and then, included in this category by just over half of the respondents, offal, burgers and sausages (Figure 3). It was hypothesized that the foods considered to be the most "meat-like" would be those ones which were avoided first (Beardsworth & Keil, 1991; Fiddes, 1991). However, offal and meat products, which would include sausages and burgers, were given up first, although fish did have the highest mean order ranking as would be predicted by this theory (Figure 4).

Attitudes on an array of meat-related issues were compared across those people who had either increased or decreased the consumption of a number of meats and non-meat products in their diets over the past year. Those who had increased their consumption of chicken (n=67), pulses (42), milk (23), and meat substitutes (52) held a stronger attitude towards health than those who had decreased their consumption ($p < 0.05$). A difference in the perceived importance of taste was found between those who had changed their consumption of beef. The respondents who had increased their consumption had a stronger attitude towards taste ($F = 4.08, p = 0.04$). Increases in the consumption of shellfish and pulses were related to a higher concern about the hormone, cholesterol and additive content of foods ($p < 0.05$).

The scenario technique was used to test the effects of price and the availability of both polyunsaturated and "microorganism-free" meat (this was defined in the questionnaire as meat which had all harmful microorganisms eliminated from it during production) on predicted consumption. It was found that polyunsaturated meat would be eaten in preference to "normal" meat if the price was held constant, however, if an increase in price was associated with this intervention then the respondents predicted that they would not buy this healthier meat (Figure 5). However, the elimination of microorganisms from meat was a safeguard for which the majority of the respondents were prepared to pay extra (Figure 6).

Discussion

A central finding of this work is that consumer definition of "meat" cannot be assumed to be the "edible flesh of animals" (Collins Dictionary, 1987). This result throws some doubt on the previous work in this area which has assumed a consensus agreement in the terms "vegetarianism" and "meat". The most meat-like meats were pork, lamb and beef whilst sausages, burgers and offal were at the lower echelons of the meat hierarchy in accordance with previous findings (Fiddes, 1991). The techniques developed in sociology (Finch, 1987) and social psychology (Ajzen & Fishbein, 1980) were successfully used here both to understand current eating and to predict the direction of future changes. Current meat-eating seems to be dominated by concerns for healthiness with additives, hormones and cholesterol being closely linked. However, taste plays a major role both as a reason for eating and not eating meat. Future changes in meat-production techniques are likely to effect meat choice if those changes produce meat that is perceived to be healthier and/or represents a lower risk. It is maintained here that price of meat which is produced by novel techniques will be an important factor in the acceptability of such products. Vegetarianism represents a microcosm of food choice issues which are reflected in the expanding reduced meat-eating population. However, elucidation of the factors that might distinguish the partial avoidance of meat from complete avoidance is crucial to our understanding of current dietary trends and to the future of the UK meat producing industry.

vegetarians or vegans express nostalgia for the flavour of meat, with curiously regular mention of the taste and smell of bacon in particular (Fiddes, 1991; Beardsworth & Keil, 1991). Although meat has traditionally been regarded as having a 'good' taste, dislike of its taste, sometimes to the extent of nausea, regularly figures in survey responses by those who avoid it. Related to this dislike of the taste of meat, is a feeling of repulsion at the idea of preparing or cooking animal flesh (British Nutrition Foundation, 1988; Woodward, 1988; Beardsworth & Keil, 1991).

Health benefits or risks are probably the most commonly acknowledged reasons for reducing meat consumption (Beardsworth & Keil, 1991). Comparisons showing vegetarians to be healthier than meat-eaters are potentially difficult to interpret since meat-avoiders may be more likely to be middle-class, leading healthier lifestyles (lower levels of smoking and alcohol intake) or to have adopted their diet for reasons of preventative health or due to illness (British Nutrition Foundation, 1988; Dwyer, 1991; Harland, 1985; Freeland-Graves et al, 1986). Vegetarians and, especially, vegans usually come closer to achieving the recommended patterns regarding cholesterol and fat than do omnivores; vegans generally consume <10% of their energy as saturated fats, although vegetarians may consume more, depending upon their intake of dairy fat (Draper & Wheeler, 1990; Dwyer, 1991). It has, however, been argued that 'healthy' omnivorous diets may be equally beneficial in at least some cases (Dwyer, 1991; Lockie, Carlson & Thomson, 1985).

Food choice is not merely about obtaining nutrition, it represents a world view which is both moral and practical. Meat avoidance motivations are often multi-layered and, thus, no single issue should be considered in isolation. The reasons for meat's decline, as suggested by various commentators, are many and varied, and operate at both explicit and implicit levels. Views might be classified as ethical, philosophical, aesthetic, psychological, political, economic, cultural, ecological, nutritional, medical, and countless ways besides. Which influences are of primary relevance, and how they are categorised, depends largely on context and orientation of the research.

The questionnaire used in this study was designed to investigate a number of different issues arising from the study of meat-eating and meat avoidance.

Method

Design

The respondents were asked to state the frequency that they ate an array of foods both at the "present time" and "one year ago" also, for how long they had avoided those foods which they did not eat at all. 'Meat' was defined by each respondent in terms of those foods they perceived to fall into this category. The foods included were beef, lamb, offal, sausages, dairy products, bacon, chicken, pork, fish, eggs and hamburger. The respondents' level of agreement to a number of statements covering a wide range of meat-related issues were measured in relation to each of the previously listed foods. The respondents' beliefs were then evaluated on bi-polar good-bad, important-unimportant dimensions (Ajzen & Fishbein, 1980).

The impact of future events on respondents' predicted meat consumption was investigated by the use of the scenario or vignette technique formerly used in sociology (Finch, 1987). The respondents were asked whether their meat-eating would change in what direction for a number of situations introduced as "something that could possibly happen in the future".

Sample

The sample consisted of 3000 names and addresses of UK residents selected from the electoral register. An equal ratio of males and females was achieved and the sample was spread evenly over 5 regions; Wales, Scotland, Midlands, Northern and Southern England.

Distribution

A three wave approach was used for the distribution of the questionnaires in order to attain the best possible response rate. Initial contact was made in the first wave by an introductory postcard which informed the individual that a questionnaire would shortly be delivered and acquainted the respondent with the Institute and the purposes of the study. A week later the questionnaire was sent along with a cover letter and freepost envelope. The cover letter detailed the sampling technique used and that a £0.20 donation would be made to a charity for each completed questionnaire that was returned. A reminder card was sent after two weeks to those not returning the questionnaire to reiterate the importance of the respondent's participation in the survey.

Figure 1
 Number of respondents (n=1030) who had changed the frequency of a consumption a number of meats over the preceding year.

N.B. "products" include burgers, sausages and pies.

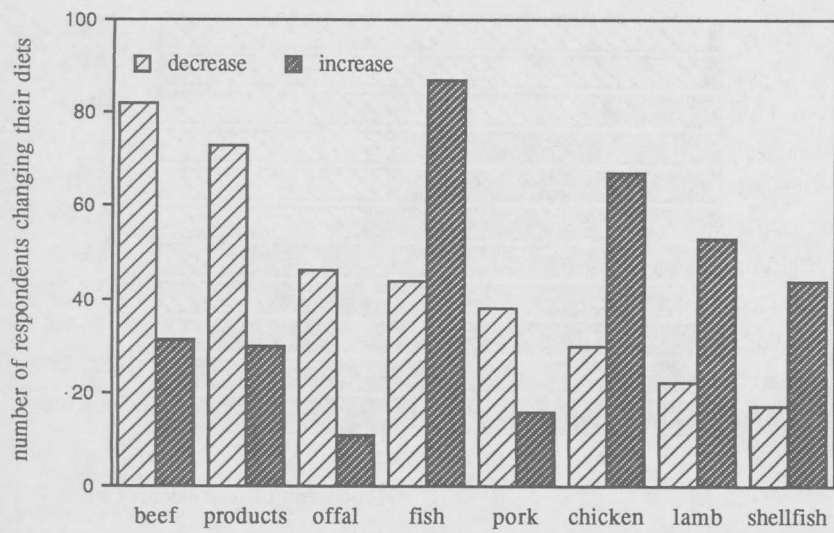
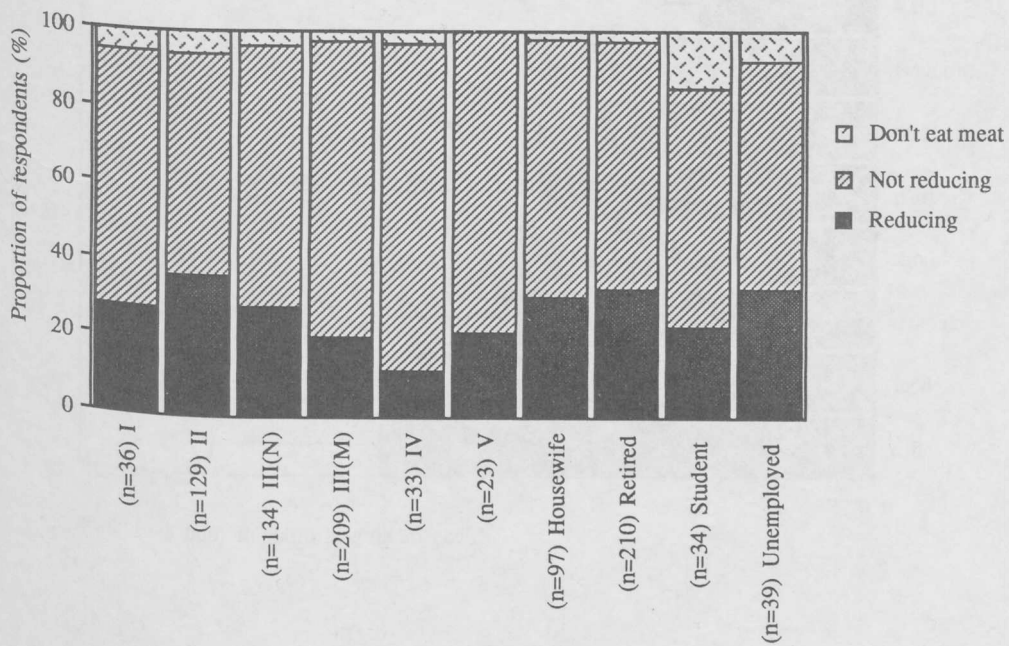


Figure 2

Reported meat-eating across respondents categorized by social class.



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Figure 3
Categorisation of foods into meat and non-meat.

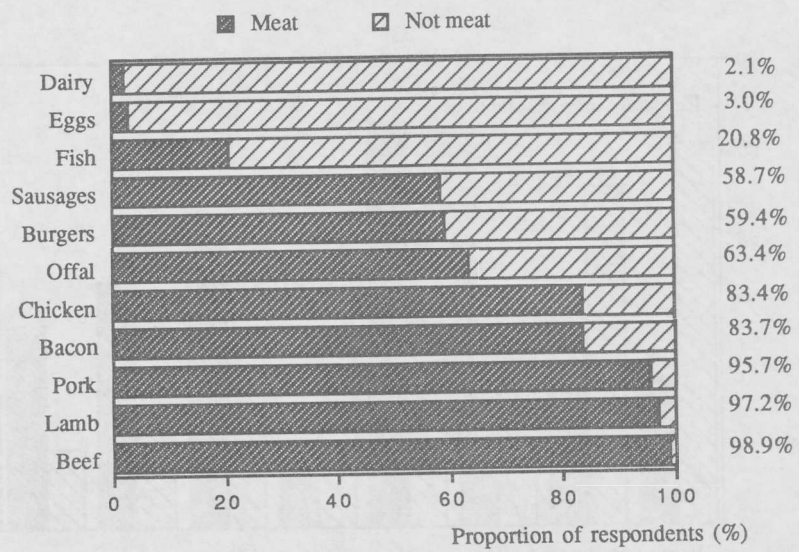


Figure 4
The order of avoidance of foods from the diet as denoted by rank where 1=avoided first, 2=second etc.
(derived from the duration of avoidance)

* This food was significantly higher in mean rank score ($p < 0.05$) from offal (Multiple Range Test)

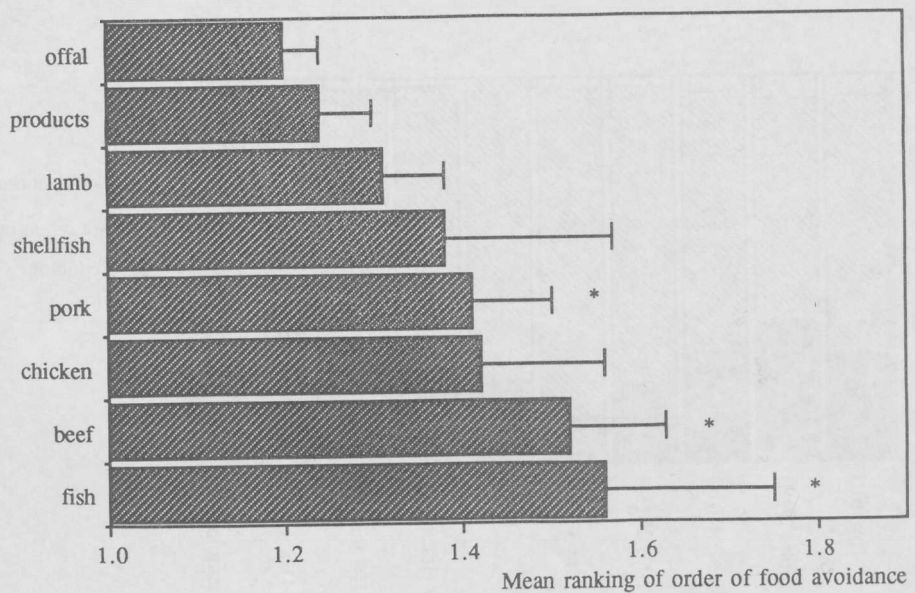


Figure 5

Number of respondents selecting regular, "polyunsaturated" or no meat consumption under two conditions;
 i) Polyunsaturated meat offered at same price as regular, ii) Polyunsaturated meat offered at higher price than regular.

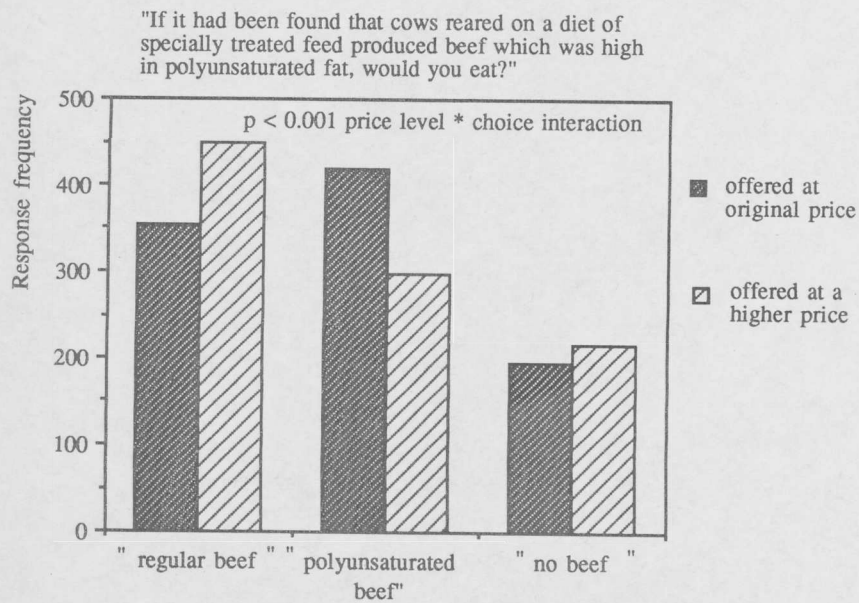


Figure 6

Number of respondents selecting regular, "microorganism-free" or no meat consumption under two conditions;
 i) Microorganism-free meat offered at same price as regular, ii) Microorganism-free meat offered at higher price than regular.

