GETTING PERSONAL:
shifting responsibilities for dietary health

FOOD ETHICS COUNCIL

The Food Ethics Council asks the questions that matter about food and agriculture. We are an independent research and advocacy group that aims to make the food system fairer and healthier.

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COUNCIL

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Summary

The notion that people should take greater responsibility for their own health is a major theme in UK public health policy. It underpins recent government commitments to support healthier food and lifestyle choices in the face of mounting concern about diet-related disease. 'Personalisation' is expected to improve public health, cut spending and empower people.

However, 'personalisation' is not confined to public health. It is a cross-government reform agenda, also shaping policies in other areas such as education and crime. The focus is on reforming public services but, when it comes to diet and nutrition, 'personalisation' has to mean something different. The state provides some food through schools and hospitals but people buy most of it from companies – there are relatively few public services to reform.

The same principles used to reform public services cannot simply be transferred to this market context. Yet that is what the government is trying to do. What will be the effects? Could a different 'personalised' approach better meet the government's aims?

The first effect of emphasising personal responsibility in a market context is that the success of the government's policies comes to depend heavily on consumers' **choices**. While claiming to enhance people's choices the government is actually reducing their autonomy, because it assumes that consumers should see food primarily as a means to health. This treats food like medicine and society like a hospital. Instead, the government could see nutrition more like it sees food safety, an area where consumers, companies and the state share responsibility, but where consumers can nevertheless be confident that their default choices are healthy.

Large food companies are in a powerful position to shape what consumers eat, so this focus on personal responsibility and consumer choice has the knock-on effect of giving such companies a hidden influence on policy delivery. The likes of Nestlé, Kraft, Unilever and Danone have their own visions of 'personalisation', based on the targeted

marketing of health-related **products**. This is presented by some as a public health solution. It is no such thing, however, because it focuses on differentiating products not on raising base-line standards of nutrition. The government should use stronger regulatory measures to help food companies raise the nutritional quality of processed foods and to ensure the market is more responsive to consumers' needs and preferences.

At the leading edge of the trend towards more targeted preventative healthcare is the emerging science of nutrigenomics, which studies how **genetic** and cellular processes relate to nutrition and health. Within both the private and the public sectors, nutrigenomics is seen to promise a more 'personalised' approach to public health, based on the principle that everybody is different. Nutrigenomics might advance the way scientists understand metabolic processes, but in public health terms it is the icing on a cake that is not yet baked. It is the product of public research strategies that put commercial wealth before public health.

In this report we argue that it is especially important in a market context for the government to match its policy focus on personal **responsibilities** with a renewed commitment to human **rights**. Specifically, we argue that the government should meet its obligations under international law to facilitate, provide, protect and respect the right to adequate food. It should:

Facilitate | by improving labelling, regulating food promotion and raising the nutritional quality of people's default food choices.

Provide | by improving social welfare as a public health priority, eliminating serious health inequalities and food poverty.

Protect | by regulating health claims on foods and strengthening corporate accountability.

Respect | by recognising the social and cultural value of food, allowing people to eat good food with dignity, without having to treat food like medicine.

We also suggest that a big idea like 'personalisation' can only work if policy-makers look at the big picture. Public health needs to be made a priority for welfare policy, public sector catering, research policy and business regulation. Crucially, however, the government has ruled out precisely the kind of systematic changes that are required to improve the nation's diet. This is a big mistake.

If 'personalisation' is to help and not hinder the government's efforts to improve diet, nutrition and health, it must guide system-wide interventions, not substitute for them.

1 Introduction

1.1 The 'personalisation' agenda

In November 2004, the government published its sixth major health policy document since 1997. Called *Choosing health: making healthier choices easier,*[1] this white paper was followed in March by *Choosing a better diet: a food and health action plan*.[2] Both these commitments to supporting healthier choices are underpinned by the notion that people should take greater personal responsibility for their own health. 'Personalisation' has become one of the major themes in public health policy.

Ever since debates about diet and lifestyle entered mainstream policy in the 1970s, Labour has emphasised people's individual responsibilities to look after themselves. Never before, however, has this idea taken the central role it now enjoys. What is more, the current enthusiasm for 'personalisation' is not confined to public health policy. It is a much wider project to reform public services and public behaviour around education, crime and much else besides. Some commentators see it as the 'big idea' for Labour's third term, as central to this government's thinking as privatisation was for the Conservatives.[3]

The logic behind this reform agenda is that the state needs to keep pace with bigger changes that are afoot. A 'command and control' approach is neither possible, when so many of the economic and social forces affecting people's lives are beyond the reach of national governments, nor is it what people want. Tony Blair underlined this thinking in his speech at Labour's 2005 party conference:

> "Today is not the era of the big state, but a strategic one: empowering, enabling, putting decision making in the hands of people, not government. One day, when I am asked by someone whose neighbourhood is plagued with antisocial behaviour or whose local school is failing or hospital is poor, 'What are you going to do about it?' I want to be able to reply: 'We have given you the resources. We have given you the powers. Now tell me what you are going to do about it.'" [4]

The basic idea behind 'personalisation' is that people should take more responsibility for delivering 'public goods', such as health and education for all, which benefit society but profit no one in particular. It is a cornerstone of the government's efforts to introduce greater choice for public service users, which have been roundly criticised in recent reports from the consumers' association Which?.[5] However, these two ideas of 'personalisation' and 'choice' are distinct. 'Personalisation' need not be about treating public service users more like consumers. It is a big political project that leaves considerable room for manoeuvre. Different government departments give different reasons for 'personalising' their policies.

1.2 A range of reasons

For the **Department of Health** 'personalisation' is primarily about motivating and supporting consumers as well as patients to make food and other lifestyle choices that are better for their health. The department sees it as the best way to tackle a serious crisis in public health. Poor diet contributes to obesity which accounts, through cardiovascular disease, cancer and type-II diabetes, for 9,000 premature deaths each year - about 6 per cent of the total.[6] The incidence of obesity has been increasing, jumping threefold since the 1980s, and rising rates among children suggest this trend will continue.

Research shows that patients respond well when they are given greater control over treatment for chronic conditions like diabetes.[7] The Department of Health hopes this approach will also work in preventative healthcare. 'Personalisation' is supposed to uphold the ethos of social solidarity that underlies public healthcare rather than supersede it, helping to create a middle road between an interfering nanny state and laissez-faire neglect.[8] It is meant to empower people, not to 'blame the victim'.

The department's aim is not simply to engage us all in a concerted drive to look after the nation's health. Its 'personalised' approach particularly targets vulnerable groups. The fact is that diet-related diseases hit poorer people hardest. They eat less fruit and fewer vegetables, they are more likely to be overweight or obese, and they are at greater risk of dying young from 'lifestyle' diseases.[9] Thus, the *Choosing health* white paper outlines plans to focus on disadvantaged areas, including a high-profile initiative to deploy an army of new health trainers equipped to "provide personalised plans for individuals to improve their health".[10]

The **Treasury** shares this interest in improving public health and is at least as enthusiastic about 'personalisation'. For the Treasury, however, the most immediate motive is cost. A conservative estimate puts the economic costs of overweight and obesity in England at £6.6 to £7.4 billion per year.[11] Derek Wanless, commissioned by the Treasury to review public health policy, estimated that proactive measures to prevent

lifestyle diseases could save the taxpayer £30 billion per year by 2025.[12] The cheapest and most effective of Wanless's scenarios relied on people becoming "fully engaged" in living healthier lives.

But even for the Treasury 'personalisation' is as much about politics as economics. 'Personalisation' is something of a pressure-release valve, promising a way to reform public services so they meet people's different needs, and thus disabling one of the arguments for wholesale privatisation. 'Personalised' public services, argues Gordon Brown, are fairer and more efficient than either market delivery or a one-size-fits-all approach.[13]

The **Prime Minister's Strategy Unit**, credited with some of the thinking behind the 'personalisation' agenda, presents it as a way of changing people's behaviour.[14] Many of the goals that the public wants government to achieve rely on changing individual behaviour nation-wide, it explains, but regulations, subsidies and other traditional means of state intervention have not proved sufficiently effective. Giving people greater personal responsibility in areas such as health might overcome major social and psychological barriers to change. The unit concurs with the Treasury that 'personalising' public services should bring savings for taxpayers.

This political project also has champions outside government, notably the think-tank **Demos**. According to Demos, half measures will not do.[15] 'Personalisation' should mean much more than better 'customer care' in the public sector, treating public service users more like consumers, and a smaller bill for the Chancellor. Instead, Demos sees it as an entirely new model for public services; one where citizens share in designing services, where they are more empowered to organise themselves and to take initiative, and where service users and professionals enjoy a radically new relationship.

1.3 This report

'Personalisation' is a political project that stretches right across government. It generally focuses on reforming public services. But when it comes to policies on diet and nutrition it has to mean something different. The state provides some food through hospitals, schools and prisons, but we buy most of it from companies. In the food sector there are relatively few public services to reform. While it may be poor practice to treat public service users like consumers, most of us already are consumers in this instance.

The effect of focusing on individual responsibilities in this market context is that the success of government policies comes to rest heavily on consumer behaviour. What consumers do, in turn, depends not only on our personal circumstances and on what the government does, but also on the actions of companies and, when it comes to our health, on new developments in science and technology.

As it happens, the government is not alone in trying to 'personalise'. The food industry is pursuing a different kind of 'personalisation', focused on marketing value-added food products that people can mix and match to suit their specific health needs or preferences. Meanwhile, research in nutrigenomics - the study of gene-diet-health interactions - is transforming nutritional science, opening the prospect of genetically targeted approaches to dietary health. Whereas the specific policies we discuss in this report are peculiar to the UK, these trends in business and in science are international. Governments around the world need to consider their implications.

Amid these different versions of 'personalisation', will the government succeed in improving public health, cutting spending and empowering people by giving them greater responsibility?

In this report we try to address that question by looking at the points where policies promoting 'personalised' approaches to dietary health meet 'personalisation' in the food industry and in nutrigenomics. These trends towards 'personalisation' are different in many respects but they do overlap, and we argue that those overlaps matter. Because we agree with the government that it is important to improve public health and to empower people, our most immediate concern is whether the kind of 'personalisation' we are seeing in practice is headed in that direction. Are the government's deeds living up to its words? Where they are not, what can policy-makers do to put public health policy back on track? And what can we learn from this example about 'personalisation' in general.

But we are also interested in some broader issues. In particular, what kinds of **responsibility** are being 'personalised'? Responsibility has many meanings.[16] The government is not, thankfully, increasing individual responsibilities in the sense of holding people to account if their health deteriorates, though some commentators forecast limits on free NHS treatment for obesity if health costs spiral.[17] For now public health policy seems instead to be putting a greater 'task responsibility' on individuals *to do more* to improve their health. This presupposes that people have the *capacity* to do more.

One of our concerns is that despite all the government's talk about empowerment, choice and autonomy, not enough is being done to build people's capacity to eat healthily. The new health trainers, for instance, focus on building capacity at an individual level, through education, advice and motivation.[18] This is decent idea but beside the point. As we describe in the concluding chapter, the big-picture policy measures that would really make a difference to people's health have not just been neglected but have been ruled out of bounds.

The thrust of our argument is that in order to be both fair and effective, a policy emphasis on personal responsibilities needs to go hand in hand with a renewed commitment to human **rights**. The most important right in this case is the right to adequate food, to which the UK has signed up many times over (Box 1).

Box 1: The right to food

The right to food is a binding right under international law. It features in the Universal Declaration on Human Rights, the International Covenant on Economic, Social and Cultural Rights and numerous other commitments that the UK government has signed. It is formally defined as:

> "the right of every man, woman and child alone and in community with others to have physical and economic access at all times to adequate food or means for its procurement in ways consistent with human dignity."

Voluntary guidelines giving advice on implementing the right to food were adopted by the UK and other governments in November 2004. These include guidance on improving dietary health and highlight the need for governments to respect the social and cultural importance of food, in addition to its nutritional value.

Human rights are not policies that a government can choose whether or not to implement. They imply binding state obligations to:

Respect | people's rights by taking measures to ensure that the state's own actions do not prevent those rights from being realised.

Protect | people's rights by taking measures to ensure that third parties do not prevent those rights from being realised.

Facilitate | people's rights by taking measures to help people realise those rights by themselves.

Provide | for people who cannot fulfil these rights by themselves, for instance by having social welfare safety nets.

Sources:

Food and Agriculture Organisation of the United Nations (2004) *Report of the 30th session of the Committee on World Food Security (CFS): final report of the chair.* FAO, Rome, September 20-30.
UN Special Rapporteur on the Right to Food (2005) *What is the right to food?*
Available at www.righttofood.org.

The UK government is obliged in international law to respect, protect and fulfil the rights of all people to have access to adequate food. The high levels of diet-related disease in this country are evidence that this right is not being upheld. Even as the government emphasises people's personal responsibilities, it is not doing enough to meet its own **obligations** towards its citizens.

The next three chapters of this report discuss three different aspects of 'personalisation' around diet and nutrition. Chapter 2 examines the emphasis on choice that 'personalisation' underpins in public health policy. Chapter 3 discusses the 'personalised' marketing of food products by food companies. Chapter 4 looks at research in nutrigenomics and whether knowledge about our genes might lead to better-targeted preventative healthcare. The conclusion sums up our main points about food, nutrition and public health policy, and considers what they mean for 'personalisation' in general.

2 Choice

2.1 Choose life

"Choose life... Choose good health, low cholesterol and dental insurance." It could be a strap-line for the government's *Choosing health* white paper. In fact, these words are spat out by Renton, the heroin addict played by Ewan McGregor in the film *Trainspotting*.

Renton chooses not to choose life. "And the reasons? There are no reasons," he explains. "Who needs reasons when you've got heroin?" No one rational, he suggests, could fail to choose life.

The government's approach to 'personalisation' in public health policy, which focuses on helping people to make the choices that are right for their health, is strikingly similar. Indeed, the echoes of Trainspotting in *Choosing health* are so strong that it is tempting to think of Renton's monologue, dominating one of the iconic posters of the 1990s, blu-tacked up in the student room of some bright young future policy-maker. Who in their right mind would not want to choose health? If we eat and live unhealthily, the logic goes, we must be irrational or ignorant, or something else must be preventing us from doing what we really want to do, which is to choose health.

Choosing health extends the doctrine of informed choice, central to medical treatment, into preventative healthcare. In the name of supporting people's freedom of choice the white paper says that the task of deciding what to eat should lie with individuals - that autonomy should not be trampled by the state - yet it also argues that when people decide, they ought to choose health. The further we are from the hospital, from immediate health problems and direct treatments, the more difficult it becomes to assume that even informed, rational people will or should 'choose health'.

In hospital, if patients who have all the right information make decisions that will cause themselves serious harm, then the chances are they will be declared out of their senses and doctors will override their right to choose. In that context choosing health almost

defines rationality, though it is still controversial to go against people's wishes, for instance when hospital staff force-feed anorexics.

By contrast, outside the hospital or doctor's surgery, people routinely choose not to 'choose health' in a medical sense. Sometimes this is because we are ill-informed, but even when we know we have access to an effective treatment we may not take medication because of an unpleasant side effect or we may skip a physiotherapy routine because it is inconvenient. Such decisions are not necessarily irrational. They just put health in its wider social context.

When choice concerns an aspect of our lifestyle such as changing our diet, the health benefits may be both deferred and uncertain. If the aim of such a change is to lower our risk of developing diet-related disease, we may statistically be helping to 'choose health' for the population at large, but there is no guarantee that our actions will be either necessary or sufficient to change our own health in the longer term. This is true whether we are following generic public health advice aimed at the whole population or measures that are targeted at our own specific circumstances.

The government is right to place a growing emphasis on preventative measures to improve public health. As it does so, however, peoples 'choices', such as they are, become less often between health and illness, or life and death, but between different lifestyles, some statistically healthier than others.

While it is reasonable to assume that few people actively want to be unhealthy, it does not follow that health is the main criterion for rational lifestyle choices, nor that health *ought* to be foremost in people's minds when they decide what to eat and how to behave.

Yet the government's *Food and health action plan* seems to assume health should be everyone's top priority when they eat. Whereas the World Health Organisation (WHO) defines health as a state of complete physical, mental and *social* well-being,[19] when the government exhorts us to 'choose health' by 'choosing a better diet', it means, first and foremost, choosing good nutrition: the nation should choose to consume an average of five portions of fruit and vegetables a day, not the current 2.8 portions; we should eat more fibre and less salt, sugar and saturated fat. [20]

That everyone should have access to affordable, nutritious food is beyond doubt. But putting the onus on individuals to choose healthy foods is counterproductive. It implies that health should be people's top priority and it underplays the other reasons why food is important. Eating and drinking play a vital part in social bonding, in distinguishing different cultures, and in shaping individual and group identities. We lose a great deal by valuing food for little but its nutrients, becoming a society of health fetishists.

Food is rich with social values and the Department of Health's current 'personalised' approach impoverishes it. By assuming rational people should 'choose health' it treats society like a hospital and food like medicine (Box 2).

Box 2. Medicalisation

'Medicalisation' is the process of adopting medical terms and remedies for non-medical, social problems. It is not a new phenomenon. Back in the 1970s Ivan Illich wrote about the 'medicalisation of life'.

In the case of dietary health, 'medicalisation' involves treating foods like drugs that can prevent diseases. It occurs when an individualistic, medical approach to health - modelled on traditional doctor-patient relationships - is applied to preventative healthcare for the population at large.

Most approaches to public health fall within one of two broad paradigms: the health promotion paradigm, which aims to promote good health across the whole population; and the medical paradigm, which aims to reduce risk factors and treat disease in individuals.

	Health promotion paradigm	Medical paradigm
Focus	Population	Individuals
Health	Physical, mental and social	Absence of disease, physical and mental fitness
Responsibility	Social	Personal
Food	Prerequisite for health	Product to prevent or treat disease
Causes of illness	Risk imposing factors: social inequality, work, culture etc.	Biology and risk-taking behaviour

Source:
Lawrence, M. and Germov, J. (2004) Future food: the politics of functional foods and health claims. In: Germov, J. and Williams, L. (eds), *A sociology of food and nutrition: the social appetite.* 2nd edn. Oxford University Press, Oxford: 119-147.

People should not have to 'choose health' in order to eat healthily. The UN's voluntary guidelines on implementing the right to food specifically remind governments that food is important for cultural and social reasons, as well as because it is nutritious. A public health policy that both improved health, in the broad sense used by the WHO, and

respected people's individual autonomy would focus on improving access to healthy food for the whole population. Instead of emphasising the responsibility individuals share in the task of improving the nutritional status of the population at large, it would build their *capacity* to make up their own minds about what counts as a better diet without having to put health before other priorities.

The right to food covers food safety as well as nutrition, and the UK government arguably does a better job of upholding its citizens' right to safe food than it does of upholding our right to a nutritious diet. Our food contains varying levels of pathogens such as salmonella and campylobacter, and consumers need to wash vegetables and cook meat sensibly if we want to avoid getting ill. We share responsibility for the task of eating safely with food companies and government. But the Food Standards Agency does not tell us to 'choose food safety', in the sense of making that a major factor when we decide what to eat. Instead, the government takes supply-side measures to help ensure safe food is affordable and accessible to all, freeing the rest of us to pursue personal priorities besides health.

Rather than treating food more like medicine, perhaps the government should see nutrition more like food safety. In practice we are unlikely to become a nation of health fetishists, but if we do not do so then the government's approach will fail. To meet its own objectives and respect people's rights to food the government needs to ensure that our **default choices** are better for our health.[21]

2.2 Default choices

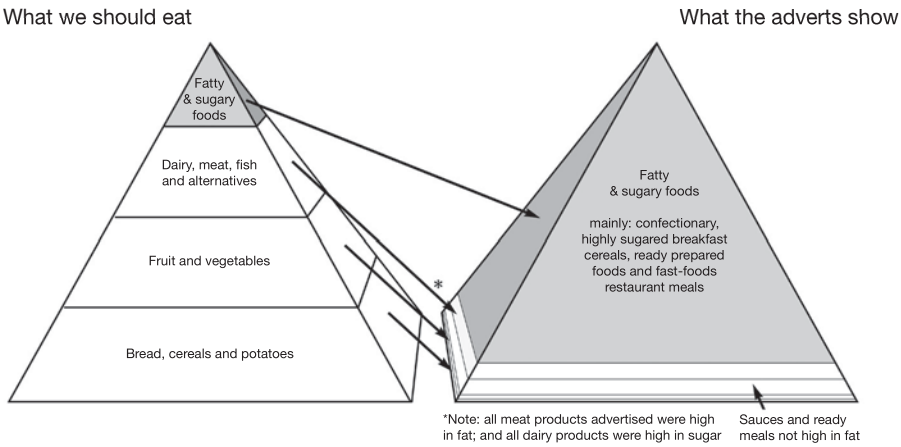
Not only does the government overstate the part that health should play in our food choices, but it also exaggerates the degree to which we choose at all. Of course we all face lots of little choices about what to eat, going to different shops or buying different products. For some people - the millions in the UK who suffer 'food poverty'[22] - even these little choices are severely constrained. But the really big choices about what we eat as a nation are not only beyond our direct influence as individuals but also beyond our *collective* influence as a market.

One constraint on all of our choices is **information**. Even when consumers do want to choose a healthy option and know roughly what constitutes a healthy diet, the details contained on product labels may be little help. After all, the main purpose of a food label is to sell the product. The problem is not that nutritional information is absent or inaccurate, but that it is often difficult for its target audience to interpret or is economical with the truth. The *Food and health action plan* commits the government to ensuring that foods are 'signposted' more clearly, so consumers can easily tell the difference between foods that can be eaten often and those that should be eaten only sparingly.

Information constrains our choices in a more subtle way through food **advertising** and food promotion.[23] About half a billion pounds is spent on food advertising each year.[24] Either the companies paying for this can tell they get their money's worth or the advertising industry does a good job of selling its own wares. Perhaps both, but one way or another we can be sure advertising works. In particular, research has shown that advertising to children does not only persuade them one brand is better than another, but also leads them to eat more of the categories of food promoted to them.[25]

We can think of the influence of advertising as a constraint on choice in two respects. First, it is unbalanced. Most advertisements are for fatty and sugary foods that should be eaten only sparingly according to public health advice (Figure 1). Government campaigns to promote healthy eating spend only about one hundredth of the amount that the food industry spends on advertising.[26] Second, the purpose of food advertising is to align consumer choices with the interests of companies further up the supply chain, in effect cancelling out a degree of consumer autonomy.

Figure 1: Two food pyramids



The 'Food Pyramid' guide, on the left, shows recommended proportions of food groups for a healthy diet. The shaded area shows the fatty and sugary foods that should be eaten sparingly. The pyramid on the right shows the pattern of children's TV advertising.

Reproduced with permission from:
Dalmeny, K., Hanna, E. and Lobstein, T. (2003) *Broadcasting bad health: why food marketing to children needs to be controlled.* International Association of Consumer Food Organisations, London, July.

For many people in the UK, however, information is not the only major constraint on their food choices. People who are **food poor** are usually on low incomes, but the limits on what they eat are not simply financial.[27] Money is an issue, because poorer households spend more of their money on food and because a 'junk' diet high in energy and low in micronutrients costs less than a 'healthy' one full of fruit and vegetables.[28] However, food poverty arises when all sorts of other factors combine, such as sparse shops, poor public transport and a lack of time, making it very difficult to buy good food and eat a healthy diet.[29]

The government recognises that poorer communities, many suffering from food poverty, bear the brunt of the nation's public health problems.[30] It also claims to accept that cheap food is not the answer. Rather the key lies in poverty alleviation, both in the sense of raising incomes and directly addressing problems like a lack of access to shops or to clear guidance on nutrition.

The government is taking some measures to tackle this **absolute poverty**. Whether it is doing enough, however, is not at all clear. Neither *Choosing health* nor the *Food and health action plan* contains details of major, pro-active cross-government collaboration in order to reduce inequalities and improve public health. A Cabinet sub-committee, MISC 27, was set up to address this problem, but when then Secretary of State for Health John Reid was pressed for details by the Health Select Committee in February 2005, he suggested collaboration between ministers over health and inequalities was ad hoc and bilateral.[31]

Even if the government adequately addressed absolute poverty through social welfare, however, **relative poverty** would still be a problem for public health. The problem with the government's focus on stimulating consumer demand for healthy food is not only that individual choices are more or less constrained, but that agricultural production and the supply of food are heavily *insulated* from consumer preferences. The overall supply of the bulk fats and sugars that play a big part in making the nation's diet unhealthy depends on other factors besides consumer demand - and if those ingredients continue to be overproduced, beyond our collective capacity to consume them and remain healthy, poorer people will eat the excess and bear the health consequences.

The thickest layer of insulation comes in the form of agricultural **subsidies**, principally Europe's €40 billion per year Common Agricultural Policy (CAP). "In health terms," says Karen Lock, from the London School of Hygiene and Tropical Medicine, "CAP should be seen as a failure."[32] Until recently the CAP supported the production of milk, butter, cheese, meat and grains for animal feed, whereas fruit, vegetables and fish were destroyed to keep prices high.[33] Recent reforms have sought to address some of these problems. Whether they will succeed remains to be seen.[34]

Relying on consumer demand is also risky because the 'consumers' who buy food are not the same as the 'consumers' who eat it. Often, for instance, only one member of a household buys most of the food. Workplaces and institutions, some of them in the public sector, buy much of our food for us. Most significantly, perhaps, food is usually bought and sold at least once before it reaches the shops, and the strength of our demand is diluted by every one of these business-to-business transactions.

As Which? describes in its recent report on food choice:

> "By the time we decide which foods to buy, they have probably already passed along a complex production, processing and distribution chain. Our choices are therefore shaped, and largely determined, by the actors involved at these different stages."[35]

These business customers have different interests from end consumers. They need to 'add value' to foods in order to survive in the marketplace, and the way many of them do this is processing ingredients to give them new qualities. Little money can be made by selling the fresh fruit and vegetables that form the mainstay of healthy eating advice.

As consumers, then, we *already* carry considerable responsibility for our own health. The urgent priority is not to give us a greater share in the task of delivering public health, nor to diminish our responsibilities, but to build our capacity to perform the tasks that are already expected of us.

If the government favours a 'personalised' approach, its first challenge is not to increase people's responsibilities but to meet its own human rights obligations. Not only should the government *facilitate* everyone's access to an adequate diet by improving labelling and addressing other constraints on people's choices. It should also *provide* for the right to food, making sure social welfare safety nets are robust enough to keep everyone out of food poverty. Most importantly of all, perhaps, the government should *respect* that right by ensuring that its policies in other areas, notably agriculture, support good public health. The *Choosing health* white paper proposes that future legislation will be subject to a Health Impact Assessment.[36] This is welcome but inadequate. The UK government also needs to revisit existing policy and campaign for a similar rethink at the European level.

In short, addressing the constraints on consumer's 'little' choices by signposting foods, regulating food promotion and alleviating poverty will help to improve public health, but it is not enough. Boosting the demand for healthy food can only achieve so much. The 'big' supply-side choices affecting what we eat also need to be made more responsive to people's health needs.

3 Products

3.1 'Personalised' marketing

The government's 'personalised' approach to public health aims to boost the demand for healthy food and gambles that the market will respond. The *Choosing health* white paper describes the major public health problems that we now face as "the cumulative results of thousands of choices by millions of people over decades".[37] And so they are. By focusing on decisions *consumers* make, however, the government underplays the importance of supply-side decisions made not only by civil servants and ministers, but also by farmers, food processors, manufacturers and retailers.

In practice, a few large global companies exert a great deal of influence within the food system.[38] Though some are extremely sensitive to market trends they are by no means slaves to consumer demand. The difference between their power and that of consumers is that these companies can act strategically. Their large market share places them at bottlenecks in the supply chain, so a single decision by a company like Tesco can affect many thousands of farmers and millions of consumers.[39] By contrast, the influence of consumers comes from the ordered chaos of our collective behaviour.

The choices global food companies make will affect how the UK government's public health policies turn out. On the face of it, they seem to be heading in a similar direction. Just as concern about overweight and obesity has prompted the government to take a more 'personalised' approach, so too for these big companies. 'Personalised' marketing and product development is one of the most pronounced trends in today's food industries.

The food industry's version of 'personalisation' is similar to the government's public health approach in as much as it, too, treats food rather like medicine: 'personalised' marketing goes hand in hand with a focus on 'wellness'. The likes of Nestlé, Kraft, Unilever and Danone are reinventing themselves as 'wellness' companies.[40] When Nestlé's head of nutrition explained that the company was "moving from an agrifood

business to an R&D-driven nutrition, health and wellness company", he could have been speaking for almost any one of the largest food companies in the world.[41]

The basic link between 'personalisation' and 'wellness' is the notion that when it comes to health, one size does not fit all. This idea is not confined to company boardrooms: consumer surveys reveal a strong belief that everybody has distinctive nutritional needs.[42] The most prolific signs of the industry's interest in 'personalisation' and 'wellness' are one-gulp bottles of fortified or probiotic drinks, which mark the emergence of what some industry analysts have dubbed a 'single-serve society'.[43]

Like the government's public health strategy, the marketing of 'personalised nutrition' boosts consumer demand for healthy food and emphasises the onus on individuals to improve their own health. It, too, contains mixed messages about 'personal' choice and about personal responsibilities for individual needs. But there the similarities end. Businesses are meant to make money, not to improve public health. For global food companies the specific risks and opportunities driving 'personalisation' are quite different from those facing the government.

The most pronounced risk faced by food manufacturers and retailers is that they will be held **legally liable** for the costs of diet-related disease. In the USA, lawyers previously involved in tobacco lawsuits are now turning to obesity. McDonald's has been sued for negligence by a group of New York teenagers, for selling foods high in fat, sugar and salt. A Californian non-profit organisation has sought a court order to stop Kraft from marketing Oreo cookies to children, mainly because of concerns about the damaging health effects of trans-fatty acids. Cases like these have not yet been successful, but the analogy with tobacco suggests that a big payout may be only a matter of time.

The threat of legal liabilities is accompanied by more immediate costs in increased insurance, lower confidence among investors, and damage to a company's brand and sales. The business think-tank SustainAbility calls these **moral liabilities**, which arise where "a company violates stakeholder expectations of ethical behaviour in such a way as to put business value at risk".[44] While the risk of costly litigation is much lower in the UK than in the USA, because UK group actions lack the punch of class action lawsuits across the Atlantic, the risks of moral liabilities are the same.

A further challenge is **market saturation**. Food companies have relied heavily on shifting a greater volume of food in order to grow and make a profit. This has meant extending into new international markets, promoting meat consumption, which expands the demand for animal feed, and persuading consumers to eat more, notably by increasing portion sizes.[45] Although these strategies can still be profitable, high rates of obesity world-wide suggest that there are limits to this growth model.

As selling *more* food becomes increasingly difficult, the other main way for companies to grow, which is by *differentiating* products, 'adding value' and charging a premium, becomes increasingly important. What better way to do this in the current climate of concern about dietary health than by marketing products using their health properties, either intrinsic or specially added? Thus, we have 'functional foods', ranging from probiotic yoghurts to spreads that can lower cholesterol, and the marketing concept that 'every food is functional'.[46]

The government's public health approach puts the onus on consumers. What consumers eat depends in part on what food companies make available. The biggest food companies in the world want to sell us functional foods and many of us will eat them. But functional foods and 'personalised' marketing are responses to the *commercial* risks and challenges associated with obesity, and will not necessarily benefit the public at large.

3.2 A single-serve solution?

Functional foods may benefit a portion of the people who eat them, but some are more functional than others. At one end of the scale are innovations like Benecol, a spread containing plant sterols that can lower cholesterol. At the other end are familiar products that have been given a facelift, such as ketchup, once marketed by Heinz in the USA with the strap-line "America's favorite source of lycopene" and the statement that "Lycopene may help reduce the risk of prostate and cervical cancer."[47]

As a rule of thumb, the 'stronger' functional foods contain novel ingredients and they need to be assessed by government regulators. Existing products given a health-related marketing boost do not need to be licensed.

Marketing claims fall into two main groups. Health claims are statements such as "Helps aid digestion" or "Helps you reduce your cholesterol". The European Commission is in the process of developing a regulatory framework for such claims.[48] In the meantime, in the UK, they are subject to a voluntary code of practice under the Joint Health Claims Initiative, which is endorsed by the Food Standards Agency and major stakeholders.[49] The other main kind of claim used in functional food marketing is what is known as a nutrient-function claim, such as "Contains calcium - calcium is good for your bones."[50]

As the US food marketing expert James Tillotson reminds companies developing any kind of health claim, "the overriding purpose of the claim is commercial - to sell a *food product*. Any collateral public health or consumer education that occurs is necessarily secondary."[51]

Whether functional foods will significantly improve public health depends on three main factors. First, do they focus on **major** public health problems? So far few do. Some marketing claims on weaker functional foods relate indirectly to cardiovascular disease and cancer but it is hard to see how the knowledge that ketchup contains lycopene, for example, would in practice benefit public health - nutrition is only thought to account for 5 per cent of prostate cancer risk and ketchup contains about 20 per cent sugar anyway.[52] Companies developing stronger new functional foods have their eye on the big killers - that is where the big money is - but such products remain the exception to the rule.[53]

The second issue is whether any products that can significantly benefit people's health will be **accessible** to the people who need them most from a public health perspective. Highly effective functional foods - medicines in food form, to all intents and purposes - might be made available to patients at the state's expense on the National Health Service. In the marketplace, however, functional foods that work will mostly target the 'healthy wealthy' who can afford to pay for the added value but are precisely the people who would need them least in public health terms.

In some cases demand from the high-end of the market may raise base-line 'functionality'. For example, vitamins and minerals are now added to a significant proportion of children's breakfast cereals. But children's cereals are as packed with sugar now as they have ever been, so this case illustrates that the **base-line nutritional content** of foods, not their base-line functionality, is what matters most in public health terms. At best the functional food trend will see little change in the nutrient profile of low-end products. At worst it will see the increased use of food fortification and health-related marketing to boost sales of products that should be eaten only sparingly according to public health advice.[54]

Even if functional foods are not widely accessible, they are widely marketed. Third, then, one might expect public health to benefit indirectly if the **healthy eating messages** used to sell functional foods rub off on a wider audience. Could functional food marketing contribute to the government's efforts to 'market health', announced in the *Choosing health* white paper? The difficulty with this idea is that the people selling functional foods have an interest in *not* communicating the message that good health can be achieved without buying their premium products.

Functional foods and the 'wellness' trend also bring potential public health risks. First there is a **flip-side to wellness**. When the big food companies talk about 'wellness' they mean it in the sense of peak physical and mental condition. The reason they talk about it is precisely so they can target the 'healthy wealthy' and the 'worried well', people who can afford to pay a premium and have no immediate need for a product to 'function'. However, the problem with aiming to be 'better than well' is that it implies that we are all sub-optimal in the first place.

The relevance to public health is that feeling downtrodden can damage your health. Years of research at the University of London, for instance, has shown that social status, irrespective of material circumstances, is an important determinant of health.[55] Whether the disquiet about health promulgated by 'wellness' marketing will have a similar effect remains to be seen, but it is certainly worth considering.

A second safety issue concerns who will eat 'stronger' functional foods and in what quantities. As foods become more like medicines is there a risk of **overdosing**, particularly among children, pregnant women and the elderly? Since you can be poisoned by a surfeit of carrot juice, the risk is surely real.

3.3 Healthier junk?

Whether on balance functional foods are good for our health depends on what we are comparing them against. For the food industry, the obvious point of comparison is their non-functional equivalents. A breakfast cereal with added vitamins may be better for you than a similar product without. For public health policy-makers, however, the comparison must be broader. They should ask whether functional foods make it easier for most people to eat a better diet.

Take the case of **healthy junk**. Very fatty, sugary and salty foods, such as soft drinks and crisps, are often called 'junk' food. You can buy versions of the same kinds of food that contain less of the ingredients that are deemed unhealthy, such as diet drinks and unsalted, low-fat crisps. Food scientists are now developing functional ingredients that are not just meant to be less unhealthy but positively good for you. Although products containing these ingredients would still look like junk food, they could in theory be eaten more than just sparingly within a nutritious diet.

'Healthy junk' is surely an improvement on 'junk junk'. But is it much of a public health solution? One of the arguments in favour of this approach is that it is *easier* to change food than it is to change behaviour.[56] "Banging on about unrealistic goals is not really an option because 10 or 15 years of sensible healthy eating policy has made very, very little difference," says Gary Frost from Hammersmith Hospital, a proponent of 'healthy junk'. "We should manipulate what we like to choose to eat and try to make that more healthy."[57]

The notion that it is easier to change foods than to change diets is questionable. The way we eat has shifted remarkably over the past 30 years. Indeed much of the rise in diet-related disease is attributed to an upsurge in eating outside the home, because home-made food tends to be relatively low in fat, sugar and salt.[58] The fact that home-made meals tend to be better for us than those prepared outside the home also illustrates that a healthy diet need not be austere, health-focused or complicated

- by contrast, 'healthy junk', is often all these things. It is quite plausible that consumers would eat vastly more fruit and vegetables, follow public health advice, and be healthier than we ever could be by eating 'healthy junk', if it was made much more convenient for us to do so.

Rather than seeing 'healthy junk', 'functional foods', 'wellness' and 'personalisation' as the best solutions around for public health, it makes sense to see them as the best that big food companies can offer within the immediate constraints of remaining competitive. They rely on selling added-value, processed food products, not fresh fruit and vegetables. Food companies are accountable first to their shareholders, not to the public. Although they need to be involved in overcoming the major public health challenges we currently face, because they sell so much of our food, we cannot expect them to focus on that.

There the matter could lie but for two issues. First, big food companies are **active players in policy debates** about public health. Some present a 'personalised', market driven approach, including the sale of functional foods, as *the* way to improve public health. They have embraced this role, not had it thrust upon them. A paper by senior scientists at Nestlé, for example, argues:

> "Now food is poised to take a major step to increase the value to the consumer by personalising diet and health... The questions therefore become 'How will science and technology find solutions to the causes of metabolic disease?' and 'How will the food marketplace deliver these solutions to consumers?'"[59]

In a similar vein Frans van der Ouderaa, Unilever's vice-president of corporate research, writes with a colleague that "public health organisations and the commercial health care and foods industries share a mutual interest and motivation in providing better health and well-being solutions for society".[60]

However, the food industry's interest in public health can be only secondary at best, and the extent of this 'mutual interest' depends on many factors, including there being a robust framework for corporate liability. In effect, 'personalised', 'wellness' marketing performs a feat of misdirection, enticing us to focus on added micronutrients and microbial exotica while the base-line nutritional quality of many people's diets remains desperately inadequate.

The second issue is that it is not just the 'healthy wealthy' who are missing this trick, but also **public health services**. Individually packaged functional foods are heavily advertised to hospital caterers and are increasingly popular, not only in the name of patient choice and hygiene, but also in the name of health. Hospitals are serving and implicitly promoting probiotic drinks, fortified foods and a host of other 'functional' products.[61] The taxpayer pays a premium for these products but their contribution to improving patient health is questionable.

If the government wants to 'personalise' responsibilities for public health, giving consumers a greater share in the task of achieving improvements, it needs to do more to *protect* their rights in the marketplace. In particular, it needs to make food companies more accountable for the promises they make to the public at large, not only explicit marketing claims to benefit people's health but also the implicit promise not to cause harm.

European regulation governing **health claims** on food will be welcome.[62] However, it is essential that the new rules, due to be adopted in 2006, should require health claims to be underpinned by robust evidence that the properties they advertise can hold true in real life. Before companies make any new health claims those claims should have to be approved by regulators. It is also essential that health claims should not be allowed on fortified food products, both in order to make it more difficult to use added vitamins and minerals to sell poor-quality foods and to avoid promoting the reductionist view that a good diet can be had by adding together a limited range of discrete nutrients. So as not to confuse basic public health advice to eat a balanced diet, the new regulations should ensure that health claims on food remain the exception rather than the rule.

It is more difficult to see how the government can make food companies more accountable for their **implicit promises** not to cause the public harm. The threat of legal and moral liability has contributed to a shift in corporate strategy towards 'well-ness'. However, even if obesity lawsuits are successful they would inevitably be too little, too late. Moral liabilities, meanwhile, can often be diluted by effective public relations.

Liabilities focus on whether specific people or companies were negligent or set out to cause harm. But current diet-related public health problems are caused by the systematic failure of an entire industry to make it easy to eat well, not helped by the agricultural subsidies discussed in Chapter 2. The government needs to be a firmer advocate of the public's health interests in its dealings with the industry as a whole, working to raise base-line standards of nutrition and to promote a healthy diet for the public at large.

The FSA's current efforts to reduce salt in processed food should be replicated for harmful fats and sugars. This would not mean making food less 'fun'. Many processed foods contain high levels of fats and sugars because they are cheap bulk ingredients and they make processing easier. Food science has shown itself to be remarkably inventive - it is up to the government to help point it in the direction of better public health, not by making some 'junk' healthier but by making less 'junk'. This would help to build business-to-business demand for healthier food ingredients.

The FSA's salt initiative is voluntary and some reports suggest major companies are pulling out.[63] Statutory measures can avoid that problem and the government should use them more readily. Indeed, the government should use the full range of tools at its

disposal, including rules on planning, competition and financial reporting, to help food businesses become more accountable to the public and more supportive of people's rights to adequate food.

4 Genes

4.1 Targeting health improvement

'Personalisation' in the food sector is more about marketing than it is about health, but it is nevertheless underpinned by scientific research. At the leading edge of this research is the emerging science of **nutrigenomics**, which studies how genetic and cellular processes relate to nutrition and health. This includes how people with different genetic variants respond to alternative dietary conditions and how diet can 'switch' genes on or off. Nutrigenomics lies at the intellectual heart of the food industry's 'wellness' revolution and it is increasingly prominent in scientific and policy debates about improving public health.

Food companies are interested in nutrigenomics because it can help them to develop new functional foods. The relevance of nutrigenomics to public health is that it promises the prospect of more targeted preventative healthcare. Different people respond in different ways to similar diets and lifestyles. Although public health advice is already meant to account for genetic variation, the logic is that nutrigenomics could improve on a one-size-fits-all approach.

Even before the advent of nutrigenomics, special public health advice has already been targeted at certain genetic communities facing a particularly high risk of ill-health. The most obvious example is probably dairy products: around 95 per cent of people of Asian origin are lactose intolerant compared with only 5 per cent of Caucasians of European or Scandinavian descent.[64] Type-II diabetes is also more common in Asian and African-Caribbean communities.

Thus, some of the strongest genetic factors in public health are already evident from epidemiological research. Not only can nutrigenomics help to explain some of the metabolic processes involved but it can also identify less striking variations in people's responses to diet.

One of the examples often used to illustrate the **public health potential** of nutrigenomics is ApoE, a gene that plays a part in lipoprotein metabolism. Most people have one of three common variations of this gene and which one you have appears to affect how well you respond to diets designed to lower cholesterol - some studies suggest that 'bad' cholesterol may even rise in people with one of the three main genetic variations.[65] In the longer run this might lead to varying advice on dietary health depending on your genetic make-up.

But the example of ApoE also illustrates some of the **difficulties** in using nutrigenomics to improve public health. A systematic review of the evidence on ApoE found that although the gene affects lipoprotein metabolism it seems to do so in a very complicated way so "the effects of genetic variation are not consistently seen and are sometimes conflicting".[66] Even if a clear relationship is found, point out other researchers, the "challenge is to decide whether this 'additional knowledge' of the intricate workings of lipid metabolism will impact on recommendations for fat intake at both population and individual levels".[67]

In practice, nutrigenomics is unlikely to lead to major changes in **population-wide** public health advice. The leeway that is already found in generic healthy-eating recommendations is sufficient to accommodate major genetic variations.[68] Instead, what is more likely is that generic advice would first be supplemented and then superseded by a more targeted approach.

This vision of genetically **targeted**, ultimately 'personalised', public health measures is shared by government, some scientists and industry. In the genetics white paper, *Our inheritance, our future*, the UK government foresees "a revolution in healthcare".[69] "Above all," it argues, "genetics holds out the promise of more 'personalised' healthcare with prevention and treatment tailored according to a person's individual genetic profile." [70] Since dietary health plays a central role in its preventative healthcare efforts, nutrigenomics is presumably part of this promise. In the USA, the former Commissioner of the Food and Drug Administration has put it more boldly, predicting that "by adjusting nutrient composition in a person's diet according to genetic profiles, gene-based nutrition planning could one day play a significant role in preventing chronic disease".[71]

Nutrigenomics also plays an increasingly prominent role in nutrition science, featuring frequently, for instance, in recent conferences of the UK Nutrition Society.[72] But one of clearest manifestos for a new approach to public health comes from the food industry. Unilever's Frans van der Ouderaa and his colleague forecast:

> "that major benefits for society will arise in the future from modest, individual improvements in health and well-being generating a cumulative, significantly improved pattern of health and well-being across entire populations; and that

> these accumulated benefits from now on will far outweigh those achieved by new medical treatments." [73]

Elsewhere van der Ouderaa predicts that it will be about five years before functional foods can be marketed to groups of people who are statistically more likely to develop a particular disease.[74]

4.2 Tailor-made diets

Some genetic testing companies have taken targeting a step further. They sell genetically 'personalised' dietary advice.

At least 20 companies world-wide already offer a home sampling kit and analysis service, or are very soon to market one. You send them a cheek swab, a lifestyle questionnaire and cheque for a few hundred dollars. They send you your test results, telling you which of a limited range of genetic variants they have found, and suggest changes to your eating habits.

Although these tests are based on nutrigenomics, many scientists working in that broader field, in the public sector and in food companies, have distanced themselves from what they see as a hype-driven testing industry. Nutrigenomics is in its infancy and the critics of commercial genetic tests, which they distinguish as **nutrigenetics**, are worried that 'tailor-made diets' are being marketed prematurely. An expert workshop organised by the Nuffield Trust and the Public Health Genetics Unit at Cambridge found that "researchers believe there is no evidence at present to support clinical applications involving individualised dietary advice based on gene testing".[75]

No nutrigenetic tests are currently marketed in the UK but there is nothing to prevent a company from trying to sell them. Yet, not only is the advice they provide unlikely to benefit the people paying for it, but nutrigenetics might even cause harm by confusing people about healthy eating.

Indeed, any kind of 'personalised' risk advice is difficult to interpret. Whether personal risk advice is based on a genetic test or, for example, on family history, it takes a statistical relationship that holds for the population at large and reinterprets it as an individual probability. Whether this probability is high, middling or low, the implications for individual behaviour are unclear. You only live once, so you cannot develop diabetes, say, *x* per cent of the time. Either you get it or you do not.

So risk information can be useful at a population level but is fairly meaningless for individuals. If you are at high risk should you be fatalistic or should you try extra-hard to lead a healthy life? Does this new 'personal' knowledge come with new personal responsibilities?[76] There are no simple answers. What is interesting, however, is that

recent research suggests people who are told they are at increased risk based on genetic test results, are more likely to look for a medical solution and less likely to try to change their lifestyle than people told they are at the same hereditary risk based on family history alone.[77]

Many critics of nutrigenetic tests, including scientists, campaigners and people from the food industry, argue that tests ought to be **regulated** in the UK, probably under European rules for licensing medical devices.[78] Despite the risk that genetic tests will indirectly cause harm, the main public interest case for regulation is that it compels testing companies to gather robust scientific evidence to back up the claims they are making. If a regulatory system is put in place, it is crucial that tests can demonstrate clinical utility - that the knowledge they yield is not only technically valid but practically useful - before they are given a licence for commercial use.

However, there are also problems with regulation. Would it give tests spurious legitimacy, suggesting to consumers that they are more useful than they actually are? Would it unfairly single out one kind of 'personalised' dietary advice for regulation, when other forms may also pose problems? Whether or not genetic tests are regulated, stronger enforcement of existing consumer protection laws is essential.

4.3 You eat what you are?

Nutrigenetics companies operate on the fringes of nutrigenomics and, on the face of it, the 'personalised' targeting they promise also seems a long way from the kinds of 'personalisation' that the government has in mind. But when we unpack these differences we find some important common threads.

The first difference seems to be that in as much as nutrigenetics and nutrigenomics are both about 'personalisation' and public health at all, they are about **targeting** health intervention more accurately rather than about giving people greater personal **choice.** Indeed, if you do know more about your genetic make-up it implicitly constrains your choices rather than widening them. In effect, 'you eat what you are'.[79]

However, as we suggested in Chapter 2 of this report, the government's own interest in autonomy is fairly cosmetic when it comes to public health. Although *Choosing health* says it is about 'making healthier choices easier', the main message is that if we want to be healthy then we need to make the *right* choices.

The difference between nutrigenetics and nutrigenomics lies less in what is meant by 'personalisation' and more in **how soon** it can be achieved. The nutrigenomics researchers who criticise genetic testing companies are worried that if the hype proves empty it will damage the field as a whole.

However, both share the vision of an increasingly targeted approach to diet and nutrition based on the principle that everybody is different. What is more, nutrigenomics seems to be heading towards 'personalisation'. 'Personalised nutrition', for example, was the focus of the latest conference of NuGO, the EU-funded Nutrigenomics Organisation that links researchers across ten countries.[80] Similarly for the food industry: whereas food companies have generally kept their distance from nutrigenetics, a major food ingredient company recently invested in one of the leading testing firms.[81]

From a public health perspective one problem common to nutrigenomics and nutrigenetics, however far they manage to 'personalise', is that genetic differences are rarely as important as other factors in explaining why some people develop health problems and others do not.[82] Social and economic factors are much more important than genetics in explaining, for example, why Scotland suffers from very high rates of cardiovascular diseases. The same goes for other big killers such as cancers. Where genetics is a key factor, such as in type-II diabetes, that is generally already known from epidemiological research.

Even where genetics is important in explaining health, two further issues mean that targeting people at high genetic risk will only rarely be a sensible way of spending scarce public health resources. On the one hand, if only a small proportion of people are at high risk - which is almost a precondition of a targeted approach - then it is more often still the case that more people in the larger low-risk group will develop the condition in question, simply because they are so much more numerous.[83] On the other hand, if public health interventions are to be targeted at all, it makes sense to focus on people who are most likely to benefit, who are not necessarily the people at highest genetic risk.

Genetic targeting is not intrinsically irrelevant to public health. Nor, however, is it a solution to the major public health challenges we now face in the UK. Nutrigenomics is more like the icing on a cake that is not yet baked. If the oven is broken we need to focus on fixing it, instead of concentrating on the finishing touches.

Of course, there is not a simple either/or choice between nutrigenomics and more urgent public health research and intervention. Rather, both the government and scientists working in this field need to be very careful not to overstate the short- or medium-term public health potential of research in nutrigenomics. It is not enough for scientists simply to assert that what they are doing is different from nutrigenetics. They need to buttress themselves against the pressure to make premature promises about the benefits of their work for public health.

In as much as the public health promises of nutrigenomics partly justify state support for this science, it is essential that **funding agencies** critically assess the potential of nutrigenomics to benefit the public at large. There is little incentive for the scientific community to ask the question 'How will we know if nutrigenomics or personalised

nutrition is a dead end for public health?' Public sector funding agencies, however, have a strong responsibility to ensure that question is both asked and answered promptly.

A second step is to become more responsive to citizens by engaging with them directly, not in one-way education but in a two-way **dialogue**. The benefits of such public engagement are now widely accepted.[84] It is welcome that an element of NuGO focuses on public engagement, but there is little to suggest this has prompted a more critical or reflective attitude to nutrigenomics across the network as a whole.

The problem with public engagement within a research network like NuGO is that the biggest decision of all - to have the network in the first place - has already been made. It is therefore crucial that research funders such as the European Commission and the UK government's research councils promote public engagement **upstream as well as downstream**. Ample guidance on good practice now exists.[85]

Greater public engagement in science is vital. If we think of publicly funded research as a public service, then we are suggesting this service should be more 'personalised', in the Demos sense of being co-designed by citizens and scientists.[86]

But that is not enough to ensure the government's research policy respects people's rights to food and improves public health. To achieve that, public health should be made a **central objective** of the government's support for science and innovation.

There might well be a case for nutrigenomics research to improve our understanding of the way our bodies work. But the government places little value on knowledge for its own sake. In practice, even 'blue skies' researchers compete for a living and it is unusual to find substantial funding where there is no hint of a future return.[87] The main return this government wants, set out in its *Science and innovation investment framework*, is not to improve public health but to make the UK more competitive in an international race to profit from science in today's 'knowledge economy'.[88]

This priority is reflected not only in research funding, but also in intellectual property rules and in the science that the government procures. The government's ambition for the UK to "become a world centre for systems biology" ("it is now the European leader in genomics, closely chasing the US") goes a long way towards explaining why nutrigenomics research is supported at all.[89] The European Commission, which funds NuGO, also focuses its research effort on science that will boost the EU's economic competitiveness.[90] This emphasis within research policy may help to account for the fact that only about 0.4 per cent of UK research outputs are relevant to public health implementation.[91]

Recent research on public attitudes to research on diet and health, commissioned from MORI by the Biotechnology and Biological Sciences Research Council and the Institute of Food Research, found members of the public were concerned about the

idea that boosting UK competitiveness was an objective for publicly funded research.[92] This reinforces the findings of previous deliberative research by the Agriculture and Environment Biotechnology Commission.[93]

Public health needs to be a higher priority for government research policy, though it should not be the only objective. One option is to recognise more clearly that public health is essential to the nation's wealth, so a research strategy focused on wealth creation should aim explicitly to promote public health. In practice, however, the Treasury sees wealth in narrow terms, and to reduce the value of good health to a budgetary saving is to understate its importance. Therefore, instead, we suggest that government support for science and innovation should focus on 'sustainable development' or on 'public value', both concepts in which public health has a central role.[94]

5 Conclusion

5.1 Roles and rights

A more 'personalised' approach is not sufficient to meet the health-boosting, cost-cutting aims of the Department of Health and the Treasury. Nor is it necessary. There may be a case for some forms of 'personalisation' to empower the users of certain public services but, we have suggested, this reasoning does not easily translate to the food system. Instead, the strongest argument for a more 'personalised' approach to diet and nutrition policy is that responsibility already lies heavily on the shoulders of individuals. This argument would imply a quite different 'personalisation' strategy.

The think-tank Demos makes one of the clearest cases that 'personalisation' could lead to more responsive, accountable and democratic public services.[95] It uses the metaphor of a play, describing 'personalisation' as a new script for public services. To perform well all the players involved - the service users and providers - need to act differently.

When it comes to diet and nutrition the cast - the state, citizens and businesses - start with different roles. Government is a regulator first and a service provider only second. Citizens are consumers before they are service users. They are assumed to be sovereign, responsible and independent of the state. And private companies, accountable to their shareholders ahead of their customers, provide most of the goods and services.

The same principles used to reform public services should not simply be transferred to these different conditions. Yet that is what the government is trying to do. The effect is that consumers get 'personalised', in the sense of taking greater responsibility for the task of delivering public health, but government and business do not.

In this report we have argued that a fairer and more effective approach would be to match the new emphasis on personal **responsibilities** with a renewed commitment to human rights. This principle might usefully guide policy efforts to 'personalise' responsibility in other market contexts. Specifically, we have argued that the government must meet its obligations under international law to facilitate, provide, protect

and respect the right to adequate food. It should implement the right to food in UK policies, including clear commitments to:

Facilitate | by improving labelling, regulating food promotion and raising the nutritional quality of people's default food choices.

Provide | by improving social welfare as a public health priority, eliminating serious health inequalities and food poverty.

Protect | by regulating health claims on foods and strengthening corporate accountability.

Respect | by recognising the social and cultural value of food, allowing people to eat good food with dignity, without having to treat food like medicine.

5.2 Big idea, big picture

The government's obligation to respect human rights encompasses the principle that the state should make sure none of its own actions hinders the realisation of those rights. In short, joined-up government is required under international law. A key theme throughout this report has been that a 'big idea' like 'personalisation' can work only if policy-makers look at the big picture.

Thus, the government's efforts to improve public health through better diets and nutrition cannot be confined to public health policy. In particular, a stronger commitment to public health is needed in:

Welfare policy | better cross-government coordination to address poverty, which is a major factor in explaining diet-related ill-health. The priority should be to target deprivation, not to target advice and encouragement at people in deprived areas.

Public sector catering | despite increasing interest in the potential of progressive public procurement to create a healthier food system, hospitals and other public sector institutions are increasingly serving 'personalised' premium products that offer few health benefits. Promoting health in a broad sense, meaning complete physical, mental and social well-being, should be a top priority for public food procurement.[96]

Research policy | the UK's science and innovation strategy needs a broader focus than wealth creation, such as sustainable development, and should explicitly include public health as a top priority.

Business regulation | the government should use all tools at its disposal, including rules on competition and financial reporting, to make the food sector more responsive to consumers and more accountable to the public at large.

Efforts to coordinate policy-making among ministers and departments have either been ad hoc and poorly planned or else the plans have been poorly communicated - from the outside it is hard to tell. But, most crucially of all, the government's approach to 'personalisation' has led it to rule out precisely the kind of systematic changes that are required in the food sector. As John Reid, then Secretary of State for Health, told the House of Commons Health Select Committee in February 2005:

> "We decided that the limits of the envelope should basically be on those issues which could be changed by people changing their own lifestyle *rather than by changing external things in the main* or having things done to people."[97]

This is a big mistake. If 'personalisation' is to help and not hinder the government's efforts to improve diets, nutrition and health, it must guide system-wide interventions, not substitute for them.

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GETTING PERSONAL:
shifting responsibilities for dietary health

Public health is getting personal. The looming costs of diet-related disease have prompted policy makers to look for ways of changing people's eating habits on an epic scale. Government believes the key lies in making people more responsible for their own health.

This 'personalisation' is not restricted to public health policy. It is one of the big ideas for public service reform. It also echoes trends within the food industry and nutritional science towards single-serve, health-focused marketing and genetically targeted dietary advice.

But how will this policy approach, developed to improve public services, work in the market context of the food sector? Will it change people's behaviour and improve public health, and if so at what cost? Will it save the Treasury money? Will it empower people? And what can we learn from this example about 'personalisation' in general?

In this report we examine where 'personalised' policies on diet and nutrition are heading, exploring how they overlap with 'personalisation' in the food industry and in the emerging science of nutrigenomics. We argue that the government should match its focus on personal responsibilities with a renewed commitment to human rights. Specifically, it should meet its obligations under international law to facilitate, provide, protect and respect the right to adequate food.

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