Iain Ferguson, CBE

Iain Ferguson joined Unilever in 1977 as a trainee following graduation from St Andrews University. His early career included roles in operations, sales and industrial marketing. In 1988 he became Chairman of Plant Breeding International and in 1992 his role expanded to include Chairmanship of the Unilever Plantation Group. He moved to be Chairman of Birds Eye Walls in 1995 and then Senior Vice President Corporate Development for Unilever plc and NV in April 2001.

In May 2003 Iain became Chief Executive of Tate & Lyle plc. Tate & Lyle is a world leader in carbohydrate ingredients with headquarters in London; the Group has 8,500 employees and 50 plants in 24 countries.

Iain is active in a number of key industry groups, including the Food & Drink Federation and the British Nutrition Foundation, and is President of the Institute of Grocery Distribution. He is also a Non-Executive Director of Sygen International plc.

He has served on a number of public/governmental bodies, including the Health & Safety Commission quinquennial review, the DTI Foresight Panel, the Board of Companies House (89-96) and most recently as a Commissioner on the Policy Commission on the Future of Farming and Food.

He is married to a historian, Catherine, and they have one daughter, Lucy, aged 18. In the June 2003 Queen's Birthday Honours List, Iain was awarded a CBE for services to the food industry.

The Role of Food in Social Change

by Iain Ferguson
Group Chief Executive of Tate & Lyle plc

Many thanks for my welcome this morning. I am delighted to have been asked to deliver this lecture today.

To be giving the 26th lecture is both an opportunity and a challenge. It has been a wonderful opportunity to look back over the 25 years of wisdom that is so evident in the lectures delivered by my predecessors. The clarity of their vision has been excellent, as I will demonstrate by quoting from a few in the course of my own speech. The challenge for me is to deliver something that will look equally clear sighted in 25 years time. I will have to rely on time to be the judge of that.

This lecture will look at how food and the food industry have enabled social change. Building on that, I will attempt to show that although over the centuries our relationship with the growing, sourcing and preparing of food has changed, many of today's issues are ones that our industry has already confronted in the past. Then I will spend some time looking at the core issue of trust, how we as an industry have won it and what we need to do to maintain and build it. Within this I will look at how best to ensure that consumer choice flourishes and I will point to what researchers can do to give us the tools we need to meet society's latest challenges.

Food as an enabler of social change

I am a chemist by training, not a historian. However, I have been happily married to a historian for 26 years, which is long enough to learn that history is a useful tool to use to inform the present and shape the future. What we understand by the food industry today clearly did not exist in centuries past but agriculture has been a common link through time. It is well known amongst economic historians that one of the first hurdles that needed to be negotiated for society to change from an agrarian to an industrialised one was what is termed the 'Malthusian trap'.

Named after the infamously gloomy economist Thomas Malthus, who was writing in the late 18th century, this theory rightly observed that in a pre-industrial society population growth always outstrips its food supply unless it is cut back to a viable level by famine, plague or war. This 'trap' may best be explained as a situation where agricultural supply cannot meet increased demand for

food caused by population growth. This problem haunted even advanced civilisations of antiquity, indeed in England before the 18th century the population struggled to grow beyond 5-6 million.

The method of breaking out of the 'trap' is a clear indication of how food can change society, because what is needed is an increase in agricultural output sufficient to sustain population growth well beyond previous limits. This was found in England from the mid-18th century. Not only did this 'green revolution' rapidly feed a growing population, but it could do so with less labour.

I don't have time to dwell on the many factors driving the green revolution, but suffice to say that science and technology such as new crop rotations, better soil husbandry, improvements in livestock breeds and seed varieties, and new machinery, together with new property rights following enclosure, were key drivers.

These innovations were first deployed in the UK, and freeing up workers to participate in the industrial revolution enabled this country to surge ahead economically and become the leading industrial society of that age.

And how effective was this increased agricultural productivity? Well, in terms of *labour* productivity, in 1500 over 80% of the population of 2 million people in this country worked in agriculture; in 1850 this had fallen to 20% but fed a population of just under 20 million. This had a profound impact on the urban/rural split and the development of the economy. Clearly, a society which can feed itself effectively with only 20% of its working population in agriculture frees up the remaining 80% to generate wealth in other ways. In addition, once a large proportion of the population is no longer tied to the land it becomes much more mobile. At the beginning of the 19th century only one-fifth of the population were town dwellers, but by early in the 20th century this had swung to four-fifths urban dwellers. This, of course, is a process we are still seeing today as developing countries move towards more industrialised societies - look at what is happening in China right now.

As the 19th century progressed in the UK, the ability of food supply to keep pace with demand from a growing population led to stable food prices, kept inflation in check and enabled consumers to have 'spare' money with which to purchase industrial goods and for the first time other 'luxury' foods, such as meat, imported tea and sugar, and alcohol.

Even in the 18th century the impact on society of these developments in the food industry were evident. The proportion of income spent on food was declining; and economic historians argue that a 'sizeable middle class of consumers' was identifiable as early as 1750. At the same time industrialisation delivered growing volumes of manufactured industrial goods (such as crockery, lace and expanded copper and brass sectors), along with an improvement in quality. These changes permanently affected the levels of expectation among a widening range of people, thus creating some of the first prototypes of today's consumers.

The changing relationship between people and their food

By the time the industrial revolution was in full swing, people's relationship with food was well on the way to fundamental change. With the fall in rural population came an increased specialisation of production and processing.   Where once we all grew what we ate, people were already buying ingredients that had been processed from raw materials, the provenance of which was unknown to them. Those ingredients were also combined and processed to create end products, moving ordinary consumers ever further from the source of their nutrition.

This move away from processing in individual households to specialised firms sowed the seeds of what we recognise as our modern food industry. This was very important and I will give you just two examples of this change: Beer and Bread.

In 1800 around half of all beer was brewed by individual households, but by 1870 this had fallen to 2.5% of total production, the vast majority being produced by specialist brewers.

One of the first staples to be made outside the home was bread; the opportunity to buy it rather than bake at home was an extremely convenient and in terms of fire risk much safer solution at that time. However, it must be noted that this was not universally welcomed. One observer in the early 19th century wrote: "*How wasteful, and indeed, how shameful, for a labourer's wife to go to the baker's shop: and how negligent, how criminally careless of the welfare of his family must the labourer be who permits so scandalous a use of the proceeds of his labour*".

The disconnection by the majority of people from rural life was not the only reason for this new reliance on a specialised food industry, for example urban living conditions were often over-crowded and ill-equipped for cooking. Additionally, while we may think that limited time or diminished desire to cook are new drivers of choice, historians note that in nineteenth century urban England many women worked in factories or in domestic trades and had little time or energy left for cooking. It is interesting to reflect that the fast food revolution started in the pie shops and fish & chip takeaways in the industrial northern mill towns.

By the mid-nineteenth century the majority of individual households had become dependent on professional food suppliers. Grocers and general stores were the most numerous category of all shops by this time, closely followed by bakers.

In manufacturing, rapid changes were also taking place, where technology and innovation, coupled with improved distribution and access to capital helped transform many small scale businesses into large-scale highly mechanised industries. So in everything from flour milling to sugar refining, large-scale businesses absorbed a growing share of the market.

So, what can we conclude at this point? Well, it is clear that agricultural development and an increasingly recognisable food industry are crucial in the economic development of nations, and we are still seeing this today in many developing countries. And through this economic

development comes an evolving society where the majority of the population is increasingly dependent on a food industry. With this dependence comes responsibilities, and it is from here we start to see where we can draw most lessons.

Building trust for food

As the food industry grew, so did its need to meet certain criteria to fulfil its basic responsibilities. In facilitating industrialisation, the food industry then had to respond to the problems of distribution. This was a major problem, particularly before the introduction of railways in the 1830s which revolutionised food distribution to the urban centres. Then of course came the challenge of preserving food until it reached the relatively distant consumer.

In many cases, manufactured products were adulterated at the retail stage, so manufacturers needed to move away from bulk 'commodity' distribution towards packaging which was harder to tamper with and also allowed the manufacturer's name to be carried. Indeed up to 1875, when the first effective regulation - The Sale of Food & Drugs Act - came into force, it was commonplace to add alum lime, chalk and even powdered bones to bread and the leaves of native plum trees, horse chestnuts and sycamore to tea, and for milk to be found to have up to 50% additional water added. In some cases, the population had become so used to foods with their unofficial additives that demand fell when the natural state was restored.

It was in 1909 that the forebear to IGD, 'The Grocers Institute', was formed as a registered charity. At this time a major aim of The Institute was to train grocers in the science of grocery, including recognition of adulteration in foods, weights and measures, and preparation.

I could go on, but I think it serves to demonstrate that a guarantee of purity has become increasingly important. And so has safety. Our industry has a fantastic record in meeting the food safety challenges. Today's food industry is able, through monitoring and technology, to assure that food consistently meets the required specifications, and ensures that the food it provides consistently reaches high levels of safety, whether sourced in the local area, or from a distant part of the planet.

I think it is generally accepted that brands developed out of the need for food manufacturers to assure the purity of their food in the face of widespread adulteration by some manufacturers and traders. Over time, brands developed that command loyalty with customers and help drive sales. At the heart of this loyalty, consumers trust that a successful brand will meet their basic criteria: Can I get it; will it be in good condition; is it pure and safe; will I enjoy it as much this time as I did last time? But increasingly, consumers expect much more than the delivery of basic criteria in a consistent way.

Meeting greater expectations

To maintain this trust, modern branded products often need to convey a complex mixture of additional positive attributes to the consumer. I have already hinted that convenience is an attribute that is highly valued. It is a term that many of my predecessors on this platform have referred to, and rightly so - convenience is a key driver of how today's customers choose what they buy.

However, convenience is not a new concept. You might recall my earlier reference to bread and be thinking, 'bread isn't a real convenience food'. So let me give you some other examples of convenience in the early 20th century: Powders that were being produced for making custard, jellies and the like. Porridge that could be made in two minutes; American style cereals (just add milk); and a million bags of potato crisps sold as 'snacks' as early as 1928. Indeed by the 1930s historians note that 'almost every kind of domestic and foreign fruit, meat, game, fish, and vegetable was available in tins at prices which many people could afford, at least occasionally' .

Today the call for convenience is driven by the demographics of smaller households and an associated erosion of traditional meal patterns. Increasingly, individuals are likely to cook just for themselves. It should be remembered that the 'convenience factor' offers not just reduced preparation and cooking time, but also uses fewer pots and reduces washing up time.

And thanks in good measure to the dedication of food researchers we have the technology to deliver on this need. With the introduction of microwaves and steamers has come a variety of types of 'ready to eat' meals that take a fraction of the traditional cooking times.

While people trust branded and particular own-label ready made meals to be tasty, easy to prepare and safe to eat, the escalating demand for pre-prepared meals sets a new challenge that brings us very much up to date.

Diet and Health

Diet has of course been a concern in earlier centuries. The fast industrialisation of the late 18th and 19th centuries posed many problems for workers' diets. Not only in effective distribution to towns, but also in the ability of urban workers to afford a decent diet in the face of highly fluctuating food prices and sometimes unstable wages. Even then the food for the masses was described as 'at best stodgy and monotonous, at worst hopelessly deficient in quantity and nutriment'.

But, the full-scale physical problems caused by a generally poor diet only seemed to come to the fore much later when recruiting to fight in the Boer War and later still World War One. The Physical Deterioration Report of 1904 makes chilling reading, with 50% of urban recruits in 1900 being malnourished and unfit to bear arms.

Diet remains an important issue. In earlier times it was because the population was not getting enough calories. Today, there is sufficient evidence to confirm that in many cases, significant sections of the population are consuming more calories than they burn.

Almost every day, statistics are published that, when extrapolated, point to obesity as an ever-rising issue in the developed world. Picking just one, the British Nutrition Foundation estimates that if trends continue, by 2030 over 50% of the UK population will be clinically obese, with all of the long-term health implications this implies.

It is no secret that a surplus of calories will lead to weight gain. A person living in a developed society in general does not perform hard physical labour in the workplace; is able to move around the neighbourhood, country or globe with little physical effort and has sufficient money to buy as much food as is wanted. In these circumstances the temptation is to consume more calories than are strictly needed.

Looking back at the previous 25 Campden lectures, diet and nutrition feature in many, here are some tasters: In 1980 Prof. R.F. Curtis, Director of the Food Research Institute said that "*consumers will become more concerned about nutritional issues in relation to food… and this will be backed by Government as there is greater recognition of the need for preventative medicine rather than curative medicine*". The following year Ken Durham of Unilever called for greater attention to be paid to the nutritional aspects of food and suspected that in the future "*the food industry will have to sponsor significant work on nutrition…if only to offer a sensible defence against accusation that our processes take most of the goodness from the food*".

With the benefit of hindsight I think the observations made by both speakers have turned out to be valid in the intervening two decades.

Looking forward, it is wrong of course to talk about diet without also referring to health. At the end of April this year, Sir Liam Donaldson, the Government's Chief Medical Officer, appealed to the public to take more exercise. The tenet of what he said was that people do not necessarily need to go to a gymnasium, as normal activities can use up energy. However, people should be more aware of how much exercise they need to take to stay healthy and should make a positive effort to do sufficient activity to achieve this.

Whatever an individual's exercise regime, there is a diet that will help him or her maintain a healthy lifestyle and the foods needed to achieve that are already available in every supermarket in the land.

When the majority of food was consumed as meals prepared at home from basic ingredients, it was clear where the key decisions regarding choices for a healthy diet lay. The decisions usually rested with the housewife, who controlled the component ingredients used to make her family's meals.

That is less often the case today. Many consumers are almost totally abstracted from contact with and knowledge of individual ingredients to the extent that they only ever consume whole meals that have been pre-prepared by the food industry. During his speech on this platform in 1991 Dr Tony O'Reilly of the Heinz Company observed that "*Modern consumers have entrusted their health and safety to food processors. We are obliged to use our knowledge, our technology and our best judgement to remain faithful to that trust*". Thirteen years later this is more relevant than ever and means that we must work together with others to ensure that these people have the knowledge, information and the product range they need to make the choices best suited to them. If we ignore or shirk these challenges we will lose the trust of our consumers.

I know our industry won't shrink from this challenge and I will now look at three routes to helping address the issue: First, Labelling & Knowledge; second, Choice; and third, Functionality.

Labelling and Knowledge

One of the panaceas often presented is the provision of more meaningful labels. Of course, most of the at least 10,000 or so items available in an average supermarket already have labels attached to them. The amount of information they contain is mind boggling and often difficult for most people to interpret. Therefore, I agree that we absolutely have to find a way of making labels more meaningful.

For this to happen, the information on a label has to be related to a realistic understanding of its effects on the people who will eat the food. This is not as straightforward a proposition as some proponents of Good Food:Bad Food labelling, the so called "traffic light labelling" approach, would have you believe.

I am not dodging the question when I say there is absolutely no way that a single red light:green light style of labelling would improve food choice. It is not possible to use such a simplistic system to distinguish effectively between the needs dictated by different sex, age, genetic predisposition, activity level or culture. Put simply, the needs of a 13-year-old girl undergoing puberty are very different from her male classmate.

As we all know, this is an area of intense activity at the moment and we will all be interested to learn whether the recently announced Tesco multi-traffic light approach helps consumers to make informed choices.

In looking forward, in accepting the responsibility to improve labelling, the food industry must enlist researchers to help us choose the right way of framing, presenting and highlighting nutritional information that people actually read and use. We must base our decision on well-founded science, not conjecture.

But that is of course only one part of the picture. Knowledge of how to use this information will not come through osmosis. It will come through well-funded and coherent information and

education that links labelling to lifestyle. And it is here that Government has a major role in leading this process and helping bring together all the interested parties to speak with one voice. This is a non trivial task given the Babel of contradictory and competing messages that currently fill the airwaves.

And here there have been successes. The British Nutrition Foundation is a good example, where industry and government come together to raise understanding of key issues informing this agenda. Elsewhere, as an industry, we are working hard to contribute positively and support the upcoming Department of Health paper on public health, which offers a real opportunity to look at all the factors that contribute to the health of our nation.

Choice

Education may be one of the Government's major roles, but it has another very important one: Creating and sustaining an environment where competition can flourish. Because it is only through competition that real consumer choice can prosper.

The importance of this should not be underestimated, and if we want an example where over-regulation has contributed to the disconnection of the food chain and abstracted producers from their customers we need look no further than the European Common Agricultural Policy (CAP).

The Policy Commission report on the future of farming and food (commonly known as the 'Curry report') summed up these problems eloquently: *"The production subsidies paid to farmers under the CAP have become part of the problem rather than the solution. They divide producers from their market, distort price signals, and mask inefficiency. As result, some farmers have been slow to meet their customers' requirements, slow to change, and slow to innovate."*

I am proud to have been a Curry Commissioner and I know that Sir Donald gave this lecture last year. Today, the industry and a wide range of other elements are building on the initial report to reconnect the supply chain.

For its part, Government's role looking forward should be to ensure that there continues to be competition, because with this will come innovation and new products that will meet the ever widening nutritional needs of our consumers. This takes us to my third pointer for the future.

Functionality

The role of food and the food industry in society has expanded, from providing the raw fuel, to one that offers the potential for advanced health or lifestyle benefits. Recent consumer demands are for foods that provide specific functions over and above calories and normal nutrients. The food industry is already responding through increased research into neutraceuticals, and more food

products with functional elements are appearing in the market place that offer a variety of benefits, examples include:

- Eggs and bread with omega 3 fatty acids
- Bread fortified with folic acid
- Energy drinks
- Cholesterol reducing margarines
- Probiotic yoghurts

But of course pure functionality is not always enough, as the producers of GM tomato paste found out to their cost. These problems were in the future when in 1997 Professor Derek Burke took to this platform to talk about 'What biotechnology can do for the food industry' and reported that the modified paste "*sold well, and the marketing strategy had clearly been a success*". However only three years later, in 2000, Sir Robert May was able to reflect on the changing attitudes to GM when he said: "*A global commercial free-for-all in biotechnology could all too easily lead to the kind of backlash already experienced by those in the GM food industry*".

This just goes to show how quickly public opinion can move in favour of or against a particular technology and how careful the food industry must be in conducting good technical and market research.

Coming back to functionality in general, what the food industry has found is that functional products must actively benefit health and lifestyle. Only in this way can brands build loyalty and of course generate improved returns for their products. And of course, our industry must continue to contribute to the continued improvement in people's life expectancy. So here is another challenge for the researchers, help us to continue to offer new ways of helping our customers maintain active and long lives.

Other technologies

Before concluding I would like to focus on one more use of technology and the potential it may have for the food industry and consumers alike. I hope it demonstrates the power and importance of continuing research and technological development in the grocery sector.

Consider a world where household appliances (cookers, fridges, microwaves, washing machines etc) can all be controlled from mobile phones; allowing you, for example, to call your cooker on the way home and switch it on, or warn it that you will be late so that it turns the heat down. Not only this, but each appliance is able to diagnose its own faults and call the relevant manufacturer asking for repair.

Or how about a dustbin in your kitchen, with the capacity to detect and re-order products on-line from your local supermarket, using its ability to identify the packaging you are throwing away.

Everyday use of these technologies is not far away. Broadband and Radio Frequency Identification (RFID) are making this possible and major advances continue.

RFID technology is already being heavily trialled in supply chains, and has been in use for some time on high value products. It is probably only a matter of time before individual items use RFID technology in place of barcodes.

As a final example, marketeers are very excited about the potential for dramatically improving the 'personal shopping experience' by using RFID in loyalty cards combined with knowledge of previous purchases to target individuals as they enter a store and move around it with personal marketing messages.

Conclusion

In conclusion then. The food industry is clearly an integral part of society and its evolution, and I hope I have shown today that it has enabled significant beneficial changes to have been realised over time. Today, we face a challenge to address the problems caused by the relative abundance and affordability of food coupled with increasingly sedentary work and recreational environments.

In addressing this, the food industry has an important role in ensuring the availability of relevant, straight-forward and applicable information. We also have a role in continuing to innovate and deliver an ever wider range of nutritional and functional options and this is a role where research will be vital. If we achieve this efficiently we can ensure that all options are realistically available to everyone, not just the relatively well off.

For its part, Government must foster the necessary partnerships to ensure that there are effective education and information programmes to develop the necessary consumer knowledge. Government must maintain an environment where creative competition flourishes.

What Government should avoid is the imposing of the day's fashionable solutions through short-term regulation. As we all know, there is plenty of evidence available to show that knee-jerk solutions don't work, either in the short or the long term. Indeed, such actions often yield unexpected consequences.

As someone who has spent all his working life in this industry I have a personal stake in ensuring that food companies pass the cocktail party test. By that I mean I am able to tell people what I do at the local drinks party without shame or embarrassment. I want to avoid being pushed into a corner to face a barrage of complaints. Today I can say with pride that I work in the food industry.

For the future it will be up to all of us to ensure that we maintain the trust of our consumers and respect of our peers. I have no doubt that with the help of the companies and institutions represented by the people in this room, together with the dedication of researchers in Campden and Chorleywood Food we will achieve this, and continue to be a force for good in society. Thank you for the opportunity to deliver this lecture.