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IS 'GREEN BUSINESS' A CONTRADICTION IN TERMS?

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Good evening ladies and gentlemen, and welcome to this lecture on green businesses, and supposedly green businesses. As ever, I am grateful to the Frank Jackson Foundation for sponsoring the Environment Professorship, and I hope to provide you with an interesting and thought provoking talk tonight. I am also hoping to avoid being sued by anyone who objects to what may prove to be a challenging and uncomfortable subject.

As any of you who browse along Britain's High Streets, or drive along our motorways will notice, posters in shops and banners on trucks are increasingly trumpeting the environmental credentials of businesses. The slogans speak of being carbon neutral, or environmentally-friendly, or using responsible sourcing for their raw materials, and they have become routine now, not as noteworthy as they were a few years ago when there were far fewer. Almost all of our major UK supermarkets, for instance, have strong environmental messages, at least about some of their products. You may see some familiar slogans here. The same messages are also being promoted by industries who work behind the scenes: manufacturers Unilever (here seen compressing the size of their aerosol cans, though not abandoning this form of product delivery altogether), and engineering companies such as Arup and WSP, for instance. WSP say 'We transform the UK's built environment and protect the natural environment, helping our clients find sustainable solutions and overcome environmental risks (sic)'. The Royal Mail and British Telecom are also part of the green vanguard, it seems. Chaired by former Labour MP Joan Walley, a significant group of UK businesses known as the Aldersgate Group have been working together for several years to lobby the UK Parliament to maintain and enhance environmental standards, including well known companies such as Ikea, Kingfisher, Legal and General, Marks and Spencer, National Grid, Nestlé, Siemens, and Tesco. But perhaps many other companies are lying about their efforts and intentions.

Simultaneously, we have diesel car emission frauds created by apparently reputable car manufacturers, such as Volkswagen tweaking their engine testing software, followed closely by Volvo, Renault, Jeep, Hyundai, Citroen, Mercedes and Fiat whose cars all emit far higher levels of pollution under real world driving conditions than their theoretical test data would suggest. As you may know, Volkswagen had apparently intentionally programmed turbocharged direct injection diesel engines to activate emissions controls only during test cycles, not during normal running on the road. In January 2017, they pleaded guilty to disseminating this environmental misinformation and are to pay US\$4.3 billion in penalties in the USA, and one or two people were jailed. That sounds like quite a price, (despite the fact that in Europe the legal consequences were much lower) but I think it is likely that despite the positive message they now convey to aspirant purchasers about recycling and environmental credibility, VW were not alone in cheating. We have also seen heavy truck manufacturers doing the same thing: Caterpillar, Renault and Volvo, for instance, who programmed their trucks to keep NOx emissions low during the emissions test cycles, whilst actually emitting up to three times as much of the polluting nitrogen gases when on the road. Often, this was in the interests of demonstrating improved fuel efficiency, a difference that I noted when my own car, an Audi, went back to be 'adjusted' following the outbreak of the VW scandal in 2016. Afterwards, it was using about 10% more fuel for a standard journey, and presumably emitting more carbon dioxide as a consequence. The level of public disbelief in human-induced climate change is also falling, though naturally there remain uncertainties. 200,000 fewer diesel cars were sold in the UK 2017, compared to the previous year, perhaps reflecting increasing public awareness of environmental



issues and the demonization of diesel in particular. VW's recent messages refer not to greenhouse gases, but to recycling possibilities; their production apparently 'protects our world'.

Some industries would appear today to be inherently unsustainable in environmental terms. For example, despite the oil industry 'beginning a journey towards setting up an investment fund for improved energy efficiency' as was suggested in the media in 2017, it generates more income by selling more oil, which will in turn generate more greenhouse gas when burnt. If we step back to the 1990s, the fossil fuel industry's environmental messages were clear. Chevron, for instance, claimed to be protecting mountain wilderness areas, and the local bears, by drilling very quietly for oil in the valleys. We may well continue to be sceptical.

The figures on investment by Shell and BP for instance speak for themselves. Shell, appears to have put only about 0.7% of its investment into renewables, despite making some environmental claims and recently establishing a 'new energies' division. It is also looking at supporting electric car charging networks. Oil company BP appears to have moved a little further, with 3% of its current investment going into non-fossil fuel initiatives. These are 2016 figures, but I am sure that the latest ones are not very different. BP states that 'Our goal of achieving no damage to the environment guides our actions. We consider local conditions when determining which issues would benefit from the greatest focus'. They are also supporting the Oil and Gas Climate Initiative, mainly promoting methane reductions and carbon capture and storage technology, the latter which is yet to show major possibilities. And they have expressed surprise about the speed at which the industry is changing. Their 2016 Sustainability Report reminds us, amongst other things, that alongside seeking to be a good corporate citizen, they provide £billions in tax revenues.

You will, at this stage, need to draw your own conclusions about whether these messages are 'greenwash', or not, greenwash being defined as marketing being deceptively used to promote the perception that an organization's products, aims or policies are environmentally friendly. Certainly, BP is looking at climate change questions, perhaps being driven away from 'business as usual' by a growing public mood for disinvestment in fossil fuels.

Some products are certainly 'greenwashed', shouting very loudly about being environmentally sensitive, whereas in reality they are not. My own particular source of irritation is patio heaters. Here's a wonderful advertisement for a make of patio heater that is apparently based on infrared short wave radiation, which according to its advertising is up to 89% more efficient than gas heaters at heating the western arm of our galaxy, as well as heating those restaurant patrons who want to smoke, and have to be kept warm whilst lounging outside in T shirts. This is not a sustainable product, at least in relation to greenhouse gas generation, however it is sold to us, and whatever logos appear on the website. I think this one is Danish.

Before we get into the details of some interesting greenwash and fake news stories, I need to reflect for a minute on the nature of 'business' and what the term covers. When we think of the impact of business on the environment, we may think first of manufacturing industry – manufacturing of goods, that requires resources such as metals, minerals, plastics, biological products and so on. In the UK, despite assertions to the contrary, we remain a major industrial force in this context, lying 7th in terms of the commercial value of our output in 2016, at £360 Billion. And 6th in 2015; we have now been overtaken by South Korea. But we are not only making things, but generating Gross Domestic Product by selling services, and (to a lesser extent), engaging in agriculture. The global map shows the balance of the three elements globally. As you will see, in the areas shaded blue, such as the UK, the service sector dominates. The reddish tones cover countries with a greater focus on industrial production, and there is a minority of countries in Africa and South East Asia where agricultural production dominates the economy. Areas with a more equal balance have purplish tones: China, for example. However, all of these sectors of 'business' are relevant to our consideration here, and all are generating green messages, to a greater or lesser extent now, to highlight their environmental credentials.

There are green marketing scams, and dubious data uses. For some people, there are scientific hoaxes, lies suggesting for example that climate change is a fiction thought up by scientists keen to secure more research funding, or industries keen for us to buy new low carbon products, which actually require unnecessary changes to lifestyles. We have also had greenwash concerning such things as 'biodegradable plastics', and a fashion



industry that claims to be sustainable, whilst selling more and more clothes every year. And then there is fake news, and a new emphasis on what seems to be a 'post truth' society, where if something is repeated enough, people will end up either believing it or not caring. Or possibly admiring the originator of the 'fact' for their tenacity in the face of suggestions to the contrary.

In fact, the latest figures for the UK public do suggest that industries may need to be careful how they behave in future, because a majority of the public, although somewhat fickle, are currently saying that they do want to make a positive difference to the environment by making changes to their lifestyles. They also display a largely positive outlook on whether they personally could make a difference, particularly in relation to reducing their carbon footprint. This compares with the situation a decade ago, when 75% or more were challenged to see how their action could make a difference. I am grateful to 'Compare the Market.com' for this data, which together with other material will appear in a press release later this week. The poll of 2000 British people did also show the most favoured environmental actions, which included waste consciousness, reducing plastics and packaging, eating less meat, driving less, and home energy efficiency. These are all perfectly rational, even scientifically-based approaches, but ones that may cause car manufacturers, energy companies and butchers to feel somewhat under threat.

It is not my intention tonight to harangue various businesses about their environmental credentials, or to preach about the rampant impact of uncontrolled capitalism, for which of course we are almost all responsible as consumers. Rather, I want to look at how these environmental messages come about, perhaps how we might recognise the worst examples as fake, and then to evaluate whether industry and commerce are now genuinely moving in new directions. Have we gone through an industrial transition, where we are now living in a more accountable and environmentally-friendly post-industrial world? It is, to my mind at least, important because alongside the shifts in climate that are being recorded now, and the implications that are being seen in such parameters as Arctic Sea Ice, loss of biodiversity, ecosystem changes, insidious contamination from plastics and other toxic products, and air pollution amongst other things, perhaps other things are also happening.

So, businesses may try to adjust our view of reality, in order to promote their interests, and those of their shareholders. On the screen now, I have listed some of the typical types of 'greenwash', which range from outright lying (to which I will return later) through lack of substantiating proof or certification, through claims that are so vague that they tell us little, to irrelevance: claims that may be true, but are unimportant or unhelpful for consumers seeking environmentally-preferable products. Continuing, we also have false labelling, hidden trade-offs (where a beneficial part of the impact of a product is praised, whilst ignoring another adverse impact), or explaining that something is the lesser of two evils (that is, that it may not be great, but it is not as bad as the alternative). I am afraid there are a few more types too, according to work by Gillespie: claims that are 'just not credible', because they relate to inherently dangerous products such as organic cigarettes; gobbledegook, where the statements are too complex to be understood by the average person, and using evocative pictures, such as flowers coming from car exhausts.

I want now to look at some particular environmental challenges that raise issues about greenwash and business, because in these cases the environmental damage is fairly clear, even if responsibility for it cannot easily be allocated.

The Aral Sea, in central Asia, is shrinking rapidly. Thirty years ago, it had standing water over a substantial area, and in the nineteenth century, before the advent of satellite imagery, it was recorded as a spectacular scene, where the Russian Navy practiced their arts and sciences. By 2003, major shrinkage and acute salinization was apparent, and by 2009 the 'Sea' was almost dry. Derelict boats were permanently beached on the former shores, and the residual water was a briny and contaminated fluid, with damaging ecological and health consequences. The cause of this was extraction of water for cotton growing, to feed an apparently insatiable desire for clothes in the West. The latest image, 2017, shows little change. Processing the cotton also produces waste products from the cleaning and dyeing processes that contaminate local watercourses, this one apparently (although the image is not attributed, on the 'buy natural cotton' website on which it appears) in Uzbekistan. It might be a lie, of course.



Cotton is a highly damaging ‘natural’ product, whose cultivation requires large volumes of water, far greater than can naturally be replenished in this near-desert area. The analysis here, done by Defra in 2010, shows the relative impacts of cotton as against other textiles. It is thirsty, space and energy consuming, and emits a lot of greenhouse gases during its growth, collection, processing, and weaving. You will note actually that wool is also demanding on some counts, whereas some of the modern artificial fibres are better on some parameters such as water use. Farming is also an industry, of course. This analysis was done before the recent studies of microplastics particles revealed the loss of polyester fibres that break down only very slowly in water. In order to understand the impact of cotton production, a full Life Cycle Analysis needs to be undertaken, and the diagram here shows an introductory one, identifying the impacts on natural environment, water, soil and the human environment. It takes into account the opportunities for reuse, recycling and incineration.

Some companies are trying to work to reduce these adverse impacts, and a plethora of certification schemes have emerged, the logos for some of which are shown here. Most people will not know whether any of these have value in identifying ‘environmentally better’ products. However, on UK High Streets, clothing companies such as Primark are suggesting that they use ‘responsible sourcing’ to reduce their environment impact; they particularly mention cotton. They also include a range of other activities they do to improve their performance, such as using brown paper bags, and donating samples to clothing charities. This all seems very worthy, and laudable.

Another UK clothing and home products company, Next, also tells us in its corporate responsibility statement that it recognises its environmental obligations, focusing its environmental efforts on areas such as energy and carbon emission reductions, and resource efficiency. In the same way as Primark, it produces a statement in which it commits to a range of actions, again including resource efficiency. However, there are ways of interpreting this phrase – perhaps it implies only cutting the cloth carefully to avoid waste, rather than anything relating to sustainable water use in the production of the cotton. Of course, both actions would be helpful. Little is said about water use in the production of the raw materials, only about water use in new premises, but it appears very positive.

With clothing being a crucial part of the environmental impact of all of us, an external analysis of cotton-using textile retailers was undertaken last year in conjunction with WWF. They examined a number of retailers to see whether any were making good progress, and who was lagging behind. The results showed that in relation to environmental policy, uptake of recommendations, and traceability of products, some retailers had made good progress, and perhaps deserved their green credentials. Ikea, Marks and Spencer and the now defunct C&A received first class marks. Benetton, by contrast, were only ‘starting the journey’, well down the list. What of ‘Next’, with their environmental statements? Sadly, they appear almost off the bottom of the scale, alongside Ralph Lauren, and the US giant, JC Penney. Surprising, and perhaps there is ‘greenwash’ here, as I have no reason to believe that Next is the victim of any subterfuge or lack of independence by the researchers.

Of course, the waste element is something for which businesses are not the only culprits. We buy products and dispose of them very readily. There is a growth in waste products associated with manufacturing and consumption of various sorts, that is so significant that we now have a newly approved (by the International Commission on Stratigraphy) geological layer of Anthropocene deposits, which include plastics, disposable sanitary products, and all the rest of it, that reflect a situation where human agency is affecting the planet more than any natural forces. And industry and households themselves are almost equal currently in terms of generation of waste, including textiles, one of the environmental elements.

I want to look at a second example. The recent surge in attention being given to plastic particles in the ocean, fostered by Sir David Attenborough’s excellent series, was reflected in the Compare the Market.com figures for public concern. The pictures are appalling, with plastic bottles a major culprit for the damage. They are now found everywhere, even on shores in Antarctica.

The company Coca Cola produces a lot of literature about its environmental performance, including an extensive sustainability statement. They say ‘To reduce CO2 emissions of ‘the drink in your hand’ by 25%, Coca-Cola will work to reduce the greenhouse gas emissions across its value chain, making comprehensive



carbon footprint reductions across its manufacturing processes, packaging formats, delivery fleet, refrigeration equipment and ingredient sourcing.’ Again, it is a very positive statement. However, an analysis of their performance in terms of statements versus investment is revealing. They note that all of their bottles and cans in the UK have been recyclable since 2012 and that they will commit to increasing the amount of recycled plastic in each bottle from 25% to 50% by 2020. They are also switching some of their production, and support development of a deposit scheme for all bottles produced in the UK. However, they make 3400 bottles globally every second, the number is increasing, and it would be possible to make all bottles of wholly recycled materials now, if the investment was made. Plastic packaging figures are commercially sensitive, and hence not available. My figures are taken from reports in the Daily Telegraph, not noted for criticism of business. So, again the question arises, is the environmental media material from Coca Cola merely greenwash? Indeed, I like it myself, and quite frequently buy and drink it.

One attempt to explore the issue of greenwash in more detail was an investigation into ExxonMobil, another oil company, by two Harvard researchers, Supran and Oreskes, published last year (2017) in the open source publication Environmental Research Letters. Using text analysis of 187 ExxonMobil Corporation documents, both internal to the company and external, they looked at statements made about climate change. The documents they read included advertisements, internal memos, ‘advertorial’ (paid content in magazines) and other material. Specifically, they examined the articles’ positions on climate change as a real, human-induced, serious and solvable problems. In all four cases, they found after rigorous statistical analysis that as the documents became more publicly accessible, they increasingly communicated doubt about climate change. 83% of the peer-reviewed papers and 80% of the internal documents acknowledged that climate change was real and human-caused, whereas only 12% of the paid for advertorials said the same thing. 81% of the latter expressed doubts. So, ExxonMobil clearly appeared to be misleading the public, deliberately, by not saying the same thing internally and externally. It advanced the science of climate change through its scientists’ academic publications, but promoted doubt in the minds of readers amongst the general public. This surely has to be business ‘greenwash’?

Finally, a brief example from a company specifically working in an environmental domain. Thames Water, as all UK water companies, has a strong environmental message repeated throughout its publicity materials. It is also regulated by the Environment Agency, and legally bound to meet various environmental targets in relation to water quality in rivers into which it discharges treated human wastes. However, earlier this year, they alongside three other water companies were prosecuted for environmental damage. How does this relate to the idea of ‘greenwash’? Do they simply say one thing, and do another when it suits their business?

If we return to the ‘greenwash’ definitions, I showed earlier, we might usefully reflect on those again. In the examples I have discussed, and I could have taken hundreds of others, there are mismatches, lies, vagueness, lesser of two evils (to a lesser extent in these examples), and some evocative pictures in Corporate Responsibility Statements and Environmental Reports. But I can add some others to these, as well, particularly when we consider the individuals who make various debatably green claims. namely making a genuine error of judgement, misunderstanding, or accident, telling only part of the truth, ‘lying’ because of (deliberate?) misunderstanding, because it suits our mindset better than an alternative, and lying to ourselves because we are afraid/frightened to confront reality. There are others too, again in a more individual and personal capacity, including cognitive dissonance where we hold two opinions concurrently, or we are in denial because the reality is too complex or challenging to contemplate (perhaps global warming). The point here is that not everyone sets out deliberately to mislead for commercial gain.

Some companies are also apparently working hard to push forward with environmental initiatives. Here we see Visa committing to renewables (though how it will manage that is an interesting technical question), Lego using more environmentally sensitive plastic sourced from sugar cane, Unilever making huge shifts in its production, transport and packaging methods, and Arup with a strong commitment to pushing its own clients to more sustainable solutions for development, because, as its suggests here in this quote, it makes good long term business sense.



How can we evaluate these moves, to see if businesses are genuinely making positive moves, or not? I have demonstrated that many business environmental statements are dubious in their veracity, and utilise non-comparable metrics. However, more is happening in relation to the UN Sustainable Development Goals. For those of you who are not aware of these, the Accord sets out 17 goals, the development of which was driven in part by businesses. All of them are related to everyone, but those specifically pointing at business and industry include Goals 8 (Decent work and economic growth), 9 (Industry, Innovation and Infrastructure) and 12 (Responsible consumption and production). The diagrams here suggest how they are related, and these would form a useful benchmark, not only for the supermarkets who recently signed up to them.

Not that this is only recently recognised, as this 1821 quote from the French socialist Charles Fourier showed when talking about the widespread destruction of deciduous forests by shipbuilders, amongst other industries. I still have no complete answers for you, except to suggest that in every case of potential greenwash you look at the opportunity for lies to be purveyed, and that you also bear in mind the motto of the Royal Society, founded in association with Gresham College 'Take Nobody's Word For It'.

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