2 Linking planetary boundaries and overconsumption by individuals

A new frontier for (EU climate) law?

Javier de Cendra de Larragán

2.1 Introduction

It is widely accepted that in order to avert dangerous climate change, both producers and consumers need to change their behaviour, and need to do it relatively fast.[1] What is much more controversial is what part law should, or could, play in bringing about such change in behaviour, particularly in relation to consumers, and the issue has not received sufficient attention in the literature.[2] This chapter seeks to add modestly to the discussion.

In the last 40 years or so, environmental law has mainly focused on producers of goods and services to encourage them to reduce pollution and waste.[3] But law has been more timid in dealing with the environmentally damaging behaviour of consumers, even if their contribution to environmental pollution and degradation has been increasing steadily.[4] The preferred approach has been to persuade consumers to adopt more environmentally friendly lifestyles. Lifestyles have been defined generally as 'the way in which a person lives'[5] or as 'a way of life or style of living that reflects the attitudes and values of a person or group'.[6] This goal has been pursued mainly through 'soft' measures that provide information, education and (economic) incentives to change behaviour and lifestyles. A particularly illuminating example is waste law and policy. Waste legislation is believed to have been extremely successful in

1 See, for instance, N. Stern, *The Economics of Climate Change: The Stern Review* (Cambridge: Cambridge University Press, 2007).

2 See most recently, K. F. Kuh, 'Capturing Individual Harms' (2011) 35 *Harvard Environmental Law Review* 156.

3 For a detailed description and analysis of EU waste law, see G. Van Calster, *Handbook of EU Waste Law* (Oxford: Oxford University Press, 2007).

4 K. F. Kuh, 'Capturing Individual Harms' (2011) 35 *Harvard Environmental Law Review* 156.

5 The Oxford Dictionary online defines lifestyle as 'the way in which a person lives'. Moreover, it notes that the term can be used as a modifier 'denoting advertising or products designed to appeal to a consumer by association with a desirable lifestyle'. See http://oxforddictionaries.com/definition/lifestyle.

6 www.thefreedictionary.com/lifestyle. The term has sometimes been criticized as voguish and superficial, perhaps because it appears to elevate habits of consumption, dress, and recreation to categories in a system of social classification.

achieving its goals across the EU. For instance, it seems that waste law in the UK has led to a decrease in the total volume of waste generated by households that goes to landfills, thanks to a combination of EU waste legislation and UK waste policies.[7] In Germany and the Netherlands, municipal waste generation fell during the 1990s. However, even waste law does not impose upon consumers any limits on the amount of waste they generate, and the fact is that the total volume of waste within the EU continues to increase.[8] EU waste policy has sought to reverse this trend by focusing on prevention and a shift to more sustainable consumption patterns, seemingly following the mantra that persuasion is superior to coercion.[9] The logical corollary is an increasing focus in the legal literature on the findings of social science research in human behaviour in order to help design more effective policies,[10] which has started to permeate legislation.[11]

These developments within environmental law need to be placed within the context of other non-legal literature exploring the scale and urgency of current environmental problems and their root (social, economic, political) causes. First, scientific literature exploring current environmental problems increasingly resorts to the idea of limits in the carrying capacity of the earth that, if surpassed, will negatively affect the capacity of societies to thrive.[12] Second, scholars studying the link between behavioural changes at individual level and the broader 'milieu' within which those changes take place often reach the conclusion that consumers are 'locked into' many environmentally damaging behaviours that they often cannot change, even if they really want to (though often they might not want to at all);[13] present societal structures in Western countries are committed to levels of production and consumption that are essentially unsustainable, and in the absence of sweeping structural changes, discrete changes in behaviour will be unable to revert current trends.[14] Third, although some legal literature has acknowledged the limits of persuasion, this insight has not been sufficiently pursued, often taking for

7 See Market & Business Development, 'UK Waste Management Market Development Report', February 2011.

8 See European Commission information at http://ec.europa.eu/environment/waste/index.htm.

9 M. Babcock, 'Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm' (2009) 33(1) *Harvard Environmental Law Review* 117.

10 D. Rhode and L. Ross, 'Environmental Values and Behaviors: Strategies to Encourage Public Support for Initiatives to Combat Global Warming' (2008) 26 *Vanderbilt Environmental Law Journal* 161.

11 The case of the UK is well known, where a new cabinet office called Behavioral Insights Team (BIT) has been created by the current government to apply insights from behavioral sciences to public policies. www.cabinetoffice.gov.uk/resource-library/applying-behavioural-insight-health (last accessed 21 July 2011).

12 See, for instance, J. Rockström, W. Steffen, et al., 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity' (2009) 14(2) *Ecology and Society* 32.

13 C. Sanne, 'Willing Consumers – or Locked-in? Policies for a Sustainable Consumption' (2002) 42 *Ecological Economics* 273.

14 T. Jackson, *Prosperity without Growth – Economics for a Finite Planet* (London: Earthscan, 2009).

granted that imposing restrictions upon consumers would be too intrusive and difficult to enforce.[15]

A consistent and coherent legal approach must consider all these literatures holistically if it is to yield insights into future regulatory frameworks for environmental protection. This chapter will attempt to do so by exploring the quintessentially modern notion of overconsumption and the perceived reluctance of law-makers to address it through legally binding means for the sake of environmental protection. The goal is to better understand both the notion of overconsumption and legislators' attitudes (in Western countries) towards it. The current state of affairs suggests a strong tension between, on the one hand, the duty of policy-makers to protect the (global) environment by imposing legally binding obligations upon consumers if necessary and, on the other hand, the perceived obligation of governments to respect the freedom of choice of consumers. This tension raises many interesting questions for the current dominant approach of (environmental) law towards consumers. These questions concern the origin of those tensions and the rationality of the current solutions, the sources and extent of law's potential legitimacy to limit consumer choice; the possible role and functions of (certain) legal principles in guiding legislative action; the extension, conditions and shape of legal interventions addressing consumers; and their relation with legislative measures on other sectors of the economy.

The chapter is structured as follows: the second section explores the nature of overconsumption and of its links with climate change. The third section explores in greater depth the different dimensions of overconsumption and the potential responsibility of consumers. The fourth section explores the nature of and justification for the responses that law has given to the problem of overconsumption of natural resources, and reflects on the justifiability of those responses. The fifth section briefly examines one possible instrument that law could make use of to address overconsumption, namely personal carbon trading. This tool is assessed against the findings obtained in the previous section regarding the conditions shaping the legitimacy of law in addressing overconsumption by individuals. The final section offers some conclusions.

2.2 The challenges arising from overconsumption: a portrait

The European Commissioner for the Environment, Mr Janez Potočnik, speaking in the context of the preparatory works of the Earth Summit 2012, expressed himself as follows:

15 An exception is K. F. Kuh, 'Capturing Individual Harms' (2011) 35 *Harvard Environmental Law Review* 156. This author explores the idea that legal mandates to reduce consumption might work better at local rather than at federal level.

> The biggest challenge we are facing this century is essentially this: how can we live and prosper together in this planet – within the constraints of what one earth can provide? How, by the year 2050, do we ensure continued economic growth, eradicate poverty and feed 9 billion people without continuing and exacerbating current patterns of environmental degradation and resource depletion? We all know business as usual is not an option. But how do we move away from our usual business – and how do we do it quickly enough?[16]

One key idea hidden within the words of the Commissioner is that of overconsumption of natural resources. This can be best understood with an example: if in 1969 the entire world population had adopted the UK's consumption patterns prevailing at that time, one planet's worth of resources would have been required to satisfy global consumption. 40 years later, we would need 3.1 earth planets.[17] Put in another way, the world has, approximately from 1990 onwards, started a period of 'ecological debt'.[18] This term is often used to describe the consumption of resources from within an ecosystem that exceeds the system's regenerative capacity, where system can be understood as the entire earth.[19] It is closely related to that of 'biophysical environmental subsystems', otherwise termed 'planetary boundaries'.[20] These planetary boundaries collectively define a safe operating space for humanity where social and economic development does not create lasting and catastrophic environmental change. Some authors have suggested that, out of the nine planetary boundaries identified, three have already been exceeded, four are approaching their limit and for the remaining two there is not enough data to provide a clear diagnosis.[21] This could result, according to many natural scientists, in more ecological volatility and potentially disastrous consequences for humankind.

The European Commission has seemingly accepted these ideas, along the lines of Mr Potočnik's thinking:

16 Janez Potočnik, European Commissioner for the Environment, 26th UNEP Governing Council – Global Ministerial Environmental Forum, Nairobi, 22 February 2011.

17 New Economics Foundation, *The Consumption Explosion – The Third UK Interdependence Report* (London: New Economics Foundation, 2011), p. 60.

18 Ibid.

19 The ecological debt can be roughly calculated with a tool known as the ecological footprint, which estimates the rate at which human societies are depleting natural resources. Year by year, the day on which the world is starting to become in ecological debt arrives earlier, and the economic recession has not had any substantial impact on this (something like one day in 2010).

20 The concept of planetary boundaries derives from that of thresholds. While thresholds are non-linear transitions in the functioning of coupled human–environmental systems – e.g. the collapse of the termohaline ocean circulation – boundaries are human-determined values of the control variable set at a safe distance from dangerous levels or thresholds. See J. Rockström et al., 'Planetary Boundaries: Exploring the Safe Operating Space for Humanity' (2009) 14(2) *Ecology and Society* 32. See also J. Rockström et al., 'A Safe Operating Space for Humanity' (2009) 461 *Nature* 472.

21 Ibid.

> Global demand for natural resources is growing fast, and will continue to increase due to the growth of population, which is expected to reach 9 billion people by 2050. Measured by the ecological footprint, it is estimated that this would be 30% more than the planet can sustain in the long term.[22]

Although this holistic approach to the exploitation of earth resources is important, this chapter will only focus on one boundary: that is, the capacity of the atmosphere to absorb greenhouse gas emissions. Canadell and colleagues have shown that 65 per cent of the rise in greenhouse gas emissions since 1970 is directly linked to the growth of the global economy.[23] Moreover, they note that many future scenarios used by policy-makers for the twenty-first century assume continued economic growth in at least one scenario. Indeed, as the Potočnik quote above suggests, a key dilemma facing society is whether continued economic growth is possible without exceeding planetary boundaries. Of course, this raises the question of how economic growth is understood, since the current models of economic growth are inevitably and directly linked to growth in carbon emissions.[24] Indeed, with current patterns of economic growth, the explosion of energy consumption in developed countries has meant that the average ecological footprint per person in high-income countries is almost six times larger on average than in low-income countries. From this overview we can conclude that not only is science increasingly able to locate planetary boundaries, but also that there is a deeply normative component embedded in the framing of, and the response to, the project of transitioning towards a human society that lives within the planetary boundaries. Steffen, Rockström and Costanza have suggested that while the concept of planetary boundaries suggests a threshold that humanity should not trespass, it does not say anything about how societies should respond to it:

> The planetary boundaries approach doesn't say anything explicit about resource use, affluence, or human population size. These are part of the trade-offs that allow humanity to continue to pursue increased well-being. The boundaries simply define the regions of global environment space that, if human activities push the Earth system into that space, would lead to unacceptably deleterious consequences for humanity as a whole. Because the planetary boundaries approach says nothing about the distribution of affluence and technologies among the human population, a "fortress world," in which there are huge differences in the distribution of wealth,

22 Communication from the Commission, 'Mainstreaming Sustainable Development into EU Policies: 2009 Review of the European Union Strategy for Sustainable Development' COM (2009) 400 Final, at p. 7.

23 Canadell et al., 'Contributions to Accelerating Atmospheric CO2 Growth from Economic Activity, Carbon Intensity, and Efficiency of Natural Sinks' (2007) *PNAS* 104(47) 18866, at p. 18868.

24 Some have suggested that indefinite growth is not only impossible but is also conceptually defective in the face of finite natural resources. See A. Simms, V. Johnson, et al., *Growth Isn't Possible: Why We Need a New Economic Direction* (London: New Economics Foundation, 2010), p. 148.

> and a much more egalitarian world, with more equitable socioeconomic systems, could equally well satisfy the boundary conditions. These two socioeconomic states, however, would deliver vastly different outcomes for human well-being. Thus, remaining within the planetary boundaries is a necessary – but not sufficient – condition for a bright future for humanity.[25]

Accordingly, it is not only the position of the boundary which is a normative judgment, but also the distribution of the remaining ecological space. The ethical and moral challenges are inescapable.[26] The question is what these challenges mean for law's approach to citizens as consumers. The next section focuses therefore on overconsumption as individual behaviour.

2.3 A brief exploration of the notion of overconsumption by individuals

2.3.1 What is overconsumption? Different approaches to the concept

While the previous section has addressed the problem of overconsumption of natural resources by way of overview, this section focuses on overconsumption as an *excessive* consumption of goods and services by individual human beings.

2.3.1.1 A normative approach

The normative approach to overconsumption is understood as referring to types and quantities of goods and services that exceed some level perceived by the speaker as constituting 'enough'.[27] From this perspective, overconsumption is considered to be an immoral behaviour, a particular manifestation of greed or gluttony, with negative consequences for the individual and for society. This approach has been particularly explored from religious and philosophical perspectives and links directly with understandings of what constitutes a good life.[28] As Pieper explains, the virtue of temperance is that which allows us to cherish and enjoy the good things of life while respecting natural limits. Temperance in fact does not diminish but actually heightens the pleasure we

25 W. Steffen, J. Rockström and R. Costanza, 'How Defining Planetary Boundaries Can Transform Our Approach to Growth' (2011) 2(3) *Solutions*, available at www.thesolutionsjournal.com/node/935.

26 But this is not all. As these authors point out, there are, in addition, massive challenges for global governance that challenge the core of the concept of national sovereignty in the exploitation of natural resources. However, this chapter will not focus on the governance challenges.

27 See, for instance, J. Swearengen and E. Woodhouse, 'Overconsumption: An Ethical Dilemma for Christian Engineers' (2002) 54(2) *Perspectives on Science and Christian Faith* 80.

28 See, for instance, C. Murphy, 'The Good Life from a Catholic Perspective: The Challenge of Consumption', at www.usccb.org/issues-and-action/human-life-and-dignity/global-issues/the-good-life-from-a-catholic-perspective-challenge-of-consumption.cfm (United States Conference of Catholic Bishops).

take in living by freeing us from a joyless compulsiveness and dependence.[29] As it should become clear, this normative approach is, however, very controversial because determining when enough is 'enough' is widely seen as a highly subjective exercise.[30]

Another, related attempt to draw the line between a sufficient and an excessive level of consumption has been made by seeking empirically to probe the assumed links between consumption levels and happiness within Western societies[31] by linking data on consumption levels with reported levels of quality of life and happiness.[32] A general finding is that while there is a direct correlation between quality of life and energy consumption at low levels of consumption, such correlation quickly breaks down as energy consumption levels rise. On this approach, the view that the main goal of public policy is to promote happiness measures to limit overconsumption, e.g. through taxation and labour policies, would appear to be justified.[33]

2.3.1.2 A scientific approach

As seen above, the scientific approach tries to estimate the aggregate level of consumption of natural resources that exceeds planetary boundaries. Accordingly, 'enough' can be defined as a level of (aggregate) consumption that ensures that the carrying capacity of the earth (or the planetary boundaries) is not exceeded. The possibility to estimate individual shares of use of remaining ecological space provides a robust starting point for an ethical discussion on how to share the remaining ecological space. However, it is almost impossible, in our highly complex and globalised economy, to disaggregate and attribute the consumption of natural resources to individual consumers. Moreover, concepts such as ecological footprint are still loaded with uncertainty and therefore should be handled with care when seeking to determine the precise contribution of each citizen to the global problem. Thus notwithstanding, by shifting the

29 J. Pieper, *The Four Cardinal Virtues: Prudence, Justice, Fortitude, Temperance* (Notre Dame, IN: Harcourt, Brace & World, 1966).

30 And, moreover, one often associated with a religious mindset. E.F. Schumacher, in his most influential book, *Small is Beautiful: Economics as if People Mattered* (London: Blond & Briggs, 1973), contrasts the consumerist way of life which multiplies human wants with the simple life whose aim is to achieve maximum well-being with the minimum use of the earth's resources. The 'logic of production' that demands more and more growth in consumption is a formula for disaster, he argues. 'Out of the whole Christian tradition,' Schumacher concludes, 'there is perhaps no body of teaching which is more relevant and appropriate to the modern predicament than the marvelously subtle and realistic doctrines of the Four Cardinal Virtues' and in particular temperance that means knowing when 'enough is enough'.

31 P. Brown and L. Cameron, 'What Can be Done to Reduce Overconsumption?' (2000) 32 *Ecological Economics* 27.

32 New Economics Foundation, *The Consumption Explosion*, p. 60.

33 See, for instance, B. Gruzalski, 'Mitigating the Consumption of the US Living Standard' in W. Aikin and J. Haldane (eds), *Philosophy and Its Public Role: Essays in Ethics, Politics, Society and Culture* (Exeter: Imprint Academic, 2004), p. 135.

discussion from consumption of products and services to natural resources, and by linking natural resources to planetary boundaries, the scientific approach adds a new crucial dimension to the concept of overconsumption. Indeed, a veneer of objectivity is added to the normatively loaded concept. The implications of this for legal purposes can be profound, as will be argued below. This objectivity may not ease the ethical discussion on burden sharing; on the contrary, it can make it more controversial, since by providing factual data on the contributions and therefore responsibilities of states and individuals to the problem it sharpens the object of the dispute. It also provides an aura of legitimacy to scientists to derive normative implications from scientific findings. For instance, Jacqueline McGlade has noted that, in order to achieve global sustainability not only deep changes in production and consumption processes are required, but also absolute reductions in levels of per capita consumption, and all of this in a more equitable context. Otherwise it is simply not possible to ensure that all human beings have 'enough' with the resources provided by 'one earth'.[34] Clearly, these are moral and ethical questions that, due to their relevance for the common good, demand a legal response.

2.3.1.3 An economic approach

The traditional approach to the notion of overconsumption springs from the Hardinean 'tragedy of the commons'. According to Hardin, many consumers, each one of them acting in its own rational interest, will consume from the common pool resource to the point where that resource is depleted. Overconsumption could be defined as any level of consumption that does not maximise social welfare, i.e. because negative externalities have not been sufficiently internalised. Traditional regulatory solutions proposed by economists include allocating property rights or putting in place Pigouvian taxes. The difficulty in this model lies in determining the 'optimal' level of pollution or consumption, and a critical issue is the degree of perceived substitutability between natural and man-made capital. Neoclassical economics tends to assume a high level of substitutability, but other schools such as ecological economics consider that the level has to be much lower. For ecological economists, the economy is a subset of human activity, itself limited by the available ecological space.[35] The economy cannot carry on indefinitely while ignoring these restraints, because it will eventually reach its physical limits and will collapse. This starting point allows the problematisation of the central concept of neoclassical economics: growth. If current global growth trends are unsustainable,

34 J. McGlade, 'How Many Earths?' available at www.unep.org/ourplanet/imgversn/154/mcglade.html (last accessed 20 May 2011).

35 For one of the founding documents of this movement, see H. Daly and J. Cobb, *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future* (Boston: Beacon Press, 1989).

then reversing them requires redefining growth,[36] which necessarily requires 'deep' behavioural changes – as opposed to the 'soft' changes in lifestyle mentioned above. This view acknowledges the profound challenges that arise for governments, producers and consumers stemming from the need to revise entirely their understandings of human flourishing, the rights of future generations and the relationship of humans with the natural world.[37] It is to these changes that the words of Mr. Potočnik quoted above seem to allude, which bring to the fore the ethical and normative implications of policy responses.

2.3.2 Potential causes of overconsumption by individuals

It has been suggested that overconsumption is a syndrome of a deeper problem, partly caused by the very makings of our economies. By this view, it is a problem characteristic of capitalist economies, and therefore a relatively recent one.[38] Some of the reasons include the fact that economies of scale need consumers that can consume all production, and advertising businesses work hard to create new (consumer) needs that can be fulfilled with new goods and services.[39] Also, the very design of many of our cities forces us to drive long distances to go to work, do our shopping and seek leisure.[40] Global trade, while having many benefits, also leads to a huge waste of natural resources. For instance, critics of prevailing models of economic growth point out some of the 'bizarre' phenomena that these models lead to. One is termed 'ecologically wasteful trade', exemplified by UK trade patterns (to give a few examples, the UK exports annually 27,000 tonnes of potatoes while importing 22,000 tonnes, and exports 4,000 tonnes of toilet paper only to import back 5,000 tonnes).[41] Further, the structure of the global food chain can account for much of the food waste currently generated. For instance, a report prepared for the Food and Agricultural Organization (FAO) suggests that roughly one-third of food produced for human consumption is lost or wasted globally.[42] Huge amounts of the resources used in food production are used in vain, and huge amounts of waste (i.e. in the form of greenhouse gas emissions) are generated. Food is lost or wasted throughout the entire supply chain, from initial agricultural production

36 This notion of redefining growth has been taken up by many government sponsored research programmes and initiatives, and is at the basis of attempts to redefine economic concepts such as GDP.

37 T. Jackson, *Prosperity without Growth – Economics for a Finite Planet* (London: Earthscan, 2009).

38 It is usually considered that overconsumption as currently understood is a phenomenon that arose after the end of the Second World War: ibid.

39 A. Simms, V. Johnson, et al., *Growth Isn't Possible*, p. 148; J. Swearengen and E. Woodhouse, 'Overconsumption: An Ethical Dilemma for Christian Engineers' (2002) 54(2) *Perspectives on Science and Christian Faith* 80.

40 New Economics Foundation, *The Consumption Explosion – The Third UK Interdependence Report* (London: New Economics Foundation, 2011), p. 60.

41 Ibid.

42 J. Gustavsson, C. Cederberg, et al., *Global Food Losses and Food Waste – Extent, Losses and Prevention* (Rome: FAO, 2011), p. 38.

down to final household consumption. In industrialised countries, food can get lost due to 'overproduction' by farmers, demands from supermarkets for high-quality standards (including appearance related), trimming of sub-standard items in the production line to ensure quality, large quantities on display in supermarkets that lead to products reaching the sell-by date before being sold, and consumer attitudes that lead to high food waste. However, while waste exists across the entire chain, the abovementioned FAO report shows that consumer attitudes are the single most important cause.[43] There would seem to be two underlying reasons: first, the system itself encourages waste. The amount of available food per person in retail stores and restaurants has increased during the last decades in both the USA and the EU. A lot of restaurants serve buffets at fixed prices, which encourages people to fill their plates with more food than they can actually eat. Retail stores offer large packages and 'get one free' bargains. Likewise, food manufacturers produce oversized ready to eat meals. Second, consumers 'simply can afford to waste food'.[44] There are many other examples of wasteful overconsumption of this sort. Babcock has gathered evidence showing, for instance, that households in the US discharge as much mercury to wastewater as do all large industrial facilities combined. They also release one-third of the chemicals that form ozone or smog, generate approximately one-third of US greenhouse gas emissions, and consume one-third of total energy consumption.[45] Babcock notes that 'both resource depletion and industrial pollution are ultimately traceable to the individual'.[46]

2.3.3 Exploring the responsibility of consumers for overconsumption

The first reason behind food waste offered in the FAO report has to do with structural considerations: in highly complex and globalised economies, individuals as consumers may, to a substantial extent, lack control over the consumption of natural resources associated with their daily actions. But if consumers cannot avoid performing activities that are highly resource intensive (consuming high greenhouse gas emitting electricity for an individual living in an isolated place where the only source of electricity is an old and inefficient coal power plant, driving to work when there is no other less carbon intensive alternative, etc.), they are not responsible for the deleterious impacts on the environment. By this view, environmental problems are 'structural' problems demanding technocratic solutions.

The second reason looks more particularly at consumer behaviour, but presents some problems. Saying that consumers waste food simply because they can

43 Ibid, p. 4.

44 Ibid, p. 14.

45 M. Babcock, 'Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm' (2009) 33(1) *Harvard Environmental Law Review* 117.

46 *Ibid*.

afford to do it might well be true, but reveals a highly mechanistic approach to human choice. Humans are essentially moral agents so it follows that all human decisions are necessarily backed up at least partially by moral reasons, whether articulated or not. One can then look for different moral theories to justify those choices. For instance, from a utilitarian perspective, people might decide that since food is cheap and abundant, the loss of utility generated by the search for ways to save is not compensated by the utility gained by reduced consumption. Consumers might think that there is something wrong with wasting food, but consider, adopting a consequentialist framework, that their efforts will amount to nothing if others do not do the same. It is also possible that, due to the existence of cognitive barriers, consumers fail to realise the consequences of their acts, hence they do not see anything morally wrong with it. Or it could be that some consumers waste food because even if they try to reduce waste, they fail time and again because of lack of commitment, force of habit, lack of time, or lack of (knowledge of) adequate alternatives. In short, the gamut of possible justifications for food waste is very large indeed. The conclusion could be easily reached that there are as many possible justifications as individuals, and a relativistic and pragmatic attitude is inescapable. In this view, a moral debate about waste is essentially fruitless and should be avoided by policy-makers, which could instead rely upon sophisticated accounts of human behaviour developed within the social sciences to set up strategies that lead to less waste. (For more on this, see below.)

Taken together, these two explanations seem to point to the futility of engaging in moral discussions of individual behaviour within policy and law-making processes. A focus on solutions exclusively based on behavioural science and technology seems to be the only justifiable one. But such a conclusion, as will be discussed more fully below, risks weakening an important claim that law can make: to demand compliance from individuals based on justice.

However, an alternative arises if we focus on another crucial finding of the FAO report. The report concludes that citizens are, by means of their choices as consumers, responsible for at least (a rather large) part of the phenomenon of food waste. After discounting issues such as the structure of the food chain, the behaviour of food businesses, including their marketing and pricing strategies, and even issues having to do with access to shopping malls or food markets, we find that consumers still must make choices as to what and how much to consume. These choices involve moral considerations, and hence demonstrate the inescapability of moral reflection in understanding consumer choice. This finding is not surprising, but the crucial question is in considering the legal implications (if any). Should law engage with the moral dimension of consumer choices, particularly when they cause damage to other people (including future generations) and the environment?[47] Law as an institution is

47 J. Nolt, 'How Harmful Are the Average American's Greenhouse Gas Emissions' (2011) 14(1) *Ethics, Policy & Environment* 3. See also the very interesting responses to this article within the same journal issue.

inescapably moral, for instance insofar as it seeks means of redressing injustice such as systems of checks and balances in the law-making process, legislation, adjudication, administrative procedures, recognition of rights, etc. One question is whether new legal mechanisms are needed to redress the injustices arising from consumer choices, particularly when they affect the environment and future generations.[48]

2.4 Some thoughts on the contribution of law to tackling overconsumption

2.4.1 Traditional legal responses to overconsumption of natural resources

Traditionally, environmental law has been used as a conveyor belt for policies aiming at influencing the behaviour of consumers.[49] The limited effectiveness of these approaches has led scholars and policy-makers to turn their attention to the insights generated by behavioural sciences.[50] There it is often pointed out that the challenges of achieving even apparently trivial behavioural changes are massive and have not yet been adequately overcome through policy interventions.[51] The contribution of technological innovations to assist behavioural change is often emphasised.[52] Whether technology alone will lead to a reduction in energy consumption is, however, not clear in the absence of conscious decisions to change behaviour.[53]

Current laws and legal literature do not generally consider in detail the potential legitimacy and effectiveness of law in changing consumption behaviour by doing what law is uniquely placed to do: imposing legally binding restrictions

48 The representation of future generations in law-making processes is a topic that is receiving increasing attention in the literature. The issue of the legal standing of natural objects can be traced at least to the seminal book of Christopher Stone, *Should Trees Have Standing* (3rd edn, Oxford: Oxford University Press, 2010). In both cases, it is obvious that standing strictly speaking is not possible. However, it is possible to grant standing to representatives of those collective bodies, both in the law-making process and in adjudicative procedures.

49 For an analysis of the approach of EU climate change law to consumers, see J. de Cendra de Larragán, 'EU Climate Change Law and Consumers' (2011) 1 *European Journal of Consumer Law* 149.

50 This is particularly the case in US law journals, where there is a growing literature on the subject starting more or less with M. Vandenbergh, 'From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law' (2004) 57 *Vanderbilt Law Review* 515.

51 H. Babcock, 'Responsible Environmental Behavior, Energy Conservation and Compact Fluorescent Bulbs: You Can Lead a Horse to Water, But Can You Make it Drink?' (2009) 37 *Hofstra Law Review* 943.

52 S. Stern, 'Smart-Grid: Technology and the Psychology of Environmental Behavior Change' (2011) 86(1) *Chi.-Kent L. Rev* 139.

53 The well-known phenomenon known as rebound effect attests to this. See A. Druckman, M. Chitnis, et al., 'Missing Carbon Reductions? Exploring Rebound and Backfire Effects in UK Households' (2011) 39 *Energy Policy* 3572.

on individual behaviour.[54] Very often the assumption is that legally binding restrictions are at the end of a regulatory ladder often called the 'Nuffield Ladder of Interventions', which classifies public policies according to their degree of intervention in the personal life of individuals.[55] Only when less intrusive interventions are proven ineffective would one climb up the ladder, one step at a time. Though this might be reasonable, it can be challenged on two grounds. First, it assumes that imposing legally binding requirements is more intrusive than not doing so. However, whether that is the case depends on the nature and details of the interventions considered, rather than on whether they are legally binding or not. For instance, it could be argued that a measure that seeks to manipulate the behaviour of a consumer without him realising it is more intrusive than a well publicised legal limit on his volume of consumption expressed, e.g. in terms of associated greenhouse gases, while respecting the freedom to choose how to allocate that volume among different products and services. Second and more fundamentally, the Nuffield Ladder takes as the central value that of 'freedom of choice'; however, if it focused on the value of freedom as the capacity to strive for excellent behaviour, the order of the steps in the ladder would be reversed, and legal obligations would come first as a necessary step in enabling citizens to make excellent choices for themselves. Before accepting the charge that this would amount to paternalism, it should be noted that the law imposes certain behaviour all the time – for instance when it imposes limits on driving speed, parking places and hours, smoking places, noise limits, etc. All these prohibitions seek to imbue citizens of civic virtues that enable societies to flourish. Even if not everyone accepts the adequacy or convenience of those measures, most recognise their legitimacy and obey them. But before concluding that limits on consumption are akin to these measures, and therefore that law should impose them, we need to consider the issue more closely. Accordingly, the argument will proceed by considering: (1) why law may be entitled to impose such limits, and what the conditions are for that legitimacy to hold; (2) counterarguments; (3) possible challenges to the ability of law to actually impose such limitations.

2.4.2 Why law may be entitled to impose limits on individual consumption

A very old definition of law – developed from Aristotle by Aquinas – is that law is a rational ordinance, for the common good, enacted by the legitimate

54 The obvious starting point here is the trite distinction between law and policy. Essentially, law imposes obligations, and is backed by the use of legitimate force to ensure that they are fulfilled, whereas policies are not, or at least not in the same way. So here we are concerned not with 'soft' interventions to 'nudge' consumers to adopt more environmentally friendly behaviors, but with hard interventions that force upon them limits on the types of products they can consume and/or on overall consumption levels of natural resources.

55 The Nuffield Ladder of Interventions is an analysis of interventions developed by the Nuffield Council of Bioethics in a report on ethical issues in public health published in 2007. It classifies categories of public policies according to degree of intervention in the personal life of individuals. See *Public Health: the Ethical Issues* (London: Nuffield Council of Bioethics, 2007).

legislator, and made publicly accessible (which includes some requirements of internal morality such as clarity, stability, accessibility, etc.)[56] From this perspective, a law that seeks to promote the common good can introduce limits to personal freedom as long as those limits are necessary to achieve its aims, there is adequacy between means and ends and the fundamental rights of citizens are respected (proportionality *stricto sensu*). However, this definition of law is by no means universally accepted, and is moreover open to multiple and conflicting interpretations regarding what is adequate and proportionate and what counts as fundamental rights and how to interpret those rights. A second goal of law under the abovementioned definition is to promote among citizens the basic civic virtues that are necessary to enhance and sustain the common good. In this, law is similar to public policy.[57] However, there is a basic difference: while policies seek to encourage those virtues, laws generally seek to enforce them, if necessary with recourse to force. Serious questions that arise in this regard include whether promoting civic virtues among the citizenry can be a proper goal of law, whether civic virtues can be imposed and enforced upon citizens through law, and whether law is an effective way of creating virtuous citizens.

2.4.3 Why law might not be entitled to impose limits on individual consumption levels

2.4.3.1 Challenges arising from different understandings of what law is and what the law does

To start with, the definition of law proposed above is by no means universally accepted. The most fundamental challenge comes from instrumental conceptions of law that deny that it is possible to define the common good, and therefore law cannot be concerned with it; instead, law is at best an instrument to balance conflicting interests (which is different to promoting the common good), and at worst an instrument to promote particular ends, which often coincide with those of the most powerful in society to the detriment of others and the environment.[58]

A second challenge arising from persisting disagreements about the notion of the common good is the relativistic view of law as a tool for the protection

56 These are some of the requirements that Fuller considered to form the internal morality of law.

57 Clearly, one legitimate aim of (environmental) policies is to help people become 'better' persons, for instance by promoting 'green virtues'. Indeed, environmental policies cannot work in the absence of virtuous citizens that take it upon themselves to reduce their levels of consumption, to reuse, and to recycle. Policy in liberal democracies is (or should be) therefore in part the art of promoting those civic virtues that are essential for the political system to work and for the public good to be achieved. W. Kymlicka, *Contemporary Political Philosophy* (2nd edn, Oxford: Oxford University Press, 2002).

58 See the analysis in B. Tamanaha, *Law as a Means to an End: Threat to the Rule of Law* (Cambridge: Cambridge University Press, 2006).

of individual freedom primarily understood as freedom of choice. The only limit to that freedom comes from the rights of other citizens. To achieve this goal, civil and political rights need to be granted that can in turn be used to protect oneself against the state. The welfare state has added to those rights social, economic and cultural rights. These rights are vertical (they apply between individuals and the state, not among individuals), individual rights (as opposed to community rights), they can always be increased with new rights or expansions of existing rights, and crucially, they are not matched by corresponding obligations.[59] Some authors have argued that potential consequences of this trend include: (1) a decline in the moral responsibility of the citizenry, which is now used to make claims against the state, but not to acknowledge their moral and social obligations towards other members of society; (2) a focus on present generations *vis-à-vis* future ones; (3) passivity in the relations that build thriving democracies; and (4) a depoliticisation of social questions. One of the consequences is that legislative welfare projects based on reciprocity and solidarity are rejected as being either unrealistic or unacceptable; another consequence is that debates about the good society or the common good are either absent and/or largely incomprehensible. The law-making process suffers from this mindset, because it cannot set goals that are not liberal, i.e. communitarian. Against this background, legislators seem to be barred from using laws to foster a society of solidarity, reciprocity and equality, and instead will be locked in processes that generate laws that foster individualism and conflicts of interests.

A third challenge comes from disagreement about what the central function of law is. Paraphrasing Gabriel Marcel, law is not primarily concerned with the world of being, but with the world of having.[60] In other words, law, as opposed to policy, deals primarily with facts, not with the internal dispositions of actual people. At the same time, it is clear that, in order to achieve its ends, law needs to forbid certain behaviour that is considered to be socially unacceptable and morally wrong, e.g. killing or stealing. But this alone does not show that law is concerned with promoting civic virtues, rather that it seeks to prevent seriously asocial behaviour that undermines the polity and makes the peaceful existence of societies impossible. Assuming for a moment that law is legitimised to impose civic virtues, the next question is whether it constitutes an effective means to do so. There seems to be a contradiction between, on the one hand, practising virtues, which is a voluntary act, and, on the other hand, complying with the law, which would seem on the surface to be an involuntary act stemming from coercion. It has been argued that this contradiction is only apparent, and that compliance with legally binding obligations has the potential to generate civic virtues in those that comply

59 L. Eriksson, 'Making Society Through Legislation' in L.J. Wintgens (ed.), *Legisprudence: A New Theoretical Approach to Legislation* (Oxford: Hart, 2002), at pp. 43–44.

60 M. Villey, *Compendio de Filosofia del Derecho* (Pamplona: EUNSA, 1979–81), p. 340.

with them. The key issue to note here is that citizens always have a choice in complying with the law. They can comply out of the exercise of a civic virtue consisting in complying with (just) laws, they can comply out of a calculation of interests, or they can comply out of fear of being detected and punished. In any case, the decision to comply in each specific instance is one in which the will of the subject is always at play. So it follows that in choosing to comply, even if it is out of fear, the subject is performing a good act. And performing a good act out of free will – even if mediated by other considerations – has the capacity to generate the associated civic virtue that naturally leads to further compliance with the law.

So it follows that compliance with the law can either flow from the exercise of a civic virtue or could lead to the formation of civic virtues in those that previously lacked them. Another challenge is more fundamental. Where does the capacity of law to encourage civic virtues among citizens come from? In other words, on which factors does the normative legitimacy of the law rest?[61] While this is an issue that falls beyond this chapter, it must nevertheless be noted. Suffice it here to point out that the mere choice to comply with a law, provided that law is not clearly against morality – however defined – is in itself a virtuous act that can therefore lead someone to become a virtuous person. To say that a law is not clearly against morality implies, at a minimum, that it complies with the minimum requirements of the internal morality of law as famously spelled out by Fuller.[62] One of those principles relates to the rationality of law. In adopting laws that impose restrictions on individual behaviour to protect and promote the public good, the legislator is bound to follow principles of practical rationality, so that citizens can understand the reasons why they are being ordered to do or not to do something, and ideally share these reasons. For those that accept these reasons as correct ones, compliance is not an issue and in fact arises out of pre-existing civic virtues. For those that do not accept the reasons as valid, compliance will not be forthcoming out of civic virtues, but might come instead out of fear of being punished. In the latter case and as shown above, the fear of being punished leads to behaviour in accordance with the rational law, and in that way it has the capacity to develop the civic virtues of that citizen. So it can be shown that law, by mandating certain behaviour backed with sanctions, can not only promote the solution of environmental problems, but can also promote civic virtues. Of course law's ability to promote civic virtues does not only depend on its rationality (including its justice), but also on other requirements of internal morality such as feasibility (not asking too much too fast), accessibility (that citizens indeed have the chance to know the law and to understand what

61 See, for instance, S. Delacroix, 'You'd Better Be Committed: Legal Norms and Normativity' (2009) 54(1) *American Journal of Jurisprudence* 117.

62 L. Fuller, *The Internal Morality of Law* (New Haven, CT: Yale University Press, 1964).

it is that is required from them) and stability (that the law is not changed so often that the meaning of civic virtues becomes blurred).

2.4.3.2 Challenges arising from prevailing assumptions within environmental law

To the challenges mentioned in the previous section, it is possible to add others that seem to apply more specifically to environmental law.

2.4.3.2.1 CONCEPTUAL CHALLENGES

While traditional environmental law has been effective in solving many discrete environmental problems (mainly deriving from source pollution), current environmental problems have reached a scale and pervasiveness that sets them apart from the old ones, in that they have more to do with resource depletion rather than with pollution, as the first section showed. Moreover, while in the past it was relatively easy to distinguish between polluters and victims, this is becoming increasingly difficult, because all of us contribute (to different extents) to the degradation of the environment. Thus environmental laws increasingly are faced with the need to address individual consumer behaviour directly if they are to be effective and fair.[63] But doing this raises a number of challenges, normative, psychological and empirical.

2.4.3.2.2 NORMATIVE CHALLENGES

This challenge arises from the observation that there are a number of reasons why most of us may not be ready to accept legally imposed restrictions on our freedom as consumers for the sake of environmental protection.

First, a dominant view among consumers is that environmental problems arise primarily from the smokestack, while individual actions are largely irrelevant. Flowing from this view is a resistance to attempts by law to restrict personal freedoms for the sake of environmental protection.

Second, even if consumer responsibility were to be accepted, there are further difficulties. To start with, society is so wedded to the idea of an unfettered right to consume that it is not likely that such notion of responsibility will have serious practical consequences for consumer behaviour. This value attached to consumer freedom (and consumer protection) does not apply equally to

63 The fairness element comes from the fact that an equitable sharing of the burden depends on incorporating criteria of contributive justice, so that those responsible for the damage and capable of reducing it actually contribute to do so. If the behaviour of citizens is tackled by the law to a much lower extent than the behaviour of industries and businesses, then it is possible to argue that a basic tenet of contributive justice is not being fulfilled. This is as much a requirement of justice as one of rationality. Laws that do not tackle all sources of emissions are in principle less likely to achieve their mitigation goals than those that are comprehensive.

producer freedom, which is often subject to restrictive regulations.[64] However, even weaker in this context than both the producer and the consumer is the environment, which is damaged by both. But consumer law has not yet embraced the environmental rationale.[65] To continue, it can be argued that the predominant moral outlook within Western societies has not yet accepted that engaging in behaviour that leads to the exhaustion of natural resources is morally comparable to engaging in behaviour that leads to the destruction of particular portions of the surrounding environment (such as killing a particular member of a species). While killing a member of an endangered species meets with general repulsion, driving an SUV does not (yet) give rise to the same reaction. The dominant moral outlook has probably not (yet) accepted that individuals can be morally responsible for normal daily activities that cause environmental damage. In this state of affairs, imposing 'green virtues' among citizens can easily be seen as akin to imposing upon them a certain view of morality, opposed to the dominant one based on values cherished by neoliberal capitalism. Last but not least, while many citizens may accept their share of responsibility for environmental degradation, they can also consider that it is so small compared with the enormity of the problem, and their capacity to make a change so limited, that it does not make sense for law to regulate it.

In view of these reflections, it does not come as a surprise to learn that, in the UK (but this conclusion can be extended to many other countries), while a clear majority of citizens (70 per cent) consider that reducing household energy use is a virtuous thing to do for the environment, a similar majority rejects policy measures aimed at reducing household energy use. For instance, only 34 per cent would accept green taxes, only 30 per cent would accept road pricing and only 28 per cent would accept carbon rationing. Likewise, there is very little enthusiasm for changing lifestyles in order to protect the environment. In this regard, while 65 per cent of people tend to agree that they are prepared to greatly reduce their energy use to help tackle climate change, only 44 per cent are prepared to pay significantly more money for energy-efficient products.[66]

Third, there is a difficulty more closely related to law's nature. Law, as a social institution, employs dominant moral outlooks and works at least in part to reinforce them. Accordingly, contemporary law-making processes are shaped

64 One rationale could be the dominant focus of consumer law on protecting the consumer, who is perceived to be the weakest actor in market exchanges within market-based economies. Another possible explanation is that liberal societies recognise that respect for the freedom of rational individuals is a fundamental value of society, but this recognition does not extend to commercial organisations in so far as they are not rational agents of that kind.

65 L. Krämer, 'On the Interrelation Between Consumer and Environmental Policies in the European Community' (1993) 16(3–4) *Journal of Consumer Policy* 455.

66 L. Whitmarsh, P. Upham, et al., *Public Attitudes, Understanding and Engagement in relation to Low-Carbon Energy: A Selective Review of Academic and Non-Academic Literatures* (London: RCUK Energy Programme, 2011), at p. 10.

by prevailing values such as open markets, efficiency, consumer choice, and individual autonomy. Markets orientate personal freedom towards increased consumption, in order to ensure their long-term growth and thus their viability. So law itself might be promoting levels of consumption that are excessive from the perspective of the resources that the planet can provide. Indeed a dominant trend within environmental law is to promote market-based instruments to protect the environment. But, more insidiously, many areas of law work directly to fuel growth of the traditional kind and the virtues that promote it, chiefly freedom of consumption.

All these factors sketch a very complex landscape, which probably explains in part why it is so difficult to change dominant paradigms and therefore why so far the principal approach followed in environmental law has been largely limited to persuasion.[67]

2.4.3.2.3 PSYCHOLOGICAL CHALLENGES

If environmental law is to tackle effectively the environmentally damaging behaviour of consumers, it needs to be based on an accurate understanding of human behaviour. At least two strands of literature exist, one focusing on understanding consumer behaviour and the other focusing on understanding public attitudes to environmental or energy policies.

The first strand of the literature is prompted by the realisation that consumers do not appear to behave as rational actors, as traditional economists would predict.[68] Rather than seeking always to maximise their utility, consumers are strongly influenced by emotional factors, by the behaviour of other people, by habits and by the use of mental short-cuts, often used to speed up decision-making processes in the face of multiple and conflicting options. Moreover, consumer preferences are inconsistent, changing over time and according to the situation and the way in which information is presented. Consumers rarely weigh up all the costs and benefits of choices; they respond more to losses than gains, value products much more once they own them, place a greater value on the immediate future, are easily overwhelmed by too much choice, are heavily influenced by other people and use products to make a statement about themselves. On the basis of these facts, researchers have sought to derive policy recommendations, including a focus on:[69]

- the effectiveness of pricing as a policy tool;
- the importance of helping consumers to consider long-term costs;

67 This is certainly the case within EU environmental law. See J. de Cendra, 'EU Environmental Law and Consumers' (2011) *European Journal of Consumer Law* 149.

68 For a recent review of that literature, see Policy Studies Institute, *Designing Policy to Influence Consumers: Consumer Behavior Relating to the Purchasing of Environmentally Preferable Goods* (London, Policy Studies Institute, 2009).

69 Ibid.

- the importance of brand recognition;
- the importance and structure of information provision;
- the facilitation of environmentally friendly choices;
- realising that fines are less acceptable to the public than incentives;
- ensuring that standard products or services (those chosen by consumers 'by default') are the environmentally preferable ones;
- allowing consumers to change their mind through 'cool-off' periods;
- keeping in mind that all consumers are different.

The underlying message is the importance of helping consumers to behave in environmentally friendly ways. But the methodologies used in these studies makes them blind to relevant questions. For instance, by seeking to understand how consumers behave, they do not engage with the deep motivations underlying the dynamics of human action. Another, perhaps more serious, problem stems from the limitations of this literature when seeking to inform policies. By focusing on 'nudging' consumers to change their consumption choices, they neglect the more fundamental question whether law and policy can be used to present to consumers substantially different ways of living, less consumption-oriented and yet arguably more rewarding. Critics point out that achieving sustainability requires a deep rethinking of what it means for human societies to flourish, and what the consumption of products and services does to reach that goal. Jackson has suggested that a new moral imagination is needed that creates new visions of human flourishing,[70] based on a renewed understanding of the common good, more accessible and attractive to all members of society. This project is a very profound one requiring, as it does, engaging seriously with the deepest needs and desires of human beings, but it does not seem possible to address it with the mainstream tools used in the literature.

I would argue that it is in this light that the second strand of the literature, on public attitudes to environmental policies, should be considered. In essence, this literature tries to understand public attitudes to environmental and energy policies.[71] How do people react to policy proposals that attempt to change their lifestyles in order to make them more environmentally friendly? The issue of public acceptability is of the essence. The literature tends to regard people as citizens who have an interest and a right to participate in important societal decisions, and who may be willing to contribute (to differing extents) to the success of societal goals. Hence, the focus is on better

70 T. Jackson, *Prosperity Without Growth – Economics for a Finite Planet* (London: Earthscan, 2009), at p. 189.

71 For a good review of this literature, see L. Whitmarsh, P. Upham, et al., *Public Attitudes, Understanding and Engagement in Relation to Low-Carbon Energy: A Selective Review of Academic and Non-Academic Literatures* (London: RCUK Energy Programme, 2011).

understanding how citizens perceive their responsibilities towards society and how the exercise of those responsibilities is shaped by policy initiatives, social, economic, political and technological contexts, habits and routines. It is impossible to synthesise this literature here, but there seem to be at least two key messages: first, the degree of virtuosity of citizens is rather modest; citizens are more willing to support public policies as long as they do not have to shoulder (a considerable part of) the burden and are assisted in doing it; second, citizens do appear to demand more participatory rights in policy-making processes. This seems to resonate with literature mentioned above in the section 'Challenges arising from different understandings of what law is and what the law does', regarding the increasing recognition of rights within welfare states, but could also be related to a genuine desire to be constructively involved in policy-making processes.

In the light of these literatures, a number of interesting questions arise.

First, how do 'nudges' relate to the scale and urgency of current natural resource challenges such as climate change? The House of Lords has concluded, on the basis of evidence collected over a year, that the recent choice of the English government to rely more on nudge theory in public policy has three main limitations. First, there is a dearth of evidence about how effectively to translate theoretical knowledge about (individual) human behaviour into actual behavioural changes at a collective level through public policy. Second, there is a lack of evidence about the cost-effectiveness of policy interventions aimed at behavioural change. Third, there are almost no long-term data against which the effectiveness of interventions over sustained periods can be measured.[72] Moreover, assessing the extent of the rebound effect following energy efficiency interventions in households, Druckman et al. have noted that the money saved is often spent on carbon intensive activities that can, in extreme cases, more than counter the original savings.[73] Hence, they conclude that it is not really useful to put all the focus on single behavioural changes without engaging with people at a deeper level, focusing on values and social identities. In short, while people can be nudged into making a specific change in order to adopt low carbon or low environmental impact lifestyles, they need to make that decision in full awareness and with a full commitment to live by it.[74] Interestingly, Druckman et al. do not stop here, but fully acknowledge that policy-makers not only require information on unintended consequences of policies such as the abovementioned rebound effect, but also practical solutions. They mention – but do not elaborate upon – two possibilities: first, enacting regulatory measures that encourage shifts to less carbon intensive

72 House of Lords Science and Technology Select Committee, *Behaviour Change* (London: House of Lords Science and Technology Select Committee, 2011), at p. 18.

73 For instance, if a family used the money saved on the energy bill to pay for a holiday to Thailand.

74 A. Druckman, M. Chitnis, et al., 'Missing Carbon Reductions? Exploring Rebound and Backfire Effects in UK Households' (2011) 39 *Energy Policy* 3572.

categories (examples of such measures are obvious enough: taxes, domestic emissions trading schemes, publicity campaigns, etc.); second, encouraging households not to spend savings but rather to invest them in low carbon investments (such as green saving accounts).

Second, how does the human behaviour literature engage with moral theories of individual responsibility? Can it overcome the tendency to an ever-increasing fragmentation in the study of public attitudes, by focusing on particular technologies and sub-technologies? And if not, how do we engage with people at a deeper level, focusing not only on values and social identities but going even deeper into the core of human motivations, as suggested, for instance, by Jackson?

From this perspective, the key questions are as follows. Is law able to make a contribution, and if so which one? What are the limitations of law in doing so? And how could law make its contribution in practice? The short answer is that law can make a contribution by deploying its potential to generate green virtues among citizens. But what does this mean and how can it be done?

2.4.4 A possible response to the challenges posed

2.4.4.1 The problem of law's legitimacy

The three challenges considered above, namely the lack of agreement on the meaning of the common good, the increasing instrumentality of law, and the pre-eminence of a rights culture in Western societies, are certainly formidable. They are further empowered by the other challenges identified, which portray a culture where imposing legal limits on personal freedom for the sake of protecting the environment and future generations appears not to resonate with the majority of members of society. Together they would seem to render implausible a defence of the legitimacy of law to impose any sort of limits on personal consumption.

At the same time, we can point to numerous instances where laws have been passed to regulate, or directly ban, certain individual behaviour, including restrictions or prohibitions on drug and alcohol use, smoking, speed limits, use of seat belts when driving, parking rules, noise limits, etc. All these rules are based on considerations of public policy: in other words, the prevalence of the public good over individual freedom. So what is it that makes these interventions different from imposing limits on general consumption for the sake of environmental protection?

It seems from the above discussion that the legitimacy of all these restrictions (and their reach) may come from a number of factors:

- the legitimacy of the end itself, which can be judged, for instance, by its relevance and urgency;

- the legitimacy of the legislator to pass laws restricting personal freedoms for the common good;
- the rationality of those restrictions, in the sense that they must be necessary to promote a legitimate end, and must not impose restrictions that are out of proportion to the end sought;
- the fact that the laws adopted take into account the real situations of real people, thus avoiding the imposition of requirements that are beyond their capacity or that would put them in a dire situation;
- the fact that those restrictions resonate with societal convictions as formed over relatively extended periods of time.

Inevitably, the question of law's legitimacy to impose restrictions on consumer behaviour involves so many considerations that a single dimensional answer is not possible. Arguments can be provided for very different and even opposing responses. Even if the basic authority of the legislator is presumed, much will hinge on the procedures it uses to reach its decisions. And even then, it is not guaranteed that the decisions reached will remain valid for long, that they will be adequately implemented at lower levels of governance, and that they will be complied with and adequately enforced.

In addition to the issue of law's legitimacy, there is also that of law's opportunity. In the absence of widespread public enthusiasm for, or at a minimum, acceptance of the need for introducing personal limits on consumption, it is highly unlikely that policy-makers will take the risk of passing them through legislation. This is the greatest challenge faced by law, and points to the nature of law as a social institution. This reality of law's nature suggests that technocratic approaches that perceive law as a tool for achieving goals of public policy will not be successful.[75] This arguably illustrates the key difference between tobacco related prohibitions and climate change. While the former resonate with societal convictions, arguably the latter do not yet share the same degree of public support. This explains why they are widely regarded as unrealistic, at least for the time being.

2.4.4.2 The problem of law's effectiveness in reducing personal consumption

To put it starkly, legitimate laws can be utterly ineffective. Laws imposing limits on consumption on the basis of consumers' responsibility for the problem might be just, but at the same time totally ineffective.[76] Of course, law needs to reflect the fact that different consumers will have very different degrees of responsibility and capacity. A blanket approach to all consumers might, with

75 E. Claes and B. Keirsbilck, 'Facing the Limits of the Law' in E. Claes, W. Devroe and B. Keirsbilck (eds), *Facing the Limits of the Law* (Berlin: Springer, 2011).

76 Such ineffectiveness could also raise the question whether the law is actually just in the first place.

good reason, be considered illegitimate and resisted.[77] Achieving the right balance is obviously crucial for law's legitimacy but is not sufficient to guarantee effectiveness. In considering the effectiveness of potential instruments, it is necessary, as suggested above, to consider carefully existing theoretical knowledge and empirical data.

It is also necessary to consider the role that existing societal structures and cultural norms play in locking consumers into current behaviour. More generally, it is necessary to recognise that the (regulatory) status quo within Western societies is still largely tilted against sustainability (due in part to the reasons described above).

Law has a proper role to play here beyond channelling knowledge from psychological studies. It can be a tool to open up the societal space to alternative cultural, behavioural, ethical and philosophical responses to the challenges posed by environmental problems. In doing this, it is, however, important to be aware of the fact that law is resistant to being used as a purely instrumental tool to achieve certain goals. Very often law is seen in this context as a tool to overcome barriers, yet this view overlooks the real nature of law and its power to achieve societal change. Law is a reflection of past, present and future mores; it is a conservative yet dynamic institution, filled with contradictions, ambiguities and limitations. Thus, it is a very imperfect tool to 'engineer' societal changes. In contrast, law can powerfully channel new sentiments within society, new ideologies, hopes, goals, fears and angers. This does not suggest that law should be used as a tool to manipulate consumer behaviour, but rather suggests that law is effective in capturing new thoughts and ideas and in translating them into legal rights and responsibilities. In this way, law can break existing conceptions of the world, expand horizons, and open up new avenues for the development of society. In short, law can help to crystallise visions of sustainability. These changes will be slow, and will come up in piece-meal ways. There will be many failures, many dead-ends; when law is used as an instrument of social engineering it always, sooner or later, ends up failing, because even if the human condition can be to an extent shaped, human nature remains immutable.[78] Nonetheless, law can help bring about and normalise new ways of life that are more sustainable than those of hitherto. Laws that work to overcome structural barriers make it easier, more legitimate and more attractive for consumers to reduce their consumption levels and eventually to change their lifestyles permanently. A wide range of measures have been proposed, including:

77 On the other hand, a too finely grained approach is also unrealistic and would be a bureaucratic nightmare. Fortunately, states are used to making regulatory distinctions among different types of consumers, and tax rules reflect precisely that, though the tendency to over-complexity is in-built in the process.

78 For a detailed analysis of the concepts of human nature and human condition and differences therein, see H. Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1998 reprint).

- providing education about the environmental consequences of consumers' consumption choices;
- providing more and better information about consumers' (energy) consumption levels;
- enabling use of technologies such as smart meters that are consumer friendly;[79]
- obliging energy service companies to provide energy services that effectively enable consumers to engage in energy demand management;
- enabling consumers to self-generate their own electricity and to send the excess to the grid;
- developing electric or hydrogen cars accompanied by a well developed charging infrastructure;
- developing well conditioned cycle lanes in cities;
- developing good, attractive and affordable public-sector transportation;
- making changes to labour rules that allow and incentivise part-time working;
- creating incentives to put savings into low carbon investments.

Lawyers may worry about the potential (in)compatibility of some of these measures, and might want to ensure consistency and coherence. I think it is unlikely that the goal of consistency will be achieved at all. The problem of scarcity of natural resources is too large, too urgent and too complex to permit elegant solutions. Clearly there is a need to ensure that regulatory regimes do not become so complex that they are self-defeating, but complexity is unavoidable in a learning-by-doing process (which seems the only feasible approach).

To conclude this section, the crucial role of law is to make explicit through regulation the link between green virtues and global sustainability. The remainder of this chapter will look at the potential of one particular instrument that has recently received much attention in environmental law and policy, though it has never been applied to consumers – emissions trading. Emissions trading for consumers could be one part of the regulatory approach that links the need to ensure that planetary boundaries are not exceeded – the cap – with the measures needed to overcome structural barriers that reduce the capacity of consumers to alter their lifestyles.

79 Consumer friendly smart meters are those that help consumers to improve control over their energy use while providing them with tools to reduce it and making sure that their pre-existing rights and expectations are protected. This means that smart meters do not represent high additional costs for consumers, that they do not allow for remote switching and disconnection, that data protection and security issues are well addressed, and that smart meters are coupled with new services such as automated and demand-side control, energy saving tariffs, load-management devices, energy efficiency and insulation measures, micro-generation, etc. See for instance G. Owen and J. Ward, *The Consumer Implications of Smart Meters* (London: National Consumer Council, 2007).

2.5 How should a legally binding limit on consumption be designed and how would it relate to the wider body of environmental regulation?

2.5.1 One possible regulatory tool to address overconsumption by individuals: personal carbon trading

Personal carbon trading (PCT) is a generic term used to refer to emission trading schemes whereby individuals are allocated emission credits broadly on an equal *per capita* basis, under a total cap defined, for instance, at national level. Individuals surrender these credits when buying goods covered by the scheme. If they go over their quota they can buy more; if not they can sell them to others.

2.5.1.1 PCT is in line with the concept of law developed above

Because there would be a cap that could be reduced over time, PCT could account for the issues of scale and urgency. In addition, it might also be able to incorporate the relevant findings of psychology and behavioural economics outlined above.[80] At the same time, it presents some limitations: it focuses only on one planetary boundary; it can look like a radical measure thereby risking being seen as not acceptable; it can quickly get very complex and expensive; and its implementation through law – which would certainly be needed if the scheme were to be binding – would be in the context of the already crowded and rather messy regulatory frameworks in place (certainly in the EU and its Member States). A lot of early work on PCT focused on its acceptability, by looking at technical complexity and economic costs. The UK's Department for the Environment, Food and Rural Affairs (DEFRA) for instance concluded that, although PCT was in principle very attractive, it faced extreme challenges on both counts, and dismissed the idea as being potentially powerful but ahead of its time.[81] Although more recent work has sought to challenge the assumptions used by DEFRA and to carry out small-scale studies that could throw new light on its acceptability,[82] the key challenge seems to be fitting PCT within the paradigm of individual freedom in neoliberal market economies.

80 For an analysis of personal carbon trading from the perspective of behavioral economics, see E. Woerdman and J. Bolderdijk, *Emissions Trading for Households? A Behavioral Law and Economics Perspective* (Groningen: University of Groningen, 2010). PCT could potentially acknowledge the lessons derived from behavioural economics by incorporating findings that can help to increase its acceptability among policy makers and the public, and by actually encouraging individuals to change their behaviour, as they realise that doing so will provide them with a number of previously unrealised benefits both personally and for the environment.

81 DEFRA, *Synthesis Report on the Findings from Defra's Pre-Feasibility Study into Personal Carbon Trading* (London: DEFRA, 2006).

82 J. Bird and M. Lockwood, *Plan B? The Prospects for Personal Carbon Trading* (London: Institute for Public Policy Research, 2009).

Faced with this challenge, it is notable that the key advantage of PCT is that it does not force consumers into making particular choices; rather, consumers are free to make choices as long as they remain within the cap. The crucial issue is to ensure that consumers are presented with new and attractive choices while respecting that limitation. PCT cannot, therefore, exist without measures addressing the structural barriers outlined above. In other words, PCT will not be seen as a legitimate regulatory tool unless smart meters that are consumer friendly are in place, convenient alternatives to combustion engine cars are available at affordable prices, etc.

Another (possibly complementary) route is to use PCT to open up space for reflection on what the role of consumption is in the pursuit of a good life. Faced with a new, carbon constrained reality, the consumer can be encouraged to reconsider the value of consumption in bringing about happiness. Whilst this is not the primary role of law, law could serve to create space for that reflection.

2.5.1.2 Some early trials and attempts

Despite the fundamental challenges noted above, some small-scale experiments of PCT are currently taking place. On Norfolk Island, the Norfolk Island Carbon/Health Evaluation Study has just been implemented.[83] It is the world's first PCT. One goal is to test the links between carbon intensive lifestyles and health. Another is to deliver a model that could inspire applications elsewhere. It is a voluntary scheme, whereby citizens get allowances for free and have to surrender them when purchasing electricity, fuels, and certain foodstuffs. While the Norfolk scheme is certainly interesting in testing issues of acceptability and capacity to change behaviour, the very characteristics of Norfolk Island and of its environmentally conscious citizens – which determined its selection in the first place – may make its replication elsewhere challenging, to say the least.

There are also signs of change within the UK. The 2008 Climate Change Act would allow the Government to introduce PCT without further primary legislation. DEFRA, as mentioned above, has rejected the idea for the time being. However, the Parliament's Environmental Audit Committee rebuked DEFRA for being too quick in doing so and recommended more publicly funded research on the matter. The UK All Parliamentary Group on Peak Oil has returned to the idea and has linked it to the perhaps more powerful notion of energy security.[84] In the words of John Hemming, the chairman of the Group:

> '[Tradable Energy Quotas] provide the fairest and most productive way to deal with the oil crisis and to simultaneously guarantee reductions

83 www.niche.nlk.nf/ (last accessed 5 August 2011).

84 D. Fleming and S. Chamberlain, *Tradable Energy Quotas: A Policy Framework for Peak Oil and Climate Change* (London: House of Commons, 2010).

> in fossil fuel use to meet climate change targets. The challenge is urgent and TEQs are among the best tools we have at our disposal to meet it.'

The scheme proposed by the UK All Parliamentary Group would focus on electricity and fuels, whereby the credits would cover their entire lifecycle. Each energy source would carry a carbon rating set by the government. The entire society would be covered – not just individuals but also firms and the government. Allowances would be given for free to individuals and through auctions to the rest. There would be a national cap that would be reduced annually. Nevertheless, the UK All Parliamentary Group on Peak Oil report is short on legal detail. For instance it does not explain how such a scheme would fit with existing instruments such as the EU Emissions Trading Scheme (ETS), but this would clearly be relevant to judge its practical feasibility *vis-à-vis* EU law.

2.5.2 PCT as an instrument of EU climate law? Some considerations of positive law

2.5.2.1 Would the EU have competence to introduce PCT?

An important threshold question is whether the EU would constitute the right level to introduce PCT. Here a number of very basic observations can be made, beginning with the need to respect the principles of attribution of powers, subsidiarity and proportionality. The EU shares competence in environmental policy with Member States.[85] It was on the basis of that competence that it introduced the EU ETS, after a few Member States had introduced their own domestic schemes. In terms of respect for the principle of attribution of powers, introducing a PCT would largely follow the same logic, as a PCT is merely an emissions trading system introduced at the farthest possible point downstream. So the important question is not whether the introduction of a PCT would respect the principle of attribution of powers, but whether doing so would be in compliance with the principles of subsidiarity and proportionality.

2.5.2.2 Would an EU PCT be in compliance with the principles of subsidiarity and proportionality?

Article 1 TEU and Article 5(3) TEU introduces a clear presumption in favour of taking legal action at Member State level rather than at EU level whenever possible. The principle of subsidiarity[86] means that:

85 Article 4(2)(e) TFEU.

86 According to the principle of subsidiarity, the Union shall act only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level (Art. 5(3) TEU).

- the Union should only act when Member States cannot sufficiently achieve the desired goals by themselves;
- the Union should only act when it can better achieve the desired goals in comparison to the Member States, and;
- the Union's actions should be limited to the extent necessary to achieve those goals.

A set of criteria has been developed in legal and economic literature to assist in the application of the principle of subsidiarity to specific cases.[87] Arguments in favour of decentralisation include:

1 when legislators compete with each other in the market of laws *à la* Tiebout;
2 when there are informational asymmetries, and hence local governments would seem to be in a better position than central regulators to monitor the behaviour of industries;
3 when competition between regulators may serve as a learning process to achieve better solutions in terms of welfare.

Arguments in favour of (a higher degree of) centralisation are:

4 the existence of transboundary externalities;
5 the existence of economies of scale and of transaction costs;
6 the existence of a collective action problem whose unilateral regulation could lead to a race to the bottom.

Clearly, while some of these reasons would appear to argue in favour of introducing PCT at EU level (particularly 4 and 5), others would appear to counsel against it (particularly 2 and 3), and others are either inapplicable or not very illuminating (1 and 6). So there is additional work needed to further clarify the meaning of some of these reasons for PCT (1 and 6) and to examine which reasons seem to carry more weight, (2+3 or 4+5) while acknowledging that in practice competence for an EU-wide PCT would be distributed across many levels of governance (EU, national, sub-national). In any case, the most daunting political problem regarding PCT is its political acceptability. Given the perceived 'radical' nature of PCT, a crucial issue would be the perceived legitimacy of the public institutions introducing it. Since the EU's social legitimacy cannot be compared to that of

87 See for instance R. Van den Bergh and M. Faure, 'The Subsidiarity Principle in European Environmental Law: An Economic Analysis', in E. Eide, R. Van den Bergh, *Law and Economics of the Environment* (Oslo: Jurdisk Forlag, 1996), pp. 128–41.

national governments,[88] it would be for the latter to decide whether to implement PCT.

2.5.2.3 How would PCT fit into the broader regulatory picture of EU climate law?

The EU has put in place a very complex and comprehensive legal framework for climate protection, which moreover is developing in a way that suggests a progressive Europeanisation of climate change law.[89] Decision 406/2009/EC, setting emission reduction targets for Member States that cover sectors not included in the EU ETS, is very much a framework allowing Member States substantial leeway to decide which specific policies to put in place for these sectors. From this perspective, a PCT would be just one option among many, and if one or more Member States were to introduce it, important lessons would be learnt that eventually could feed into a EU-wide scheme. One option for Member States would be to explore the possibility of expanding the EU ETS to bring in consumers, or to create a domestic PCT and link it to the EU ETS. This would of course risk making the EU ETS even more complex to administer. Indeed, the Commission's proposal for a Directive establishing a scheme for greenhouse gas emission allowance trading discussed the possibility of including chemical installations in the scheme, and rejected it due to the imbalance between the added administrative complexity that such a decision would bring and its limited additional environmental benefits.[90] Arguably bringing in end-users would be even more cumbersome. Some studies on PCT have argued that there are ways to reduce administrative complexity, for instance if consumers surrender credits upon payment for fuels and if monitoring, reporting and surrendering obligations fall upon producers and importers.[91] However, the complexities brought by such a link would have to be considered.

Aside from technical considerations, PCT would probably only become a realistic regulatory tool once other key measures facilitating changes in consumer behaviour have been implemented (including for instance consumer friendly smart meters, zero carbon buildings, low carbon transport infrastructure, etc.). It is not therefore realistic or even advisable to include such an instrument until all those structural measures are effectively working.

88 See, for instance, S. Dierckxsens, 'Legitimacy in the European Union and the Limits of the Law' in E. Claes and B. Keirsbilck (eds), *Facing the Limits of the Law* (Berlin: Springer, 2009).

89 See, for instance, S. Oberthür and C. Roche Kelly, 'EU Leadership in International Climate Policy: Achievements and Challenges' (2008) 43(3) *The International Spectator* 35.

90 European Commission, Proposal for a directive establishing a scheme for greenhouse gas allowance trading within the Community and amending Council Directive 96/61/EC, COM (2001) 581 final, p. 10.

91 M. Johnson, H. Pollitt, M. Harfoot et al., *A Study in Personal Carbon Allocation: Cap and Share* (Dublin: Sustainable Development Council, 2008).

2.5.3 PCT at Member State level: some considerations of EU and international law

Whilst comprehensive consideration of the potential EU and international law issues that could arise in introducing a PCT system is beyond the scope of this chapter, a few very basic remarks can be made. First, as a purely domestic measure, a PCT system would first of all have to comply with EU primary law (for instance with the law of free movement of persons and goods, and with state aid rules)[92] and with EU secondary law (for instance, with the EU ETS). As a PCT can be designed in many different ways, it would be necessary to assess each option individually for compliance with the requirements of EU law, and generalisations are not possible. Important issues could arise, for instance, in relation to the scope of the PCT system (e.g. whether it applies only to residents or also to visitors; whether it applies to all citizens or only to adults; its treatment of foreign companies, etc.). In addition, the Member State would need to make sure that it is in compliance with obligations under international law, in particular certain WTO agreements. WTO law could come into play because a PCT scheme, if mandatory, would have to be accompanied by mandatory labelling, which would have to be assessed under the GATT and the TBT agreements. Moreover, a Member State could seek to set up its PCT scheme as an extension of the EU ETS, and in that case the relevant provisions of Directive 2003/87/EC would be applicable.[93] The point made here is simply that the requirements of EU and international law would need to be taken into account when deciding upon the possible introduction of a domestic PCT.

2.6 Concluding remarks

This chapter has argued that, if overconsumption is seen as a serious and urgent problem at the root of the current environmental crises, it ought to receive more attention by law-makers the world over. In fact, this is what we are starting to detect. While addressing the behaviour of consumers is not sufficient to solve problems such as climate change – large structural and institutional changes are also certainly needed – it is a necessary element of the equation, and a more important one than has been conceded so far. Further, this chapter does not argue that law is the most adequate tool to effectuate moral changes; what it has argued is that law can provide a link between the protection of public goods such as environmental protection and necessary changes in individual and social behaviour. Law can in particular play a role in setting up structures that open up new avenues for citizens to fulfil their

92 For an analysis of the fit of PCT or similar schemes with EU State aid rules, see M. Johnson, H. Pollitt, M. Harfoot et al., *A Study in Personal Carbon Allocation*, pp. 66 *et seq*.

93 In particular, Article 24.

civic obligations. Failure to use legal tools leaves a gap that cannot be filled by other types of interventions.

In that vein, PCT has been examined as one possible legal solution. The chapter suggests that more work, including by legal scholars, is required to determine whether PCT would be acceptable and effective. What seems clear is that PCT would be just one tool within the regulatory mix, along with structural measures empowering citizens to make real behavioural changes.