

Christmas tale of (un)sustainability: reflecting on consumption and environmental awareness on the streets of Amsterdam

Dr. Kopnina, Helen (Ph.D. Cambridge University, 2002) is currently employed at The Hague University of Applied Sciences in The Netherlands. She is a coordinator of the Sustainable Business program, lecturer and researcher of environmental education and environmental social sciences.

E-mail: h.kopnina@hhs.nl

Abstract.

In reflecting on Dutch Christmas shoppers, this article will discuss the Environmental Kuznets Curve (EKC), postmaterialist values hypothesis, and ecological modernization theory. According to the EKC hypothesis, while at the initial stages of industrialization material resources are often used unsustainably, continuing industrialization leads to a threshold after which lead to progressively more sustainable technologies. According to the postmaterialist values hypothesis, only wealthier societies can 'afford' to care about the environment, assuming that wealth will lead to the development of greater concern about and valuation of the environment. Finally, ecological modernization theory postulates that environmental conditions improve with advanced technological development and suggests that enlightened self-interest, economy, and ecology can be favorably combined and that productive use of natural resources can be a source of future growth. In generalizing economic, political and social trends in relation to consumption in The Netherlands, the aim of this article is to consider the consequences of Western-style consumption for the enterprise of global development.

Keywords: consumption, ecological modernization theory, Environmental Kuznets Curve, postmaterialist values theory, sustainability, sustainable development, The Netherlands

There's nothing they need, nothing they don't own already, nothing they even want. So you buy them a solar-powered waving queen; a belly button brush; a silver-plated ice cream tub

holder; a “hilarious” inflatable zimmer frame; a confection of plastic and electronics called Terry the Swearing Turtle; or – and somehow I find this significant – a Scratch Off World wall map....They seem amusing on the first day of Christmas, daft on the second, embarrassing on the third. By the twelfth, they're in landfill. For thirty seconds of dubious entertainment or a hedonic stimulus that lasts no longer than a nicotine hit, we commission the use of materials whose impacts will ramify for generations.... So effectively have governments, the media, and advertisers associated consumption with prosperity and happiness that to say these things is to expose yourself to opprobrium and ridicule....When the world goes mad, those who resist are denounced as lunatics. Bake them a cake, write them a poem, give them a kiss, tell them a joke, but for god's sake stop trashing the planet to tell someone you care. All it shows is that you don't (Monbiot 2012).

Introduction

This article aims to interrogate manifold features, uses and manifestations of the term sustainability through a critical investigation of the Dutch environmental attitudes and practices. Consumption, particularly in regard to energy and transportation will be examined in the light of Environmental Kuznets Curve (EKC) hypothesis, postmaterialist value theory, and ecological modernization theory.

According to the EKC hypothesis, during early industrialization, economies use material resources more intensively, until a threshold is reached after which structural changes in the economy lead to progressively less-intensive materials use (Grossman and Krueger 1991). It is believed that high-income levels and economic growth lead to environmental improvement that favors sustainable practices (Stern 2004).

Following the postmaterialist values hypothesis, while wealthier societies can ‘afford’ to care about the environment, the developing countries or poor people are concerned about meeting their basic needs (Inglehart 1971, 1977). Thus, it is assumed that wealth will lead to the development of greater valuation of the environment in a society that is materially satisfied, and in citizens whose basic needs are met. Closely related to these is ecological modernization theory (e.g. Mol and Sonnenfeld 2000), which states that enlightened self-interest, economy, and ecology can be favorably combined and that productive use of natural resources can be a source of future growth and development. Ecological modernization emerged in the early 1980s within a group of scholars at Free University in The Netherlands and the Social Science Research Centre in Germany.

Ecological modernization theory has been used by scholars particularly in application to their countries of origin, Germany and The Netherlands, and having little to say about the developing world (Fisher and Freudenburg 2001). If ecological modernization and correspondent rise in environmental postmaterialist values are possible in these countries – could other countries then be encouraged to emanate this model of sustainability?

We shall start with the Christmas tale from the Netherlands.

The Dutch Christmas tale of consumption

In 2011 the Dutch queen Beatrix (that abdicated in April 2013) used her traditional Christmas speech to urge the people of the Netherlands to take better care of the planet.

'Selfishness and a tendency towards excess makes one blind to the damage to our natural environment and undermine communities... The earth which feeds life, but cannot speak for itself, needs a voice. That should be heard in all minor and major decisions,' she said (http://www.dutchnews.nl/news/archives/2011/12/queen_calls_for_better_care_of.php).

As the author started composing this article just before Christmas 2012 in The Netherlands, when the streets, the newspapers, and people's conversations were permeated by the gifts and the wishes for the future. Just as any Christmas shoppers in most Western countries, the Dutch are filling their Christmas bags or bicycle carrying baskets, and peddle back home to share the gifts with their loved ones. In 2010 the Dutch averaged at 206 euros on Christmas presents (<http://www.statista.com/statistics/209306/christmas-present-budget-in-2010-by-country/>). In 2012 the Dutch are likely to be as generous, as witnessed from lines in malls and smaller shops.

The new trend that swept the Netherlands in the past few years, also reflective of other Western countries, is 'sustainable', or 'green', 'responsible', ecologically enlightened consumption. Many Christmas gifts are wrapped in recycled paper, shoppers prefer to buy organic, biological, and fair trade products. Overall concern about eco-efficiency in the types of gifts and transportation has become wide-spread on the wintry streets of Amsterdam, as witnessed by the rise of fair trade shops

and eco-plazas. Inspired by the festive atmosphere, one might ask whether the Dutch citizens have reached the level of environmental awareness and sustainability in consumption that could be emanated by less fortunate (in terms of GDP) countries of the world?

Not necessarily. For example, consumption energy has been on a steady rise in The Netherlands since the financial crisis in 2009, and the rise in renewable energy has been negligible (The World Bank 2012). The Netherlands still relies on more than 80% non-renewable energy, with other sources of renewable energy comprised of biomass, that often comes from wood sources imported from developing countries and Canada (European Environmental Agency 2010). According to the World Bank report (2010), the electric power consumption (kWh per capita) in the Netherlands was 6895.66 in 2009 (The World Bank 2010). The percentage of alternative and nuclear energy in the Netherlands was last reported at 1.72 in 2010, with the bulk of energy coming from non-renewable sources report (The World Bank 2012). The Dutch government has recently approved plans for continuing with building another coal plant and engaging in large scale fracking operations that were hailed as environmentally damaging by the majority of Dutch environmental organizations.

The Netherlands Court of Audit, which checks that the government spends public funds and conducts policy as intended, reports that there has been a failure for years to achieve energy saving targets and predicts that the Netherlands will not meet the agreed EU targets of "20-20-20", requiring 20 percent reductions in carbon emissions and energy use and a 20 percent increase in renewable energy by 2020. Energy consumption in the Netherlands increased by 11 percent between 1995 and 2007, not by 4 percent as the government had planned. As a result, 13 megatonnes more CO₂ was emitted than intended (<http://www.enigin.net/news/enigin-update-netherlands-failing-to-reach-energy-saving-targets/>).

In the article titled 'Dirty Dikes' of *The Economist*, The Netherlands is described as a 'sink-hole of pollution' with its water 'brimming with nitrates and phosphates, and the air is clogged with the particulate matter':

The Netherlands... scores particularly badly on the quality of its soil, where those phosphates and nitrates linger in large quantities. They seep into surface water, the quality of which is also below EU guidelines. Emissions of nitrogen monoxide and dioxide are triple the EU average.

Carbon-dioxide emissions rose by 15% between 1990 and 2010. Only vast purchases of emission rights keep the Netherlands below its Kyoto targets (The Economist 2012).

Would those tourist-celebrated bicycles used by many Amsterdam residents not account for greener transportation trends? Apparently, not. With more than seven million passenger vehicles on its roads, the Netherlands is the sixth largest automotive market in Europe (European Automobile Manufacturers' Association 2011). According to Eurostat (2013), car density in the Netherlands in 2009 is 462 per 1000 inhabitants, up from 371 per 1000 in 1991. This is remarkable because the Netherlands has a small territory with a highly developed public transportation system.

Within the European Union, The Netherlands appears to be one of the worst countries for air pollution by emissions from diesel cars. Despite European Environmental Agency regulations, by 2010 emissions had decreased much less than anticipated by the EU standards (European Environmental Agency 2011). Recent studies of Dutch children's perception of cars indicate that the future generation of Dutch citizens is not likely to start using public transport (Kopnina 2011b; Kopnina and Williams 2012).

The Dutch Household Consumption Radar, an instrument developed by Statistics Netherlands to analyze developments in consumption by Dutch households and place them in different contexts, uses six indicators selected on the basis of an econometric study, monitors whether circumstances have developed favorably or unfavorably for Dutch consumption. These indicators are consumers' expectations for the development of unemployment; consumers' expectations for their financial situation in the coming year; producers' expectations for their future number of employees; annual change in employed working labor force; annual change in prices of existing own homes; annual change in Dutch share prices.

Household consumption is influenced by consumers' expectations, developments on the labor market and developments in the capital. How willing households are to spend their money depends on their expectations for the future. If they are positive about their future financial situation and the labor market, they will be more willing to consume. Developments in the labor market give an indication of how the purchasing power of households is developing and its effect on consumption. The change in the employed labor force shows how the labor market has developed. Producers' expectations give an indication of how employment may develop in the coming months. The development of households' consumers capital position is reflected by developments in house prices and share prices. If these show positive changes, consumption will rise (CBS 2013).

It is interesting to note that environmental awareness factors are not mentioned in the analysis of current Dutch consumption trends nor in the future projections. The recent report of the Radar has indicated a

'hopeful' trend in consumer confidence and rise in consumption since the slow recovery of the economic downturn in 2009 (CBS 2013).

Recently, the Dutch government showed mild signs of environmental awareness:

Even the queen is concerned, referring in her Christmas speech to the limits of the earth's ability to sustain "human greed". Yet although it supports small environmental projects, the government does not seem worried about the big picture. In hard times it is not about to make life harder for industries that boost state coffers and supply jobs (The Economist 2012).

However, on the whole, the Dutch government at the moment seems anything but environmentally-oriented (e.g. The Economist 2012). In fact, the top of the Dutch political agenda is *increasing* consumption in order to climb out of economic malaise (e.g. Volkskrant 2011).

While the scope of this article does not allow for detailed exposition of different unsustainable trends in the Dutch society, another notable example are the government's current plans to cut down the budget for wild protected areas as the recent government campaign to meet growing demands of Dutch car drivers have negated protection of the few remaining natural areas in favor of expanding highways (NRCnext 2011; Spitsnews 2012). Rather than encouraging public transportation use, the Dutch government seems content paving more of the existing territory despite environmental groups' minority protests. The largest proportion of existing territory is 'cultivated areas' or agriculture (2.287.502 hectors out of total territory: 3.789.166), followed by green spaces in 'built settlements' and towns (classified as parks) and tailed by nature and recreation that form less than 2% of the entire Dutch territory claimed either by urban or agricultural development (CBS 2012). Green spaces in build settlements and towns classified as parks in North Holland accounted for a total of 3.644 against the total population of the province of 2.669.084 in 2010 (CBS 2012).

Whether next elections will change anything remains uncertain. Whether the Dutch electorate is likely to get any more ecologically enlightened if the economic recovery from the 2009 financial crises continues, remains as mirage-like as the limits to material saturation level and the possibility of conscious moral and material constraint for the sake of environment across the world.

According to the recent report by Henkel (2013), online survey conducted by TNS among 6.414 respondents in Great Britain, France, Italy, Spain, Belgium, The Netherlands, Sweden, and Greece, revealed that The Netherlands appears to be one of the least environmentally-conscious countries in Europe. According to the report, in the field of sustainable shopping Netherlands ranks lowest compared to the rest of the surveyed countries. For example, the study shows that 73 percent of the Dutch do not specifically note the sustainability of household products while shopping, compared to the average of 47 percent in other countries (Henkel 2013).

Charitable intentions.

Despite these unsustainable trends, recent studies of the perception of Dutch citizens on sustainability attitudes indicate environmental and social equity concerns of Dutch citizens are rising (e.g. Kopnina 2011a and 2012b). Christmas also signals an increase in charitable donations. The overall score on the World Giving Index 2011 for The Netherlands is sixth place, with 75% of the population donating money, 37% of the population donating time towards volunteering and 51% of the population has helped a stranger in the past month (Charities Aid Foundation 2012) According to Centraal Bureau Fondsenwerving (2011) a total of €3.795.593.459,02 was collected in the Netherlands for non-profit organizations in 2010. For the Dutch donor market, this means that an average of €250 is given per household (CBF 2011).

The bulk of the donations are aimed at charities targeting poverty and global inequality (Charity Navigator 2012). The Dutch citizens seem to care greatly about the fate of those who cannot afford the Christmas presents or the parking fees. And this, some would argue, presents one of the greatest paradoxes of sustainable development. Would the expansion of the 'economic pie' to satisfy a growing economic need in developing countries not lead to more natural resources being consumed and thus exacerbate ecological crises (Rees 1992)? On the one hand, economic development has helped to lift millions of individuals and arguably entire countries out of poverty. On the other hand, increased welfare and improved food technologies have enabled unprecedented burst in population growth and the ever-increasing extraction of resources and economic activity has placed increasingly unsustainable pressures on environmental exploitation. Critics have asserted unsustainable development is predicated upon the notion of 'sustainable growth', and in reality, this is not possible because growth entails the consumption of natural and human capital at great costs to both nature and societies.

While "raising the standard of living" may be nebulous shorthand for the worthy aim of ending severe deprivation, translated into shared understanding and policy the expression is a euphemism for the global dissemination of consumer culture – the unrivaled model of what a "high standard of living" looks like. But to feed a growing population *and* enter increasing numbers of people into the consumer class is a formula for completing Earth's overhaul into a planet of resources: for ever more intensified uses of land and waterways for habitation, agriculture and farming; for the continued extraction, exploitation, and harnessing of the natural world; and for the magnification of global trade and travel' (Crist 2012: 141-142).

While conventional environmental wisdom would have it that overconsumption is the failing of the affluent; 'overpopulation has been regarded as the plight of the poor as if they did not consume in ecologically unsustainable ways' (Crist and Cafaro 2012: 5). Global consumption patterns indicate that as soon as the poor reach the higher economic development level, their per capita consumption rises proportionally. A recent World Economic Forum Report (2012) noted this paradox, stating that in recent years an estimated 450 million people had been lifted out of poverty. But in the same period, about 21 million hectares of forest had been lost, 9.1 billion tons of municipal solid waste was generated and some 50 billion tons of fossil fuels were consumed.

Can we count on EKC, postmaterialist values and ecological modernization theories to offer hope for a sustainable future for many Christmases to come?

Criticism of postmaterialist values theory

In his review article, Abramson (2011) summarizes forty-eight critiques of postmaterialist value theory, beginning with Ike (1973) and ending with Lee (2007). Both Ike (1973) and Lee (2007) have pointed out that postmaterialist values might not be cross-culturally applicable as Inglehart tested his thesis in six West European societies, and did not reflect whether Western culture influences the effects of industrialization and economic change. Critics of postmaterialist values have noted that environmental concern is an exception to the post-materialist thesis and can be expressed as the basic or underlying value of all societies (Brechin and Kempton 1994; Brechin 1999; Dunlap and York 2008; Abramsom et al 2011).

There is an ongoing debate about the extent to which concern about environmental problems is a result of the objective deterioration of environmental conditions or subjective individual values. In analyzing the processes by which postmaterialism is related to environmentalism in Britain, Cotgrove and Duff (1981) concluded that support for post-material values can be attributed to the individual's social ideals rather than collectively shared ideologies (Cotgrove and Duff 1981:104). Studies of global environmental

values suggest that environmental concern is individually varied but universally shared (Dunlap and Mertig 1997).

The most recent Word Values survey report (2012) offers support for this view. This study tested both explanations using multi-level models and data from the 2005-2008 World Values Survey and the Climate Risk Index to evaluate concern for prioritization of environmental protection in 44 countries at various stages of economic development. Findings indicated that a country's recent experience with climate-related environmental disasters has little to no effect on concern for global warming – results that contradict the explanation of the objective problem of environmental concern. The subjective values explanation receives more support, particularly in countries at the most advanced stage of economic development (Running 2012).

Some studies show that national wealth is ‘negatively rather than positively related to citizens’ environmental awareness and concern’ (Dunlap and Mertig 1997: 24). Inglehart (1995) did provide an explanation for the surprisingly high levels of public concern for the environment in developing countries and indicated similar levels of willingness to pay higher taxes for environmental protection, summarized by Brechin’s two-factor explanation called “objective problems–subjective values”: In the South, it is derived from citizens experiencing directly pollution and other environmental degradation. In the North, it is derived from citizens experiencing a shift in their subjective or cultural values (1999:794).

Following Inglehart’s logic, Dunlap and York (2008) have pointed out, empirically, we would expect poor nations to only care about their own local issues such as water pollution and not global problems, which based on a number of international case studies, does not seem to be the case. Opposing Brechin (1999) Dunlap and York argue that “the environmental concerns of the poorer countries appear to be based on a broader set of values and effects than those generated simply from direct experiences” (2008:536–537).

Returning to the case of the wealthy industrial country like The Netherlands, the set of values that the Dutch exhibit – at least in as far as the statistical data of (un)sustainable practices goes - does not seem to correspond to the level of their material development. Assuming that in the democratic country the level

of political representation is reflective of the views and wishes of the majority of voters, the lack of government action to combat levels of emission, pollution, and preservation of wilderness areas seems to indicate indifference, unwillingness or alternative priorities in the 'enlightened' Dutch citizens. While The Netherlands is considered to be one of the richest countries in Europe, it also seems to be one of the worst in terms of environmental awareness (Henkel 2013), as well as actual record in terms of combatting a range of environmental problems ranging from pollution to combatting climate change (The Economist 2012).

Criticism of EKC

Critics of EKC hypothesis argue that material saturation level of 'developed' societies is far from sustainable if the more privileged societies and classes continue at the same level of consumption (e.g. Dasgupta et al 2002; Harbaugh et al 2002; Stern 2004; Kopnina 2011 and 2013). While "ecological footprinting" shows that richer nations have a far greater negative environmental impact than poorer nations, this does not mean that poorer nations limit their ecological footprint out of environmental concern. It does show, however, that more affluence does not lead to more ecological behavior (Kollmuss & Agyeman 2002).

The current focus on consumer choice and market-based solutions make political sense as politicians or corporate elites are not placed in responsible positions and leave the 'choice' to consumers (Hobson 2002). Richard Wilk, a prominent environmental anthropologist who specializes in consumption, reflects that businesses and the government are the largest consumers of all consumer products and individual consumption decisions are insignificant in proportion. Thus, "many consumption decisions are not made by consumers at all, but by governments, regulatory agencies, and businesses" (Wilk 2009: 4). It is also questionable how 'responsible' the consumers are, and whether their sense of responsibility is not limited by easy fixes of green-washed products and promises of eco-efficient innovations. Some studies point to

the irony of trying to solve problems associated with over-consumption with even more consumption, regardless of how green and efficient production processes become (Isenhour 2009).

Extensive research suggests that the contemporary emphasis on "green consumerism" might also be driving more consumption as they aim to absolve consumers of their guilt by offering "responsible" products. According to the rebound effect, "green" items are purchased to appease the wealthier consumer's conscience, driving more resource depletion and waste (Greening et al 2000). In fact, focus on individual responsibility may be seen as a reflection of the dominance of neo-liberal forms of environmental governance, whereby governments and industrial elites delegate responsibility for environmental regulation to consumers, refusing to make politically unpopular decisions that would actually regulate or limit consumption (Hobson 2002).

The greatest challenge appears to be not just the type of consumption but cutting down consumption or consuming less (Isenhour 2010). Wilk (2004: 27) has argued that responsible consumption is not necessarily about 'reducing consumption' per se, but about making sure that the 'goods and services people buy, use and throw away' consume fewer resources. For a very small segment of Western consumers, ethical consumption means consuming less, not just engaging in more damaging consumption (Isenhour 2010). Whether such a consume-less ideology can be hoped to be globally adapted remains questionable.

Returning to the case of the Netherlands, we may note that The Dutch Household Consumption Radar (CBS 2013) indicate a steady rise in Dutch consumption as soon as consumers' expectations, their personal financial situation, and developments on the job market are seen as 'favorable' as has been the case in 2012.

Criticism ecological modernization theory

O'Riordan (1981) and Yearly (1991) expressed their concerns about the failures of existing social and technological systems, including inappropriate technology, inappropriate values, over-consumption, and over-population. Critics have also argued that ecological modernization does nothing to alter the impulses within the capitalist economic mode of production that inevitably lead to environmental

degradation (Foster 2002). In doing so, ecological modernization theory tends to ignore the five facets that Dunlap (2008) and his colleagues developed to measure popular support for the New Ecological Paradigm: (a) the limits to growth, (b) non-anthropocentrism, (c) fragility of nature's balance, (d) untenability of exemptionalism, and (e) ecological crisis. According to Foster (2012), ecological modernization theory is systematically defined by its weak adherence to or complete rejection of all five of these facets, and in particular, by its new exemptionalism. While proponents of human ingenuity celebrate the human capacity for invention and innovation, critics question whether technological fix can lead to sustainable practices, particularly if powerful elites such as corporate leaders are still allowed to follow the business-as-usual trajectory (York and Rosa 2003).

Reflection on the globalization of consumption

Recent literature on sustainable solutions to world problems points to the fact that directives recommended earlier by The Limits to Growth publication (Meadows et al 1972) fail to seriously address environmental or planetary boundaries (e.g. Turner 2010). Wijkman and Rockström (2012) demonstrate that we are in deep denial about the magnitude of the global environmental challenges and resource constraints facing the world. Despite growing scientific consensus on major environmental threats as well as resource depletion, societies are largely continuing with business as usual, at best attempting to tinker at the margins of the problems. At present, Wijkman and Rockström (2012) argue, sustainability solutions aimed at health promotion and poverty reduction do not necessarily address long term solutions associated with a rise in global consumption. The issues connected with population growth and growth in consumption which may be contributing to environmental problems in the first place (Kopnina 2012a).

The new 'holy grail' of the dominant political elites, the consumerist culture, is widely supported (Blaser et al 2004), and the anthropocentric view of nature as a resource is perpetuated. The problem with viewing 'nature' as 'natural resource' is well-summed up in Crist's moral argument instructed by ecocentric environmental ethics:

The assumption embedded in the concept of resources is that the natural world always is graspable in terms of its disposability to human ends: conceptually, actionably, open-endedly, and in perpetuity. The pervasive use of the term reflects its entrenchment; even those who regret human unrestraint feel compelled to talk about resources as a counterfeit referent for things, living beings, and natural conditions on Earth. The concept of resources is an abstraction, for it says nothing specific about any real aspect of the world... The concept of the resources inscribes the world, conceptually and instrumentally, as a usable field, and by refusing all concreteness it makes itself all-inclusive and endlessly rapacious. It serves human colonialist attitudes and ends, and all of us are complicit in its ubiquity and ramifications (Crist 2012:144).

This represents a serious accusation of human superiority that is deeply entrenched both in ecological modernization theory and in sustainable development discourse. It implies that what is being consumed by the Dutch (and global) shoppers is not just the products made of natural resources – it is the living things and natural conditions on Earth that are being destroyed. Even with the help of those great ideas and possibilities inherent in green consumption, the word of warning from ecocentric environmental ethics can be instructive. In mocking ‘eco-friendly lists’ of mainstream sustainability thinkers, Crist reflects that we can always update the old triple R lists by adding

the imminent possibilities of geoengineering, synthetic biology, genetic engineering, laboratory-made meat, and sundry adaptation projects to keep climate change under control and food on the table. More serious than modern society’s potential ability to technologically fix or muddle through problems of its own making is people’s apparent willingness to live in an ecologically devastated world and to tolerate dead zones, endocrine disruptions, domestic animal torture (aka concentrated animal feeding operations or CAFO’s), and unnatural weather as unavoidable concomitants of modern living (Crist 2012:149).

From the point of view of deep ecology, expansion of highway at the expense of natural areas in the Netherlands undermines ecological sustainability in ethically inadmissible ways. We can speculate that such a harsh judgment is barely acceptable by the average (Dutch) consumer, otherwise, we would expect nothing short of a revolution in the society that proclaims to be governed by democratic values. Instead, government effort to facilitate public transport use for the sake of protected nature areas is not likely to be well-received by the Dutch electorate, an increasing proportion of which owns personal vehicles. It is understandable that instead of accepting what could be seen as ‘drastic measures’ (such as a switch to fully renewable energy sources, or instituting significant financial barriers to private transport

use), citizens embrace the comforting promises and innovative strategies offered by ecological modernization theory.

It can hardly be argued that Dutch pattern of consumption, at least as it manifests itself around the end of 2012, is 'sustainable' if translated onto the global scale, and if environmental awareness also implies responsibility beyond social and economic interests, the Dutch pattern of consumption threatens not just the natural resources but the very foundation of ecological base in human 'sustainability'.

Alternatives: Cradle to Cradle and circular economy

The alternatives are underway. One of them is the closed-loop or circular economy, emerging from industrial symbiosis or industrial ecology. In their 1976 research report to the European Commission in Brussels 'The Potential for Substituting Manpower for Energy', Walter Stahel and Genevieve Reday sketched the vision of the circular economy and its impact on job creation, economic competitiveness, resource savings, and waste prevention. The circular economy model uses the functioning of ecosystems as an exemplar for industrial processes and systems.

This framework was later adopted by American architect William McDonough and the German chemist Michael Braungart (2002) and recently popularized by Allen MacArthur Foundation. Continuing with a system that generates massive amounts of waste in the endless spiral of production and consumption, the authors argue, will only prolong the essentially unsustainable system. The term circular economy encompasses more than the production and consumption of goods and services, including a shift from towards renewable energy and the role of diversity as a characteristic of resilient and productive systems (McDonough and Braungart 2002; Stahel 2006; MacArthur Foundation 2012 and 2013). This framework contemplates not just minimizing the damage but proposes how contemporary waste and depletion of resources can be avoided by adhering to the 'waste=food' principle. This principle is well illustrated by the metaphor of the cherry tree, that produces 'waste' (berries, leaves, etc.) that actually serves as food for other species or for the formation of the soil. Reflective of critique of sustainable consumption and the

triple P's (reuse, reduce, recycle) this alternative framework criticizes sustainability defined in terms of eco-efficiency as it is seen as enabling the bad system to last longer.

The application of this idea at an economic level has risen to prominence since the World Economic Forum (WEF 2012) and propelled forward by the reports by Ellen MacArthur Foundation (2012 and 2013) and other initiatives stimulated by both government and business stakeholders (e.g. <http://resourcerevolution.net/awards/>).

Geraldine Brennan (2013) has recently completed her dissertation discussing the possibilities of use of closing-the-loop, biomimicry, and whole-systems in the production of goods and services in the industrial economy. Brennan's analysis has also considered the extent to which these frameworks can lead to a 75% reduction in natural resource use, and a reduction of 80% in associated carbon emissions, by 2050.

There are many other solutions proposed, heralded by trends like generation Y, the cloud, co-creation and new business models like collaborative consumption, the sharing economy, secondary markets, pay per use, leasing models, and dematerialization (Brennan 2013).

Yet, as the critics of EKC and ecological modernization have noted, the challenge often lies not in technologies themselves but in social, political, and most importantly economic factors that can enable their adaptation (York and Rosa 2003; Wilk 2009). While many technological improvements are currently feasible they are not widely utilized either because concerted efforts of powerful industrial lobbies and consumers block their development. The greatest challenge then lies not with adapting technology but with overcoming social, political, cultural and particularly those barriers associated with the current power (and finance) holders preferences (Isenhour 2009).

Thus, more fundamental change in the way of production as suggested by Cradle to Cradle and the circular economy may be instructive. As proponents of circular economy Hislop and Hill (2011) have noted, although adding economic incentives is just part of the package of regulatory and voluntary measures needed to achieve better resource stewardship, the large part of the shift to a more sustainable economy may need to come from our values and behavior, which might be independent of, or else

reinforced by, an economic motive. These values and behavior are neither postmaterial in a sense of being related to the development level of the country, as measured by conventional standards, nor exclusively present in the more industrially advanced systems – rather they lie in areas where human care and propensity for innovation universally reside, and where hope for truly sustainable future can be found.

Returning to the reflection on Christmas shopping in an article aptly titled ‘All I want for Christmas is a lower rate of consumption’ Rosemary Randall (2011) reflects:

For a business to become truly sustainable it has to contribute actively to cultural change, to become a co-creator of an alternative economic system in which human needs are constructed and met in a different fashion... The intrinsic values of justice, concern for nature, a community that will support a truly sustainable society tend to be suppressed in contemporary culture while extrinsic values of self-interest, ambition and materialism dominate. Activating intrinsic values and re-orienting business in accordance with them could have a surprising effect on consumers as well as a business but is not likely to be a simple task. It means asking awkward questions not just about products but about the purpose of business and its own culture.

In the meantime, the export model of Dutch ecological modernization may serve as a warning rather than an inspiration for rapidly developing nations and continuously growing populations of global consumers.

Conclusions.

In examining actual consumption patterns and evidence of environmental awareness of the Dutch citizens, it seems that the level of sustainable attitudes and practice does not correspond to the level of the country's material development. Assuming that in the democratic country the level of political representation is reflective of the views and wishes of the majority of voters, the lack of government action to combat levels of emission, pollution, and preservation of wilderness areas casts the degree of doubt on the ‘ecological enlightenment’ of the Dutch citizen-consumers.

The irony behind the charitable intentions of Dutch citizens is that while these citizens are driven by social altruism and have a well-meant desire to help others what they see as a better quality of life, they are simultaneously perpetuating the system in which unsustainable level of consumption is becoming

increasingly globally spread. The solution, of course, cannot be to abandon the charitable intentions towards the needier – as there will be morally unacceptable – but to critically examine the long term implications of the failing Environmental Kuznetz curve, postmaterialist values, and ecological modernization theories. If the Dutch sustainability does not seem to comply to optimistic prescriptions of these predictions, an alternative model such as that of the circular economy seems the necessary step, not just for the Netherlands, but on a global scale. While it is impossible to generalize to the Western countries from discussing the case of Dutch consumption, this cautionary tale of Dutch Christmas shoppers can be seen as indicative of the larger consumption patterns that affect developed countries and are increasingly imitated – or aspired to – in the developing world.

Hopeful signs can be discerned though. We have reflected that postmaterialist values might not be cross-culturally applicable and that environmental concern is an exception to the post-materialist thesis and can be expressed as the basic or underlying value of all societies, felt at the individual as well as social levels. Drawing upon these observations, we may reflect that even though the Dutch might not be more sustainably minded than other country's citizens, it is not necessarily through their wealth and environmental awareness that positive changes may occur. It is through universal although individually variable concern about the future that the recognition of the importance of alternatives, such as the circular economy, Cradle to Cradle framework, the possibilities of use of closing-the-loop, biomimicry, and whole-systems in the production of goods and services in the industrial economy.

There are many other solutions proposed, such as co-creation and new business models like collaborative consumption, the sharing economy, secondary markets, pay per use, leasing models, and dematerialization. How likely they are to take precedence on the global and local scales will depend on the multiple social, political, and technological factors, as well as on the ability of the biosphere to absorb accesses of unsustainable production, consumption and last but not least increasing population growth. As it is, as Dutch Christmas shoppers park their vehicles in underground tunnels and on the few paid parking spots to join the shopping crowds, the dream of postmaterialist values and the possibility of sustainable consumption on the world scale seems to be going up in grey air.

Bibliography

Abramson, P. 2011. Critiques and Counter-Critiques of the Postmaterialism Thesis: Thirty-four Years of Debate. CSD Working Papers, Center for the Study of Democracy, UC Irvine

<http://escholarship.org/uc/item/3f72v9q4>

Blaser, M. Feit, H. A. and McRae, G. eds. 2004. *In the Way of Development: Indigenous Peoples, Life Projects and Globalization*. London: Zed Books and Ottawa: International Development Research Centre.

Brechin, S.R. and Kempton, W. 1994. Global environmentalism: a challenge to the post material thesis? *Social Science Quarterly* 75: 245–69.

Brechin, S. R. 1999. Objective problems, subjective values, and global environmentalism: Evaluating the postmaterialist argument and challenging a new explanation. *Social Science Quarterly*, 80: 793-809.

Brennan, G. 2013. The closed loop or circular economy.

<http://www2.imperial.ac.uk/blog/cepresearch/2013/01/31/the-closed-loop-or-circular-economy/>

CBF. Centraal Bureau Fondsenwerving. 2011. *Weet waar je voor geeft*. 01 01 2010. Accessed December 23, 2012.

CBS 2012. Statline: Population.

<http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=03759NED&D1=0&D2=129&D3=0,5-16&D4=17-22&HDR=T&STB=G2,G1,G3&VW=T>

CBS. 2013. Consumptiradar. <http://www.cbs.nl/nl->

[NL/menu/themas/dossiers/conjunctuur/cijfers/kerncijfers/consumptieradar.htm](http://www.cbs.nl/nl-NL/menu/themas/dossiers/conjunctuur/cijfers/kerncijfers/consumptieradar.htm)

Charities Aid Foundation. *World Giving Index 2011, a Global View of Giving Trends*. Annual Report.

London: Charities Aid Foundation Website, 2012. PDF.

Charity Navigator. *Charity Navigator Your Guide to Intelligent Giving*. Accessed December 23, 2012.

Cotgrove, S. and A. Duff. 1981. "Environmentalism, Values, and Social Change." *British Journal of Sociology* 32 (March): 92-110.

Crist, E. 2012. Abundant Earth and Population. In P. Cafaro and E. Crist (Eds). *Life on the Brink: Environmentalists Confront Overpopulation*. University of Georgia Press. (p. 141-153).

Crist, E. and P. Cafaro. 2012. Human Population Growth as If The Rest of Life Mattered. In P. Cafaro and E. Crist (Eds). *Life on the Brink: Environmentalists Confront Overpopulation*. University of Georgia Press (p. 3-15).

Dasgupta, S., Laplante, B., Wang, H., & Wheeler, D. 2002. Confronting the environmental Kuznets curve. *The Journal of Economic Perspectives*, 16(1): 147–168.

Dunlap, R. and Mertig, A. 1997. Global environmental concern: an anomaly for postmaterialism. *Social Science Quarterly* 78: 24–29.

Dunlap, R. E. 2008. The New Environmental Paradigm Scale: From marginality to worldwide use. *The Journal of Environmental Education*, 40(1): 3–18.

Dunlap, R. E., and York, R. 2008. 'The globalization of environmental concern and the limits of the Postmaterialist values explanation: Evidence from Four Multinational Surveys'. *The Sociological Quarterly* 49:529–563.

The Economist. 2012. Pollution in the Netherlands: Dirty dikes.

<http://www.economist.com/printedition/2012-02-04>

Ellen MacArthur Foundation 2012. Circular Economy.

<http://www.ellenmacarthurfoundation.org/circular-economy>

Ellen MacArthur Foundation 2013. *Towards a Circular Economy Report Volume 2: opportunities for the consumer goods sector*. <http://www.ellenmacarthurfoundation.org/business/reports/ce2013>

European Environmental Agency 2010. The Netherlands. Air Pollution.

http://www.eea.europa.eu/soer/countries/nl/soertopic_view?topic=air%20pollution

European Automobile Manufacturers' Association ACEA 'Country profiles'.

http://www.acea.be/index.php/country_profiles/detail/netherlands#text Accessed April 13, 2011

European Environmental Agency 2010. The Netherlands. Air Pollution.

http://www.eea.europa.eu/soer/countries/nl/soertopic_view?topic=air%20pollution Accessed April 13, 2012

Eurostat 'Motorization rate cars per 1.000 inhabitants'

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdpc340>

Accessed January 1, 2013.

Fisher, D.R., and Freudenburg, W.R. 2001. Ecological modernization and its critics: Assessing the past and looking toward the future, *Society and Natural Resources*, 14, pp. 701–709.

Foster, J.B. 2002. Ecology Against Capitalism, New York, *Monthly Review Press*.

Foster, J.B. 2012. The Planetary Rift and the New Human Exemptionalism: A Political-Economic Critique of Ecological Modernization Theory. *Organization and Environment*. On-line: DOI: 10.1177/1086026612459964

Greening, L. A., Greene, D. L., & Difiglio, C. 2000. Energy efficiency and consumption—The rebound effect—A survey. *Energy Policy*, 28, 389–401.

Grossman, G. M., & Krueger, A. B. 1991. Environmental impacts of a North American Free Trade Agreement. National Bureau of Economic Research Working Paper 3914, NBER, Cambridge MA.

Harbaugh, B., Levinson, A., & Wilson, D. 2002. Reexamining the empirical evidence for an environmental Kuznets curve. *Review of Economics and Statistics*, 84, 541–551.

Henkel 2013. Onderzoek Henkel Nederland minst milieu Vriendelijk Land van Europa [Research

Henkel: The Netherlands is the least environment-conscious country in Europe.

http://www.henkel.nl/2013-7135_onderzoek-henkel-nederland-minst-milieubewuste-land-van-europa-7200_BED_HTML.htm

Hislop, H. and Hill, J. 2011. Reinventing the wheel: a circular economy for resource security. London. Green Alliance. Available online: http://www.green-alliance.org.uk/reinventing_the_wheel/

Hobson, K. 2002. Competing discourses of sustainable consumption: Does the “rationalization of lifestyles” make sense? *Environmental Politics*, 11(2), 95–120.

Ike, N. 1973. “Economic Growth and Intergenerational Change in Japan.” *American Political Science Review* 67 (December): 1194-1203.

Inglehart, R. 1971. ‘The Silent Revolution in Post-Industrial Societies’. In: *American Political Science Review*, 65: 991-1017.

Inglehart, R. 1977. *The Silent Revolution: Changing Values and Political Styles Among Western Publics*. Princeton: Princeton University Press.

Inglehart, R. 1995. “Public Support for Environmental Protection: Objective Problems and Subjective Values in 43 Societies.” *PS: Political Science & Politics* 28: 57–72.

Isenhour, C. 2009. Sustainable consumerism in Sweden: ecological risk perception and response in the age of high consumption. Doctoral dissertation. Department of Anthropology, University of Kentucky. Lexington: University of Kentucky.

Isenhour, C. 2010. On conflicted Swedish consumers, the effort to stop shopping and neoliberal environmental governance. *Journal of Consumer Behavior* 9: 454-469.

Kollmuss, A. & Agyeman, J. 2002. Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8, 239–260.

Kopnina, H. 2011a. 'What about that wrapper? Using consumption diaries in green education'. In *Environmental Anthropology Today*. Eds. H. Kopnina and E. Shoreman-Ouimet, New York and Oxford: Routledge.

Kopnina, H. 2011b. 'Kids and cars: environmental attitudes in children'. *Transport Policy*. 18: 573–578.

Kopnina, H. 2012a. 'Education for Sustainable Development (ESD): The turn away from 'environment' in environmental education?' *Environmental Education Research*. 18 (5): 699-717
<http://dx.doi.org/10.1080/13504622.2012.658028>

Kopnina, H. 2012b "People are no plants, but both need to grow": Qualitative analysis of the New Ecological Paradigm scale for children'. *The Environmentalist*, 32 (4): 394-404.

Kopnina, H. and Williams, M. 2012. 'Car attitudes in children from different socio-economic backgrounds in the Netherlands'. *Transport Policy*. 24: 118–125.

Kopnina, H. 2013. 'An Exploratory Case Study of Dutch Children's Attitudes towards Consumption: Implications for Environmental Education'. *Journal of Environmental Education*. 44(2): 128-144.

Kuhleimeier, H., H. Van den Berg, Lagerweij, N. 1999. Environmental Knowledge, Attitudes, and Behavior in Dutch Secondary Education. *Journal of Environmental Education*, 30(2):4-14.

Lee, A-R. 2007. "Value Cleavages, Issues, and Partisanship in East Asia." *Journal of East Asian Studies* 7 (May): 251-74.

McDonough, W. & Braungart, M. 2002. *Cradle to Cradle: Remaking the way we make things*. New York, NY: North Point Press.

Meadows, D. H., Meadows, D. L. Randers, J. and Behrens III. W. W. 1972. *The Limits to Growth*. New York: Universe Books.

Mol, A.P.J. and Sonnenfeld, D.A. 2000. *Ecological Modernisation Around the World: Perspectives and Critical Debates*, London and Portland: Routledge

Monbiot, G. 2012. The Gift of Death <http://www.monbiot.com/2012/12/10/the-gift-of-death/> The Guardian, 11 December 2012.

NRCnext. 2011. Meer asphalt minder files. [More pavement, less traffic jams].
<http://www.nrcnext.nl/blog/2011/05/11/meer-asfalt-minder-files/>

O'Riordan, T. 1981. *Environmentalism*. Pion, London.

Randall, R. 2011. All I want for Christmas is a lower rate of consumption. The Guardian. 21 December. <http://www.guardian.co.uk/sustainable-business/consumption-patterns-behaviour-change>

Rees, W. 1992. Understanding Sustainable Development, in B. Hamm, G. Zimmer and S. Kratz (Eds.) *Sustainable Development and the Future of cities*. Proceedings of an international summer seminar, Bauhaus Dessau, 7-14 September 1991, 17-40.

Running, K. 2012. World Values Research WVR. Examining Environmental Concern in Developed, Transitioning and Developing Countries: A Cross-Country Test of the Objective Problems and the Subjective Values Explanations. Volume 5 (1):1-25. Online:
http://www.worldvaluessurvey.org/wvs/articles/folder_published/paperseries_44/files/WVR_05_01_Running.pdf

Spitsnews. 2012. Minder files door meer asfalt. [Fewer traffic jams through more pavement]
<http://www.spitsnieuws.nl/archives/binnenland/2012/10/minder-files-door-meer-asfalt>

Stahel, W. 2006. "How to Measure it", *The Performance Economy*. London: Palgrave MacMillan. P. 8

Stern, D. I. 2004. The Rise and Fall of the Environmental Kuznets Curve. *World Development*, 32(8): 1419–1439.

Turner, G. 2010. A Comparison of the Limits of Growth with Thirty Years of Reality. CSIRO Working Paper Series. Available at: <http://www.csiro.au/files/files/plje.pdf>

Volkskrant 2011. Consumptie daalt recessie dreigt. [Consumption declines, recession threatens]. <http://www.volkskrant.nl/vk/nl/2844/Archief/archief/article/detail/3036071/2011/11/16/Consumptie-daalt-recessie-dreigt.dhtml>

Wijkman, A. and J. Rockström 2012 *Bankrupting Nature: Denying Our Planetary Boundaries*. New York: Routledge. <http://www.routledge.com/books/details/9780415539692/>

Wilk, R. 2004. Questionable assumptions about sustainable consumption. *The ecological economics of consumption* (eds) Lucia Reisch and Inge Røpke, pp 17–31. Cheltenham: Edward Elgar.

Wilk, R.W. 2009. Consuming ourselves to death. In S. Crate (Ed.), *Anthropology and climate change: From encounters to actions* (pp. 265–267). Durham, NC: Duke University Press.

World Bank. 2010. Electric power consumption. <http://www.tradingeconomics.com/netherlands/electric-power-consumption-kwh-per-capita-wb-data.html>

World Bank. 2012. Alternative and nuclear energy. <http://www.tradingeconomics.com/netherlands/alternative-and-nuclear-energy-percent-of-total-energy-use-wb-data.html>

World Economic Forum. 2012. Circular Economy. <http://www.weforum.org/content/case-circular-economy>

Yearley, S. 1991. *The Green Case: A Sociology of Environmental Issues, Arguments, and Politics*, Harper Collins, London.

York, R. and Rosa E.A. 2003. "Key challenges to ecological modernization theory", *Organization and Environment*, 16(3), pp. 273–288.