

The Dynamics of Green Consumption

Lene Holm PEDERSEN

AKF, Institute of Local Government Studies – Denmark

1 - SYNOPSIS

The paper investigates whether the changes in the consumption of organic food are likely to spread to alterations in the consumption of energy.

2 - ABSTRACT

In the last decades a group of political conscious and environmentally friendly consumers have been emerging. At the same time global warming has made energy consumption an environmental issue. As changes in consumer behaviour are linked to the dual purpose of fulfilling a need and signalling identity, the changes in consumption have been seen as a sign of new and increasing reflexivity in the construction of identity. Two diverging dynamics behind this process are identified. Either emphasis is made on a cognitive and conscious self-monitoring, or on an aesthetic and largely context dependent process. If the process is conscious, environmentally friendly behaviour is likely to make its way into energy consumption, but if it is aesthetic the patterns of alteration are likely to be much more fragmented. The investigation links theoretical elements from Anthony Giddens, Ulrich Beck and Scott Lash to quantitative survey data.

3 - THE CONCEPT OF REFLEXIVE MODERNITY

In the beginning of the 1990s Beck (1986; 1992) and Giddens (1990) launched the concept of reflexive modernity. Rather than being entering a period of post-modernity they claim that we are entering a period where modernity is becoming preoccupied with the problems created by modernisation itself. Both authors see reflexivity partly at a system level and partly at a subject level.

3.1. Reflexivity at System Level

At system level reflexivity takes place because modernity is becoming preoccupied with the problems and risks created by the modernisation process itself (Beck, 1992). Where the abolition of poverty was the main source of legitimacy in industrial society the increasing awareness of risk becomes a concern for the citizens and the base for political activity and mobilisation in the second phase of modernity (Stehr, 1989:1). These risks are of a new sort as they are no longer limited in time and space; their consequences are very often global and they extend to future generations (Beck, *ibid*). The example per se is the nuclear accident, or the climate problem.

According to Giddens there are two major driving forces behind this development: The separation of time and space, and the reflexive appropriation of knowledge. In pre-modern society knowledge was accumulated in tradition and thereby anchored backwards in time, but in modern society the more or less systematic appropriation of knowledge – through for instance expert systems – makes life roll away from the fixities of tradition. The fact that knowledge is applied to the condition of the system reproduction alters the conditions to which the knowledge originally referred (Giddens, 1990: 54). In this way, reason is subverted and it becomes impossible to gain immutable knowledge. Thinking about the climate problems and environmental regulations in general there certainly seems to be an enhanced awareness and activity at the system level. Seen in a larger time span it marks a historic change that the international society gathers to discuss this kind of problem, and expert systems are heavily involved in placing the problem on the international agenda and producing solutions. Equivalently, the number of regulations produced in the political system and the amount of jurisdiction in the legal system have risen dramatically. According to Beck the question is not so much whether the environmental problems are being solved, instead he is claiming that the environmental risks fill an empty space, a lack of conflicts and values, which is left behind from the material wealth in industrial society. The political ideologies are being replaced by a concern for unintended side effects (Seppel, 1998).

3.2. Reflexivity at the Level of the Individual

At the level of the individual Beck and Giddens argue that the structures so to speak set the agents free as the traditional parameters of industrial society such as class, culture and consciousness, gender and family roles dissolve. Where the industrial society was structured through social classes the risk society is individualised. According to Giddens self-identity is the self as it is reflexively understood by the person in terms of his/her biography. This identity presumes continuity across time and space, but identity is the way this continuity is interpreted reflexively. This interpretation is involving the cognitive component of person-hood, so the self-monitoring at the level of the subject is seen as a cognitive and conscious process (Giddens, 1990: 52). This is a point we will get back to later. Thus, the life narratives become reflexive biographies which depend on the decision of the actor as his class dependency no longer tells him what to do (Beck, 1992: 87-88).¹ This counts for both genders, and therefore the individualisation also affects the families which become scenes of struggles over diverging ambitions. The result is altogether that the individuals in 'risk society' face different risks at an individual level than they did in modern society. Beck sees the growing awareness of these problems as a possible source of mobilisation and it is his hope that citizen groups and new social movements will be formed reacting against the increasing risks. The new social movements centred around ecology, peace and feminism are seen as such responses. Thereby the reflexivity at the levels of the system and the individual link together, as Beck argues that the process of individualisation and the popularisation of knowledge will set off the transformation of society into a society governed by risk consciousness.

3.3. Critiques of Reflexive Modernity

Among post-modern theorists Lash (1993) has raised the most elaborate critique of Ulrich Beck's Risk-society. The most crucial idea in the Lash criticism is the contrast between a cognitive and an aesthetic dimension of reflexivity. The concept 'aesthetic' refers to the science treating the conditions of sensuous perceptions with emphasis on the process leading to admiration of artistic objects. Lash is emphasising the rational and conscious part of understanding in his usage of the 'cognitive', and the term aesthetic gains a main part of its meaning as being distinct from this rationality and being strongly linked to feeling and simply something different. According to Lash it is possible to speak of an aesthetic reflexivity as well as of a normative or cognitive reflexivity. In other words, Lash shares the view that the individual is being freed from the structures and values of industrial society, whereas the disagreement is linked to the new social forms which are emerging. According to Lash, Beck sees these as objective and cognitive, whereas in reality they are aesthetic. Thus society is seen as based on a sort of aesthetic self-interpretation, where the general and global originates from specific and local, and the new social forms are largely context dependent and open to universal values.

In later publications Beck has become more sceptical and pessimistic about the social solutions to environmental problems. The transition is not so much seen as driven by a conscious behaviour as by a system inherent logic (Beck, 1988). The theory of the risk society analysed how a society based on material production, developed into a society where the socio-cultural elements like politics and science had a more autonomous position. In some of his later work Beck discusses which attitudes and values should be central in a society that does not simply reflect its material basis, and he gives a central place to ambivalence and doubt (Beck, 1993). Thus, the cognitive and conscious elements in risk society has been altered substantially in Beck's later work.

3.4. Questions for Further Investigation

The present analysis is taking point of departure in the original divergences between Beck, Giddens and Lash. Are the new social forms, which are emerging, founded on cognitive and consciousness processes or are they aesthetic in nature? Inspired by this discussion, we can raise two major points about consumption patterns within the realm of energy and environment.

- If the consumers follow Beck's theory of a risk society, a group of politically conscious consumers is emerging. In this process of creating identity the cognitive and conscious self-monitoring is emphasized. We can therefore expect a certain consistency, where consumers of organic food also tend to show an environmentally friendly behaviour within other consumption areas.
- If the consumers follow the post-modern critique, represented by Lash, reflexivity is less linked to cognition than to aesthetics and hermeneutic self-interpretation. People act not so much because they think their actions make a difference to the environment, but because they wish to create and signal a certain identity. Post-modern society is characterised by ambivalence and ever changing positions of the individuals, and the construction of identity is largely dependent on the context. As the individual acts in many different contexts we can expect the construction of identity to be characterised by multiple selves instead of one single and coherent identity. Following from this, little consistency between different consumption areas can be expected.

Taking this argument one step further the aesthetic value of different types of consumption can be expected to vary. If the consumption is visible and tangible it can be expected to hold larger aesthetic value, as invisible and intangible consumption only can be viewed aesthetically if the consumer is keen on the abstract aesthetic satisfaction of a voluntary simplicity satisfying a planet friendly way of life. Food consumption is generally acknowledged to be loaded with social norms and cultural codes expressing important values and social distinctions (Halkier, 1998). Car-ownership and transportation is also linked to identity in several studies (Jensen, 1997a, 1997b), and similarly the handling of garbage involves cultural distinctions (Douglas & Isherwood, 1980). However, analysis of electricity consumption often emphasizes the fact that electricity in itself is invisible, and thus holds little aesthetic value. Though, many of the appliances consuming electricity are of course visible, the relationship between aesthetics and electricity consumption is essentially indirect. Therefore, the aesthetic and ambivalent dimensions of reflexivity gain empirical support if green orientation sets through in areas with aesthetic values. In other words, it can be seen as a sign of aesthetic reflexivity, if green orientation sets through in areas such as food consumption, transportation and recycling, but not within electricity consumption.

4 - DATA

The data are based on a survey undertaken in the town of Odense, Denmark in 1996. It includes 782 respondents and 89 questions. The data collection is based on personal interviews.² The data hold one important quality. The questions are formulated as being closer to behaviour than attitudes. Thus data is based on reported behaviour rather than more abstract ideas about what behaviour should be, apart from the electricity consumption, which is reported by the utility. This should enhance the quality of the data, as the relationship between abstract values and specific behaviour is complicated by the fact that respondents might feel that they are checked by 'the environmental police', and thus respond strategically. But of course it does not eliminate the problem with strategic answers completely.

5 - CONSUMPTION PATTERNS

In the analysis green consumers are defined as respondents who answer that they almost always or most of the time buy organic milk, vegetables or meat. Following from this criteria 22% qualifies as green consumers and 78% qualifies as not green consumers – in the following labelled red for practical purposes. Consumption has a dual purpose of filling material needs and signalling identity at the same time. As a vantage point it is therefore accepted that green consumption is rooted in reflexivity at the level of the individual, that it is linked to the construction of identity, and that it can be seen as a mode of political participation (see Halkier, 1994; 1997). However, the data in the present survey show that the green consumer group participates more in politics and interest organisations than the consumers in general. This indicates that green consumption is to be seen as a supplement to other modes of political participation more than as an alternative.

The applied criteria for delimiting the green consumers hold one drawback, as people might consume organic food for personal health reasons with little or no regard to the environmental or political implications of the consumption. However, the definition of the green consumer group is consistent with the general idea of basing the survey on questions which are closely linked to behaviour - actual and report - instead of using more abstract motivational and value questions, which tend to be flawed. Furthermore, the data show that the green consumers also hold a different behaviour in realms that are political, but does not carry a health perspective. Thus, 2/3 of the green consumers report to have banned gas from Shell and French products during the nuclear testings and only 1/3 of the red report the same behaviour.³ Altogether, the question will seldom be either or. It is more likely that personal health and environmental concerns go together for the consumers. Thus, there might be some in the green consumer group who find motivation in a concern for their personal health, but it is not likely to stir the overall picture. Furthermore, reporting of abstract value patterns and motivational forces in survey analysis is likely to be flawed. Therefore, reported motivations are not useful in defining the green consumer group.

It can be argued that green consumption mainly is a question of affordability, or that it is determined by other socio-demographic variables. Therefore the socio-demographic differences between the two consumer groups have been investigated. Employing an F-test the difference in education proves to be significant, whereas the difference in income is not. When it comes to age, average square meters of housing and distance to work no significant differences can be found. This indicates that green consumption is a practice which tends to be found among the better educated. However,

it is interesting that it is not the ability to consume in terms of income which proves to be important, but education which tends to institutionalize value systems. Thus, the phenomenon studied does not seem to be floating free from the traditional cleavages in industrial society.

Table 1. Average income and education of the two consumer groups

(N=782)	Green (N=174)	Red (N=608)
Disposable income of household (DKK)	14.345	13.325
Education of the respondent (years)	13	12

In the following, we set out to explore the behaviour and attitudes of the green consumers within the realm of recycling, transportation and energy consumption.

5.1. Recycling

Within the realm of recycling, the most striking thing about the behavioural patterns is how widespread recycling is in the population in general. Thus, 92% claim that they almost always recycle glass, and 87% claim that they always recycle newspapers. Employing a gamma-correlation, the green consumers report to recycle glass and newspapers more frequently. Qualitative analyses of recycling behaviour tend to emphasize that recycling has been facilitated by societal solutions, as recycling containers generally have been made easy to access. Thus, the logistical barriers to this type of green behaviour have been diminished (Iversen, 1996). This indicates that when it causes little inconvenience in terms of money or time, people generally show an environmentally friendly behaviour. The difference in behaviour between the consumer groups is not very outspoken, but this should be seen in relation to the fact that people recycle in general. At the same time it should be noticed that carrying garbage to the recycling container is a highly visible process.

Table 2. Recycling, percentage agreeing completely to statement

	Green	Red	Total	Gamma	Sig.
Bottles and glass is almost always recycled (N=782)	95%	91%	92%	0.287	0.056
Newspapers are almost always recycled (N=781)	91%	86%	87%	0.229	0.061

5.2. Transport

Within the realm of transport a logistic regression is used to investigate the parameters linked to car-ownership. The model contains socio-demographic, logistic and green consumption variables. The main attention is the significance of the different variables, as we are not interested in using the model to forecast car-ownership. Therefore, the size of the estimated coefficients are not interpreted, though it is important whether the relationships are positive or negative.

Table 3. Car-ownership (N=776)

Variable	Estimated coefficients (β_i)	Significance
Income	0.0002	0.000
Distance to work	0.1700	0.114
Adults in household	0.7557	0.000
Age	0.1422	0.000
Age ²	-0.0012	0.000
Rural	1.6270	0.041
Green consumer	-0.5800	0.013
Constant	-7.8055	0.000

First, we look at the socio-demographic variables income, age and number of persons in the household, which prove to be most significantly linked to car-ownership. When the disposable income of the household and the number of persons in the household increase car-ownership becomes more likely. The relationship between age and car-ownership is curve linear, and thus decreasing among the elder part of the population. Second, two variables linked to the location of the household are investigated. The largest distance between workplace and home in the households does not have a significant relation with car-ownership, but it does have an influence whether the household is located in a more rural area. The variable labelled 'rural' is dichotomous. All the respondents in the survey live within the region of the same utility, and urbanization is thus fairly homogeneous, but they live in two different communities one being more rural than the other. People in the rural area are more likely to have a car. Finally, the relationship between green consumption and

car-ownership proves to be significant, as the green consumers are less likely to have a car. The green consumption variable is the same variable which constitutes the two consumer groups throughout the study. This result holds no statement about causal relationships. People, who buy organic food, might identify as being green and therefore hold back on car purchase, or the people who do not have a car might identify as being green - an identification which then rubs off on food consumption. Behaviour is an element in the construction of identity and value systems, just as identity is linked to specific behavioural patterns. However, the fact that green consumption is linked to car-ownership indicates that green orientation sets through in different consumption areas.

In the survey people also report their most frequent means of transportation to their workplace. It could be expected that the green consumers would be more likely to cycle to work, and less likely to go by car. However, there is no significant relationship between being a green consumer and using a specific means of transportation. The means of transportation is linked to variations in income and distance to the workplace.

If the differences in transportation behaviour are few, the correlations are more clear when it comes to attitudes. Measuring the degree of agreement to statements on transportation shows that the green consumers to a higher degree think that the public should make it attractive to use public transportation, and that something ought to be done to limit private transportation. This indicates that the green consumers, even if the behavioural change within the realm of transportation is small, still hold opinions which put pressure for action on societal level.

Table 4. Attitudes to transport, percentage agreeing completely to statement

	Green	Red	Total	Gamma	Sig.
It is the responsibility of the authorities to make it attractive to use public transportation (N=775)	72	65	67	0.174	0.04
Something ought to be done to limit private transportation in Denmark (N=762)	49	32	36	0.323	0.00
Cars do not constitute a big environmental problem compared to farming and industry (N=741)	13	16	15	-.053	0.43

Linking these results to the theoretical framework, it should be noticed that consumption is not just a question of identity whether this is based on cognitive or aesthetic self-interpretation. Traditional socio-demographic and structural parameters hold a privileged position when it comes to explanation of car-ownership and transportation behaviour. In addition it can be asked whether the relationship found cannot be due to aesthetic as well as cognitive processes. Here the answer must be yes. In sociological studies car-ownership generally proves to hold aesthetic dimensions (Jensen, 1997a; 1997b). Thus, the significance of green consumption can be explained by cognitive as well as aesthetic dynamics. Therefore, this question will be left unanswered until consumption areas which are known to hold little aesthetic value are investigated. The electricity household can be seen as such a critical case, because people generally are known to pay little attention to it simply because it is invisible (Stern, 1992; Gardner & Stern, 1996).

5.3. Electricity Consumption

The electricity consumption of the consumer groups can be analysed employing a multiple regression analysis. The dependent variable is the electricity consumption of the households as measured by the utility. The model can be read as an equation. The B-coefficients show that the electricity consumption increases by 661.9 kWh if there is an extra child in the household. As variables such as children and income are measured in different amounts (number vs. DKK) they cannot be compared directly. The standardized beta-coefficient is therefore calculated to express the relative importance of the different variables. The beta-coefficients thus show that income is more important than education.

It is of course possible to build different statistical models of the electricity consumption. For instance the amount of square meters and the number of electrical appliances can be employed (see Pedersen & Broegaard, 1997). However, it is not surprising that electricity consumption is linked to energy-consuming appliances and the size of the housing. Therefore, the present model is based on a theoretical interest in socio-demographic variables and green orientation.

Table 5. Factors with significant influence on electricity consumption

Variable	B	Beta - standardised
Constant	-2682.8	
Age	138.1	1.59
Age2	-1.2	-1.45
children	661.9	0.32
adults	622.6	0.25
income	0.027	0.12
education	39.6	0.08

The socio-demographic variables prove to influence the electricity consumption, whereas the green consumption variable proves to be insignificant.

Table 6. Fluorescent light bulbs and willingness to pay for green electricity

	Green	Red	Total
Average number of bulbs (N=782)	0.68	0.51	0.55
Willingness to pay extra per year to ensure green electricity (N=745)	248 DKK	169 DKK	186 DKK

A closer look at the energy consumption provides some interesting results. The green consumers on average use more fluorescent light bulbs than the consumers in general. Furthermore, they report a higher willingness to pay extra for 'green' electricity, e.g. electricity produced by windmills. However, there is no significant difference between the actual electricity consumption of the two households in the two consumer groups.

Whereas green orientation seems to set through within the realm of food consumption, car-ownership and recycling do not have an influence on the electricity consumption. This supports the idea that green consumption is largely aesthetic and ambivalent. This conclusion is in line with the fact that the green consumers hold more energy efficient light bulbs, which are visibly different from the standard bulbs.

6 - CONCLUSION

Consumption has a dual purpose. On the one hand it fulfils a need and at the same time it signals identity. The dynamics of green consumption can therefore be seen as linked to the individual's construction of identity. Within sociological theory two major dynamics are identified. Following Ulrich Beck's theory of the risk society the reflexivity of the individual holds cognitive and conscious elements, but in contrast the post-modern criticism raised by Lash emphasizes the ambivalent and aesthetic dimensions of reflexivity. If the process is largely conscious, green consumption can be expected to set through more coherently with in different consumption areas with environmental implications, than if consumption is rooted in aesthetic and context dependent processes. Additionally, it can be expected that dynamics rooted in aesthetic values, will make alterations more outspoken in visible types of consumption. The empirical investigations of the coherence between environmental concerns within different consumption areas, showed that green orientation sets through more clearly within the realm of food consumption, recycling and car-ownership, than within the realm of the electricity consumption of the households. It can therefore be concluded that green consumption is fragmented within different consumption areas. Furthermore, green consumption is most outspoken in the consumption areas, which hold a large aesthetic value, as it is insignificant within the realm of energy consumption, which invisibility is often emphasized. This supports the idea that the dynamics behind green consumption are rooted in aesthetic reflexivity and largely ambivalent. Following from this, green consumption is unlikely to set through within the realm of electricity consumption, even though the environmental problems linked to energy consumption have become more outspoken in recent years. However, the empirical analysis does not solemnly support post-modern theory. On the contrary, the empirical investigations show that the socio-demographic and structural variables, which are seen as defining of industrial society, still hold a large explanatory value.

7 - ENDNOTES

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1. The power of judgement denotes the ability to see the particular as a part of the general. If the general is given (the rule, the principle, the law), it is the power of judgement which subsumes the particular as part of this general, but if the particular is given, while at the same time seeking the general then the power of judgement is reflective (Kant, 1995 [1790] 47).
 2. Further descriptions of the data can be found in Pedersen & Broegaard, 1997.
 3. The gas consumption is measured among the consumers who hold a car.

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