SUSTAINABLE LIFESTYLE AND ACTION SPACE

Mikael Jensen
GothenburgUniversity
Sweden

ABSTRACT

This paper is about trying to change lifestyle. 28 individuals have been interviewed in connection with their participation in a unique project. The participants were committed to achieve a sustainable lifestyle and were therefore willing to enhance their knowledge on environmental problems such as carbon dioxide emissions and the causes of emissions. During the project the participants had a greenhouse gas profile made for them and they took part in seminars, field trips and read books. The interviews were carried out at the beginning of the project period and at the end of the project period. 9 individuals in the first interview session described their lifestyle in relation to consumption and the avoidance of carbon dioxide emissions. 21 individuals in the second session described the impact of the project and how they had and would be changing lifestyle and consumption habits and what they perceived as possibilities and limitations. The importance of beliefs, motivation, habits and action space is discussed in order to attain a sustainable lifestyle.

Keywords: Sustainable lifestyle, Action space, Lifestyle change, Beliefs, Habits, Carbon dioxide, Consumption

INTRODUCTION

In the late summer of 2005 a unique project was started in Stockholm, Sweden. It was called "Smart consumption – decrease the greenhouse effect" and was an initiative carried out by the city of Stockholm. 60 households took part in the project. The households were selected (among 110 applicants) to represent Stockholm as a whole in geographic and demographic terms. The 60 households formed, as described by the project leader, a mini-Stockholm. Most of the participants were officials or self-employed, some were industrial workers, students or senior citizens. The aim was to get participants that were committed to the task but not too committed. Non-admitted applicants were outside the preferred range. It means that the population, the so called mini-Stockholm, was actually biased. The main reason for this bias was to (1) have participants that were active enough to carry out the whole project period and (2) find out if changes were possible. Applicants that were not committed enough to the cause would probably not be motivated to finish the project period.

Applicants that were too committed would probably have accomplished a lot already which would make it harder to realize changes big enough. The purpose of the project was to construct, what the project leader called, *a greenhouse gas profile* (but they were only concerned in carbon dioxide) for every household at the beginning of the project and to compare it with a second profile at the end of the project, three years later. A greenhouse gas profile was based on measurements of everything the household consumed during a three month period and the measurements were calculated by researchers at the Royal Institute of Technology (a university in Stockholm). 37 households managed to complete a profile at the beginning of the project, 17 of them completed the second profile at the end of the project

(spring 2008)[1]. How much emission of greenhouse gases in kg did one person cause per year at the beginning of the project? What had changed, if anything, by the end of the project? The 37 households caused on average an emission of 5418 kg carbon dioxide per person per year. This is almost the same as earlier estimations of the average citizen of Stockholm. The 17 households that completed both measurements had an average of 4964 kg the first time and 3866 kg the second time. This means that they managed to reduce the carbon dioxide emissions by 22 % from profile one to profile two (personal communication with the project leader Martin Saar, 2008). How was this reduction possible? The project participants were invited on a voluntary basis to attend seminars and workshops, read books (distributed for free) and go on field trips during the whole project period. The topics ranged from global economy and the use of oil in large scale agriculture, to gardening and the use of more efficient electronic devices at home. This was arranged ones or twice a month. The idea was that more knowledge, practical as well as theoretical, may lead to new attitudes that may lead to lifestyle change. So, was this enough? Would they be motivated to change their lifestyle in such a way to reduce carbon dioxide emissions? The current interview study is one way of finding out how the project participants related their old and new beliefs/knowledge to their lifestyles and consumption habits, and how it would be possible to change their lifestyles in order cause less carbon dioxide emissions.

Sustainable Lifestyle

The term sustainable in sustainable lifestyle refers to sustainable development. A sustainable development is a development that does not put currently living humans and future generations at risk. Global warming and its consequences are considered a risk for currently living humans and future generations. To avoid this risk we are strongly recommended to reduce our emissions of greenhouse gases, especially carbon dioxide, from 8000 kg to 2 000 kg per person per year. This goal is set to be achieved before 2050. According to IPCC (2007) greenhouse gas emissions must be cut 50-80 % worldwide by 2050. The number 2000 kg (a 75 % reduction from 8000 kg) is not undisputed and is therefore only used here as a point of reference. A sustainable lifestyle is constrained by a super ordinate goal. The super ordinate goal in this case is a lifestyle (and the effects of it) that is limited by emissions of 2000 kg greenhouse gases per person per year. The actions (behaviour) within one day can be converted into emissions of carbon dioxide. To lead a sustainable lifestyle every individual must produce less than 6 kg of carbon dioxide per day on average. That would be well within reach if we only consider the direct emissions from transport and heating (housing). The participants in the Stockholm project (personal communication with the project leader Martin Saar, 2008) had, on average, 3 kg of emissions of carbon dioxide per person per day. However, if we take all emissions into account, we also have to add the indirect emissions from products and services that we consume almost every day. It ends up as an average of 5418 kg per person per year or 15 kg per person per day. The emissions can be traced to so-called aspects of lifestyle (Michaelis 2003), that is, the lifestyle is divided into sub categories of activity. In the Stockholm project, nine aspects of lifestyle were used with four of them

---

[1]There are some problems involved that should be mentioned. (1) Three months were perceived as a long time for the participants but when the result is extrapolated to a year you realize that there are a lot of things that the participant did during this period that may be typical for that part of the year, for example going for a long vacation, and on the other hand, a lot consumption may not have occurred that is more expected on other parts of the year. The estimations are therefore somewhat problematic to begin with. (2) The first measurement period was during the Swedish early autumn and the second period was during late spring. That may have affected the difference. The project group (the author of this paper was not included in the group but researchers from the Royal Institute of Technology were) decided to overlook the possible shortcomings but at the same time called the results "roughly estimated". The results are probably ok but should not be taken too serious.

dominating. Transport (flying on vacation excluded) and housing each produce 16 % of the emissions of carbon dioxide. Recreation and leisure as one aspect (including flying on vacation) alone produces 26 % of the carbon dioxide emissions (personal communication with the project leader Martin Saar, 2008). How we spend our leisure time and vacation is very much related to lifestyle. It is the most deliberate and voluntary part of modern life. And these choices turn out to be one of the largest sources of emission. Just like in other studies (e.g. Michaelis 2003), food is causing large amounts of emissions as well. In the Stockholm project, food stands for 27 % of carbon dioxide emissions (personal communication with the project leader Martin Saar, 2008). What we eat and how much we eat is also directly related to lifestyle. According to Åkerman and Höjers' (2006) model it is not possible to reduce the emission to 2000 kg per person per year by 2050 with new technology as the sole means. New technology will probably not make us spend less money on recreation and leisure or make us eat less. We not only have to buy other products and services than we do now (Connolly & Prothero 2003), we need to buy less products and services.

An interesting aspect of buying less can be found in Jensen (2007b). Participants in the Stockholm project had different consumption strategies. One group of participants bought many low-priced products while another group spent more money on few expensive products. The expensive products, according to personal experience, were of a higher quality and durability. Thus, they lasted longer and were more appreciated. One family caused 7.3 kg carbon dioxide emissions per 100 SEK (about 10 Euro) spent on food while another family caused 4.5 kg carbon dioxide emissions per 100 SEK spent on food. In a similar comparison one family caused 4.4 kg carbon dioxide emissions per 100 SEK spent on clothing and shoes while another family caused 1.8 kg carbon dioxide emissions per 100 SEK spent on clothing and shoes. It is possible to consume in a more sustainable direction. It is also possible to consume in a non-sustainable direction. The family that caused 7.3 kg carbon dioxide emissions per 100 SEK spent on food exceeded the daily limit of 6 kg only on buying food for 100 SEK / 10 Euros. Certainly, they have to buy more food than that for one day and they have a lot of other expenses. We know from Jensen (2007b) that this family described themselves as committed, pro-environmental and ethically concerned. If this committed family only exceeds the limit on food, what can we expect from a non-committed family?

The Purpose

The purpose of this article is to find out (1) how people in this particular project describe the believes and habits that underlie their lifestyles and consumption, (2) how they see the possibility of directing their lifestyle in a sustainable direction (less carbon dioxide emissions) and (3) how they perceive the possibilities of acting in accordance with a higher goal, that is, a lifestyle change that leads to a reduction of carbon dioxide emissions. An important notice is that the only thing that connects the present interview study with the Stockholm project is the participants of the project. They have stated that they are pro-environmental and ethically concerned and motivated to change their lifestyle. As a group they become interesting to know more about, to better understand how they think in order to make a change. To focus on this aim, the following sections will provide a description of the concepts of lifestyle and action space, and a closer description of the method, the participants and the procedure. The results of the interviews are presented in section 4 and in section 5 the results will be discussed and analysed.

LITERATURE REVIEW

Max Weber discussed lifestyle in terms of chance and choice (see Giddens 1991). Chance constitutes all the opportunities and limitations offered from one's social surroundings. Choice is what the individual desires to make and how the individual acts according to his/her own desires. We can view the dynamics of chance and choice as a space within which the individual is acting in everyday life.

Lifestyle

Lifestyle is often used as an everyday word in research, the media and political discourses where it simply means something that we do regularly, a way of life. If lifestyle is to be used as a theoretical concept it needs to be more than a vague everyday word. The concept of lifestyle is a manifestation or expression of identity. The individual identity is made visible to others by use of artefacts and manners that are consistent with that identity (Giddens 1991; Chaney 1996; Wilska 2002; Jensen 2007a). Identity can be a national identity, a sub cultural identity or a self-identity. Since it is possible for an individual to have several identities at the same time it is also possible for a single individual to have a mix of lifestyles. Johansson and Miegel (1992) suggested that lifestyle should be analysed on three levels: (1) The structural or national level, (2) the positional or sub group level, and (3) the individual level. Jensen (2007a) developed this idea to a four level description:

1. The global level
2. The national level
3. The sub group level
4. The individual level

Jensen (2007a) argues that lifestyle used on the global and national level has no analytical strength. Lifestyle is best used as a theoretical concept on the sub group level and the individual level. Therefore lifestyle is, in this text, narrowed down to individuals and the minor groups that they belong to. The groups can be family, friends, colleges, neighbours and interest groups. The description of one individual's lifestyle can still be very complex (see figure 1).

Habits

Charles S. Peirce (1992) and John Dewey (1922/2002) both studied the nature of human habits. A habit, they said, is when you know how to act in a certain situation without giving it a thought. According to Peirce, a habit is formed by a belief that something is in such a way that it holds for an act. A habit can thus be broken if the belief no longer supports the act. Dewey thought that the function of a habit is stable but that it can be changed at will. A habit, Dewey wrote, also has a social function. Individuals in a group form habits which follow the norms within the group. It is a way of seeing which group the individual belongs to. More resent research on habits (e.g. Chen et al. 2004; Thirlaway & Upton 2009) indicates that their function is one of stability and efficiency in given situations. Stability makes the habit difficult to change, causing it to remain the same over time. However, a habit can be changed with some effort. To generate this effort, a lot of motivation is required. A lifestyle is typically characterised as something that is stable over time (Thirlaway & Upton 2009). This stability is grounded in sets of habits. If one habit is changed to another habit the lifestyle as a

whole is slightly adjusted. In order to change a lifestyle, a great portion of the habits has to be changed. This is why a lifestyle is not easily changed overnight.

Beliefs and Desires

Individuals and minor groups possess certain attitudes (e.g. perceptions, beliefs, desires, goals, plans, and intentions) (Bandura 2001). These attitudes are central to the identity of individuals and groups as well as the expressed lifestyles. The formation and change of lifestyle always begins with attitudes. You cannot change a lifestyle without a change of attitudes. However, a change of attitude does not have to mean a change of lifestyle. The lifestyle can still be governed by the set of habits. Beliefs, or rather belief systems, are the foundation of everyday life. We very seldom act against our own beliefs. Not when it is obvious to us at least. So, beliefs are crucial for everyday acts (Peirce 1992; Bandura 2001; 2006). If a belief is changed or we adopt a new belief it can affect how we see and understand the world. A belief system as a whole is stable and it is slightly adjusted if a single belief is changed or a new belief is formed. Belief systems change slowly. That is why they work well as a foundation for everyday life. Desires are wants and needs in everyday life. Desires are the motivation for change, small or large. If I desire something I can set it up as a goal. In order to realize a goal I have to determine a suitable means. When I want to realize my goal I intentionally act in a certain way. The act makes a difference, big or small, to the surrounding world. If I realize my goal I receive positive feedback and if I do not I receive negative feedback. The feedback helps me to see whether the goal is attainable or not as does employing a suitable means (Bandura 2001; Jensen 2009; Thirlaway & Upton 2009).

Why do we desire? First of all, there must be something missing in the present state, something wanted or needed. Secondly, we have to believe there are at least two possible states: the present state and an alternative state. If the alternative state, but not the present state, can fulfil our wants or needs it is desired. In some way, desires are dependent on beliefs. We have to have beliefs about alternative states which are grounded in real life. Desires and goals are the motivators that can make us change habits and eventually lifestyles (see figure 1).
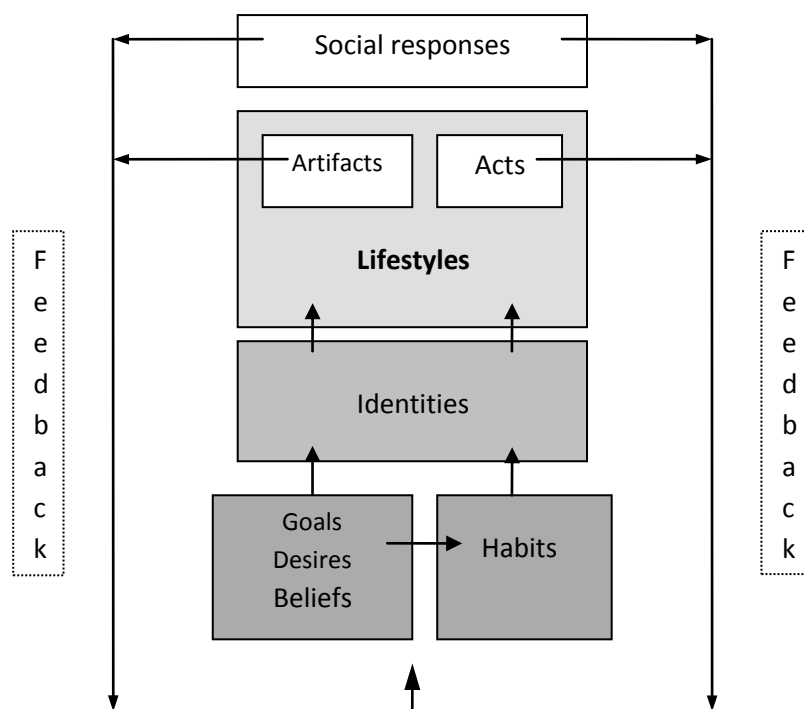
Figure 1: The relation between key concepts

Action Space

Action space is synonymous with room for manoeuvre or possibilities to act. This space can be described as a space framed by one's self as well as others, made by opportunities and limitations (see figure 2). Individuals try to create opportunities to widen their action space (for well-being) and they also try to delimit their own room for manoeuvre (e.g. avoid self-destructive acts). Members of a society (strive to) offer services and products for the common good. For example, we try to legislate laws that protect the individual and freedom to act in a variety of ways or individuals and organizations offer services and products (for money). Moreover, society constrains us to follow norms and laws (Bandura 2006; Thirlaway & Upton 2009). This delimits the action space (Angelöw & Jonsson 1994). Whatever an individual is trying to do to express his/her identity he or she has to remain within the action space. This does not mean that an action space has to be static; it can be very dynamic if the individual both mentally, socially and normatively keeps it that way (cf. Bandura 2006).
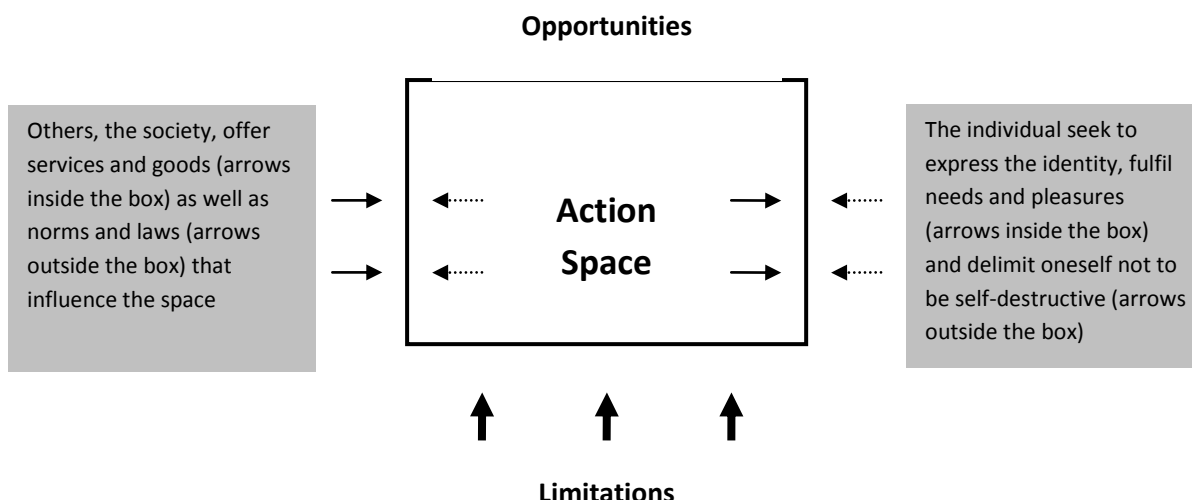
Figure 2: The influences on an individual's action space

In order to change a lifestyle the individual is dependent on the action space. If an individual is supposed to change the lifestyle on his or her own it usually happens within the existing action space. If a lifestyle change is not supported by the existing action space then the action space has to change first. Some individuals are motivated and capable of changing their own action space. Others need help from social networks or the government. It is not possible to motivate people to change lifestyle if they do not have room for manoeuvre. Before the action space can be altered the individual:

- Must believe it is possible to gain more freedom to act in a certain way
- Must believe it is for their own good to act in a certain way
- Must believe it is beneficial for others as well
- Must have the power to act differently (break existing habits)
- Must possess the knowledge to act differently

The action space is primarily regulated by laws and social norms but it is also regulated by physical factors like environments and resources, cultural factors like artefacts and knowledge, and individual factors like beliefs, motivation and habits (Angelöw & Jonsson 1994; also Bandura 2001; 2006; Thirlaway & Upton 2009).

3. METHODOLOGY

In this section the method and the participants are described in more detail.

Interview

Two interview sessions were carried out. The first in the autumn of 2006 (before the participants had seen their first profiles) and the second in the spring of 2008 (before the participants had seen their second profiles). All interviews were semi-structured. The first session was about knowledge, consumption and lifestyle. The second session was about change of lifestyle and action space. Every interview was made by the use of telephones, recorded with a digital audio recorder that was connected directly to the interviewers' phone, and later transcribed.

Participants

In the Stockholm project there were 60 households participating. 28 individuals from these households took part in at least one of the interview sessions. Two individuals participated in both interview sessions. For the first interview session the participants were randomly selected among the applicants that became part of the project "Smart consumption – decrease the greenhouse effect". It was predominantly housewives who applied (approximately 80 percent), therefore there were more women interviewed.

	Women	Men	In total
First interview	8	1	**9**
Second interview	14	7	**21**

Table 1: The distribution of participants in the two interview sessions

Eight women and one man took the first interview (see table 1). For the second interview session the subjects were selected strategically. 21 individuals were selected, 14 of them women and 7 men. Almost 50 percent of the households were represented. Some of them lived in the city of Stockholm, some in the suburbs. Some had children (1-4), some did not (single or a couple). Some lived in a house others in an apartment. Some were students, some were senior citizens but most of them were in the middle of their careers.

Procedure

The interviews in the first session took on average 90 minutes. The first question was a self-estimation (on a scale from 1 to 10) of the participants' commitment to environmental and ethical issues. The commitment was on average 7.5 (ranging from 5 to 10). If a 10 is considered fanatical the group as a whole is very committed. This is consistent with the bias sought for in the whole project. The themes of the first interview sessions were food and clothing in order to have something concrete to relate to and discuss. The main questions were:

- What did the subjects know about environmental and ethical problems connected to food and clothing?
- How did the subject reason when they were buying food and clothing?
- Were any aspect of the subjects' lifestyles displayed in their choice of food and clothing?

The interviews in the second session took 50 minutes on average. This time too, the first question was a self-estimation (on a scale from 1 to 10) of the participants' commitment to environmental and ethical issues. On average the commitment in the second interview group was estimated to 8.3 which are a bit higher than the first interview group. The themes during the second session were the individual and society. The main questions:

- What can an individual do to change his/her lifestyle?
- What can or must society offer for the individual to change his/her lifestyle?
- In what way did the project offer tools for lifestyle change?
- In which areas (aspects of lifestyle) is it most reasonable to achieve changes?

RESULTS

The results from the two interview sessions will be presented in two major sub-sections. Firstly, the answers from the first interview session on lifestyle and consumption, thereafter the answers from the second interview session about lifestyle change and action space.

Lifestyle and Consumption

The following sub-sections describe why the participants, according to themselves, consume the way they do (4.1.1 – 4.1.5) and what they know about sustainable development (especially environmental issues, health related issues and ethical issues) and lifestyle (4.1.6 – 4.1.7).

Principles

When the participants choose products they are strongly influenced by one or both of the following two principles:

- The closeness principle – You try to find products that are produced in the local area and thereafter widen the circle to include the whole country, the neighbouring countries, the whole continent, the whole globe.
- The cautiousness principle – Products that you have information on is preferred over products that you know little about. Products that contain unknown or questionable substances are avoided.
  Some of the participants used the exact phrase (e.g. closeness principle) and others described the meaning of it.

Priorities

The participants prioritize products that are of good quality (by their own standards) produced in the local area or the same country and eco-labelled. Price is of less importance. If the product is of good quality and is eco-labelled it may cost more. Most of the respondents (7 out of 9) prefer to buy fewer expensive clothes and shoes. They believe that a high price is an indicator of good quality and durability. They also said that they abandon their principles and priorities only when they are stressed (lack of time).

Strategies

There are two main strategies for making consumption more pro-environmental. (1) Families with a car (or two) plan the shopping by making a list of products to buy and they do the shopping once or twice a week. They do this in order to use the car less often and not to buy unnecessary products that are not on the list. (2) Families without a car walk from shop (market) to shop (market) to find all the products needed with an eco-label. Since one shop does not usually have all the eco-label products required they visit more than one shop to get what they want. A third strategy of less significance which is only practised by the women in the households is to buy second-hand clothes.

Good Habits

Most (8 out of 9) of the participants try to maintain what they see as good habits taken over from their parents and grandparents. They also try to establish new good habits for their children; especially concerning health related eating habits. For all of the participants, to know which products to choose from is a careful procedure in the beginning before it becomes a habit. It all begins with the listed contents on a potential product. When one product is selected it has to be tested at home. If the product is considered good or even very good it becomes the first choice and continually selected as long as it is available. New products are almost never considered until the first choice is out of stock. This procedure contains two feedback processes. The first feedback is offered by the listed contents. The second feedback is offered when the product is tested at home. Relatively fast feedback is appreciated by the respondents in their statements. The selection of clothing is made in a similar way to the selection of food. The obvious difference is that the second feedback process is longer. The individual has to wear the clothing for a while before they can be sized up and evaluated. From experience, the nine households almost never buy clothing from big clothing companies but rather small specialised shops.

Eco-Labelling

The participants trust the national eco-label (stands for an ecologically sound production) but

they are suspicious of foreign eco-labels. They would choose a non eco-labelled local product before a foreign eco-labelled product. Most of the respondents (not made explicit by everyone) demand a simple CO_2-label to better know which product to use and buy. A suggested label is one which provides a scale from 1 to 5. 5 stands for a high degree of carbon dioxide emissions during production and transportation while 1 stands for a minimum degree of emissions.

Knowledge

Knowledge of environmental and ethical importance is actively sought for by the participants on the Internet, in magazines, and from networks, seminars and organizations. In some cases they learn about new information on TV, radio, newspapers and in discussions with friends. TV and newspapers are generally not considered reliable as a knowledge source. The respondents see knowledge as the best way to change habits and behaviour. With new knowledge they look at the list of contents again and again. If a well-known product contains something that has become negative in the eyes of the individual, the product is most often exchanged for an alternative one. On some rare occasions the individual stops buying a whole category of products if they all contain a negative substance. The participants explain that they need new knowledge in order to change a habit but not all new knowledge leads to a change in habits.

Self-Described Lifestyle

The most common response about their own lifestyle was that they did not have a lifestyle. After a while the respondents came up with these suggestions:
- Eco-lifestyle
- Bohemian lifestyle
- Vegetarian lifestyle
- As an expression of vocational identity
- As an expression of socioeconomic belonging
- Trendy lifestyle (in clothing)
- Relaxed lifestyle
- Sustainable lifestyle
- Slow lifestyle
- As an expression of personality
- Generational lifestyle

The respondent that described her lifestyle as an eco-lifestyle consumed above the average (in Stockholm) and caused carbon dioxide emissions that were above the average. That was especially visible in the consumption of clothing (see Jensen 2007b). Furthermore, the participant who described her lifestyle as sustainable consumed a little below average but had a high degree of carbon dioxide emissions caused by food consumption. The amount of emissions caused by food consumption was the highest in the project group (see Jensen 2007b). Some of these self-described labels of lifestyle rather stand for how they want to live but not how they actually live. It is possible that they do not know how to manage to live an eco-lifestyle or a sustainable lifestyle. Even though the respondents did not have much to say about their own lifestyle they often talked about lifestyle change: "We have to change our lifestyle" or "It is necessary that we change lifestyle". "We" in these kinds of statements refers to the society as a whole or mainstream society. They never see themselves as a part of

the "we", not as part of the problem. The second interview sessions were also full of expressions about lifestyle change.

Lifestyle Change and Action Space

The following sub-sections describe what the participants saw as major areas to reduce carbon dioxide emission (4.2.1), how additional knowledge is of importance (4.2.3), how they described their action space (4.2.4) and finally how the project affected the participants (4.2.4).

Reduction of Carbon Dioxide Emissions

The group of 21 respondents together came up with four major ways in which to reduce carbon dioxide emissions:

1. Changed choices in food consumption
2. Alternative or reduced use of transportation for individuals and products
3. Reduced energy (electricity and heating of the house)
4. General reduction in consumption

Many of the project participants deliberately bought less animal products and more vegetables since they had come to learn that the production of meat causes higher carbon dioxide emissions than the production of vegetables. All of the project participants consumed some eco-labelled products before they joined the project. At the end of the project they had increased their consumption of eco-labelled products radically. It is known that eco-labelled products in general are more expensive than non eco-labelled products. The typical story is that the participants managed to reduce their energy costs and reduce their general consumption and therefore had more money to spend on eco-labelled products. The amount of money they spent per month is constant but the amount of products they consumed has reduced. Transportation for recreational activities has shifted from airplane to train whenever possible. It is sometimes easier and less costly to fly than to go by train. That makes the choice a little problematic. Travelling by train is not always attractive. When the participants can influence how the products they consume are transported they favour the train and boat to the airplane and the long-distance truck (lorry). Sometimes there is a conflict in the choice of food. Locally or nationally produced food is more often transported by truck than by train.

 In any case the respondents prefer locally produced products. When they commute to work and back home most of the participants try to exchange the car to a bicycle or public transport. The participants have lowered their use of energy in two major ways. (1) They use efficient products like low-energy bulbs, turn off stand-by functions, lower their indoor temperature, and use low-energy washing machines, dishwashers, refrigerator and stoves and so on. (2) They have changed their houses' heating systems where possible. Most of the households that used an oil boiler had changed to heat exchanger/geothermal energy, pellets or a hybrid system. All respondents are of the understanding that they are encouraged to consume more since we live in a consumer society. There is no belief that technology alone will solve the local or global situation. We have to consume less. Therefore the respondents buy less low-priced products and instead choose expensive products that hopefully are healthier and last longer.

More Knowledge

The participants describe their role as a consumer as different today than decades ago. They have to know more about production and causal links in order to be deliberative consumers. Knowledge about environmental problems and ethical issues makes it harder to do nothing. As a consequence of more knowledge the participants want to make what they see as the right choice both for the common good and for their own and their families benefit. It is obvious that their own lives and the life of their loved ones are the strongest motivator. With more knowledge they can make well-considered, deliberate choices. Most of the participants imply that the project has provided them most of the knowledge (it is an estimation made by the participants that is hard to validate) accumulated and assimilated in the last three years. In other words, the project has made the participants well-equipped consumers.

Action Space

New knowledge influences people's desire to act in other ways. For example, they come to know more about products and services they used to purchase but no longer want to buy; they come to know more about products and services they did not know existed and find them a more suitable choice. The participants describe how they wanted to find new opportunities to get hold of a more desired product or service and make that a new habit. They also described how they tried to avoid certain products or services even if it was difficult to break a habit.
As a consequence of identity, attitudes and motivation the participants described their behaviour as belonging to one of five categories:

1. They effort to change one's current lifestyle for a more sustainable one and they do it by pushing the action space in a certain direction. This is made through constantly looking for new opportunities, new ways of getting hold of more desired products and services.
2. The action space is already wide enough to change their lifestyle in a desired direction. The surrounding society is always one step ahead.
3. Society is limiting the action space in a non-desired direction. They do not want to change their lifestyle, thus society is working against them. The society is forcing them to change their lives against their will and capability.
4. They want changes and try to make them themselves but they need help from society. They want laws and taxes to make it harder for them to choose a certain product or service. Today it is too easy and too tempting to do the "wrong" thing.
5. Society should not reduce our action space with limitations (laws and taxes). Even if they want lifestyle changes, primarily they expect the market and the companies to offer better choices. They will do the right thing if the right choices are available. It is the responsibility of society to create opportunities for the citizens rather than limitations.

The majority of the participants belong to group 1 or group 2 (7 + 8 out of 21). A few men have changed from group 3 to group 2 during the project period. Many of the participants speak of group 3 as "them", the hopeless and lost ones or the ones without resources and choices. As the participants put it, group 3 are part of the problem in a more obvious way than the other groups. They are the ones that need to be limited since they have scarce knowledge and lack of motivation. Three individuals described themselves as belonging to group 4 and the same number belonged to group 5. There was no indication in an individual's description that made him/her belong to more than one group. It gives the impression that the groups are not overlapping. Many individuals in group 1 have described themselves as used to dealing with problems in their lives. Life is seen as problematic and difficult to lead. They

are used to struggling and to lives in constant flux. They typically describe themselves as very responsible and ethically concerned. Most of them go from store to store to only buy eco-labelled products. Even if this is a big group among the project participants it cannot be expected to be a large group in (the Swedish) society as a whole.

The Project

During the project period the participants had gained new knowledge, a change in attitude and the opportunity to discuss common interests with the other project participants. In fact, the social factor was viewed as so important that they wanted forums, online and in real life, for more discussions. The main reason for this was that all participants found themselves lonely in their commitment. Just a few, if any, friends and colleges had the same interest in sustainable development. In sum, the following is the most important affect the project has had:

- It is possible for the individual to do more than they expected before. For example, they have the power as consumers to influence through their choices.
- Society and the economic system is more complex and more intertwined in environmental problems than they previously expected.
- Food and recreation causes more carbon dioxide emissions than expected (the profile clarified this).

DISCUSSION

The following discussion will focus on the issues of beliefs, habits, sustainable lifestyle, action space and lifestyle change in order to analyse the main parts of the result. The first section, about beliefs and principles, is an attempt to better understand why people in general and the participants of this study in specific motivate themselves to act in a certain way. This is further developed in the section about habits. The discussion ends up in a section about lifestyle change and the earlier sections elaborate why it is so difficult and how it can be made easier.

Beliefs and Principles

Every time you choose to drink tap-water you do it because you believe it is drinkable. The very specific act of drinking tap-water is strongly connected to the belief that tap-water is drinkable. A principle can be viewed as a general, broad belief or a belief-system. We apply principles to a wide variety of situations. For example, (the principle=) all tap-water is drinkable and therefore influences the holder of the principle to drink from wherever he or she finds a tap. This kind of naive principle can be combined with risk. What if the water from a particular tap is poisonous or full of unhealthy bacteria? It is safer to use tap-water from a tap that you are familiar with. Then you apply the closeness principle. You only use water from taps in your own home, your friends or neighbours' home. Maybe you think it is safe to drink the water from a tap in your own country but not in remote countries. The closeness principle can be applied both in geographical terms and in social terms (Jensen 2009). First, you know your own local environment and are mostly secure in it. Second, the social closeness principle says that you do what the majority does, since it cannot be bad anyway, and you do as the people you have close relations with would do (Richerson & Boyd 2005). We are, whether we like it or not, mostly inclined to emulate our parents and siblings. We are also apt to emulate peers (e.g. friends) and people we look up to (e.g. idols). So, if the

whole family drinks tap-water you will probably also be doing so. If the whole family avoids tap-water when you visit foreign countries you will probably also avoid it. The cautiousness principle can be applied in cognitive terms or social terms. Things you know little about are suspiciously approached and things you believe can be unhealthy are often avoided. But things that you already use are not viewed with suspicion. That is because you believed it was safe when you started using it, probably because others used it. We do not always approach new things with doubt. We put our trust in some individuals and if they use it we are more apt to use it. It is the social factor again that influences our behaviour (Bandura 2001; 2006). Once more, if a majority use a product it cannot be bad. The individual must be very wary or have strong beliefs about negative influence in order to go against the majority. Some of the participants in the project have that disposition and tend to go their own way. The participants have lots of useful beliefs that help them make choices. They believe that eco-labelled products are better in some way. They believe that expensive products are better. That is why they are willing to buy expensive eco-labelled products. The participants are actively seeking more information about products and what makes one product better than another product. A primary motivation for this is doubts about the industries. They believe that a majority of the industries use substances that are harmful, noxious or unwholesome. It gives an unpleasant view of the world, it cannot be trusted. It makes people ontologically insecure (Giddens 1986).

There is a paradox involved here. The more you know the more problems you come across. More problems make you more insecure and doubtful. When you doubt you have to know more to feel secure. The more you know the more problems you come across (see Giddens 1990). Another way of handling it is through denial (Stoll-Kleemann et al. 2001). Nothing said by the participants indicates that they deny the environmental problems involved. A third way to handle it is to accept the problem but not find out more about it. When beliefs about an environmental problem cause certain behaviour it is most often based on prejudice and superstition (Beck 1992). An example of prejudice in the result of this study is the statement that domestic eco-labels are more reliable than foreign eco-labels. Other examples of how environmental problems are believed to affect us can be found in Jensen (2007b). Some participants believe that substances of certain kinds can make us sick. There is no research that confirms this belief. Instead it may be found in the media in the form of speculation or sensationalism. Most of the project participants believe that animal products cause more emissions of carbon dioxide than vegetable products. This is nothing we can see with our own eyes. The belief probably originates from experts (see Giddens 1990) that have measured and estimated the emission. What we come to believe and how strong the belief becomes depends on how willing we are to trust the experts. Many participants have chosen to change their consumption habits, which must indicate that they put their trust in experts in this case.

Habits

The participants from the first interview session describe how they have inherited habits from their parents and try to teach their own children good habits for the future. It is not just about routinized acts but well developed beliefs behind their habits (also Jensen 2007b). They believe that locally produced food and a balanced diet is healthy (healthier). Therefore they want their children to eat the same diet now and in the future. Most of the participants were detailed in their description of forming and retaining habits when they purchasing at a store (also Jensen 2007b). There are three aspects of retaining a habit. (1) You always buy the product that you usually buy. You know where to find it and you always find it even if the

staff moves it. You get really upset if you cannot find the product. (2) If the product is not in stock you wait until next time. Hopefully it is just sold out for the day and will be in stock the next day. (3) You have a list of possible products. Choices are placed in order of priority. You choose according to availability. If it is not available you choose the second one. The third way to deal with habits at the store is the most flexible one. However, many of the participants only buy eco-labelled products. Often there is only one particular product of choice. The other choices are not eco-labelled. Some of the participants said that they were not willing to buy a non eco-labelled product. Other participants chose the non eco-labelled product this time but saw it as a poor substitute.

The participants only described one way of forming a new habit but this can be for a number of reasons. (a) An eco-labelled product is available. Previously there was no eco-labelled alternative. Since the strategy is to buy eco-labelled products when available this is a way to fulfil a higher goal. This effect is caused by what is visible in the store. (b) The consumer has become aware of an undesired substance (or high emissions of CO_2). If the substance is present in the usual product the consumer has to find an alternative one. This effect is caused by knowledge gained outside the store independent of the shopping procedure and is remembered when the consumer goes to the store. (c) The quality of the usual product seems to decrease over a period of time. Consequently, it will not be the number one choice on the list of possible products. This effect is caused by feedback from the use of a particular product following shopping. The outcome is remembered until the consumer is in the store again. The following illustrates the process of habit change (cf. Thirlaway & Upton 2009):

1. Beliefs and other motivation to buy a new product
2. Comparing alternative products with the new product (e.g. price, content and quality)
3. Decision process
a. Decision in favour of new product = Purchase the new product
b. Decision in favour of old product = Stick to the old product
c. Equal alternatives = Stick to old product as safe alternative or try a new product to have options on your possible products list
4. Test the new product
5. Feedback from testing
a. Positive feedback = buy again (form a habit)
b. Negative feedback = do not buy again

Without motivation to buy a new product this process will not take place. The process can also be interrupted in two stages. First of all, if the old product is judged as better there is no need to buy the new product. Secondly, if the feedback from testing the product at home is negative there is no need to buy it again. The participants are well aware of this process since they have described it themselves. This is the opposite of why we have habits. Habits are supposed to be automatic without the need for decision-making. The forming of a habit needs well informed decisions, testing and evaluation. It is cognitively strenuous. A habit is cognitively relieving (Bandura 1999). On the assumption that it is difficult to change a habit there must be a strong motivation to do it or at least some help from others. The respondents give some reasons and they are all self-centred. (1) It is better for their own health and future. (2) It is for their children's and family's health and future. (3) It is for the well-being of their local environment (concerning their own and their families health indirectly). A strong motivation may not be enough. A few participants want help in changing their habits. If it were more difficult to continue with the old habit it would be easier to form a new habit. If there were alternative products they could form a new habit buying the new product. As long

as there is only one good choice the habit stays the same. The consumers need help from the market/the producers. The formation of a new habit demands the coincidence of several factors, at least three:

- A specific belief or set of beliefs about healthy or unhealthy substances
- A motivation for the well-being of the individual or loved ones
- A specific product at the right time and place

A belief is of no use if it does not influence the motivation. A motivation is of no use if there is nothing that fulfils the desired qualities (based on the beliefs). The product is of no use if no one sees it as desirable.

Sustainable Lifestyle

A lifestyle, as a set of habits and intentions, is very complex. The participants' answers also indicate this. It is difficult to observe your own lifestyle. Not only because it consists of habits that are more or less automatized, but also because of all the different beliefs and goals that together form the visible expressions of one single individual. A contradiction like an eco-lifestyle or a sustainable lifestyle and a high emission of carbon dioxide as a result of that lifestyle (see also Stoll-Kleemann et al. 2001) can only be explained by the complexity of lifestyles as well as the complexity of what is causing emissions of carbon dioxide. Two complex phenomena are even harder to combine. Hence, both these processes have to be made explicit and in some degree simplified for the consumer. (a) Young citizens need to be educated (formal education but others sources can be used and also directed against adults) on how we form and change lifestyles. (b) If the producers label their products with a CO_2 scale (1-5) or colours (red, yellow and green) it would make a huge difference for the consumer. During the project period the participants have developed an idea of what a sustainable lifestyle means and necessitates:

1. They know that they have to understand the production and causal links to be well-informed deliberate consumers
2. They know that they constantly need to seek more knowledge
3. The individual is responsible for obtaining a sustainable lifestyle
4. The society and the economic system are, in one or the other way, causing limitations or possibilities for a sustainable lifestyle.
5. They have an idea about what is causing more emissions of carbon dioxide:
a. Animal products
b. Flying (vacation transportation)
c. Cars (personal transportation)
d. Lorries (product transportation)
e. A material-dense consumption (many low-priced products)
f. Recreation
6. They are willing to consume less

During times when eco-labelled products are expensive the consumers will automatically consume less if they choose eco-labelled products. What will happen when eco-labelled products are as cheap as other products? Will they start to consume more? What will they do with the extra money? This is something we cannot answer now.

Action Space

An action space is a measure of how easy it is to change a lifestyle. A reduced action space offers little room for changes. An enhanced action space offers expanded room for changes. Political and economic means of control are of major importance but we can also see from this study that individuals change lifestyle despite political and economic regulation. These participants are not breaking any laws but they are in some ways breaking society's norms. They find and use products and solve problems in a way that no one in their network does (see Bandura 2001). This is probably cognitively, emotionally and physically demanding for the individual. At the other extreme, many people experience that the system is working against them. New laws and taxes are reducing their possibilities and prices are getting higher. This is probably also cognitively, emotionally and physically (they have to go to a more remote mall to find low-priced products) demanding for the individual. The only ones that are really satisfied with the situation is the group of people who follow the middle-class trends. They have the money and most of the products they desire are available as eco-labelled products. Is it possible to create a general, public action space where everyone is satisfied? Probably not. The challenge is to get the majority of a population within the second category.

Individuals in category 1 and category 4 all want to change their lifestyles. One major difference is that individuals in category 1 have a higher self-efficacy and individuals in category 4 have a low (at least lower) self-efficacy. Self-efficacy is the belief that you can attain a goal; achieve what you set yourself up to do (Bandura 1997; Thirlaway & Upton 2009). That is why individuals in category 4 sometimes need help more than individuals in category 1. Neither individuals in category 3 nor individuals in category 5 want limitations from the society. In any case, there is a big difference. Individuals in category 5 want a lifestyle change and have beliefs and the motivation but are waiting for the right opportunities. Individuals in category 3 do not have beliefs and a motivation for change. They are mostly content with their contemporary habits. Individuals in category 2 have the beliefs and some motivation. They are willing to change their habits but the process is slow. They do not need a high self-efficacy even though it is higher than individuals in category 3.

A way to adapt the action space is to listen to the groups of people in category 4 and 5. What kind of help do the individuals in category 4 need? They want to change their lifestyle but they want a little push in the right direction. Can this push help even more citizens? It will probably help the ones in category 1 who are trying hard by themselves. Maybe some in category 2 are grateful. Individuals in category 5 either do not care or are against it. People in category 3 are most certainly against it. What kind of changes do the individuals in category 5 demand? They want a broader variation of supply and probably a broader range of prices. This will work for everyone except the ones in category 1 and 4. They think it is too easy to do the "wrong" thing. This suggestion is not based on the empirical findings but on the logic and design of the action space (see figure 2). The tension and dynamics between group 4 and 5 is more constructive for all groups than the tensions between group 1 and 3 since the difference between them are more extreme. There is no perfect middle path. There is only a middle path that will make it easier for a majority and limit the rest.

Lifestyle Change

Thus far we may assume that a lifestyle change has to start with new beliefs. Reasonable beliefs will slowly adjust one's habits if there is a permissive action space. Many adjusted

habits can change a lifestyle. Perhaps too simplistically, the project participants describe their three years in the project like this. So, the way to bring about a major lifestyle change in a population is suggested to be achieved during several stages of the process (cf. Thirlaway & Upton 2009):

- Inform and educate the individuals – only individuals can be motivated
- Create conditions for action spaces – delimit some old alternatives and create new possibilities
- Habits can change, even quickly, with better possibilities for decision-making and feedback – offer simple CO_2 labels
- Express higher goals and the means to attain them – why and how to reduce the emissions of carbon dioxide
- Make it possible to consume less – A material-light consumption
- Make clear what the individual is expected to do and what the society is expected to do

This is not an easy-fix checklist. It is merely a suggestion about what we need to better understand in order to achieve a sustainable lifestyle for everyone.

CONCLUSIONS

The participants of this study are a group of committed individuals that took part in a project to try to gain more knowledge and indirectly change their lifestyles in a direction towards sustainable development. They had developed some principles, strategies and good habits to make the everyday consumption easier. They found it difficult to describe their own lifestyles and often they wanted to lead a more sustainable lifestyle than they could. The project gave the participants lots of opportunities to direct their efforts in a more sustainable way. Earlier they knew about the impact of transportations and housing but after more than two years in the project they began to focus on food and recreation. It is obviously difficult to change lifestyle but it is possible with the right motivation. In this case an important motivator is that the individual can do a lot. They became aware that it is possible and therefore they try. There are also ways to make it easier for the individual. The surrounding society has to help. Especially to simplify the complexity of production for the consumer and to widen the action space to give the individual a feeling that there are opportunities, not only limitations.

REFERENCES

Åkerman, J. & Höjer, M. (2006). How much transport can the climate stand? – Sweden on a sustainable path in 2050. Energy Pol, 34, 1944–1957.

Angelöw, B. & Jonsson, T. (1994). Individ och miljö. Att utveckla och stimulera människors miljöengagemang. Lund: Studentlitteratur.

Bandura, A. (1997). Self-efficacy: the exercise of control. New York: Freeman.

Bandura, A. (1999). Social cognitive theory: An agentic perspective. Asian Journal of Social Psychology,2, 21–41.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. Annu. Rev. Psychol., 52, 1–26.

Bandura, A. (2006). Toward a psychology of human agency. Perspective on psychological science, 1 (2), 164–180.

Beck, U. (1992). Risk society: Towards a new modernity. London: Sage.

Chaney, D. (1996). Lifestyles. London: Routledge.

Chen, C., Gärling, T. & Kitamura, R. (2004). Activity rescheduling: reasoned or habitual? Transport Res, Part F 7, 351–371.

Connolly, J. & Prothero, A. (2003). Sustainable consumption: consumption, consumers and the commodity discourse. Consumpt Markets Cult, 6, 275–291.

Dewey, J. (2002). Human nature and conduct. New York: Dover Publications. First published 1922.

Giddens, A. (1986). The constitution of society. Berkeley: University of California Press.

Giddens, A. (1990). The consequences of modernity. Cambridge, UK: Polity in association with Blackwell.

Giddens, A. (1991). Modernity and self-identity. Self and society in the late modern age. Cambridge, UK: Polity Press.

IPCC. (2007). Climate Change 2007 - Fourth Assessment Report. Intergovernmental Panel on Climate Change, Geneva.

Jensen, M. (2007a). Defining lifestyle. Environmental Sciences, 4 (2), 1–11.

Jensen, M. (2007b). Konsumtion, livsstil och miljö (eng. consumption, lifestyle and environmental issues). Technical report, SSKKII-publication, 2007:2. Gotheburg University.

Jensen, M. (2009) Lifestyle: suggesting mechanisms and a definition from a cognitive science perspective. Environment, Development and Sustainability, 11 (1), 215–228.

Johansson, T. & Miegel, F. (1992). Do the right thing. Lifestyles and identity in contemporary youth culture. Stockholm: Almqvist & Wiksell.

Michaelis, L. (2003). Sustainable consumption and greenhouse gas mitigation. Clim Pol, 3S1, 135–146.

Peirce, C. S. (1992). The essential Peirce: selected philosophical writings. volume 1, (1867-1893). Edited by Kloesel, C. J. W. & Houser, N. Bloomington: Indiana University Press.

Richerson, P. J. & Boyd, R. (2005). Not by genes alone. How culture transformed human evolution. Chicago: University of Chicago press.

Stoll-Kleemann, S., O'Riordan, T. & Jaeger, C. C. (2001). The psychology of denial concerning climate mitigation measures: evidence from Swiss focus groups. Global Environ Change, 11, 107–117.

Thirlaway, K. & Upton, D. (2009). The psychology of lifestyle. Promoting healthy behaviour. London: Routledge.

Wilska, T-A. (2002). Me – A consumer? Consumption, identities and lifestyles in today's Finland. Acta Sociologica, 45, 195–210.